



Rochester 2021 Test Catalog

Laboratory Reference Edition

Sorted By Test Name

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Definition of Specimen "Minimum Volume"

Defines the amount of specimen required to perform an assay once, including instrument and container dead space. Submitting the minimum specimen volume makes it impossible to repeat the test or perform confirmatory or perform reflex testing. In some situations, a minimum specimen volume may result in a QNS (quantity not sufficient) result, requiring a second specimen to be collected.

Policies

Mayo Clinic Laboratories

POLICY STATEMENTS

Animal Specimens

We do not accept animal specimens for laboratory testing.

Billing

Client—Each month you will receive an itemized invoice/ statement which will indicate the date of service, patient name, CPT code, test name, and test charge. Payment terms are net 30 days. When making payment, please include our invoice number on your check to ensure proper credit to your account.

Patient—Mayo Clinic Laboratories does not routinely bill patient's insurance; however, if you have made advanced arrangements to have Mayo Clinic Laboratories bill your patient's insurance, please include the following required billing information: responsible party, patient's name, current address, zip code, phone number, Social Security number, and diagnosis code. Providing this information will avoid additional correspondence to your office at some later date. Please advise your patients that they will receive a bill for laboratory services from Mayo Clinic Laboratories for any personal responsibility after insurance payment. VISA® and MasterCard® are acceptable forms of payment.

Billing—CPT Coding

It is your responsibility to determine correct CPT codes to use for billing. While this catalog lists CPT codes in an effort to provide some guidance, CPT codes listed only reflect our interpretation of CPT coding requirements and are not necessarily correct. Particularly, in the case of a test involving several component tests, this catalog attempts to provide a comprehensive list of CPT codes for all of the possible components of the test. Only a subset of component tests may be performed on your specimen. You should verify accuracy of codes listed. Where multiple codes are listed, you should select codes for tests actually performed on your specimen. **MAYO CLINIC LABORATORIES ASSUMES NO RESPONSIBILITY FOR BILLING ERRORS DUE TO RELIANCE ON CPT CODES LISTED IN THIS CATALOG.** For further reference, please consult the CPT Coding Manual published by the American Medical Association. If you have any questions regarding use of a code, please contact your local Medicare carrier.

Business Continuity and Contingency Planning

In the event of a local, regional, or national disaster, Mayo Clinic and Mayo Clinic Laboratories' performing sites have comprehensive contingency plans in place in each location to ensure that the impact on laboratory practice is minimized. With test standardization between our performing sites and medical practice locations throughout the country, we have worked to ensure that patient care will not be compromised.

Cancellation of Tests

Cancellations received prior to test setup will be honored at no charge. Requests received following test setup cannot be honored. A report will be issued automatically and charged appropriately.

Chain-of-Custody

Chain-of-custody, a record of disposition of a specimen to document who collected it, who handled it, and who performed the analysis, is necessary when results are to be used in a court of law. Mayo Clinic Laboratories has developed packaging and shipping materials that satisfy legal requirements for chain-of-custody. This service is only offered for drug testing.

Compliance Policies

Mayo Clinic Laboratories is committed to compliance with applicable laws and regulations such as the Clinical Laboratory Improvement Amendments (CLIA). Regulatory agencies that oversee our compliance include, but are not limited to, the Centers for Medicare and Medicaid Services (CMS), the Food and Drug Administration (FDA), and the Department of Transportation (DOT). Mayo Clinic Laboratories develops, implements, and maintains policies, processes, and procedures throughout our organization which are designed to meet relevant requirements. We expect clients utilizing our services will ensure their compliance with patient confidentiality, diagnosis coding, anti-kick back statutes, professional courtesy, CPT-4 coding, CLIA proficiency testing, and other similar regulatory requirements. Also see “Accreditation and Licensure,” “HIPAA Compliance,” and “Reportable Disease.”

Confidentiality of Results

Mayo Clinic Laboratories is committed to maintaining confidentiality of patient information. To ensure Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the College of American Pathologists (CAP) compliance for appropriate release of patient results, Mayo Clinic Laboratories has adopted the following policies:

Phone Inquiry Policy—One of the following unique identifiers will be required:

- Mayo Clinic Laboratories’ accession ID number for specimen; **or**
- Client account number from Mayo Clinic Laboratories along with patient name; **or**
- Client accession ID number interfaced to Mayo Clinic Laboratories; **or**
- Identification by individual that he or she is, in fact, “referring physician” identified on requisition form by Mayo Clinic Laboratories’ client

Under federal regulations, we are only authorized to release results to ordering physicians or health care providers responsible for the individual patient’s care. Third parties requesting results including requests directly from the patient are directed to the ordering facility. We appreciate your assistance in helping Mayo Clinic Laboratories preserve patient confidentiality. Provision of appropriate identifiers will greatly assist prompt and accurate response to inquiries and reporting.

Critical Values

The “Critical Values Policy” of the Department of Laboratory Medicine and Pathology (DLMP), Mayo Clinic, Rochester, Minnesota is described below. These values apply to Mayo Clinic patients as well as external clients of Mayo Clinic Laboratories. Clients should provide “Critical Value” contact information to Mayo Laboratory Inquiry to facilitate call-backs. To facilitate this process, a customized form is available at mayocliniclabs.com.

Definition of Critical Value—A critical value is defined as a value that represents a pathophysiological state at such variance with normal (expected values) as to be life-threatening unless something is done promptly and for which some corrective action could be taken.

Abnormals are Not Considered Critical Values—Most laboratory tests have established reference ranges, which represent results that are typically seen in a group of healthy individuals. While results outside these reference ranges may be considered abnormal, “abnormal” results and “critical values” are not synonymous. Analytes on the DLMP Critical Values List represent a subgroup of tests that meet the above definition.

Action Taken when a Result is Obtained that Exceeds the Limit Defined by the DLMP Critical Values List—In addition to the normal results reporting (eg, fax, interface), Mayo Clinic Laboratories’ staff telephone the ordering physician or the client-provided contact number within 60 minutes following laboratory release of the critical test result(s). In the event that contact is not made within the 60-minute period, we continue to telephone until the designated party is reached and the result is conveyed in compliance and adherence to the CAP.

Semi-Urgent Results— Semi-Urgent Results are defined by Mayo Clinic as those infectious disease-related results that are needed promptly to avoid potentially serious health consequences for the patient (or in the case of contagious diseases, potentially serious health consequences to other persons exposed to the patient) if not acknowledged and/or treated by the physician. While not included on the Critical Values List, this information is deemed important to patient care in compliance and adherence to the CAP.

To complement Mayo Clinic Laboratories' normal reporting mechanisms (eg, fax, interface), Mayo Clinic Laboratories' staff will telephone results identified as significant microbiology findings to the ordering facility within 2 hours following laboratory release of the result(s). In the event that contact is not made within the 2-hour period, we will continue to telephone until the responsible party is reached and the result is conveyed. In addition, in most instances, you will see the comment **SIGNIFICANT RESULT** appear on the final report.

For information regarding the Mayo Clinic Critical Value List, contact Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700 or visit mayocliniclabs.com.

Disclosures of Results

Under federal regulations, we are only authorized to release results to ordering physicians or other health care providers responsible for the individual patient's care. Third parties requesting results, including requests directly from the patient, are directed to the ordering facility.

Extracted Specimens

Mayo Clinic Laboratories will accept extracted nucleic acid for clinical testing, provided it is an acceptable specimen source for the ordered test, if the isolation was performed in a CLIA-certified laboratory or a laboratory meeting equivalent requirements as determined by the CAP and/or the CMS.

Fee Changes

Fees are subject to change without notification and complete pricing per accession number is available once accession number is final. Specific client fees are available by calling Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700 or by visiting mayocliniclabs.com.

Framework for Quality

"Framework for Quality" is the foundation for the development and implementation of the quality program for Mayo Clinic Laboratories. Our framework builds upon the concepts of quality control and quality assurance providing an opportunity to deliver consistent, high-quality and cost-effective service to our clients. In addition, our quality program enhances our ability to meet and exceed the requirements of regulatory/ accreditation agencies and provide quality service to our customers.

A core principle at Mayo Clinic Laboratories is the continuous improvement of all processes and services that support the care of patients. Our continuous improvement process focuses on meeting the needs of you, our client, to help you serve your patients.

"Framework for Quality" is composed of 12 "Quality System Essentials." The policies, processes, and procedures associated with the "Quality System Essentials" can be applied to all operations in the path of workflow (eg, pre-analytical, analytical, and post-analytical). Performance is measured through constant monitoring of activities in the path of workflow and comparing performance through benchmarking internal and external quality indicators and proficiency testing.

Data generated by quality indicators drives process improvement initiatives to seek resolutions to system-wide problems. Mayo Clinic Laboratories utilizes "Failure Modes and Effects Analysis (FMEA)," "Plan Do Study Act (PDSA)," "LEAN," "Root Cause Analysis," and "Six Sigma" quality improvement tools to determine appropriate remedial, corrective, and preventive actions.

Quality Indicators—Mayo Clinic Laboratories produces hundreds of Key Performance Indicators for our business and operational areas, and we review them regularly to ensure that we continue to maintain our high standards. A sampling of these metrics includes:

- Pre-analytic performance indicators
 - Lost specimens*
 - On-time delivery
 - Special handling calls
 - Specimen acceptability*
 - Specimen identification*
 - Incoming defects*
- Analytic performance indicators
 - Proficiency testing
 - Quality control
 - Turnaround (analytic) times
 - Quantity-not-sufficient (QNS) specimens*
- Post-analytic performance indicators
 - Revised reports*
 - Critical value reports*
- Operational performance indicators
 - Incoming call resolution*
 - Incoming call abandon rate
 - Call completion rate
 - Call in-queue monitoring
 - Customer complaints
 - Customer satisfaction surveys

The system provides a planned, systematic program for defining, implementing, monitoring, and evaluating our services.

*Measured using Six Sigma defects per million (dpm) method.

HIPAA Compliance

Mayo Clinic Laboratories is fully committed to compliance with all privacy, security, and electronic transaction code requirements of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). All services provided by Mayo Clinic Laboratories that involve joint efforts will be done in a manner which enables our clients to be HIPAA and the College of American Pathologists (CAP) compliant.

Infectious Material

The Centers for Disease Control (CDC) in its regulations of July 21, 1980, has listed organisms and diseases for which special packaging and labeling must be applied. Required special containers and packaging instructions can be obtained from us by using the “Request for Supplies” form or by ordering from the online Supply Catalog at mayocliniclabs.com/customer-service/supplies/index.php.

Shipping regulations require that infectious substances affecting humans be shipped in a special manner. See “Infectious Material.” A copy of the regulations can be requested from the International Air Transport Association (IATA); they may be contacted by phone at 514-390-6770 or by fax at 514-874-2660.

Informed Consent Certification

Submission of an order for any tests contained in this catalog constitutes certification to Mayo Clinic Laboratories by ordering physician that: (1) ordering physician has obtained “Informed Consent” of subject patient as required by any applicable state or federal laws with respect to each test ordered; and (2) ordering physician has obtained from subject patient authorization permitting Mayo Clinic Laboratories to report results of each test ordered directly to ordering physician.

On occasion, we forward a specimen to an outside reference laboratory. The laws of the state where the reference laboratory is located may require written informed consent for certain tests. Mayo Clinic Laboratories will request that ordering physician pursue and provide such consent. Test results may be delayed or denied if consent is not provided.

Non-Biologic Specimens

Due to the inherent exposure risk of non-biologic specimens, their containers, and the implied relationship to criminal, forensic, and medico-legal cases, Mayo Clinic Laboratories does not accept nor refer non-biologic specimen types. Example specimens include: unknown solids and liquids in the forms of pills, powder, intravenous fluids, or syringe contents.

Patient Safety Goals

One of The Joint Commission National Patient Safety goals for the Laboratory Services Program is to improve the accuracy of patient identification by using at least 2 patient identifiers when providing care, treatment, or services.

Mayo Clinic Laboratories uses multiple patient identifiers to verify the correct patient is matched with the correct specimen and the correct order for the testing services. As a specimen is received at Mayo Clinic Laboratories, the client number, patient name, and patient age date of birth are verified by comparing the labels on the specimen tube or container with the electronic order and any paperwork (batch sheet or form) which may accompany the specimen to be tested. When discrepancies are identified, Mayo Laboratory Inquiry will call the client to verify discrepant information to assure Mayo Clinic Laboratories is performing the correct testing for the correct patient. When insufficient or inconsistent identification is submitted, Mayo Clinic Laboratories will recommend that a new specimen be obtained, if feasible.

In addition, Anatomic Pathology consultation services require the Client Pathology Report. The pathology report is used to match the patient name, patient age and/or date of birth, and pathology case number. Since tissue blocks and slides have insufficient space to print the patient name on the block, the pathology report provides Mayo Clinic Laboratories another mechanism to confirm the patient identification with the client order and labels on tissue blocks and slides.

Parallel Testing

Parallel testing may be appropriate in some cases to re-establish patient baseline results when converting to a new methodology at Mayo Clinic Laboratories. Contact your Regional Manager at 800-533-1710 or 507-266-5700 for further information.

Proficiency Testing

We are a College of American Pathologists (CAP)-accredited, CLIA-licensed facility that voluntarily participates in many diverse external and internal proficiency testing programs. It is Mayo Clinic Laboratories' expectation that clients utilizing our services will adhere to CLIA requirements for proficiency testing (42 CFR 493.801), including a prohibition on discussion about samples or results and sharing of proficiency testing materials with Mayo Clinic Laboratories during the active survey period.

Mayo Clinic Laboratories' proficiency testing includes participation in CMS-approved programs. Mayo Clinic Laboratories also performs alternative assessment using independent state, national, and international programs when proficiency testing is not available. Mayo Clinic Laboratories also conducts comparability studies to ensure the accuracy and reliability of patient testing, when necessary. We comply with the regulations set forth in Clinical Laboratory Improvement Amendments (CLIA-88), the Occupational Safety and Health Administration (OSHA), or the Centers for Medicare & Medicaid Services (CMS).

It is Mayo Clinic Laboratories' expectation that clients utilizing our services will adhere to CLIA requirements for proficiency testing including a prohibition on discussion about samples or results and sharing of proficiency

testing materials with Mayo Clinic Laboratories during the active survey period. Referring of specimens is acceptable for comparison purposes when an approved proficiency-testing program is not available for a given analyte.

Radioactive Specimens

Specimens from patients receiving radioactive tracers or material should be labeled as such. All incoming shipments arriving at Mayo Clinic Laboratories are routed through a detection process in receiving to determine if the samples have any levels of radioactivity. If radioactive levels are detected, the samples are handled via an internal process that assures we do not impact patient care and the safety of our staff. This radioactivity may invalidate the results of radioimmunoassays (RIA).

Record Retention

Mayo Clinic Laboratories retains all test requisitions and patient test results at a minimum for the retention period required to comply with and adhere to the CAP. A copy of the original report can be reconstructed including reference ranges, interpretive comments, flags, and footnotes with the source system as the Department of Laboratory Medicine's laboratory information system.

Referral of Tests to Another Laboratory

Mayo Clinic Laboratories forwards tests to other laboratories as a service to its clients. This service should in no way represent an endorsement of such test or referral laboratory or warrant any specific performance for such test. Mayo Clinic Laboratories will invoice for all testing referred to another laboratory at the price charged to Mayo Clinic Laboratories. In addition, Mayo Clinic Laboratories will charge an administrative fee per test for such referral services.

Reflex Testing

Mayo Clinic Laboratories identifies tests that reflex when medically appropriate. In many cases, Mayo Clinic Laboratories offers components of reflex tests individually as well as together. Clients should familiarize themselves with the test offerings and make a decision whether to order a reflex test or an individual component. Clients, who order a reflex test, can request to receive an "Additional Testing Notification Report" which indicates the additional testing that has been performed. This report will be faxed to the client. Clients who wish to receive the "Additional Testing Notification Report" should contact their Regional Manager or Regional Service Representative.

Reportable Disease

Mayo Clinic Laboratories, in compliance with and adherence to the College of American Pathologists (CAP) Laboratory General Checklist (CAP GEN. 20373) strives to comply with laboratory reporting requirements for each state health department regarding reportable disease conditions. We report by mail, fax, and/or electronically, depending upon the specific state health department regulations. Clients shall be responsible for compliance with any state specific statutes concerning reportable conditions, including, but not limited to, birth defects registries or chromosomal abnormality registries. This may also include providing patient address/demographic information. Mayo Clinic Laboratories' reporting does not replace the client or physician responsibility to report as per specific state statutes.

Request for Physician Name and Number

Mayo Clinic Laboratories endeavors to provide high quality, timely results so patients are able to receive appropriate care as quickly as possible. While providing esoteric reference testing, there are times when we need to contact the ordering physician directly. The following are 2 examples:

When necessary to the performance of a test, the ordering physician's name and phone number are requested as part of "Specimen Required." This information is needed to allow our physicians to make timely consultations or seek clarification of requested services. If this information is not provided at the time of specimen receipt, we will call you to obtain the information. By providing this information up front, delays in patient care are avoided.

In some situations, additional information from ordering physician is necessary to clarify or interpret a test result. At that time, Mayo Clinic Laboratories will request physician's name and phone number so that one of our staff can consult with the physician.

We appreciate your rapid assistance in supplying us with the ordering physician's name and phone number when we are required to call. Working together, we can provide your patients with the highest quality testing services in the shortest possible time.

Special Handling

Mayo Clinic Laboratories serves as a reference laboratory for clients around the country and world. Our test information, including days and time assays are performed as well as analytic turnaround time, is included under each test listing in the Test Catalog on mayocliniclabs.com. Unique circumstances may arise with a patient resulting in a physician request that the specimen or results receive special handling. There are several options available. These options can only be initiated by contacting Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700 and providing patient demographic information.

There is a nominal charge associated with any special handling.

- **Hold:** If you would like to send us a specimen and hold that specimen for testing pending initial test results performed at your facility, please call Mayo Laboratory Inquiry. We will initiate a hold and stabilize the specimen until we hear from you.
- **Expedite:** If you would like us to expedite the specimen to the performing laboratory, you can call Mayo Laboratory Inquiry and request that your specimen be expedited. Once the shipment is received in our receiving area, we will deliver the specimen to the performing laboratory for the next scheduled analytic run. We will not set up a special run to accommodate an expedite request.
- **STAT:** In rare circumstances, STAT testing from the reference laboratory may be required for patients who need immediate treatment. These cases typically necessitate a special analytic run to turn results around as quickly as possible. To arrange STAT testing, please have your pathologist, physician, or laboratory director call Mayo Laboratory Inquiry. He/she will be connected with one of our medical directors to consult about the patient's case. Once mutually agreed upon that there is a need for a STAT, arrangements will be made to assign resources to run the testing on a STAT basis when the specimen is received.

Specimen Identification Policy

In compliance with and adherence to the CAP and the Joint Commission's 2008 Patient Safety Goals (1A), Mayo Clinic Laboratories' policy states that all specimens received for testing must be correctly and adequately labeled to assure positive identification. Specimens must have **2** person-specific identifiers on the patient label. Person-specific identifiers may include: accession number, patient's first and last name, unique identifying number (eg, medical record number), or date of birth. Specimens are considered mislabeled when there is a mismatch between the person-specific identifiers on the specimen and information accompanying the specimen (eg, computer system, requisition form, additional paperwork).

When insufficient or inconsistent identification is submitted, Mayo Clinic Laboratories will recommend that a new specimen be obtained, if feasible.

Specimen Rejection

All tests are unique in their testing requirements. To avoid specimen rejection or delayed turnaround times, please check the "Specimen Required" field within each test. You will be notified of rejected or problem specimens upon receipt.

Please review the following conditions prior to submitting a specimen to Mayo Clinic Laboratories:

- Full 24 hours for timed urine collection

- pH of urine
- Lack of hemolysis/lipemia
- Specimen type (plasma, serum, whole blood, etc.)
- Specimen volume
- Patient information requested
- Proper identification of patient/specimen
- Specimen container (metal-free, separation gel, appropriate preservative, etc.)
- Transport medium
- Temperature (ambient, frozen, refrigerated)

Specimen Volume

The “Specimen Required” section of each test includes 2 volumes - preferred volume and minimum volume. Preferred volume has been established to optimize testing and allows the laboratory to quickly process specimen containers, present containers to instruments, perform test, and repeat test, if necessary. Many of our testing processes are fully automated; and as a result, this volume allows hands-free testing and our quickest turnaround time (TAT). Since patient values are frequently abnormal, repeat testing, dilutions, or other specimen manipulations often are required to obtain a reliable, reportable result. Our preferred specimen requirements allow expeditious testing and reporting.

When venipuncture is technically difficult or the patient is at risk of complications from blood loss (eg, pediatric or intensive care patients), smaller volumes may be necessary. Specimen minimum volume is the amount of sample necessary to provide a clinical relevant result as determined by the Testing Laboratory.

When patient conditions do not mandate reduced collection volumes, we ask that our clients submit preferred volume to facilitate rapid, cost-effective, reliable test results. Submitting less than preferred volume may negatively impact quality of care by slowing TAT, increasing the hands-on personnel time (and therefore cost) required to perform test.

Mayo Clinic Laboratories makes every possible effort to successfully test your patient’s specimen. If you have concerns about submitting a specimen for testing, please call Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700. Our staff will discuss the test and specimen you have available. While in some cases specimens are inadequate for desired test, in other cases, testing can be performed using alternative techniques.

Supplies

Shipping boxes, specimen vials, special specimen collection containers, and request forms are supplied without charge. Supplies can be requested using one of the following methods: use the online ordering functionality available at mayocliniclabs.com/supplies or call Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700.

Test Classifications

Analytical tests offered by Mayo Clinic Laboratories are classified according to the FDA labeling of the test kit or reagents and their usage. Where appropriate, analytical test listings contain a statement regarding these classifications, test development, and performance characteristics.

Test Development Process

Mayo Clinic Laboratories serves patients and health care providers from Mayo Clinic, Mayo Health System, and our reference laboratory clients worldwide. We are dedicated to providing clinically useful, cost-effective testing strategies for patient care. Development, validation, and implementation of new and improved laboratory methods are major components of that commitment.

Each assay utilized at Mayo Clinic, whether developed on site or by others, undergoes an extensive validation and performance documentation period before the test becomes available for clinical use. Validations follow a standard protocol that includes:

- Accuracy

- Precision
- Sensitivity
- Specificity and interferences
- Reportable range
- Specimen stability
- Specimen type comparisons, if applicable
- Urine preservative studies: stability at ambient, refrigerated, and frozen temperatures and with 7 preservatives; at 1, 3, and 7 days
- Comparative evaluation with current and potential methods, if applicable
- Reference intervals: reference intervals provided by Mayo Clinic Laboratories are derived from studies performed in our laboratories or adopted from the manufacturer package insert after internal verification. When reference intervals are obtained from other sources, the source is indicated in the “Reference Values” field.
- Workload recording
- Limitations of the assay
- Clinical utility and interpretation: written by Mayo Clinic medical experts, electronically available (MayoAccess™)

Test Result Call-Backs

Results will be phoned to a client when requested from the client (either on Mayo Clinic Laboratories’ request form or from a phone call to Mayo Clinic Laboratories from the client).

Time-Sensitive Specimens

Please contact Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700 prior to sending a specimen for testing of a time-sensitive nature. Relay the following information: facility name, account number, patient name and/or Mayo Clinic Laboratories’ accession number, shipping information (ie, courier service, FedEx®, etc.), date to be sent, and test to be performed. Place specimen in a separate Mayo Clinic Laboratories’ temperature appropriate bag. Please write “Expedite” in large print on outside of bag.

Turnaround Time (TAT)

Mayo Clinic Laboratories’ extensive test menu reflects the needs of our own health care practice. We are committed to providing the most expedient TAT possible to improve diagnosis and treatment. We consider laboratory services as part of the patient care continuum wherein the needs of the patient are paramount. In that context, we strive to fulfill our service obligations. Our history of service and our quality metrics will document our ability to deliver on all areas of service including TAT.

Mayo Clinic Laboratories defines TAT as the analytical test time (the time from which a specimen is received at the testing location to time of result) required. TAT is monitored continuously by each performing laboratory site within the Mayo Clinic Department of Laboratory Medicine and Pathology. For the most up-to-date information on TAT for individual tests, please visit us at mayocliniclabs.com or contact Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700.

Unlisted Tests

Mayo Clinic Laboratories does not list all available test offerings in the paper catalog. New procedures are developed throughout the year; therefore, some tests are not listed in this catalog. Although we do not usually accept referred tests of a more routine type, special arrangements may be made to provide your laboratory with temporary support during times of special need such as sustained instrumentation failure. For information about unlisted tests, please call Mayo Laboratory Inquiry at 800-533-1710 or 507-266-5700.

DHVD
8822

1,25-Dihydroxyvitamin D, Serum

Specimen Requirements: Patient Preparation: Fasting (4-hour preferred but not required)
Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: At least 1.5 mL

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 82652

SFUNG
604094

1,3-Beta-D-Glucan (Fungitell), Serum

Specimen Requirements: Container/Tube: Serum gel (red top tube is not acceptable) Specimen Volume: 1 mL Collection Instructions: 1. Avoid exposure of specimen to atmosphere to prevent environmental contamination of the sample. 2. Centrifuge and send specimen in original collection tube. Do not aliquot or open tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Refrigerated (preferred)	14 days	SERUM GEL TUBE
	Frozen	30 days	SERUM GEL TUBE

CPT Code Information: 87449

DOCS
46919

11-Deoxycorticosterone, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL Collection Instructions: Morning (8 a.m.) specimen is preferred.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	
	Ambient	7 days	

CPT Code Information: 82633

DCORT 11-Deoxycortisol, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL Collection Instructions: Morning (8 a.m.) specimen is preferred.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82634

F11DX 75673

11-Desoxycortisol

Specimen Requirements: Collection Container/Tube: Red-Top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Serum must be separated from cells within 45 minutes of venipuncture. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.2 mL (Note: Minimum volume does not allow for repeat analysis)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)		
	Ambient	72 hours	
	Refrigerated	72 hours	

CPT Code Information: 82634

THCMX 62744

11-nor-Delta-9-Tetrahydrocannabinol-9-Carboxylic Acid (Carboxy-THC) Confirmation, Chain of Custody, Meconium

Specimen Requirements: Container/Tube: Chain-of-Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required. Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen. Additional Information: Specimens that arrive with a broken seal do not meet the chain of custody requirements.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	28 days	
	Refrigerated	21 days	
	Ambient	14 days	

CPT Code Information: 80349; G0480 (if appropriate);

THCM
84284

11-nor-Delta-9-Tetrahydrocannabinol-9-Carboxylic Acid (Carboxy-THC) Confirmation, Meconium

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288)
Container/Tube: Stool container Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	28 days	
	Refrigerated	21 days	
	Ambient	14 days	

CPT Code Information: 80349; G0480 (if appropriate);

F143P
75516

14-3-3 eta Protein

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top/SST acceptable
Specimen Volume: 1mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum ambient in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Ambient (preferred)	7 days	
	Frozen	365 days	
	Refrigerated	7 days	

CPT Code Information: 83520

17OHP
81151

17-Hydroxypregnenolone, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	28 days	
	Refrigerated	28 days	

CPT Code Information: 84143

OHPG 9231

17-Hydroxyprogesterone, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 0.6 mL Additional Information: Indicate patient's age and sex.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 83498

FHC18 75675

18-Hydroxycorticosterone, Serum

Specimen Requirements: Collection Container/Tube: Red-Top Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Serum must be separated from cells within 45 minutes of venipuncture. Spin down and send 3 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 1 mL (NOTE: Minimum volume does not allow for repeat analysis.)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Ambient	24 hours	
	Refrigerated	24 hours	

CPT Code Information: 82542

GLIOF 35272

1p/19q Deletion in Gliomas, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Six consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Four consecutive, unstained, 5-micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Tissue	Ambient (preferred)
	Refrigerated

CPT Code Information: 88271x2, 88291- DNA probe, each (first probe set), Interpretation and report; 88271x2- DNA probe, each; each additional probe set (if appropriate); 88271x1- DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2- DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3- DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274- w/modifier 52- Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274- Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate);

BPGMM 63208 2,3-Bisphosphoglycerate Mutase, Full Gene Sequencing Analysis, Varies

Specimen Requirements: Submit only 1 of the following specimens: Patient Preparation: Bone marrow transplants preclude accurate germline and genetic variant analysis. Please inform the laboratory if this patient has undergone bone marrow transplantation. On rare occasions transfusion of blood products can preclude accurate genetic variant analysis and results should be interpreted with caution if performed after recent transfusion (within 4 months). Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD), green top (sodium heparin) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in the original tube. Stability Information: Ambient 14 days (preferred)/Refrigerate 30 days Specimen Type: Extracted DNA from whole blood Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen 2. Provide volume and concentration of the DNA Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 50 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted Molecular Pathology procedure

23BPT 606357 2,3-Dinor 11 Beta-Prostaglandin F2 Alpha, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Patients taking aspirin or nonsteroidal anti-inflammatory drugs (NSAID) may have decreased concentrations of prostaglandin F2 alpha. If possible, discontinue for 2 weeks or 72 hours, respectively, prior to collecting a specimen. Supplies: Plastic, 5-mL tube (T465) Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. No preservative preferred. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	8 hours	

CPT Code Information: 84150

23BPR
606356

2,3-Dinor 11 Beta-Prostaglandin F2 Alpha, Random, Urine

Specimen Requirements: Patient Preparation: Patients taking aspirin or nonsteroidal anti-inflammatory drugs (NSAID) may have decreased concentrations of prostaglandin F2 alpha. If possible, discontinue for 2 weeks or 72 hours, respectively, prior to collecting a specimen. Supplies: Plastic, 5-mL tube (T465) Specimen Volume: 5 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	8 hours	

CPT Code Information: 84150; 82570;

20HGP
608030

2-Hydroxyglutaric Aciduria Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479

21DOC
89477

21-Deoxycortisol, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL Collection Instructions: Morning (8 a.m.) specimen is preferred.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	

Frozen	21 days
Ambient	14 days

CPT Code Information: 82542

21OH
607788

21-Hydroxylase Antibodies, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial to remove from cells or gel prior to shipping.

Specimen Minimum Volume: 0.20 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	14 days	

CPT Code Information: 83516

CYPZ
37445

21-Hydroxylase Gene (CYP21A2), Full Gene Analysis, Varies

Specimen Requirements: Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Prenatal Specimens Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Acceptable Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Amniotic Fluid: 10 mL Blood: 1 mL Chorionic Villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81405-CYP21A2 (cytochrome P450, family 21, subfamily A, polypeptide2) (eg, steroid 21-hydroxylase isoform, congenital adrenal hyperplasia), full gene sequence ; 81402-CYP21A2 (cytochrome P450, family 21, subfamily A, polypeptide2) (eg, congenital adrenal hyperplasia, 21-hydroxylase deficiency), common variants (eg, IVS2-13G, P30L, I172N, exon 6 mutation cluster [I235N, V236E, M238K], V281L, L307FfsX6, Q318X, R356W, P453S, G110VfsX21, 30-kb deletion variant); ; Fibroblast Culture for Genetic Test; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); ; Amniotic Fluid Culture/Genetic Test; 88235-Tissue culture for amniotic fluid (if appropriate); 88240-Cryopreservation (if appropriate); ; Maternal Cell Contamination, B; 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing,

post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells (if appropriate);

DD22F 35246

22q11.2 Deletion/Duplication, FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Supplies:

Refrigerate/Ambient Shipping Box, 5 lb (T329) Specimen Type: Amniotic fluid Container/Tube:

Amniotic fluid container Specimen Volume: 20-25 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Provide gestational age at the time of amniocentesis. 2. Discard the first 2 mL of amniotic fluid. 3. Place the tubes in a Refrigerate/Ambient Shipping Box, 5 lb (T329). 4. Fill remaining space with packing material. Additional Information: 1. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 2. Bloody specimens are undesirable. 3. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 4. Results will be reported and also telephoned or faxed, if requested. Supplies: Hank's Solution (T132) Specimen Type: Autopsy Container/Tube: Sterile container with sterile Hank's solution (T132), Ringer's solution, or normal saline Specimen Volume: 1

cm(3) biopsy specimen of muscle/fascia from the thigh Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis. Specimen Type: Blood Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. Supplies: CVS Media (RPMI) and Small Dish (T095) Specimen

Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-25 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer chorionic villi to a Petri dish containing transport medium (Such as CVS Media (RPMI) and Small Dish [T095]). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Type: Fixed cell pellet

Container/Tube: Sterile container with a 3:1 fixative (methanol:glacial acetic acid) Specimen Volume: Entire specimen Supplies: Hank's Solution (T132) Specimen Type: Products of conception or stillbirth Container/Tube: Sterile container with sterile Hank's solution (T132), Ringer's solution, sterile RPMI transport media, or normal saline Specimen Volume: 1 cm(3) of placenta (including 20 mg of chorionic villi) and a 1-cm(3) biopsy specimen of muscle/fascia from the thigh Collection Instructions If a fetus cannot be specifically identified, collect villus material or tissue that appears to be of fetal origin.

Additional Information: Do not send entire fetus. Supplies: Hank's Solution (T132) Specimen Type: Skin biopsy Container/Tube: Sterile container with sterile Hank's solution (T132), Ringer's solution, or normal saline Specimen Volume: 1-cm(3) biopsy specimen of muscle/fascia from the thigh Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. A local anesthetic may be used. 5. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis.

Additional Information: Do not send entire fetus. Supplies: Hank's Solution (T132) Specimen Type: Skin biopsy Container/Tube: Sterile container with sterile Hank's solution (T132), Ringer's solution, or normal saline Specimen Volume: 1-cm(3) biopsy specimen of muscle/fascia from the thigh Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. A local anesthetic may be used. 5. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis.

Specimen Minimum Volume: Amniotic Fluid: 5 mL; Autopsy, Skin Biopsy: 4 mm; Blood: 2 mL; Chorionic Villi: 5 mg; Fixed Cell Pellet: 1 pellet; Products of Conception: 1 cm(3)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271 x 1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88273 w/modifier 52-Chromosomal in situ hybridization, less than 10 cells (if appropriate); 88273-Chromosomal in situ hybridization, 10-30 cells (if appropriate); 88274 w/modifier

52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

25HDN
83670

25-Hydroxyvitamin D2 and D3, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 82306

2425D
63416

25-Hydroxyvitamin D:24,25-Dihydroxyvitamin D Ratio, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Specimen Volume: 3 mL
Collection Instructions: Spin down within 2 hours of draw.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 82306; 82542;

HMGCR
607414

3-Hydroxy-3-Methylglutaryl Coenzyme-A (HMG-CoA) Reductase, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 2 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 82397**3MT**
65157**3-Methoxytyramine, 24 Hour, Urine**

Specimen Requirements: Patient Preparation: Tricyclic antidepressants, labetalol, and sotalol medications may elevate levels of catecholamines producing results that cannot be interpreted. If clinically feasible, it is optimal to discontinue these medications at least 1 week before collection. Levodopa (Sinemet) medication will cause false-positive results. For advice on assessing the risk of removing patients from these medications and alternatives, consider consultation with a specialist in endocrinology or hypertension. Supplies: Urine Tubes, 10 mL (T068) Submission Container/Tube: Plastic urine tube Specimen Volume: 10 mL Collection Instructions: 1. Complete 24-hour urine collections are preferred, especially for patients with episodic hypertension; ideally the collection should begin at the onset of a "spell." 2. Collect urine for 24 hours. 3. Add 10 g (pediatric: 3 g) of boric acid or 25 mL (pediatric: 15 mL) of 50% acetic acid as preservative at start of collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	90 days	
	Ambient	28 days	

CPT Code Information: 82542**3MGAP**
608034**3-Methylglutaconic Aciduria Panel, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443**F5NUL**
57285**5'Nucleotidase**

Specimen Requirements: Specimen Type: Serum Container/Tube: SST or Red Specimen Volume: 1 mL Collection Instructions: Draw blood in a serum gel tube(s), plain red-top tube(s) is acceptable. Spin

down and send 1 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	14 days	
	Ambient	4 hours	

CPT Code Information: 83915

FLUC 82741

5-Flucytosine, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL Collection Instructions: 1. Serum for a peak level should be drawn 1 to 2 hours after oral dose or 30 minutes after intravenous infusion. Trough specimens should be drawn immediately prior to next scheduled dose. 2. Spin down within 2 hours of draw.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80299

FHIAA 75515

5-HIAA (5-Hydroxyindoleacetic acid), Plasma

Specimen Requirements: Patient preparation: Patient should fast overnight prior to collection of specimen. Specimen Type: Plasma Container/Tube: Z tube Specimen Volume: 3 mL Collection Instructions: Draw 10 mL of blood in special Z-tube (MCL T701). Separate plasma from cells immediately after draw and send 3 mL of plasma frozen in plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	90 days	

CPT Code Information: 83497

F5HAR 57333

5-Hydroxyindoleacetic Acid (5-HIAA), Random Urine with Creatinine

Specimen Requirements: 10 mL random urine, after collection add 6N HCL to maintain a pH below 3. Submit in a sterile screw capped container shipped ambient. Note: 1. Urine without preservative is acceptable if pH is below 6 and shipped frozen. 2. Dietary Instructions: - Patient should avoid food high in indoles: avocado, banana, tomato, plum, walnut, pineapple, and eggplant. - Patient should also avoid tobacco, tea and coffee three days prior to specimen collection.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Ambient (preferred)	7 days	
	Frozen	30 days	
	Refrigerated	30 days	

CPT Code Information: 82570/other source; 83497/Hydroxyindoleacetic acid, 5-(HIAA);

HIAA 9248

5-Hydroxyindoleacetic Acid, 24 Hour, Urine

Specimen Requirements: Patient Preparation: 1. Some medications could interfere with test results. The ordering provider should decide if any medications should be stopped and when they should be restarted. If clinically feasible, discontinue the following medications at least 48 hours prior to, as well as during, specimen collection: -Acetaminophen (Tylenol or generic versions) -Aspirin -Antihistamines -Cough syrups -Cold and flu medications 2. For 48 hours prior to, as well as during, the urine collection, the patient should: Limit the following to 1 serving per day: -Fruits -Vegetables -Nuts -Caffeinated beverages or foods Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10 mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a 24-hour urine specimen. 2. Add 25 mL of 50% acetic acid as preservative at start of collection. Use 15 mL of 50% acetic acid for children <5 years old. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	56 days	
	Frozen	365 days	

CPT Code Information: 83497

F5M 57101

5-Methyltetrahydrofolate

Specimen Requirements: Medical Neurogenetics collection kit (T657) required. Each collection kit contains 5 microcentrifuge tubes. COLLECTION PROTOCOL: 1) CSF should be collected from the first drop into the tubes in the numbered order. Fill each tube to the marked line with the required volumes Tube 1: 0.5 mL Tube 2: 1.0 mL Tube 3: 1.0 mL (contains antioxidants necessary to protect the sample integrity) Tube 4: 1.0 mL Tube 5: 1.0 mL - If sample's not blood contaminated, the tubes should be placed on dry ice at bedside - If sample's are blood contaminated, the tubes should immediately be centrifuged (prior to freezing) and the clear CSF transferred to new similarly labeled tubes, then frozen - Store samples at -80 until they can be shipped 2) Complete Medical Neurogenetics, LLC request form. Include test required, sample date and date of birth. 3) Label tubes with patient name and ID number, leaving the tube number viewable. 4) Place samples inside a specimen transport bag and the Medical

Neurogenetics, LLC request form inside the pouch of the transport bag. 5) Ship samples frozen on dry ice.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen		CSF KIT

CPT Code Information: 82542

MAMMX
62732

6-Monoacetylmorphine (6-MAM) Confirmation, Chain of Custody, Meconium

Specimen Requirements: Supplies: Chain-of-Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required. Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: 1. Collect entire random meconium specimen. 2. Send specimen frozen. When refrigerated, a significant percentage of 6-MAM will convert to morphine in less than 24 hours. Additional Information: Specimen that arrives with a broken seal does not meet the chain of custody requirements.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen	14 days	

CPT Code Information: 80356; G0480 (if appropriate);

6MAMM
89659

6-Monoacetylmorphine (6-MAM), Confirmation, Meconium

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288) Container/Tube: Stool container Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: 1. Collect entire random meconium specimen. 2. Send specimen frozen. When refrigerated, a significant percentage of 6-MAM will convert to morphine in less than 24 hours.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen	14 days	

CPT Code Information: 80356; G0480 (if appropriate);

6MAMU
89605

6-Monoacetylmorphine Confirmation, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STATS are not accepted for this test.

Specimen Minimum Volume: 2.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80356; G0480 (if appropriate);**6MAMX**
62708**6-Monoacetylmorphine, Chain of Custody, Random, Urine**

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain-of-Custody Kit containing the specimen containers, seals, and documentation required. Specimen Volume: 10 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing.

Specimen Minimum Volume: 2.1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80356; G0480 (if appropriate);**F68KD**
91494**68kD (hsp-70)**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 3 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 2.0 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	365 days	
	Refrigerated	5 days	
	Ambient	48 hours	

CPT Code Information: 84182**7AC4**
607699**7AC4, Bile Acid Synthesis, Serum**

Specimen Requirements: Patient Preparation: 1. Patient must be fasting for at least 12 hours; fasting morning specimen is preferred. 2. Patient should not be taking bile acid sequestrants or statins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic

vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge and aliquot 1 mL of serum into plastic vial. 2. Send specimen frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Refrigerated	72 hours	
	Ambient	24 hours	

CPT Code Information: 82542

A1R
113437

A1 Antigen Subtype, Whole Blood

Specimen Requirements: Container/Tube: Pink top (EDTA) Submission Container/Tube: Original tube Collection Instructions: Send specimen in original tube.

Specimen Minimum Volume: Pediatric: 2 mL blood in 6 mL EDTA tube

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Ambient	72 hours	

CPT Code Information: 86905

G111
63686

Abnormal Transferrin CDG Panel (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 81443; ;

ABONR
113498

ABO/Rh Newborn, RBC

Specimen Requirements: Container/Tube: EDTA Micro tube Specimen Volume: 0.5 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	10 days	
	Ambient	4 days	

CPT Code Information: 86900-ABO Typing; 86901-Rh Typing;

ABOMR 113490

ABORh, RBC

Specimen Requirements: Container/Tube: Pink top (EDTA) Specimen Volume: 6 mL

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	10 days	
	Ambient	4 days	

CPT Code Information: 86900-ABO; 86901-Rh;

ACAC 82757

Acacia, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

ACARP 64717

Acanthamoeba species Molecular Detection, PCR, Ocular

Specimen Requirements: The preferred specimen for this test is corneal scraping or biopsy. Submit only 1 of the following specimens: Specimen Type: Tissue, fresh Sources: Ocular Container/Tube: Sterile container Specimen Volume: 5-10 mm Collection Instructions: Submit tissue in a sterile container with 1 mL of sterile saline, minimal essential media (MEM), or viral transport media. Preferred Paraffin-embedded tissue block: Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Ocular Container/Tube: Tissue block Collection Instructions: Submit a FFPE tissue block to be cut and returned. Acceptable Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Ocular Container/Tube: Sterile container for each individual cut section (scroll). Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission. Specimen Type: Scrapings, swabs Sources: Eye, ocular, cornea Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: 1. Collect corneal scrapings using a scalpel or other sharp device to remove the outer layer of cells from the eye. 2. Swish the collection device in 1 mL of sterile saline, minimal essential media (MEM), or viral transport media. 3. Remove the collection device from the collection container before submitting to the lab. 4. Specimens containing scalpel blades will be canceled. Additional Information: Swabs are not the preferred specimen for this test and may yield false-negative results. Specimens collected using wooden shafted swabs and calcium alginate-tipped swabs will be canceled. Specimen Type: Contact lenses Container/Tube: Sterile container Specimen Volume: Entire collection Collection Instructions: 1. Place entire contact lens in a sterile container with 1 mL sterile saline, contact lens solution, viral transport media, or minimal essential media (MEM). 2. Right and Left lenses must be submitted individually using

multiple sterile containers or in the original contact lens case. Multiple orders must be created. 3. Indicate Right or Left in the specimen source. Specimen Type: Contact lens solution Container/Tube: Sterile container Specimen Volume: 1 mL solution Specimen Type: Contact lens cases without lenses Container/Tube: Sterile container Specimen Volume: 1 mL solution or entire case Additional Information: 1. Depending on the type of case submitted, it may be necessary to test right and left chambers individually. Multiple orders must be created. 2. Indicate Right or Left in the specimen source.

Specimen Minimum Volume: Tissue: 5 mm biopsy Scrapings: 0.5 mL Contact Lens Solution: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

ACAR 82850

Acarus siro, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FACET 57707

Acetaminophen (Tylenol, Datril), Urine

Specimen Requirements: Collect 10 mL random urine without preservatives. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	365 days	
	Ambient	72 hours	

CPT Code Information: 80143

ACMA
37030**Acetaminophen, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	24 hours	

CPT Code Information: 80143

FACES
75388**Acetoacetate, Serum**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Specimen Volume: 3 mL Draw blood in a plain, red-top tube(s). Serum gel tube is not acceptable. Spin down and send 3 mL of serum frozen in a plastic, preservative-free vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 82010

ARBI
8338**Acetylcholine Receptor (Muscle AChR) Binding Antibody, Serum**

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 83519

ACMFS
610029

Acetylcholine Receptor Modulating Antibody, Flow Cytometry Assay, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see: MGLE / Myasthenia Gravis (MG)/Lambert-Eaton Myasthenic Syndrome (LEMS) Evaluation, Serum MGMR / Myasthenia Gravis Evaluation with MuSK Reflex, Serum PAVAL / Paraneoplastic, Autoantibody Evaluation, Serum Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255

ACHE_
9287

Acetylcholinesterase, Amniotic Fluid

Specimen Requirements: Container/Tube: Amniotic fluid container Specimen Volume: 1 mL
Collection Instructions: A specimen from the 14 to 18 week gestational period of pregnancy is preferred. Amniotic fluid from the 14 to 21 week gestational period is acceptable.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Amniotic Fld	Refrigerated (preferred)	365 days	
	Frozen	365 days	
	Ambient	14 days	

CPT Code Information: 82013

ACHS
8522

Acetylcholinesterase, Erythrocytes

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	72 hours	

CPT Code Information: 82482

ASCL1
71355

Achaete-Scute Homolog 1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GAAWR
606281

Acid Alpha-Glucosidase Reflex, Leukocytes

Specimen Requirements: Only orderable as a reflex. For more information see LSD6W / Lysosomal Storage Disorders, Six-Enzyme Panel, Leukocytes.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	
	Ambient	6 days	

CPT Code Information: 82542

GAAW
606267

Acid Alpha-Glucosidase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	
	Ambient	6 days	

CPT Code Information: 82657

ASMW
606264

Acid Sphingomyelinase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	
	Ambient	6 days	

CPT Code Information: 82657

SAFB 8213

Acid-Fast Smear for Mycobacterium, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Type: Bone marrow Container/Tube: SPS/Isolator System or green top (lithium heparin) Specimen Volume: Entire collection Specimen Type: Gastric washing Container/Tube: Sterile container Specimen Volume: 10 mL Collection Instructions: Neutralize specimen within 4 hours of collection with 100 mg of sodium carbonate per 5 to 10 mL of gastric wash. Specimen Type: Respiratory Sources: Bronchoalveolar lavage fluid, bronchial washing, sputum Container/Tube: Sterile container Specimen Volume: 4 mL Collection Instructions: Collect 3 respiratory specimens for acid-fast smears and culture in patients with clinical and chest X-ray findings compatible with tuberculosis. These 3 specimens should be collected at 8- to 24-hour intervals (24 hours when possible) and should include at least 1 first-morning specimen. Specimen Type: Stool Supplies: Stool Collection Kit, Random (T635) Container/Tube: Sterile container Specimen Volume: 5-10 g Specimen Type: Tissue Container/Tube: Sterile container Specimen Volume: 5-10 mm Collection Instructions: Collect a fresh tissue specimen. Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: Collect a random urine specimen. Specimen Type: Swab Additional Information: Fresh tissue or body fluid is the preferred specimen type instead of a swab specimen. Recovery of mycobacteria and aerobic actinomycetes from swabs is variable. Sources: Wound, tissue, or body fluid Container/Tube: Culture transport swab (noncharcoal) Culturette Specimen Volume: Adequate specimen Collection Instructions: 1. Before collecting specimen, wipe away any excessive amount of secretion and discharge, if appropriate. 2. Obtain secretions or fluid from source with sterile swab. 3. If smear and culture are requested or both a bacterial culture and mycobacterial culture are requested, collect a second swab to maximize test sensitivity.

Specimen Minimum Volume: Varies; If mycobacterial culture is also requested, then 1.5 mL for body fluid, 3 mL for respiratory specimen, or a pea-sized piece of fresh tissue. If smear only is requested, then 0.5 mL for body fluid, 3 mL for respiratory specimen, or a pea-sized piece of fresh tissue.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Ambient	7 days	

CPT Code Information: 87206; 87176-Tissue processing (if appropriate); 87015-Mycobacteria culture, concentration (if appropriate);

SMACN 70551

Actin, Smooth Muscle (SMActin) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

ACT 8221

Actinomyces Culture, Varies

Specimen Requirements: Supplies: Anaerobe Transport Tube (T588) Specimen Type: Abscesses, intrauterine devices, percutaneous transtracheal aspirates, sterile body fluids, suprapubic aspirations, wounds Specimen Volume: Entire specimen

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	72 hours

CPT Code Information: 87075-Actinomyces culture; 62258-Id MALDI-TOF Mass Spec Anaerobe (if appropriate); 87153-Anaerobe identification by sequencing (if appropriate); 87176-Tissue processing (if appropriate);

APMSC 602182

Activated Partial Thromboplastin Time (APTT) Mix 1:1, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85732

APTSC 602172

Activated Partial Thromboplastin Time (APTT), Plasma

Specimen Requirements: Only orderable as part of a special coagulation profile or as a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85730

APTTP 40935

Activated Partial Thromboplastin Time, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge, remove plasma and centrifuge plasma again. 2. Aliquot plasma into plastic vial leaving 0.25 mL in the bottom of centrifuged vial. Additional Information: Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen (preferred)	30 days	
	Ambient	4 hours	

CPT Code Information: 85730

APCRV 81967

Activated Protein C Resistance V (APCRV), Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Polypropylene vial Specimen Volume: 1 mL Collection Instructions: 1. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 2. Centrifuge, transfer all plasma into a vial, and centrifuge plasma again. 3. Aliquot plasma into a vial leaving 0.25 mL in the bottom of centrifuged vial. 4. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. If priority specimen, mark request form, give reason, and request a call-back. 3. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85307

APCRR 60547

Activated Protein C Resistance V, with Reflex to Factor V Leiden, Blood and Plasma

Specimen Requirements: Blood and plasma are required. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or light-blue top

(3.2% sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Type: Platelet-poor plasma Patient Preparation: Fasting preferred Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Polypropylene vial Specimen Volume: 1 mL Collection Instructions: 1. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 2. Within 4 hours of collection, centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 3. Aliquot plasma into separate plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 4. Freeze plasma aliquot immediately at -20°C, or, ideally < or = -40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: Plasma: 0.5 mL Whole Blood: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	
Whole blood	Ambient (preferred)	14 days	
	Frozen	14 days	
	Refrigerated	14 days	

CPT Code Information: 85307

AHEP 56105

Acute Hepatitis Profile, Serum

Specimen Requirements: Both 0.5 mL of refrigerated serum and 2.5 mL of frozen serum are preferred for this test. Patient Preparation: For 24 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions. 2. Transfer 0.5 mL serum into an aliquot tube labeled as HAIGM, and ship refrigerate (required). 3. Transfer remaining 2.5 mL serum into a second aliquot tube labeled as SST Serum, and ship frozen (preferred).

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated	5 days	
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	5 days	

CPT Code Information: 80074 (if all 4 initial tests are performed); 86709 (if all 4 are not performed); 86705 (if all 4 are not performed); 87340 (if all 4 are not performed); 86803 (if all 4 are not performed); 87522 (if appropriate); 87341 (if appropriate);

COGMF 113528

Acute Myeloid Leukemia (AML), Children's Oncology Group Enrollment Testing, FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type:

Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1 to 2 mL Collection Instructions: Invert several times to mix bone marrow. Acceptable: Specimen Type: Blood Container/Tube: Green top (sodium heparin) Specimen Volume: 6 mL Collection Instructions: Invert several times to mix blood.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

AMLF 35255

Acute Myeloid Leukemia (AML), FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Green top (sodium heparin) Specimen Volume: 7-10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1-2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

APGP 608015

Acute Porphyria Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81405; 81406 x2; 81479;

FACYS **75396**

Acyclovir, Plasma

Specimen Requirements: Draw blood in EDTA (lavender top) tube(s) (Plasma gel tube is not acceptable.) Spin down and send 1 mL of plasma refrigerate in preservative-free plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	30 days	
	Frozen	120 days	
	Ambient	30 days	

CPT Code Information: 80299

ACRN **82413**

Acylcarnitines, Quantitative, Plasma

Specimen Requirements: Patient Preparation: Collect specimen just prior to a scheduled meal or feeding. Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.1 mL Collection Instructions: Centrifuge and aliquot plasma.

Specimen Minimum Volume: 0.04 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen (preferred)	92 days	
	Refrigerated	64 days	
	Ambient	8 days	

CPT Code Information: 82017

ACRNS **60644**

Acylcarnitines, Quantitative, Serum

Specimen Requirements: Patient Preparation: Collect specimen just prior to a scheduled meal or feeding. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.1 mL Collection Instructions: Centrifuge and aliquot

serum.

Specimen Minimum Volume: 0.04 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	60 days	
	Refrigerated	21 days	
	Ambient	72 hours	

CPT Code Information: 82017

AGU20 608909

Acylglycines, Quantitative, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Pediatric: If insufficient collection volume, submit as much specimen as possible in a single container; the laboratory will determine if volume is sufficient for testing. Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	416 days	
	Refrigerated	9 days	

CPT Code Information: 82542

ADALX 64863

Adalimumab Quantitative with Reflex to Antibody, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	

CPT Code Information: 80145; 83520 (if appropriate);

ADM13 61212

ADAMTS13 Activity and Inhibitor Profile, Plasma

Specimen Requirements: Patient Preparation: Fasting preferred Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vials Specimen Volume: 2 mL in 2 plastic vials each containing 1 mL Collection Instructions: 1. Specimen must be drawn prior to

replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma (1 mL per aliquot) into 2 separate plastic vials, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. If priority specimen, mark request form, give reason, and request a call-back. 3. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85397-ADAMTS13 activity assay; 85335-ADAMTS13 inhibitor screen assay (if appropriate); 85335-ADAMTS13 Bethesda titer (if appropriate);

ADMBU 61214

ADAMTS13 Inhibitor Bethesda Titer

Specimen Requirements: Only orderable as part of a profile. For more information see ADM13 / ADAMTS13 Activity and Inhibitor Profile, Plasma.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85335

ADMIS 61213

ADAMTS13 Inhibitor Screen Assay

Specimen Requirements: Only orderable as part of a profile. For more information see ADM13 / ADAMTS13 Activity and Inhibitor Profile, Plasma.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85335

ADSTM 62206

Additional Flow Stimulant (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient		

CPT Code Information: 86353

AGSTM 62208

Additional Flow Stimulant, LPAGF (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient		

CPT Code Information: 86353

MGSTM 62207

Additional Flow Stimulant, LPMGF (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient		

CPT Code Information: 86353

XSRM 607838

Additional Sample for Reflex Oligoclonal Banding, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see: -MSP3 / Multiple Sclerosis (MS) Profile, Serum and Spinal Fluid -OLIG / Oligoclonal Banding, Serum and Spinal Fluid Specimen Type: Serum Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge and aliquot serum within 2 hours of collection. 2. Label specimen as serum.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	14 days	
	Ambient	14 days	
	Refrigerated	14 days	

VID2 45455

Additional Testing Virus Ident

Specimen Requirements: This test is for Billing Purposes Only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87253**FADCF**
75666**Adenosine Deaminase in CSF****Specimen Requirements:** Collect CSF in a leak-proof container. Centrifuge specimen at room temperature and send 0.5 mL frozen.**Specimen Minimum Volume:** 0.2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	30 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 84311**FADFL**
75665**Adenosine Deaminase in Peritoneal Fluid****Specimen Requirements:** Specimen Type: Peritoneal fluid (Ascites, Paracentesis) Container/Tube: Standard transport container Specimen volume: 0.5 mL Collection Instructions: Collect Peritoneal Fluid in a leak-proof container. Centrifuge specimen at room temperature, transfer 0.5 mL peritoneal fluid to plastic vial and Ship frozen. The specimen must remain frozen until received at the performing lab.**Specimen Minimum Volume:** 0.2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Peritoneal	Frozen (preferred)	30 days	
	Refrigerated	7 days	

CPT Code Information: 84311**FADDP**
75667**Adenosine Deaminase, Pericardial Fluid****Specimen Requirements:** Specimen Type: Pericardial Fluid Sources: Pericardial Fluid Container/Tube: Standard Transport Tube Specimen Volume: 0.5 mL Collection Instructions: Collect Pericardial Fluid in a leak-proof container. Centrifuge specimen at room temperature, transfer 0.5 mL pericardial fluid to plastic vial and freeze. Note: Specimen must remain frozen until received at performing lab.**Specimen Minimum Volume:** 0.2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Body Fluid	Frozen (preferred)	30 days	
	Refrigerated	7 days	

CPT Code Information: 84311

FADPF 75664

Adenosine Deaminase, Pleural Fluid

Specimen Requirements: Specimen Type: Pleural Fluid Sources: Pleural Fluid Container/Tube: Standard Transport Tube Specimen Volume: 0.5 mL Collection Instructions: Collect Pleural fluid in a leak proof container; centrifuge specimen at room temperature, transfer 0.5 mL to standard tube and freeze. Ship frozen. Note: Specimen must remain frozen until received at performing lab.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Pleural Fluid	Frozen (preferred)	30 days	
	Refrigerated	7 days	

CPT Code Information: 84311

FADBC 75553

Adenosine Deaminase, RBC

Specimen Requirements: Specimen Type: Whole Blood Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL Collection Instructions: Draw blood in a lavender-top (EDTA), or green-top (sodium or lithium heparin) tube(s). Send 1 mL EDTA or Sodium or Lithium heparin whole blood refrigerate.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	15 days	
	Ambient	15 days	

CPT Code Information: 84311

FADE 91670

Adenovirus DNA, Quantitative Real-Time PCR

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Respiratory Sources: Bronchial lavage or wash, nasopharyngeal lavage or wash, sputum, or tracheal lavage or wash Container/Tube: Sterile, plastic, leak-proof container Specimen Volume: 1 mL Other acceptable specimens: Specimen Type: Fluid Source: Spinal Fluid Container/Tube: Sterile, plastic, leak-proof vial Specimen Volume: 1 mL Specimen Type: Urine Container/Tube: Sterile, plastic, leak-proof container Specimen Volume: 1 mL Specimen Type: Whole Blood Container/Tube: Lavender top (EDTA) or yellow-top (ACD) Specimen Volume: 1 mL Additional Information: Draw blood in a

lavender-top (EDTA) tube(s) or yellow-top (ACD) tube(s) and send 1 mL whole blood refrigerated (DO NOT FREEZE). Specimen Type: Serum Collection Container/Tube: Red-top Submission Container/Tube: 12x75 mm screw capped vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s). Spin down and send 1 mL serum in a plastic, screw-capped vial. Send specimen refrigerated. Specimen Type: Plasma Collection Container/Tube: yellow-top (ACD) or lavender-top (EDTA) Submission Container/Tube: 12x75 mm screw capped vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a yellow-top (ACD) or lavender-top (EDTA) tube(s). Spin down and transfer 1 mL ACD or EDTA plasma into a plastic, screw-capped vial. Send specimen refrigerated.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	48 hours	

CPT Code Information: 87799

ADV 70352

Adenovirus Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LCADP 89887

Adenovirus, Molecular Detection, PCR, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Screw-capped, sterile container Specimen Volume: 1 mL Collection Instructions: Spin down promptly.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

LADV 89074

Adenovirus, Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Sources: Pleural, peritoneal, ascites, pericardial, or amniotic Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Respiratory Sources: Bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Stool Supplies: Stool Collection Kit, Random (T635) Container/Tube: Sterile container Specimen Volume: 1 g Specimen Type: Swab Supplies: -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Sources: Nasal, throat, respiratory, genital, or ocular Container/Tube: Multimicrobe media (M4-RT) and Eswabs Specimen Volume: Entire specimen Collection Instructions: Place swab back into a multimicrobe media (M4-RT, M4, or M5). Specimen Type: Tissue Supplies: -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Container/Tube: Sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT, M4, or M5) Specimen Volume: Entire collection Collection Instructions: Collect fresh tissue specimen. Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: Body Fluid, Respiratory Specimen, Spinal Fluid, or Urine: 0.3 mL Stool: 0.5 g Swab or Tissue: NA

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

AKC 608421

Adenylate Kinase Enzyme Activity, Blood

Specimen Requirements: Only available as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -EEEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 82657

AK1 607455

Adenylate Kinase Enzyme Activity, Blood

Specimen Requirements: Collection Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 82657

FADIO 75607

Adiponectin

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Acceptable: Serum separator tube Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial. Note: Overnight fasting is required.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 83520

ACC 604986

Adrenal Mass Panel, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Tubes, 5 mL (T465) Container/Tube: Plastic urine tube Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for a full 24 hours (required) and record the total volume. 2. Do not add preservatives. Specimens containing preservatives will be canceled. 3. Entire 24 hour collection must be mixed well prior to aliquoting into a 5 mL plastic tube.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	90 days	
	Refrigerated	14 days	

CPT Code Information: 0015M

RACTH 82140

Adrenocorticotrophic Hormone, ACTH, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

ACTHI 70351

Adrenocorticotrophic Hormone (ACTH) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

ACTH 8411

Adrenocorticotrophic Hormone, Plasma

Specimen Requirements: Patient Preparation: For the 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Ice-cooled, lavender top (EDTA) Submission Container/Tube: Plastic, 5 mL, aliquot tube Specimen Volume: 1 mL Collection Instructions: 1. Morning (6 a.m.-10:30 a.m.) specimen is desirable. 2. Collect with a pre-chilled lavender top (EDTA) tube and transport to the laboratory on ice. 3. Centrifuge at refrigerated temperature within 2 hours and immediately separate plasma from cells. 4. Immediately freeze plasma.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	28 days	
	Refrigerated	3 hours	
	Ambient	2 hours	

CPT Code Information: 82024

ADLTX 62710

Adulterants Survey, Chain of Custody, Random, Urine

Specimen Requirements: Container/Tube: Chain-of-Custody Kit (T282) containing the specimen containers, seals, and documentation required. Specimen Volume: 20 mL Collection Instructions: Collect specimen in the provided container, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 20 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 81005

ADULT 29345

Adulterants Survey, Random, Urine

Specimen Requirements: Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody information, see ADLTX / Adulterants Survey, Chain of Custody, Random, Urine. 2. Submitting less than 20 mL may compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 81005

ISAE 45246

Aerobe Identification by Sequencing (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87153

AERMC 604916

Aeromonas Culture, Feces

Specimen Requirements: Patient Preparation: Medications: Do not use barium or bismuth before collection of specimen. Supplies: C and S Vial (T058) Specimen Type: Preserved Feces Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in

preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Ambient (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 87046-Aeromonas Culture, Feces-with isolation and preliminary examination; 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate);

STAC
61018

Ag-Nor/CBL Stain (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88283

AGXTZ
35348

AGXT Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: Specimen preferred to arrive within 96 hours of draw.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure

ALT
8362

Alanine Aminotransferase (ALT) (GPT), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 84460

ALB24
606718

Albumin, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Tubes, 5 mL (T465) Container/Tube: Plastic urine tube Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. Mix well before taking 4-mL aliquot. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	7 days	

CPT Code Information: 82043

ALBFL
60622

Albumin, Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	24 hours	

CPT Code Information: 82042

RALB
603287

Albumin, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	7 days	

CPT Code Information: 82043; 82570;

ALBR 609731

Albumin, Random, Urine

Specimen Requirements: Patient Preparation: Heavy exercise should be avoided prior to collection. Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	7 days	

CPT Code Information: 82043; 82570;

RALB1 606730

Albumin, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see: ALBR / Albumin, Random, Urine RALB / Albumin, Random, Urine. Supplies: Aliquot Tube, 5 mL (T465) Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	7 days	

CPT Code Information: 82043

ALB 8436

Albumin, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	150 days	
	Frozen	120 days	

CPT Code Information: 82040**ALBS1**
610525**Albumin, Serum**

Specimen Requirements: Only orderable as part of profile. For more information see: SFIG / Cerebrospinal Fluid (CSF) IgG Index Profile, Serum and Spinal Fluid. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	120 days	
	Ambient	7 days	

CPT Code Information: 82040**ALBSF**
68001**Albumin, Spinal Fluid**

Specimen Requirements: Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Label specimen as spinal fluid.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 82042**A_CR**
606732**Albumin/Creatinine Ratio**

Specimen Requirements: Only orderable as part of a profile. For more information see: ALBR / Albumin, Random, Urine RALB / Albumin, Random, Urine.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	7 days	

FALBU 90309

Albuterol, Serum/Plasma

Specimen Requirements: Submit only one of the following specimens: Serum Draw blood in a plain, red-top tube(s). Serum gel tube is not acceptable. Spin down and send 3 mL serum refrigerated in plastic preservative free vial. Plasma Draw blood in a lavender-top or pink top (EDTA) tube(s). Plasma gel tube is not acceptable. Spin down and send 3 mL EDTA plasma refrigerated in plastic preservative free vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	30 days	
	Frozen	365 days	
	Ambient	30 days	

CPT Code Information: 80299

ALS 606872

Aldolase, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge within 1 hour of collection and aliquot serum into plastic vial. 2. Send refrigerated.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	60 days	

CPT Code Information: 82085

ALDNA 15150

Aldosterone with Sodium, 24 Hour, Urine

Specimen Requirements: Patient Preparation: If patient is taking spironolactone (Aldactone), it should be discontinued for 4 to 6 weeks before specimen collection. Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: 2 Plastic, 5-mL tubes Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Add 25 mL of 50% acetic acid as preservative at start of collection. Use 15 mL of 50% acetic acid for children under the age of 5 years. This preservative is intended to achieve a pH of between approximately 2 and 4. 3. Place 5 mL of well mixed, 24-hour urine in plastic, 5-mL

tube and label as Aldosterone. 4. Place 5 mL of well mixed, 24-hour urine in plastic, 5-mL tube and label as Sodium. Additional Information: 1. 24-Hour volume is required. 2. See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens and Renin-Aldosterone Studies for more detailed instructions in Special Instructions.

Specimen Minimum Volume: Aldosterone: 1 mL/Sodium: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	7 days	

CPT Code Information: 82088-Aldosterone; 84300-Sodium;

ALDU 8556

Aldosterone, 24 Hour, Urine

Specimen Requirements: Patient Preparation: If the patient is taking spironolactone (Aldactone), it should be discontinued for 4 to 6 weeks before specimen collection. Supplies: Urine tubes, 10-mL (T068) Container/Tube: Plastic, urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Add 25 mL of 50% acetic acid as preservative at start of collection. Use 15 mL of 50% acetic acid for children under the age of 5 years. This preservative is intended to achieve a pH of between approximately 2 and 4. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens and Renin-Aldosterone Studies for more detailed instructions in Special Instructions.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 82088

APIVC 65425

Aldosterone, Inferior Vena Cava, Plasma

Specimen Requirements: Patient Preparation: The plasma renin activity (PRA) cannot be interpreted if the patient is being treated with spironolactone (Aldactone). Spironolactone should be discontinued for 4 to 6 weeks before testing. Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL Additional Information: See Renin-Aldosterone Studies in Special Instructions for more detailed instructions.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	30 days	

Refrigerated	28 days
Ambient	4 days

CPT Code Information: 82088

AIVC 6503

Aldosterone, Inferior Vena Cava, Serum

Specimen Requirements: Patient Preparation: The plasma renin activity (PRA) cannot be interpreted if the patient is being treated with spironolactone (Aldactone). Spironolactone should be discontinued for 4 to 6 weeks before testing. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.8 mL Additional Information: See Renin-Aldosterone Studies in Special Instructions for more detailed instructions.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	30 days	
	Ambient	4 days	

CPT Code Information: 82088

APLAV 65427

Aldosterone, Left Adrenal Vein, Plasma

Specimen Requirements: Patient Preparation: The plasma renin activity (PRA) cannot be interpreted if the patient is being treated with spironolactone (Aldactone). Spironolactone should be discontinued for 4 to 6 weeks before testing. Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL Additional Information: See Renin-Aldosterone Studies in Special Instructions for more details.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	30 days	
	Refrigerated	28 days	
	Ambient	4 days	

CPT Code Information: 82088

ALAV 6349

Aldosterone, Left Adrenal Vein, Serum

Specimen Requirements: Patient Preparation: The plasma renin activity (PRA) cannot be interpreted if the patient is being treated with spironolactone (Aldactone). Spironolactone should be discontinued for 4 to 6 weeks before testing. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.8 mL Additional Information:

See Renin-Aldosterone Studies in Special Instructions for more details.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	30 days	
	Ambient	4 days	

CPT Code Information: 82088

PALD **65424**

Aldosterone, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Lavender top (EDTA)
Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 8 a.m. draw time (after the patient is active for 2 hours) is recommended; preferably no later than 10 a.m. Additional Information: See Renin-Aldosterone Studies in Special Instructions for more detailed instructions.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	30 days	
	Refrigerated	28 days	
	Ambient	4 days	

CPT Code Information: 82088

APRAV **65426**

Aldosterone, Right Adrenal Vein, Plasma

Specimen Requirements: Patient Preparation: The plasma renin activity (PRA) cannot be interpreted if the patient is being treated with spironolactone (Aldactone). Spironolactone should be discontinued for 4 to 6 weeks before testing. Collection Container/Tube: Lavender top (EDTA)
Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL Additional Information: See Renin-Aldosterone Studies in Special Instructions for more detailed instructions.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	30 days	
	Refrigerated	28 days	
	Ambient	4 days	

CPT Code Information: 82088

ARAV 6348

Aldosterone, Right Adrenal Vein, Serum

Specimen Requirements: Patient Preparation: The plasma renin activity (PRA) cannot be interpreted if the patient is being treated with spironolactone (Aldactone). Spironolactone should be discontinued for 4 to 6 weeks before testing. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.8 mL Additional Information: See Renin-Aldosterone Studies in Special Instructions for more detailed instructions.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	30 days	
	Ambient	4 days	

CPT Code Information: 82088

ALDS 8557

Aldosterone, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 8 a.m. collection time (after the patient is active for 2 hours) is recommended; preferably no later than 10 a.m. Additional Information: See Renin-Aldosterone Studies in Special Instructions for more detailed instructions.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	30 days	
	Ambient	4 days	

CPT Code Information: 82088

FALPE 57945

Alfalfa (Medicago sativa) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	

Ambient

28 days

CPT Code Information: 86003**ALP**
8340**Alkaline Phosphatase, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	60 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 84075**ALKI**
89503**Alkaline Phosphatase, Total and Isoenzymes, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL, divided Collection Instructions: Centrifuge and aliquot serum into 2 tubes, each containing 0.5 mL

Specimen Minimum Volume: 0.5 mL divided into 2 tubes each containing 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	14 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 84075; 84080;**FABP2**
57698**Allergic Bronchopulmonary Aspergillosis Panel II**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 1.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	

Frozen	365 days
Ambient	7 days

CPT Code Information: 86331; 86001; 86003; 82785;

ALLOI 88888

Allo-isoleucine, Blood Spot

Specimen Requirements: Supplies: Card - Blood Spot Collection (Filter Paper) (T493)

Container/Tube: Local newborn screening card Specimen Volume: 2 Blood spots Collection

Instructions: 1. Do not use device or capillary tube containing EDTA to collect specimen. 2. At least 1 spot should be complete and unpunched. 3. An alternative blood collection option for a patient >1 year of age is fingerstick. 4. Include type of feeding information on the collection card. 5. Do not expose specimen to heat or direct sunlight. 6. Do not stack wet specimens. 7. Keep specimen dry. 8. Let blood dry on the Blood Spot Collection Card (T493) at ambient temperature in a horizontal position for 3 hours before adding additional blood spots to the card. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)		FILTER PAPER
	Frozen		FILTER PAPER
	Refrigerated		FILTER PAPER

CPT Code Information: 82136

FALFG 57519

Almond Food IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

ALM 82882

Almond, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

ALPS 82449

Alpha Beta Double-Negative T Cells for Autoimmune Lymphoproliferative Syndrome, Blood

Specimen Requirements: For serial monitoring, we recommend that specimen draws be performed at the same time of day. Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86356 x2; 86359;

ALDEF 607710

Alpha Defensin, Lateral Flow Assay, Synovial Fluid

Specimen Requirements: Collection Container/Tube: Plain red-top tube Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL

Specimen Minimum Volume: 0.10 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Synovial Fluid	Refrigerated	7 days	

CPT Code Information: 83516

AFSH 71768

Alpha Follicle Stimulating Hormone Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable:

Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

WASQR Alpha Globin Gene Sequencing, Blood

47958

Specimen Requirements: Only orderable as a reflex. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -HBEL1 / Hemoglobin Electrophoresis Evaluation, Blood -MEV1 / Methemoglobinemia Evaluation, Blood -REVE1 / Erythrocytosis Evaluation, Whole Blood -THEV1 / Thalassemia and Hemoglobinopathy Evaluation, Blood and Serum

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	14 days	

CPT Code Information: 81259-HBA1/HBA2; full sequence

WASEQ Alpha Globin Gene Sequencing, Varies

61362

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD), green top (sodium heparin) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in the original tube. Specimen Stability Information: Refrigerate 30 days(preferred)/Ambient 14 days Specimen Type: Extracted DNA from whole blood Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen 2. Provide volume and concentration of the DNA Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 50 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81259-HBA1/HBA2; full sequence

FALG Alpha Lactalbumin IgG

57663

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001**ASYN**
70635**Alpha Synuclein Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**FA1GP**
57736**Alpha-1-Acid Glycoprotein**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial. Note: Overnight fasting is preferred.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	
	Ambient	6 hours	

CPT Code Information: 82985**A1AFS**
604982**Alpha-1-Antitrypsin Clearance, Feces and Serum**

Specimen Requirements: Both feces and serum are required. Blood must be drawn during the stool collection period. Specimen Type: Serum Collection Container/Tube: Red top or serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge within 2 hours. 2. Aliquot and ship in plastic vial. Specimen Type: Feces Supplies: Stool Containers - 24, 48, 72 Hour Kit (T291) Container/Tube: Stool container Specimen Volume: Entire collection Collection Instructions: 1. Collect a 24-hour fecal collection. 2. If no specimen is obtained within 24 hours, extend collection time to 48 to 72 hours. Document time frame.

Specimen Minimum Volume: Homogenized feces: 1 mL Serum: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	14 days	
	Ambient	14 days	
	Refrigerated	14 days	
Serum	Frozen (preferred)	28 days	
	Ambient	28 days	
	Refrigerated	28 days	

CPT Code Information: 82103 x 2

AATRP 70350

Alpha-1-Antitrypsin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

A1APP 26953

Alpha-1-Antitrypsin Phenotype, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.25 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82103; 82104;

A1ALC 61767

Alpha-1-Antitrypsin Proteotype S/Z, LC-MS/MS, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.25 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82103-Alpha-1-antitrypsin; 82542-A1AT proteotype S/Z, LC-MS/MS; 82104-Alpha-1-antitrypsin phenotype (if appropriate);

A1AF 182

Alpha-1-Antitrypsin, Random, Feces

Specimen Requirements: Supplies: -Stool container, Small (Random), 4 oz (T288) -Stool Collection Kit, Random (T635) Container/Tube: Stool container Specimen Volume: 5 g Collection Instructions: Collect a random fecal specimen.

Specimen Minimum Volume: Homogenized Stool: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	14 days	
	Ambient	14 days	
	Refrigerated	14 days	

CPT Code Information: 82103

AAT 8161

Alpha-1-Antitrypsin, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82103

A124 610363

Alpha-1-Microglobulin, 24 Hour, Urine.

Specimen Requirements: Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL
Collection Instructions: 1. Collect urine for 24 hours. 2. No preservative. 3. Mix well before taking 4-mL aliquot. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	7 days	

CPT Code Information: 83883

RA1U
610364

Alpha-1-Microglobulin, Random, Urine

Specimen Requirements: Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL
Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 83883

A2PI
602169

Alpha-2 Plasmin Inhibitor, Plasma

Specimen Requirements: See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge, remove plasma, and centrifuge plasma again. 2. Freeze specimen immediately at < or =-40°C, if possible. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85410

A2M
9270

Alpha-2-Macroglobulin, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 83883

AAMY
82866

Alpha-Amylase, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For one allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86008

ALFP
70353

Alpha-Fetoprotein (AFP) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

L3AFP
88878

Alpha-Fetoprotein (AFP) L3% and Total, Hepatocellular

Carcinoma Tumor Marker, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Refrigerated	5 days	

CPT Code Information: 82107

AFP 8162

Alpha-Fetoprotein (AFP) Tumor Marker, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen
Volume: 0.6 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 82105

AFPPT 61534

Alpha-Fetoprotein (AFP), Peritoneal Fluid

Specimen Requirements: Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 2
mL

Specimen Minimum Volume: 0.5 mL (Samples <0.5 mL may be rejected)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Peritoneal	Frozen (preferred)	90 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 86316

MAFP1 113382

Alpha-Fetoprotein (AFP), Single Marker Screen, Maternal, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen

Volume: 1 mL Collection Instructions: 1. Do not draw specimen after amniocentesis as this could affect results. 2. Centrifuge immediately. Additional Information: 1. Draw blood between 15 weeks, 0 days and 22 weeks, 6 days. 2. Initial or repeat testing is determined in the laboratory at the time of report and will be reported accordingly. To be considered a repeat test for the patient, the testing must be within the same pregnancy and trimester, with interpretable results for the same test, and both tests are performed at Mayo Clinic.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 82105

AFPSF 8876

Alpha-Fetoprotein (AFP), Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 86316

AFPA 9950

Alpha-Fetoprotein, Amniotic Fluid

Specimen Requirements: Container/Tube: Amniotic fluid container Specimen Volume: 1 mL
Collection Instructions: Do not centrifuge.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Amniotic Fld	Refrigerated (preferred)	7 days	
	Ambient	7 days	

CPT Code Information: 82106-AFP; 82013-Acetylcholinesterase (if appropriate);

FUCW 8814

Alpha-Fucosidase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 82657

AGABS 89407

Alpha-Galactosidase, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood spot collection card Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper and Whatman Protein Saver 903 paper Specimen Volume: 2 blood spots Collection Instructions: 1. Do not use device or capillary tube containing EDTA to collect specimen. 2. An alternative blood collection option for a patient older than 1 year of age is fingerstick. See Dried Blood Spot Collection Tutorial for how to collect blood spots via fingerstick: <https://vimeo.com/508490782> . 3. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	90 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Refrigerated	90 days	FILTER PAPER

CPT Code Information: 82657

AGAW 606261

Alpha-Galactosidase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	
	Ambient	6 days	

CPT Code Information: 82657

AGAS
8784

Alpha-Galactosidase, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 2 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	14 days	
	Refrigerated	24 hours	

CPT Code Information: 82657

ATHL
58114

Alpha-Globin Gene Analysis

Specimen Requirements: Only orderable as part of a profile. For more information see ATHAL / Alpha-Globin Gene Analysis.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81269

ATHAL
35346

Alpha-Globin Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Prenatal specimens can be sent Monday through Thursday and must be received by 5 p.m. CST on Friday in order to be processed appropriately. All prenatal specimens must be accompanied by a maternal blood specimen. Order MATCC / Maternal Cell Contamination, Molecular Analysis, Varies on the maternal specimen. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Blood: 1 mL/Amniotic Fluid: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Varies

Varies

CPT Code Information: 81269; 88235-Tissue culture for amniotic fluid (if appropriate); 88240-Cryopreservation (if appropriate) ; 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells (if appropriate);

IDUAW 606276

Alpha-L-Iduronidase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	
	Ambient	6 days	

CPT Code Information: 82657

ALFA 82897

Alpha-Lactalbumin, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86008

MANN 62511

Alpha-Mannosidase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 82657

ANAS 8782

Alpha-N-Acetylglucosaminidase, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	365 days	

CPT Code Information: 84311

APGH 9003

Alpha-Subunit Pituitary Tumor Marker, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen (preferred)	90 days	
	Refrigerated	7 days	

CPT Code Information: 82397

ABCRS 70636

Alpha/Beta Crystallin IHC, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

ALPRT
70593

Alport (Collagen IV Alpha 5 and Alpha 2) Immunofluorescent Stain, Renal Biopsy

Specimen Requirements: Specimen Type: Kidney tissue Supplies: Renal Biopsy Kit (T231) Container/Tube: Transport medium (Michel's or Zeus media), frozen tissue Specimen Volume: Entire specimen Collection Instructions: 1. For kidney cases, collect specimens according to the instructions in Renal Biopsy-Procedures of Handling Tissue for Light Microscopy, Immunohistology, and Electron Microscopy in Special Instructions. 2. If standard immunoglobulin and complement immunofluorescence has already been performed, submit the residual frozen tissue (must contain glomeruli) on dry ice. . Acceptable: 2 Frozen tissue unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick, submitted on dry ice. Specimen Type: Skin tissue Container/Tube: Transport medium (Michel's or Zeus media) Specimen Volume: Entire specimen Collection Instructions: Submit punch biopsy in Zeus/Michel's media.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 88346-primary IF

FALPX
75156

Alprazolam (Xanax)

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial. Plasma Draw blood in a green-top sodium heparin tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL of plasma refrigerated in a plastic vial.

Specimen Minimum Volume: 1.0 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80346

ALTN
82910

Alternaria tenuis, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

AH50 88676

Alternative Complement Pathway, Functional, Serum

Specimen Requirements: Patient Preparation: Patient should be fasting. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge at 4°C and aliquot serum into 5 mL plastic vial. 3. Freeze specimen within 30 minutes.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	14 days	

CPT Code Information: 86161

ALU 8828

Aluminum, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82108

AL 8373

Aluminum, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has

been administered, a specimen should not be collected for 96 hours. Supplies: -Greiner Z Trace Element no-additive (Aluminum Only), 6 mL (T713) -Metal Free Specimen Vial (T173) Container/Tube: Greiner Z Trace Element Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, polypropylene vial Specimen Volume: 1.2 mL Collection Instructions: See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	METAL FREE
	Ambient	7 days	METAL FREE
	Frozen	7 days	METAL FREE

CPT Code Information: 82108

ALCRU 64875

Aluminum/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82108-Aluminum/creatinine ratio

FOXOF 35281

Alveolar Rhabdomyosarcoma (ARMS), 13q14 (FOXO1 or FKHR) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5-micron thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5-micron thick sections placed on positively charged slides, and 1 hematoxylin and eosin (H and E)-stained slide

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

TFE3F 35319

Alveolar Soft Part Sarcoma (ASPS)/Renal Cell Carcinoma (RCC), Xp11.23 (TFE3), FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 DNA probe, each (first probe set), Interpretation and report; 88271x2 DNA probe, each; each additional probe set (if appropriate); 88271x1 DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88275 DNA probe, each; coverage for sets containing 5 probes (if appropriate);

ADEVL 607273

Alzheimer Disease Evaluation, Spinal Fluid

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Alzheimer's Disease Evaluation (ADEVL) Collection Kit (T836) Collection Container/Tube: Preferred: CSF AD Biomarker Tube Acceptable: Sarstedt 72.703.600 (1.5 mL) or Sarstedt 72.694.600 (2 mL) Specimen Volume: 2 mL Collection Instructions: 1. Perform lumbar puncture and discard the first 1 to 2 mL of cerebrospinal fluid (CSF). 2. Collect 2 mL of CSF directly into one of the collection tubes listed above* Note: Polystyrene collection tubes are not acceptable. Exposure of CSF to polystyrene tubes may result in falsely low Abeta42 concentrations. For more information see Cautions. *The Alzheimer's Association consensus protocol for handling of CSF for clinical measurements of Abeta42 and tau recommends using the drip method for

CSF collection and directly collecting into a low bind polypropylene tube. Although some clinicians prefer the syringe pull method due to speed of collection, the drip method reduces the risk of Abeta42 binding to the plastic of any syringe used.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	BlueTop SARSTEDT
	Frozen	30 days	BlueTop SARSTEDT
	Ambient	12 hours	BlueTop SARSTEDT

CPT Code Information: 83520 x 3

FAMAN 91132

Amantadine (Symmetrel)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL of sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80299

PAMIK 37032

Amikacin, Peak, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80150

RAMIK 37033

Amikacin, Random, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection. Additional Information: Serum for a peak level should be drawn 30 to 60 minutes after last dose (order PAMIK / Amikacin, Peak, Serum). Serum for a trough level should be drawn immediately before next scheduled dose (order TAMIK / Amikacin, Trough, Serum).

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80150

TAMIK 37031

Amikacin, Trough, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80150

AAMSD 60200

Amino Acids, Maple Syrup Urine Disease Panel, Plasma

Specimen Requirements: Patient Preparation: Fasting (overnight preferred, 4 hours minimum). Infants should be drawn just before next feeding (2-3 hours without total parenteral nutrition: TPN if possible). Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA), plasma gel tube, or green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge within 4 hours if specimen is stored at refrigerated temperature and aliquot plasma. 2. Send plasma frozen.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Plasma	Frozen	14 days
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CPT Code Information: 82136

AAQP 9265

Amino Acids, Quantitative, Plasma

Specimen Requirements: Patient Preparation: Fasting (overnight preferred, 4 hours minimum). Infants should be drawn just before next feeding (2-3 hours without total parenteral nutrition, if possible). Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA), plasma gel tube, green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Collect specimen and place on wet ice. 2. Centrifuge immediately or within 4 hours of collection if specimen is kept at refrigerated temperature. 3. Being careful to ensure that no buffy coat is transferred, aliquot plasma into a plastic vial and freeze.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	14 days	

CPT Code Information: 82139

AAPD 60475

Amino Acids, Quantitative, Random, Urine

Specimen Requirements: Supplies: Aliquot tube, 5-mL (T465) Specimen Volume: 2 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	70 days	
	Refrigerated	14 days	

CPT Code Information: 82139

AACSF 81934

Amino Acids, Quantitative, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.2 mL Collection Instructions: Collect specimen from second collection vial.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen	14 days	

CPT Code Information: 82139

AAUCD
60202**Amino Acids, Urea Cycle Disorders Panel, Plasma**

Specimen Requirements: Patient Preparation: Fasting (overnight preferred, 4 hours minimum). Infants should be drawn just before next feeding (2-3 hours without total parenteral nutrition if possible). Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge within 4 hours if specimen is stored at refrigerated temperature and aliquot plasma. 2. Send plasma frozen.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	14 days	

CPT Code Information: 82136

FALAU
57350**Aminolevulinic Acid (ALA), Urine**

Specimen Requirements: Specimen Type: Urine Submission Container/Tube: Plastic, 6-mL tube(s) (MCL T465) Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours (NO preservative). 2. Refrigerate specimen during the 24-hour collection. 3. Send specimen frozen in the plastic, 6-mL urine tube (T465) 4. Collection volume and duration are required

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	30 days	
	Refrigerated	4 days	

CPT Code Information: 82135

ALADW
31895**Aminolevulinic Acid Dehydratase, Washed Erythrocytes**

Specimen Requirements: Patient Preparation: Abstinence from alcohol is essential for at least 24 hours prior to specimen collection as ethanol suppresses aminolevulinic acid dehydratase (ALAD) activity, leading to false-positive results. Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: Entire washed erythrocyte suspension Collection Instructions: Process entire specimen as follows: 1. Transfer entire specimen to a 12-mL graduated centrifuge tube. 2. Centrifuge specimen for 10 minutes at 2000 rpm. 3. Record volume of packed cells and the total volume of the specimen. 4. Discard supernatant plasma. 5. Wash packed erythrocytes 2 times by resuspension of at least an equal amount of cold 0.9% saline, mix, and centrifuge for 5 minutes at 2000 rpm, discarding supernatant after each washing. 6. Resuspend packed cells to the original total volume with 0.9% saline. Invert specimen gently to mix.

Specimen Minimum Volume: 1 mL of washed and resuspended erythrocytes

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Washed RBC	Frozen (preferred)	7 days	
	Refrigerated	14 days	
	Ambient	4 days	

CPT Code Information: 82657**ALAD**
88924**Aminolevulinic Acid Dehydratase, Whole Blood**

Specimen Requirements: Patient Preparation: Abstinence from alcohol is essential for at least 24 hours prior to specimen collection as ethanol suppresses aminolevulinic acid dehydratase (ALAD) activity, leading to false-positive results. Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Specimen Volume: Full tube 4 mL Collection Instructions: Immediately place specimen on wet ice.

Specimen Minimum Volume: 3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	7 days	
	Ambient	4 days	

CPT Code Information: 82657**ALAU**
61547**Aminolevulinic Acid, Urine**

Specimen Requirements: Patient Preparation: Patient should abstain from alcohol for 24 hours prior to and during testing. Supplies: Urine Tubes, 10 mL (T068) Specimen Volume: 2 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	45 days	

CPT Code Information: 82135**AMIO**
9247**Amiodarone, Serum**

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Draw blood no sooner than 12 hours (trough value) after last dose or immediately before next scheduled dose. 2. Centrifuge within 2 hours of draw and aliquot to remove serum from spun RBCs.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	24 hours	

CPT Code Information: 80151

AMTRP 63506

Amitriptyline and Nortriptyline, Serum

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose (minimum 12 hours after last dose). 2. Centrifuge and aliquot serum into plastic vial. Serum must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 80335; G0480 (if appropriate);

NH3V 35130

Ammonia, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plain, plastic screw-top tube Specimen Volume: 0.5 mL or more Collection Instructions: 1. Specimens should be put on ice immediately after collection. 2. Centrifuge at refrigerated temperature (4°C). 3. Aliquot plasma into plastic screw-top tube. Keep on ice. 4. Freeze plasma within 2 hours of collection.

Specimen Minimum Volume: See Specimen Collection

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	7 days	
	Refrigerated	2 hours	

CPT Code Information: 82140

AMMO 606643

Ammonium, 24 Hour, Urine

Specimen Requirements: Supplies: -Aliquot Tube, 5 mL (T465) -Diazolidinyl Urea (Germall) 5.0 mL (T822) Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: 1. Add 5 mL of diazolidinyl urea (Germall) as preservative at start of collection or refrigerate specimen during and after collection. 2. Collect urine for 24 hours. 3. Aliquot urine into plastic vial. 4. Specimens with pH >8 may indicate bacterial contamination and testing will be cancelled. Do not attempt to adjust pH as it will adversely affect results. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 82140

RAMCN 36885

Ammonium, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see SSATR / Supersaturation Profile, Pediatric, Random, Urine.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 82140

RAMBO 606709

Ammonium, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 82140

AMOB **Amobarbital, Serum**

8325

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable)
Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80345; G0480 (if appropriate);

FAMOX **Amoxapine (Asendin) and 8-Hydroxyamoxapine**

80450

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80335

AMOXY **Amoxicillin, IgE, Serum**

82663

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

90 days

CPT Code Information: 86003**FAMP**
91171**Amphetamine, Serum or Plasma**

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	

CPT Code Information: 80324**AMPMX**
62712**Amphetamine-Type Stimulants Confirmation, Chain of Custody, Meconium**

Specimen Requirements: Supplies: Chain of Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required. Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen. Additional Information: 1. Specimen that arrives with a broken seal does not meet the chain of custody requirements. 2. The laboratory recommends sending chain-of-custody specimens by overnight shipment.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	28 days	
	Ambient	28 days	
	Refrigerated	28 days	

CPT Code Information: 80324; 80359; G0480 (if appropriate);**AMPHM**
84371**Amphetamine-Type Stimulants Confirmation, Meconium**

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288) Container/Tube: Stool container Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	28 days	
	Ambient	28 days	
	Refrigerated	28 days	

CPT Code Information: 80324; 80359; G0480 (if appropriate);

FASCC Amphetamines Analysis, Serum

75109

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 7 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80307; 80324, 80359 if applicable;

AMPHX Amphetamines Confirmation, Chain of Custody, Random, Urine

62711

Specimen Requirements: Supplies: Chain-of-Custody Kit (T282) Container/Tube: Chain-of-Custody Kit containing the specimen containers, seals, and documentation required. Specimen Volume: 20 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting <20 mL will compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80324; 80359; G0480 (if appropriate);

AMPHU Amphetamines Confirmation, Random, Urine

8257

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STATS are not accepted for this test.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80325; 80359; G0480 (if appropriate);

FAMPB 91994

Amphotericin B

Specimen Requirements: Container/Tube: Agar slant or other appropriate media Specimen Volume: Organism in pure culture Complete and submit with specimen: 1. Fungus Testing Lab request form Collection Instructions: 1. Organism must be in pure culture, actively growing. 2. Place specimen in a large infectious container (T146) and label as an etiologic agent/infectious substance.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient		

CPT Code Information: 87188 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ mould $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ MIC microdilution or agar dilution (if appropriate); 87186 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ yeast $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ MIC microdilution or agar dilution (if appropriate);

AMP 82664

Ampicillin, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

AMBF 606595

Amylase, Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Pericardial fluid Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	24 hours	

CPT Code Information: 82150

FAMYS

57288

Amylase, Isoenzymes

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a plain, red-top tube(s). Serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial. Plasma Draw blood in a green-top (sodium or lithium heparin) tube(s). Spin down and send 1 mL plasma refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	30 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 82150/x2

AMLPC

60078

Amylase, Pancreatic Cyst Fluid

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plain, plastic, screw top tube Specimen Volume: 1 mL Additional Information: A minimum of 0.5 mL is required for testing; specimens <0.5 mL may be rejected.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Pancreatic Cyst Fluid	Frozen (preferred)	30 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 82150

PAMY

606893

Amylase, Pancreatic, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot 1 mL of serum into plastic vial. Send refrigerated.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 82150

AMS 8352

Amylase, Total, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	30 days	
	Ambient	7 days	

CPT Code Information: 82150

AAH 70349

Amyloid A (Hepatic) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

AMYA 70548

Amyloid A (SAA) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FABP
91408

Amyloid Beta-Protein

Specimen Requirements: Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 3 mL of EDTA plasma frozen in plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	30 days	

CPT Code Information: 83519

AMYPI
70549

Amyloid P (SAP) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

APPI
70357

Amyloid Precursor Protein (APP) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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TECHONLY	Ambient (preferred)
	Refrigerated

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

AMPIP 70356

Amyloid Protein Identification, Paraffin, Mass Spectrometry

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Formalin-fixed or B5-fixed, paraffin-embedded tissue block Collection Instructions: Do not send fixed tissue slides. Testing can only be done on paraffin-embedded tissue blocks.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
AMYLOID	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88313; 82542 (if appropriate); 88380 (if appropriate);

TTRX 83674

Amyloidosis, Transthyretin-Associated Familial, Reflex, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: ACD Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	4 days	
	Ambient	4 days	

CPT Code Information: 82542 LC-MS; 81404 TTR gene (if appropriate);

ANAID 45010

Anaerobe Ident (Bill Only)

Specimen Requirements: This test is for Billing Purposes Only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87076

ISAN 45255

Anaerobe Identification by Sequencing (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87153

BATTA
80931

Anaerobe Suscep Battery (Bill Only)

Specimen Requirements: This test is for Billing Purposes Only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87186

SANA
45337

Anaerobe Suscep per Agent (Bill Only)

Specimen Requirements: This test is for Billing Purposes Only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87181

ANAP
81157

Anaplasma phagocytophilum (Human Granulocytic Ehrlichiosis) Antibody, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86666

ALK
70354

Anaplastic Lymphoma Kinase Immunostain, Technical

Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

ANPAT 70318

Anatomic Pathology Consultation, Wet Tissue

Specimen Requirements: Specimen Type: Lung biopsy Supplies: -Pathology Packaging Kit (T554) -Formalin, 10% (T118) -Michel's Transport Media for Immunofluorescent Testing on Tissue (T321) Specimen Volume: Entire specimen Collection Instructions: 1. Submit portion of lung tissue in 10% neutral buffered formalin for light microscopy processing. Alternatively, submit a representative hematoxylin and eosin (H and E) slide from the light microscopy sample along with the tissue in Michel's transport media. Pathology Packaging Kit can be used to submit H and E slide. 2. Place a portion of the unfixed lung tissue in Michel's transport media for immunofluorescence. Specimen Type: Cardiac biopsy Supplies: -Pathology Packaging Kit (T554) -Formalin, 10% (T118) -Michel's Transport Media for Immunofluorescent Testing on Tissue (T321) -Electron Microscopy Kit (T660) -Gluta (Trumps) (T130) Specimen Volume: Entire specimen Collection Instructions: 1. For ideal analysis, collect 4 to 6 biopsy specimens and submit all in 10% neutral buffered formalin unless electron microscopy (EM) is requested. 2. If EM is needed, submit at least 1 biopsy into 2.5% to 3% buffered glutaraldehyde preservative using the Electron Microscopy Kit along with the formalin biopsy specimens. If formalin biopsy specimens are not available, light microscopic slides would also be acceptable. Additional Information: If the question is drug toxicity, storage disease, or if the patient is younger than 25 years old, send at least 1 biopsy specimen in 2.5% to 3% buffered glutaraldehyde in case EM is needed for diagnosis. Specimen Type: Cardiac explant Supplies: -Pathology Packaging Kit (T554) -Refrigerate/Ambient Shipping Box, 5 lb (T329) Specimen Volume: Entire specimen Collection Instructions: 1. Fix entire explant specimen in formalin for a minimum of 24 hours. 2. Following fixation, lightly wrap specimen in formalin-soaked paper towel, place in a leak-proof sealable bag with a small amount of formalin, seal, and ship ambient in a sturdy shipping container (ie, Refrigerate/Ambient Shipping Box, 5 lb). Additional Information: Include the last pretransplantation echocardiogram with report and images as well as all other relevant clinical documents. Specimen Type: Enucleated eye Supplies: -Pathology Packaging Kit (T554) -Formalin - 10% Histo Prep, 45 mL (T117) Specimen Volume: Entire specimen Collection Instructions: 1. Immediately after removal, place specimen in approximately 300 mL of 10% neutral buffered formalin. 2. Enucleated eye should not be opened or punctured. 3. After 48 hours in the originating laboratory, the specimen should be transferred from the larger, 300-mL container to a smaller container with fixative (Formalin - 10% Histo Prep, 45 mL) to be shipped without risk of leakage. Specimen Type: Iris, conjunctiva, cornea, and other small biopsies from eye Supplies: -Pathology Packaging Kit (T554) -Formalin - 10% Histo Prep, 45 mL (T117) Specimen Volume: Entire specimen Collection Instructions: 1. Obtain biopsy. 2. Place iris, conjunctiva, cornea, and other small biopsies on a paper mount (a piece of filter paper or other porous paper). This helps to keep the specimen from curling when it is fixed. 3. Immediately but gently place specimen (on the paper mount) into 10% formalin, approximately 20 times the volume of the biopsy (Formalin - 10% Histo Prep, 45 mL). 4. Placing sutures at the margins of resection with accompanying explanatory draft will help orientation of the specimen in the lab, in cases where margins are important. Specimen Type: Vitreous fluid/Aqueous humor Supplies: -Pathology Packaging Kit (T554) -Aliquot Tube, 5 mL (T465) Specimen Volume: Entire specimen Collection Instructions: 1. Obtain liquid

specimen. 2. Place the liquid (vitreous or aqueous) concentrate into a small tube with a screw-top cap. Seal the tube tightly. 3. Put the specimen immediately on a refrigerated cool pack (not dry ice or frozen cool pack). 4. If a washing (diluted) is available, it can also be sent in similar manner. Specimen Stability Information: Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 88300 (if appropriate); 88302 (if appropriate); 88304 (if appropriate); 88305 (if appropriate); 88307 (if appropriate); 88309 (if appropriate);

ANCH 82345

Anchovy, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

AREC 70358

Androgen Receptor Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FAGES 75656

Androstenediol Glucuronide (Endocrine Sciences)

Specimen Requirements: Collection container/tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL (Note: Minimum volume does not allow for repeat analysis)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	6 days	
	Ambient	6 days	
	Frozen		

CPT Code Information: 82154

ANST
9709

Androstenedione, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 0.6 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 82157

MASF
35859

Angiosarcoma, MYC (8q24) Amplification, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271x1-DNA probe,

each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

FACEC 57824

Angiotensin Converting Enzyme, CSF

Specimen Requirements: Specimen Type: Spinal Fluid Sources: CSF Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Collect 1 mL of spinal fluid (CSF). Ship frozen. Note: Gadolinium contrast agents have been reported to inhibit ACE activity. Therefore, CSF containing gadolinium-based contrast agents should not be submitted to the laboratory for evaluation.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	180 days	
	Refrigerated	7 days	

CPT Code Information: 82164

ACE 603622

Angiotensin Converting Enzyme, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	24 hours	

CPT Code Information: 82164

FANGI 90429

Angiotensin I, Plasma

Specimen Requirements: Patient preparation: Patient should be on a normal sodium diet, 110 mEq of sodium. Patient should be in a recumbent posture for at least 30 minutes prior to drawing specimen. Diuretics, mineralocorticoids, glucocorticoids, estrogens, oral contraceptives, ACT medications and sodium, potassium, and posture all affect Angiotensin levels. Specimen Type: Plasma Container/Tube: EDTA Specimen Volume: 3 mL Collection Instructions: Draw blood in a lavender-top (EDTA) tube(s). Separate plasma from cells immediately after draw, and send 3 mL of EDTA plasma frozen in plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	30 days	

CPT Code Information: 83520**ANGII**
609051**Angiotensin II and Angiotensin (1-7), Plasma**

Specimen Requirements: Patient Preparation: Results used for primary aldosteronism may not be interpretable if the patient is being treated with spironolactone (Aldactone). Spironolactone should be discontinued for 4 to 6 weeks before testing. See Cautions for more information. Collection Container/Tube: Chilled, lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Draw blood in a chilled syringe from a patient in a seated position; place specimen in a chilled, lavender-top (EDTA) tube; and mix. 2. Alternatively, draw blood directly into a chilled, lavender-top (EDTA) tube. 3. Immediately place EDTA tube into an ice-water bath until thoroughly cooled. 4. Refrigerate specimen during centrifugation and immediately transfer plasma to plastic vial. If a refrigerated centrifuge is unavailable, chill the centrifuge carriers. Centrifuge specimen, then promptly transfer plasma. 5. Immediately freeze plasma.

Specimen Minimum Volume: 1.25 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	28 days	

CPT Code Information: 82163**ANISP**
82857**Anisakis, Parasite, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**ANSE**
82487**Anise, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number

of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FANSE
57520

Annatto Seed (Bixa orellana) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

ANNEX
70355

Annexin-1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FABAA
75662

Anti-bestrophin Autoantibodies

Specimen Requirements: Submit only one of the following specimens: Serum: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 5 mL serum refrigerated in a plastic vial. Plasma: Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 5 mL EDTA plasma refrigerated in a plastic vial. Complete and submit with specimen: 1. Completed OHSU Ocular request form 2. Clinical history 3. Referring physician information (name & phone number) NOTE: Without this information, testing cannot be completed.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated	7 days	

CPT Code Information: 84182 x 8**FACN1****75620****Anti-cN-1A (NT5c1A) IBM**

Specimen Requirements: Collection Container/Tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 83520**ADNAS****80204****Anti-DNase B Titer, Serum**

Specimen Requirements: Patient Preparation: Fasting preferred but not required Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 86215**FAEAB****91854****Anti-Enterocyte Antibodies**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Specimen volume: 1 mL Collection Instructions: Collect blood in a red-top no additive tube and submit 1 mL of serum shipped frozen. REQUIRED to accompany all specimens (testing will not proceed until all requirements are met): 1. Completed clinical summary/medical history form 2. See Special Instructions for a copy of the form.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen		

CPT Code Information: 88346; 88350 x 2; ;

FIGA 57552

Anti-IgA

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain, red-top tube(s) or serum gel tube(s). Spin down and send 1 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 83520

FANTI 57892

Anti-IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum ambient in a plastic vial.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Ambient (preferred)	7 days	
	Frozen	28 days	
	Refrigerated	7 days	

CPT Code Information: 83516

FAMDA 75622

Anti-MDA-5 Ab (CADM-140)

Specimen Requirements: Collection Container/Tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 83520

FFMI2 75591

Anti-Mi-2 Ab

Specimen Requirements: Collection Container/Tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 83516

FANIC 75635

Anti-Nuclear Antibodies by Indirect Fluorescent Antibody (IFA), Cerebrospinal Fluid

Specimen Requirements: Specimen Type: Cerebrospinal fluid (CSF) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Collect cerebrospinal fluid (CSF) in a sterile container and ship refrigerate.

Specimen Minimum Volume: 0.5 mL (Note: this volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 86038; 86039 (if appropriate);

FFANA 75593

Anti-Nuclear Antibodies, Synovial Fluid

Specimen Requirements: Specimen Type: Synovial fluid Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect synovial fluid and transfer into a plastic vial and ship refrigerate. 2. Indicate the specimen

source.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 86038; 86039 (if appropriate);

FCLNE **91321**

Anti-Phosphatidylcholine Ab

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 3 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	14 days	

CPT Code Information: 83520/x3

FPHET **91322**

Anti-Phosphatidylethanolamine Panel

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 3 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	14 days	

CPT Code Information: 83520 x 3; ;

FAPMA **75623**

Anti-PM/Sci-100 Ab

Specimen Requirements: Collection Container/Tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 83520**FARWB****57647****Anti-retinal autoantibodies follow up, WB**

Specimen Requirements: Note: This test should only be ordered as follow up to previous Anti-retinal autoantibodies performed at Oregon Health Sciences University (OHSU) Ocular Immunology Laboratory. Submit only one of the following specimens: Serum: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 5 mL serum refrigerated in a plastic vial. Plasma: Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 5 mL EDTA plasma refrigerated in a plastic vial. Complete and submit with specimen: Completed OHSU Ocular request form Clinical history Referring physician information (name & phone number) -NOTE: Without this information, testing cannot be completed.

Specimen Minimum Volume: 3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated	7 days	

CPT Code Information: 84182**FAS1A****75634****Anti-SAE1 Ab, IgG**

Specimen Requirements: Collection Container/Tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL (volume does NOT allow for repeat testing)**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 83520**FFRFT****75624****Anti-Synthetase Profile**

Specimen Requirements: Collection Container/Tube: 10 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 83516 x 4; 86235;

FATHO 75619

Anti-Th/To Ab

Specimen Requirements: Collection Container/Tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 83516

FAT1G 75632

Anti-TIF-1gamma Antibody

Specimen Requirements: Collection Container/Tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 86235

FAU3R
75631

Anti-U3 RNP Antibodies (Fibrillarin)

Specimen Requirements: Collection Container/Tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 86235

ABIDR
113389

Antibody Identification, RBC

Specimen Requirements: Both blood and serum are required. Specimen Type: Blood Collection Container/Tube: 6-mL PINK-top (EDTA) Submission Container/Tube: Aliquot tube Specimen Volume: 3 mL plasma 3 mL RBCs Collection Instructions: 1. Spin down and separate plasma from cells. Send both tubes. 2. Label specimen as EDTA plasma. Specimen Type: Serum Collection Container/Tube: 10-mL Red top Submission Container/Tube: Aliquot tube Specimen Volume: 5 mL serum 5 mL RBCs Collection Instructions: 1. Spin down and separate serum from clot. Send both tubes. 2. Label specimen as serum.

Specimen Minimum Volume: Blood: 6 mL EDTA Pediatric: 2 mL serum

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 86870-Antibody Identification (per panel tested); 86860-Antibody elution (if appropriate); 86880 x 3-Antiglobulin, direct (if appropriate); 86905-Each red cell antigen typing (if appropriate); 86978-Adsorption, each (if appropriate); 81403-Human Erythrocyte Antigen (if appropriate) - Internal only ;

ABYSR
113387

Antibody Screen with Reflexed Antibody Identification, RBC

Specimen Requirements: Container/Tube: Pink (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	4 days	
	Ambient	4 days	

CPT Code Information: 86850

ABTIR 113390

Antibody Titer, Whole Blood and Serum

Specimen Requirements: Both blood and serum are required. Specimen Type: Blood Collection Container/Tube: 6-mL PINK-top (EDTA) Submission Container/Tube: Aliquot tube Specimen Volume: 3 mL plasma 3 mL RBCs Collection Instructions: Spin down and separate plasma from cells. Send both tubes. Specimen Type: Serum Collection Container/Tube: 10-mL Red top Submission Container/Tube: Aliquot tube Specimen Volume: 5 mL serum 5 mL RBCs Collection Instructions: Spin down and separate serum from clot. Send both tubes.

Specimen Minimum Volume: Blood: 6 mL EDTA Pediatric: 2 mL serum

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 86886-Antibody titer; 86870-Antibody Identification (if appropriate-per panel tested); 86860-Antibody elution (if appropriate); 86880 x 3-Antigloblin, direct (if appropriate); 86905-Each red cell antigen typing (if appropriate); 86978-Adsorption, each (if appropriate); 81403-Human Erythrocyte Antigen (if appropriate)-Internal only ;

ENAE 89035

Antibody to Extractable Nuclear Antigen Evaluation, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86235 x 6

FADDS 57772

Antidepressant Drug Screen, Qualitative

Specimen Requirements: Submit only 1 of the following: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL of plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial, Urine Collect 3 mL random urine and send refrigerated in a preservative free plastic urine container.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80333; 80337; 80369;

FASQN

57740

Antidepressant Drug Screen, Ur, Quantitative

Specimen Requirements: Collect 3 mL random urine without preservatives. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	72 hours	

CPT Code Information: 80333; 80337; 80369; ;

MMLYP

81602

Antimicrobial Susceptibility Panel, Yeast, Varies

Specimen Requirements: Specimen Type: Organism in pure culture Supplies: Infectious Container, Large (T146) Container/Tube: Sabouraud's dextrose agar slant Specimen Volume: Infecting yeast isolate Collection Instructions: Organism must be in pure culture, actively growing. Do not submit mixed cultures.

Specimen Minimum Volume: NA

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87186

MMLRG

81601

Antimicrobial Susceptibility, Acid-Fast Bacilli, Rapidly Growing, Varies

Specimen Requirements: Specimen Type: Organism Supplies: Infectious Container, Large

(T146) Container/Tube: Middlebrook 7H10 agar slant or other appropriate media Specimen Volume: Pure isolate Collection Instructions: Organism must be in pure culture, actively growing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87186

MMLSG 34805

Antimicrobial Susceptibility, Acid-Fast Bacilli, Slowly Growing, Varies

Specimen Requirements: Specimen Type: Organism Supplies: Infectious Container, Large (T146) Container/Tube: Middlebrook 7H10 agar slant or other appropriate media Specimen Volume: Isolate Collection Instructions: Organism must be in pure culture, actively growing.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87186

ZMMLS 8073

Antimicrobial Susceptibility, Aerobic Bacteria, Varies

Specimen Requirements: Supplies: Infectious Container, Large (T146) Container/Tube: Agar slant or other appropriate media Specimen Volume: Organism in pure culture Collection Instructions: 1. Perform isolation of infecting bacteria. 2. Organism must be in pure culture, actively growing. Do not submit mixed cultures.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 87186-Sensitivity, MIC-per organism for routine battery; 87181-Susceptibility per drug and per organism for drugs not in routine battery (if appropriate); 87185-Beta lactamase (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87150-H pylori + Clarithro Resistance PCR (if appropriate); 87150-mecA PCR (if appropriate);

MMLSA
56031**Antimicrobial Susceptibility, Anaerobic Bacteria, MIC, Varies**

Specimen Requirements: Supplies: Anaerobic Transport Tube (T588) Infectious Container, Large (T146) Specimen Type: Organism in pure culture Acceptable Sources: Available on isolates from blood cultures, bone and joint infections, or brain abscesses and organisms isolated in pure culture from other sources Container/Tube: Preferred: Anaerobic Transport Tube Acceptable: Thioglycollate broth or any other suitable anaerobic transport system Collection Instructions: 1. Organism must be in pure culture, actively growing. Do not submit mixed cultures. 2. Place specimen in a large infectious container and label as an etiologic agent/infectious substance, if appropriate.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient		

CPT Code Information: 87186-Antimicrobial Susceptibility, Anaerobic Bacteria, MIC; 87076-Id MALDI-TOF mass spec anaerobe (if appropriate); 87181-Anaerobe Susceptibility per Agent (if appropriate); 87185-Beta Lactamase (if appropriate); 87186-Sensitivity, MIC-per organism for routine battery (if appropriate); 87181-Susceptibility per drug and per organism for drugs not in routine battery (if appropriate); 87076-Anaerobe Ident (if appropriate); 87153-Anaerobe ident by sequencing (if appropriate);

TB1LN
35994**Antimicrobial Susceptibility, Mycobacterium tuberculosis Complex, First Line, Varies**

Specimen Requirements: Specimen Type: Organism Supplies: Infectious Container, Large (T146) Container/Tube: Middlebrook 7H10 agar slant Specimen Volume: Isolate Collection Instructions: Organism must be in pure culture, actively growing.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87188 x 3-Antimicrobial Susceptibility, Mycobacterium tuberculosis Complex, Broth Method; 87186-Susceptibility, Mtb Cx, 2nd Line (if appropriate);

MMLNS
82019**Antimicrobial Susceptibility, Nocardia species and other Aerobic Actinomycetes, Varies**

Specimen Requirements: Specimen Type: Organism in pure culture Supplies: Infectious Container, Large (T146) Container/Tube: Preferred: Middlebrook 7H10 agar slant without antimicrobials Acceptable: Sabouraud's dextrose agar slant or similar media without antimicrobials (eg, 7H11 agar slant, LJ, MGIT [7H9] broth media) Specimen Volume: Isolate Collection Instructions: Organism must be in pure culture, actively growing.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87186

SBWB
64273

Antimony, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Greiner Bio-One Vacuette Tube 6 mL NH Trace Elements Sodium Heparin tube (T819) Container/Tube: Greiner Bio-One Vacuette Tube 6 mL NH Trace Elements Sodium Heparin tube for blood is required. Becton-Dickinson (BD) royal blue-top tubes are not acceptable for this testing. Specimen Volume: 0.8 mL Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated	7 days	

CPT Code Information: 83018

FANTU
91146

Antimony, Urine

Specimen Requirements: 10 mL aliquot of random or spot urine collected in metal free or acid washed container. Send specimen refrigerated.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 83018

AMH1
608824

Antimullerian Hormone, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	7 days

CPT Code Information: 83520

VASC 83012

Antineutrophil Cytoplasmic Antibodies Vasculitis Panel, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516 x 2; 86255-Cytoplasmic neutrophil antibodies screen (if appropriate); 86256-Cytoplasmic neutrophil antibodies titer (if appropriate);

ANA2 9026

Antinuclear Antibodies (ANA), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86038

NAIFA 65161

Antinuclear Antibodies, HEp-2 Substrate, IgG, Serum

Specimen Requirements: Container/Tube: Serum gel or red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	28 days	

CPT Code Information: 86039

ASO 80205

Antistrep-O Titer, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 86060

ATTF 9030

Antithrombin Activity, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 2. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 3. Aliquot plasma into a plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 4. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally < or =-40°C. Additional Information: 1. A double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial. 3. Heparin treatment may lower plasma antithrombin.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85300

ATTI 9031

Antithrombin Antigen, Plasma

Specimen Requirements: See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. Patient Preparation: Fasting preferred Collection Container/Tube: Light-blue top (citrate) Submission Container/Tube: Polypropylene vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge, remove plasma, and centrifuge plasma again. 2. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85301**ATNGS**
606366**Antithrombin Deficiency, SERPINC1 Gene, Next-Generation Sequencing, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: EDTA (lavender top) Acceptable: ACD (yellow top) or sodium citrate Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Provide volume and concentration of the DNA. Specimen Stability: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 100 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Frozen	14 days	
	Refrigerated	7 days	

CPT Code Information: 81479**APCZ**
35418**APC Gene, Full Gene Analysis, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81201; Hereditary Colon Cancer CGH Array, additional test; 81228;

APIXA 65848

Apixaban, Anti-Xa, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Specimen should be collected 2 to 4 hours (peak) after a dose or just prior (trough) to the next dose for apixaban concentrations. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma into a plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. A double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	42 days	

CPT Code Information: 80299

FAPIX 75395

Apixaban, Plasma

Specimen Requirements: Specimen Type: Plasma Container/Tube: Lavender top or pink top (EDTA) Specimen Volume: 2 mL Collection Instructions: Draw blood in an EDTA (lavender top or pink top) tube(s). (Plasma gel tube is not acceptable.) Spin down and send 2 mL of plasma refrigerated in a preservative-free plastic vial.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	29 days	
	Ambient	29 days	
	Frozen		

CPT Code Information: 80299

APOL1 605251

APOL1 Genotype, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen

Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479

APO1Z 35355

Apolipoprotein A-I (APOA1) Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81479-Unlisted molecular pathology procedure

APO2Z 35357

Apolipoprotein A-II (APOA2) Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81479-Unlisted molecular pathology procedure

APOAB 607593

Apolipoprotein A1 and B, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot 1 mL of serum.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	8 days	
	Frozen	60 days	
	Ambient	24 hours	

CPT Code Information: 82172 x 2

APOA1 607591

Apolipoprotein A1, Serum

Specimen Requirements: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL
Collection Instructions: 1. Centrifuge and aliquot within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	8 days	
	Frozen	60 days	
	Ambient	24 hours	

CPT Code Information: 82172

APOLB 607592

Apolipoprotein B, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot 1 mL of serum.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	8 days	
	Frozen	60 days	
	Ambient	24 hours	

CPT Code Information: 82172

APOEG

35358

Apolipoprotein E Genotyping, Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81401-APOE (apolipoprotein E) (eg, hyperlipoproteinemia type III, cardiovascular disease, Alzheimer disease), common variants (eg, *2, *3, *4)

FAPLG

57629

Apple IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

APPL

82712

Apple, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

APR 82835

Apricot, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

ARBOP 83267

Arbovirus Antibody Panel, IgG and IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86651 x 2-California virus (La Crosse) encephalitis antibody, IgG and IgM; 86652 x 2-Eastern equine encephalitis antibody, IgG and IgM; 86653 x 2-St. Louis encephalitis antibody, IgG and IgM; 86654 x 2-Western equine encephalitis antibody, IgG and IgM;

ABOPC 83897

Arbovirus Antibody Panel, IgG and IgM, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.7 mL

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86651 x 2-California virus (La Crosse) encephalitis antibody, IgG and IgM; 86652 x 2-Eastern equine encephalitis antibody, IgG and IgM; 86653 x 2-St. Louis encephalitis antibody, IgG and IgM; 86654 x 2-Western equine encephalitis antibody, IgG and IgM;

ARGAT

609425

Argatroban, Ecarin, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Specimen should be collected 2 hours after initiation of continuous infusion of argatroban. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma into a plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	42 days	

CPT Code Information: 80299

ARGIN

70359

Arginase-1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FARI

57112

Aripiprazole (Abilify)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80342

ARVGP 63160

Arrhythmogenic Cardiomyopathy Multi-Gene Panel, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send specimen in original tube. Additional Information: Prior Authorization is available for this test. Submit the required form with the specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81439

ARSAZ 35362

ARSA Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 Blood Spots on collection card (Whatman Protein Saver 903 Paper; Ahlstrom 226 filter paper; or Blood Spot Collection Card, T493) Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches-3 mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81405 ARSA (arylsulfatase A) (eg, arylsulfatase A deficiency), full gene sequence; ; Fibroblast Culture for Genetic Test; ; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); ; 88240-Cryopreservation (if appropriate); ;

ARSO 48551

Arsenic Occupational Exposure, Random, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: ARSOR / Arsenic Occupational Exposure with Reflex, Random, Urine HMSOR / Heavy Metal Occupational Exposure, with Reflex, Urine

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

ASOU 608890

Arsenic Occupational Exposure, Random, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: -ASUOE / Arsenic Occupational Exposure with Reflex, Random, Urine -HMUOE / Heavy Metal Occupational Exposure, with Reflex, Random, Urine

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

ASUOE 608895

Arsenic Occupational Exposure, with Reflex, Random, Urine

Specimen Requirements: Patient Preparation: -Patient should not eat seafood for a 48-hour period prior to start of collection. -High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. -For industrial exposure monitoring, recommended sampling time is at the end of the work week. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic vial or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 6 mL Collection Instructions: 1. Collect urine a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 82175 ; 82570 ;

SPASU 609383

Arsenic Speciation, 24 Hour, Urine

Specimen Requirements: Patient Preparation: 1. Patient should not eat seafood for a 48-hour period prior to start of collection. 2. High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 82175

SPAS 607691

Arsenic Speciation, Random, Urine

Specimen Requirements: Patient Preparation: 1. Patient should not eat seafood for a 48-hour period prior to start of collection. 2. High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: -Urine Tubes, 10 mL (T068) -Aliquot Tube, 5 mL (T465) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic vial or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 82175

ASU24 48537

Arsenic with Reflex, 24 Hour, Urine

Specimen Requirements: Patient Preparation: -Patient should not eat seafood for a 48-hour period prior to start of collection. -High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert. Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert. Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 82175

ASB 8645

Arsenic, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Royal blue-top (EDTA) plastic trace element blood collection tube Specimen Volume: Full tube Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original collection tube. Additional Information: If ordering the trace element blood collection tube from BD, order catalog #368381.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82175

ASHA 8651

Arsenic, Hair

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Specimen Volume: 0.2 g
Collection Instructions: Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing in Special Instructions. Additional Information: If known, indicate source of hair (axillary, head, or pubic).

Specimen Minimum Volume: 0.05 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Hair	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 82175

ASNA
89848

Arsenic, Nails

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Specimen Volume: 0.2 g
Collection Instructions: 1. Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing in Special Instructions. 2. Clippings should be taken from all 10 fingernails or toenails. Additional Information: If known, indicate source of nails (fingernails or toenails).

Specimen Minimum Volume: 0.05 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Nail	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 82175

ASCU
608900

Arsenic/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: -ASUCR / Arsenic/Creatinine Ratio, with Reflex, Random, Urine -HMUCR / Heavy Metal/Creatinine Ratio, with Reflex, Random, Urine

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

ARSC 48541

Arsenic/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: ARSCR / Arsenic/Creatinine, with Reflex, Random, Urine HMCUR / Heavy Metal/Creatinine, with Reflex, Random, Urine

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

ASUCR 608905

Arsenic/Creatinine, Ratio, with Reflex, Random, Urine

Specimen Requirements: Patient Preparation: -Patient should not eat seafood for a 48-hour period prior to start of collection. -High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 6 mL Collection Instructions: 1. Collect urine a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 82175 ; 82570;

FART 57913

Artichoke (Cynara scolymus) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	

Ambient

28 days

CPT Code Information: 86003**ARSU**

8777

Arylsulfatase A, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL tube Specimen Volume: 6 mL Collection Instructions: 1. Collect a 24-hour urine specimen. 2. No preservative. 3. Refrigerate specimen during collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated	14 days	

CPT Code Information: 84311**ARSAW**

8779

Arylsulfatase A, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 82657**ASCRI**

82764

Ascaris, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

VITC
42362

Ascorbic Acid (Vitamin C), Plasma

Specimen Requirements: Patient Preparation: Fasting overnight (12-14 hours) (infants-draw prior to next feeding). Water can be taken as needed. Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Green top (heparin) Submission Container/Tube: Amber vial (T192) Specimen Volume: 1 mL Collection Instructions 1. Immediately place specimen on wet ice. Maintain specimen on wet ice and process within 4 hours of draw. 2. Centrifuge at 4°C, aliquot plasma into amber vial to protect from light and freeze immediately.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Heparin	Frozen	14 days	LIGHT PROTECTED

CPT Code Information: 82180

AJPO
35350

Ashkenazi Jewish Mutation Analysis Panel Without Cystic Fibrosis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 2 Full tubes Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tubes. Do not aliquot Additional Information: A patient education brochure on Ashkenazi Jewish Genetic Disorders (T561) is available upon request.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81200-ASPA aspartoacylase (eg, Canavan disease) gene analysis, common variants (eg, E285A, Y231X); 81209-BLM (Bloom syndrome, Rec! helicase-like) (eg, Bloom syndrome) gene analysis, 2281 del6ins7 variant 81242-FANCC (Fanconi anemia, complementation group C) (eg, Fanconi anemia, type C) gene analysis, common variant (eg, IVS4+4A->T); 81251-GBA (glucosidase, beta acid) (eg, Gaucher disease) gene analysis, common variants (eg, N370S, 84GG, L444P, IVS2+1G>A); 81255-HEXA (hexosaminidase A (alpha polypeptide) (eg, Tay-Sachs disease) gene analysis, common variants (eg, 1278insTATC, 1421+1G->C, G269S); 81260-IKBPAP (inhibitor of kappa light polypeptide gene enhance in B-cells, kinase complex-associated protein) (eg, Familial dysautonomia) gene analysis common variants (eg, 2507_6T->C, R696P; 81290-MCOLN1 (mucopolipin 1) (eg, Mucopolipidosis, type IV) gene analysis, common variants (eg, IVS3-2A->G, del6.4kb); 81330-SMPD1 (sphingomyelin phosphodiesterase 1, acid sysosomal) (eg, Niemann-Pick disease, Type A) gene analysis, common variants (eg, R496L, L302P, fsP330); 83080 Hexosaminidase A and Tot

(additional test);

ASPAR 82478

Asparagus, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

AST 8360

Aspartate Aminotransferase (AST) (GOT), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 84450

FASPE 57947

Aspen (Populus tremuloides) IgE

Specimen Requirements: Draw blood in plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

ASPAG

84356

Aspergillus (Galactomannan) Antigen, Serum

Specimen Requirements: Container/Tube: Serum gel (red top tubes are not acceptable)

Specimen Volume: 1.5 mL Collection Instructions: 1. Avoid exposure of specimen to atmosphere to prevent sample contamination from environment. 2. Centrifuge and send specimen in original tube. Do not aliquot or open tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Refrigerated (preferred)	14 days	SERUM GEL TUBE
	Frozen	14 days	SERUM GEL TUBE

CPT Code Information: 87305

FASAB

75571

Aspergillus Antibodies, Quantitative, DID

Specimen Requirements: Specimen Type: Serum Container/Tube: Â Red top or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube, serum gel tube(s) is also acceptable. Separate serum immediately after coagulation (30 minutes) to prevent hemolysis. Send 1 mL of serum frozen in a plastic vial. NOTE: Patient should be fasting for eight hours to avoid lipemic sample interference.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	14 days	
	Refrigerated	72 hours	

CPT Code Information: 86606 x 3

ASPBA

61009

Aspergillus Antigen, Bronchoalveolar Lavage

Specimen Requirements: Container/Tube: Sterile, leak-proof container. Note: Specimen trap collection containers (with suction catheters attached) will be rejected due to high-risk of leakage and contamination upon opening. Avoid use of these for bronchoalveolar lavage specimens. Specimen Volume: 2 mL Additional Information: If specimen transfer into an acceptable sterile container is necessary, perform specimen transfer in a biosafety cabinet. Place container in separate sealed plastic bag.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Lavage	Frozen (preferred)	14 days	
	Refrigerated	5 days	

CPT Code Information: 87305

FAFE
57910

Aspergillus flavus IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

ASP
82911

Aspergillus fumigatus, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SASP
9678

Aspergillus fumigatus, IgG Antibodies, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86606

FASPG

75681

Aspergillus IgG Precipitins Panel

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 86331 x 6

ASPG

86324

Aspergillus niger, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

ADMA

607697

Asymmetric Dimethylarginine, Plasma

Specimen Requirements: Patient Preparation: Fasting-overnight (12 hours) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge and aliquot 1 mL of plasma into plastic vial. 2. Send specimen frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	90 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 82542

ATRX 70360

ATRX Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

AHUSD 64881

Atypical Hemolytic Uremic Syndrome Complement Panel, Serum and Plasma

Specimen Requirements: Both plasma and serum are required for this test. Patient Preparation: 1. Fasting preferred. 2. Samples should not be collected earlier than 48 hours following plasma exchange. Supplies: Aliquot Tube, 5 mL (T465) Specimen Type: Plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge; 1500 x g for 10 minutes at 4°C and aliquot plasma into plastic vial. 3. Freeze specimen within 30 minutes. Specimen Type: Serum Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge at 4°C and aliquot serum into 5 mL plastic vial. 3. Freeze specimen within 30 minutes.

Specimen Minimum Volume: Serum, Plasma: 1 mL each

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	
Serum Red	Frozen	14 days	

CPT Code Information: 86160 x 7; 86161; 86162;

HHLF 606144

AudioloGene Hereditary Hearing Loss Panel, Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Skin biopsy Supplies:

Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (e.g., minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Cultured fibroblast Container/Tube: T-25 flask Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured fibroblast cells from a skin biopsy from another laboratory. Cultured cells from a prenatal specimen will not be accepted. Specimen Stability Information: Ambient (preferred)/Refrigerated (<24 hours)

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81430; 81431;

AUPU 82855

Aureobasidium pullulans, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

APIN 82803

Australian Pine, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

AIAES 606974

Autoimmune Axonal Evaluation, Serum

Specimen Requirements: Patient Preparation: 1. For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication or intravenous immunoglobulin (IVIg) treatment. 2. This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed, or canceled if radioactivity remains. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255 x9; 84182; 84182 AGNBS (if appropriate); 86255 AMPCS (if appropriate); 86256 AMPIS (if appropriate); 84182 AMIBS (if appropriate); 84182 AN1BS (if appropriate); 84182 AN2BS (if appropriate); 86255 ANN2S (if appropriate); 86255 DPPCS (if appropriate); 86256 DPPTS (if appropriate); 86255 GABCS (if appropriate); 86256 GABIS (if appropriate); 86341 GD65S (if appropriate); 86255 GFACS (if appropriate); 86256 GFATS (if appropriate); 86255 GL1CS (if appropriate); 86256 GL1TS (if appropriate); 86255 NMDCS (if appropriate); 86256 NMDIS (if appropriate); 84182 PC1BS (if appropriate); 84182 PCTBS (if appropriate); 86255 PCATR (if appropriate);

DYS2 92121

Autoimmune Dysautonomia Evaluation, Serum

Specimen Requirements: Patient Preparation: 1. For optimal antibody detection, specimen collection is recommended before initiation of immunosuppressant medication or intravenous immunoglobulin treatment. 2. This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed, or canceled if radioactivity remains. 3. Patient should have no general anesthetic or muscle-relaxant medications in the previous 24 hours. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 4 mL

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 83519 ; 86255 x 6; 86255 AMPCS (if appropriate); 86256 AMPIS (if appropriate); 86255 AMPHS (if appropriate); 84182 AMIBS (if appropriate); 84182 AN1BS (if appropriate); 84182 AN2BS (if appropriate); 84182 CRMWS (if appropriate); 86255 DPPCS (if

appropriate); 86256 DPPTS (if appropriate); 86255 GABCS (if appropriate); 86256 GABIS (if appropriate); 86255 NMDCS (if appropriate); 86256 NMDIS (if appropriate); 84182 PC1BS (if appropriate); 84182 PCTBS (if appropriate); 86255 PCABP (if appropriate); 86255 PCATR (if appropriate);

GID2 92120

Autoimmune Gastrointestinal Dysmotility Evaluation, Serum

Specimen Requirements: Patient Preparation: 1. For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication or intravenous immunoglobulin (IVIg) treatment. 2. This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed, or canceled if radioactivity remains. 3. Patient should have no general anesthetic or muscle-relaxant drugs in the previous 24 hours. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 83519; 86255 x 6; 86255-AMPCS (if appropriate); 86256-AMPIS (if appropriate); 86255-AMPHS (if appropriate); 84182-AMIBS (if appropriate); 84182-AN1BS (if appropriate); 84182-AN2BS (if appropriate); 84182-CRMWS (if appropriate); 86255-DPPCS (if appropriate); 86256-DPPTS (if appropriate); 86255-GABCS (if appropriate); 86256-GABIS (if appropriate); 86255-NMDCS (if appropriate); 86256-NMDIS (if appropriate); 84182-PC1BS (if appropriate); 84182-PCTBS (if appropriate); 86255-PCABP (if appropriate); 86255-PCATR (if appropriate);

ALDG 609516

Autoimmune Liver Disease Panel, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1.5 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86255; 83516; 86038; 86256-if appropriate;

MAS1 605125

Autoimmune Myelopathy Evaluation, Serum

Specimen Requirements: Patient Preparation: 1. For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication or intravenous immunoglobulin treatment. 2. This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed, or canceled if radioactivity remains. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255 x 15; 86341 ; 84182 ; 84182-AGNBS (if appropriate); 86255-AINCS (if appropriate); 86255-AMPCS (if appropriate); 86256-AMPIS (if appropriate); 84182-AMIBS (if appropriate); 84182-AN1BS (if appropriate); 84182-AN2BS (if appropriate); 86255-DPPCS (if appropriate); 86256-DPPTS (if appropriate); 86255-GABCS (if appropriate); 86256-GABIS (if appropriate); 86255-GFACS (if appropriate); 86256-GFATS (if appropriate); 86255-GL1CS (if appropriate); 86256-GL1TS (if appropriate); 86256-MOGFS (if appropriate); 86256-MOGTS (if appropriate); 86255-NFHCS (if appropriate); 86256-NIFTS (if appropriate); 86255-NFLCS (if appropriate); 86255-NMDCS (if appropriate); 86256-NMDIS (if appropriate); 86256-NMOFS (if appropriate); 86256-NMOTS (if appropriate); 84182-PC1BS (if appropriate); 84182-PCTBS (if appropriate);

MAC1 605126

Autoimmune Myelopathy Evaluation, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Preferred: Vial number 1 Acceptable: Any vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86341; 84182; 86255 x14; 84182-AGNBC (if appropriate); 86255-AINCC (if appropriate); 86255-AMPCC (if appropriate); 86256-AMPIC (if appropriate); 84182-AMIBC (if appropriate); 84182-AN1BC (if appropriate); 84182-AN2BC (if appropriate); 86255-DPPCC (if appropriate); 86256-DPPTC (if appropriate); 86255-GABCC (if appropriate); 86256-GABIC (if appropriate); 86255-GFACC (if appropriate); 86256-GFATC (if appropriate); 86255-GL1CC (if appropriate); 86256-GL1TC (if appropriate); 86255-NFHCC (if appropriate); 86256-NIFTC (if appropriate); 86255-NFLCC (if appropriate); 86255-NMDCC (if appropriate); 86256-NMDIC (if appropriate); 86256-NMOFC (if appropriate); 86256-NMOTC (if appropriate); 84182-PC1BC (if appropriate);

appropriate); 84182-PCTBC (if appropriate);

FARP

75446

Autoimmune Retinopathy Panel by Immunoblot (ARP)

Specimen Requirements: Submit only one of the following specimens: Serum: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 5 mL serum refrigerated in a plastic vial. Plasma: Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 5 mL EDTA plasma refrigerated in a plastic vial. Complete and submit with specimen: Completed OHSU Ocular request form Clinical history Referring physician information (name & phone number) -NOTE: Without this information, testing cannot be completed.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated	7 days	

CPT Code Information: 84182 x 8

AUTOP

65666

Autoinflammatory Primary Immunodeficiency (PID) Gene Panel, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Blood spot Supplies: Card-Blood Spot Collection Filter Paper (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Whatman FTA Classic paper, Ahlstrom 226 filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient <1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Peripheral blood mononuclear cells (PBMCs) Container/Tube: Cell pellet Collection Instructions: Send as a suspension in freezing medium or cell pellet frozen on dry ice. Specimen Stability Information: Frozen Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Additional Information: Indicate the tests to be performed on the fibroblast culture cells. A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes of culture media can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Additional Information: A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL 2. Include concentration and volume on tube. Specimen Stability Information: Frozen

(preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443

ARPKZ 35359

Autosomal Recessive Polycystic Kidney Disease (ARPKD), Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of specimen must be submitted. Testing may be canceled if DNA requirements are inadequate. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Prenatal Specimens Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Blood: 1 mL Amniotic Fluid: 10 mL Chorionic Villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81408; Fibroblast Culture for Genetic Test; 88233-(if appropriate); 88240-(if appropriate); ; Amniotic Fluid Culture/Genetic Test; 88235-(if appropriate); 88240-(if appropriate); ; Maternal Cell Contamination, B; 81265-(if appropriate);

FAVCG 57690

Avocado IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	

Frozen	365 days
Ambient	7 days

CPT Code Information: 86001

AVOC 82812

Avocado, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FAZAT 91934

Azathioprine (Imuran) as 6-Mercaptopurine

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL of sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80299

CD40 89009

B-Cell CD40 Expression by Flow Cytometry, Blood

Specimen Requirements: For serial monitoring, we recommend that specimen draws be performed at the same time of day. Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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CPT Code Information: 88184**BCLGP**
65664**B-Cell Deficiency Primary Immunodeficiency Disorder Panel (34 genes), Next-Generation Sequencing, Varies**

Specimen Requirements: Due to lower concentration of DNA yielded from alternate specimen sources, _PMS2 cannot be performed on any sample type other than whole blood or DNA extracted from whole blood. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Blood spot Supplies: Card-Blood Spot Collection Filter Paper (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Whatman FTA Classic paper, Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 2 to 5 blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient <1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Peripheral blood mononuclear cells (PBMCs) Container/Tube: Cell pellet Collection Instructions: Send as a suspension in freezing medium or cell pellet frozen on dry ice. Specimen Stability Information: Frozen Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Additional Information: Indicate the tests to be performed on the fibroblast culture cells. A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes of culture media can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Additional Information: A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mL (microliters) Collection Instructions: 1. The preferred volume is 100 mL at a concentration of 250 ng/mL 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443**BALLM**
608251**B-Cell Lymphoblastic Leukemia Monitoring, Minimal Residual**

Disease Detection, Flow Cytometry, Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA), green top (sodium heparin) Specimen Volume: 3 mL Slides: Include 5- to 10-unstained bone marrow aspirate smears, if possible. Collection Instructions: 1. Submission of bilateral specimens is not required. 2. Label specimen appropriately (bone marrow).

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient	72 hours	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker 88185 x 9-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each) 88188-Flow Cytometry Interpretation, 9 to 15 Markers

BLYM
65878

B-Cell Lymphoma, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Lymph node Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: For each probe set ordered, 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide. Specimen Type: Solid tumor Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: For each probe set ordered, 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88377 (if 1 probe set); 88377 x 2 (if 2 probe sets); 88377 x 3 (if 3 probe sets); 88377 x 4 (if 4 probe sets); 88377 x 5 (if 5 probe sets); 88377 x 6 (if 6 probe sets);

BLPF
35258

B-Cell Lymphoma, FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1 to 2 mL Collection Instructions: Invert several times to mix bone marrow. Acceptable: Specimen Type: Blood Container/Tube: Green top (sodium heparin) Specimen Volume: 7 to 10 mL Collection Instructions: Invert several times to mix blood. Specimen Type: Touch prep or fresh tissue

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

IABCS 88800

B-Cell Phenotyping Profile for Immunodeficiency and Immune Competence Assessment, Blood

Specimen Requirements: Two separate EDTA specimens are required: 1 refrigerated and 1 at ambient transport temperature. For serial monitoring, we recommend that specimen draws be performed at the same time of day. Specimen Type: Whole blood for TBBS / Quantitative Lymphocyte Subsets: T, B, and NK Container/Tube: 4 mL Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Send specimen in original tube. Do not aliquot. 2. Label specimen as blood for TBBS / Quantitative Lymphocyte Subsets: T, B, and NK. Specimen Stability Information: Ambient <52 hours Specimen Type: Whole blood for IABC / B-Cell Phenotyping Screen for Immunodeficiency and Immune Competence Assessment, Blood Container/Tube: Lavender top (EDTA) Specimen Volume: < or =14 years: 4 mL >14 years: 10 mL Collection Instructions: 1. Send specimen in original tube. Do not aliquot. 2. Label specimen as blood for IABC / B-Cell Phenotyping Screen for Immunodeficiency and Immune Competence Assessment, Blood. Specimen Stability Information: Refrigerated <48 hours

Specimen Minimum Volume: TBBS: 1 mL IABC < or =14 years: 3 mL >14 years: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Varies	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: T- and B-Cell Quantitation by Flow Cytometry; 86355-B cells, total count; 86357-Natural killer (NK) cells, total count; 86359-T cells, total count; 86360-Absolute CD4/CD8 count with ratio; ; B-Cell Phenotyping Screen for Immunodeficiency and Immune Competence Assessment, Blood; 86356 x7 - Mononuclear cell antigen, quantitative; ; Common Variable Immunodeficiency Confirmation Flow Panel; 88184-Flow cytometry, first marker (if appropriate); 88185 x 2-Flow cytometry, each additional marker (if appropriate);

COGBF 113530

B-Lymphoblastic Leukemia/Lymphoma, Children's Oncology Group Enrollment Testing, FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1 to 2 mL Collection Instructions: Invert several times to mix bone marrow. Acceptable: Specimen Type: Blood Container/Tube: Green top (sodium heparin) Specimen Volume: 6 mL Collection Instructions: Invert several times to mix blood.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

BALLF

35256

B-Lymphoblastic Leukemia/Lymphoma, FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Green top (sodium heparin) Specimen Volume: 7-10 mL Collection Instructions: Invert several times to mix blood. Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1-2 mL Collection Instructions: Invert several times to mix bone marrow.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

BNP

83873

B-Type Natriuretic Peptide, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge, aliquot plasma into plastic vial, and freeze immediately or within 7 hours from time of collection.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	365 days	

CPT Code Information: 83880

BABG

81128

Babesia microti IgG Antibodies, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86753

LBAB

62847

Babesia species, Molecular Detection, PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	7 days	

CPT Code Information: 87798 x 3

FBACS

75397

Baclofen, Serum

Specimen Requirements: Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 1 mL of serum refrigerate in a preservative-free plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	120 days	
	Ambient	14 days	

CPT Code Information: 80369

GENS

60518

Bacterial Culture, Aerobic with Antimicrobial Susceptibilities, Varies

Specimen Requirements: Preferred: Specimen Type: Closed abscess; deep tissue or fluid Container/Tube: Sterile container Specimen Volume: Entire collection Collection Instructions: Aspirate

the abscess contents with a syringe or excise a portion of tissue. Acceptable: Specimen Type: Open abscess, swab, tissue, or fluid Supplies: Culturette (BBL Culture Swab) (T092), BD E-Swab (T853) Sources: Abscess, aspirate, lesion, or wound Container/Tube: Sterile container, culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) or ESwab Collection Instructions: For most open lesions and abscesses, remove superficial flora by decontaminating skin before collecting a specimen from advancing margin or base. Additional Information: 1. If submitting a specimen from a source contaminated with usual flora, send at refrigerated temperature. 2. Refrigerated specimens are not suitable for isolation of Neisseria species.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	24 hours	
	Refrigerated	24 hours	

CPT Code Information: 87070-Bacterial Culture, Aerobic; 87186-Antimicrobial Susceptibility, Aerobic Bacteria, MIC-per organism for routine battery (if appropriate); 87181-Susceptibility per drug and per organism for drugs not in routine battery (if appropriate); 87077-Identification commercial kit (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria Identification (if appropriate); 87077-Additional Identification procedure (if appropriate); 87077-Identification Staphylococcus (if appropriate); 87077-Identification Streptococcus (if appropriate); 87147 x 1-3-Serologic agglut method 1 ident (if appropriate); 87147-Serologic agglut method 2 ident (if appropriate); 87147 x 4-Serologic agglut method 3 ident (if appropriate); 87147 x 2-6-Serologic Agglut Method 4 Ident (if appropriate); 87153-Aerobe ident by sequencing (if appropriate); 87176-Tissue Processing (if appropriate); 87185-Beta lactamase (if appropriate); 87150-Identification by PCR (if appropriate); 87150-H pylori + Clarithro Resistance PCR (if appropriate); 87150-mec A PCR (if appropriate);

SPUT 8095

Bacterial Culture, Aerobic, Respiratory

Specimen Requirements: Patient Preparation: Have patient rinse his/her mouth with water immediately prior to specimen collection. This reduces the number of contaminating oropharyngeal bacteria. Specimen Type: Respiratory Sources: Sputum, bronchoalveolar lavage, trachea, endotracheal tube, etc. Container/Tube: Sterile container Specimen Volume: Entire specimen Collection Instructions: An early-morning expectorated sputum is preferred.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	24 hours	
	Ambient	24 hours	

CPT Code Information: 87070-Bacteria, Culture, Aerobic, Respiratory; 87077-Identification Commercial Kit (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria Identification (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87077-Identification Staphylococcus (if appropriate); 87077-Identification Streptococcus (if appropriate); 87147 x 1-3-Serologic Agglut Method 1 Ident (if appropriate); 87147-Serologic Agglut Method 2 Ident (if appropriate); 87147 x 4-Serologic Agglut Method 3 Ident (if appropriate); 87147 x 2-6 - Serologic Agglut Method 4 Ident (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87150-Identification by PCR (if appropriate);

SPUTS 60517

Bacterial Culture, Aerobic, Respiratory with Antimicrobial Susceptibilities, Varies

Specimen Requirements: Specimen Type: Respiratory Patient Preparation: Have patient rinse his/her mouth with water immediately prior to specimen collection. This reduces the number of contaminating oropharyngeal bacteria. Sources: Sputum, bronchoalveolar lavage, trachea, endotracheal tube, etc. Container/Tube: Sterile container Specimen Volume: Entire specimen Collection Instructions: An early-morning expectorated sputum is preferred.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	24 hours	
	Ambient	24 hours	

CPT Code Information: 87070-Bacterial, Culture, Aerobic, Respiratory; 87186-Antimicrobial Susceptibility, Aerobic Bacteria, MIC-per organism for routine battery (if appropriate); 87181-Susceptibility per drug and per organism for drugs not in routine battery (if appropriate); 87077-Identification Commercial Kit (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria Identification (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87077-Identification Staphylococcus (if appropriate); 87077-Identification Streptococcus (if appropriate); 87147 x 1-3-Serologic Agglut Method 1 Ident (if appropriate); 87147-Serologic Agglut Method 2 Ident (if appropriate); 87147 x 4-Serologic Agglut Method 3 Ident (if appropriate); 87147 x 2-6-Serologic Agglut Method 4 Ident (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87185-Beta Lactamase (if appropriate); 87150-Identification by PCR (if appropriate); 87150-mecA PCR (if appropriate);

UR 8105

Bacterial Culture, Aerobic, Urine

Specimen Requirements: Supplies: Urine tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 1 mL Collection Instructions: Collect a random urine specimen. Specimen Stability Information: Refrigerated 24 hours

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Varies		

CPT Code Information: 87086-Bacterial Culture, Aerobic, Urine; 87077-Identification Commercial Kit (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87147 x 1-3-Serologic Agglut Method 1 Ident (if appropriate); 87147-Serologic Agglut Method 2 Ident (if appropriate); 87147 x 4-Serologic Agglut Method 3 Ident (if appropriate); 87147 x 2-6 - Serologic Agglut Method 4 Ident (if appropriate); 87077-Identification Staphylococcus (if appropriate); 87077-Identification Streptococcus (if appropriate); 87185-Beta Lactamase (if appropriate); 87798-Identification by PCR (if appropriate);

GEN 8108

Bacterial Culture, Aerobic, Varies

Specimen Requirements: Preferred: Specimen Type: Closed abscess; Deep tissue or fluid
Container/Tube: Sterile container Specimen Volume: Entire collection Collection Instructions: Aspirate the abscess contents with a syringe or excise a portion of tissue. Acceptable: Supplies: Culturette (BBL Culture Swab) (T092) BD E-Swab (T853) Specimen Type: Open abscess, swab, tissue, or fluid
Sources: Abscess, aspirate, lesion, or wound Container/Tube: Sterile container, culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium), or ESwab Collection Instructions: For most open lesions and abscesses, remove superficial flora by decontaminating skin before collecting a specimen from advancing margin or base. Additional Information: 1. If submitting a specimen from a source contaminated with usual flora, send at refrigerated temperature. 2. Refrigerated specimens are not suitable for isolation of Neisseria species.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	24 hours
	Refrigerated	24 hours

CPT Code Information: 87070-Bacterial, Culture, Aerobic; 87077-Identification commercial kit (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria identification (if appropriate); 87077-Additional identification procedure (if appropriate); 87077-Identification Staphylococcus (if appropriate); 87077-Identification Streptococcus (if appropriate); 87147 x 1-3-Serologic agglut method 1 ident (if appropriate); 87147-Serologic agglut method 2 ident (if appropriate); 87147 x 4-Serologic agglut method 3 ident (if appropriate); 87147 x 2-6 - Serologic Agglut Method 4 Ident (if appropriate); 87153-Aerobe ident by sequencing (if appropriate); 87176-Tissue processing (if appropriate); 87150-Identification by PCR (if appropriate); 87150-H pylori + Clarithro Resistance PCR (if appropriate);

URNS 60515

Bacterial Culture, Aerobic, with Antimicrobial Susceptibilities, Urine

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Urine
Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 1 mL Collection Instructions: Collect a random urine specimen. Specimen Stability Information: Refrigerated 24 hours

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Varies		

CPT Code Information: 87086-Bacterial Culture, Aerobic, Urine; 87186-Sensitivity, MIC-per organism for routine battery (if appropriate); 87181-Susceptibility per drug and per organism for drugs not in routine battery (if appropriate); 87077-Identification Commercial Kit (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria Identification (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87077-Identification Staphylococcus (if appropriate); 87077-Identification Streptococcus (if appropriate); 87147 x 1-3-Serologic Agglut Method 1 Ident (if appropriate); 87147-Serologic Agglut Method 2 Ident (if appropriate); 87147 x 4-Serologic Agglut Method 3 Ident (if appropriate); 87147 x 2-6-Serologic Agglut Method 4 Ident (if appropriate);

87153-Aerobe Ident by Sequencing (if appropriate); 87150-Identification by PCR (if appropriate);
87150-mecA PCR (if appropriate);

ANAES 60519

Bacterial Culture, Anaerobic with Antimicrobial Susceptibilities, Varies

Specimen Requirements: Supplies: Anaerobic Transport Tube (T588) Acceptable Sources: Deep tissues, sterile body fluids, abscesses, percutaneous transtracheal aspirates, suprapubic aspirations, or wounds Collection Instructions: Specimen should be obtained by using a needle and syringe from a source not normally colonized by anaerobes.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient	72 hours	

CPT Code Information: 87075-Bacterial Culture, Anaerobic; 87076-Anaerobe Ident (if appropriate); 87076-Id MALDI-TOF Mass Spec Anaerobe (if appropriate); 87153-Anaerobe Ident by Sequencing (if appropriate); 87186-Antimicrobial Susceptibility, Anaerobic Bacteria, MIC (if appropriate); 87181-Anaerobe Susceptibility per agent (if appropriate) ; 87185-Beta Lactamase (if appropriate); 87176-Tissue Processing (if appropriate); 87150-Identification by PCR (if appropriate);

ANAE 84292

Bacterial Culture, Anaerobic, Varies

Specimen Requirements: Supplies: Anaerobe Transport Tube (T588) Specimen Types: Deep tissues, sterile body fluids, abscesses, percutaneous transtracheal aspirates, suprapubic aspirations, or wounds Collection Instructions: Specimen should be obtained by using a needle and syringe from a source not normally colonized by anaerobes.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	72 hours

CPT Code Information: 87075-Bacterial Culture, Anaerobic; 87076-Id MALDI-TOF Mass Spec Anaerobe (if appropriate); 87153-Anaerobe Ident by Sequencing (if appropriate); 87176-Tissue Processing (if appropriate)87150-Identification by PCR (if appropriate);

CFRCS 60563

Bacterial Culture, Cystic Fibrosis with Antimicrobial Susceptibilities, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Sputum, expectorated or induced Container/Tube: Sterile container Specimen Volume: Entire collection Acceptable: Specimen Type: Bronchial aspirate or washing, bronchoalveolar lavage, endotracheal, or tracheal Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Type: Throat swab Supplies: Culturette (BBL Culture Swab) (T092) BD E-Swab (T853) Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Specimen Volume: Entire collection

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated	48 hours	

CPT Code Information: 87070-Bacteria, culture, cystic fibrosis, respiratory; 87186-Antimicrobial Susceptibility, Aerobic Bacteria, MIC-per organism for routine battery (if appropriate); 87181-Susceptibility per drug and per organism for drugs not in routine battery (if appropriate); 87077-Identification commercial kit (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria Identification (if appropriate); 87077-Additional Identification procedure (if appropriate); 87077-Identification Staphylococcus (if appropriate); 87077-Identification Streptococcus (if appropriate); 87147 x 1-3-Serologic agglut method 1 ident (if appropriate); 87147-Serologic agglut method 2 ident (if appropriate); 87147 x 4-Serologic agglut method 3 ident (if appropriate); 87147 x 2-6-Serologic Agglut Method 4 Ident (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87185-Beta lactamase (if appropriate); 87150-Identification by PCR (if appropriate); 87150-mecA PCR (if appropriate);

CFRC 89653

Bacterial Culture, Cystic Fibrosis, Respiratory

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Sputum, expectorated or induced Container/Tube: Sterile container Specimen Volume: Entire collection Acceptable: Specimen Type: Bronchial aspirate or washing, bronchoalveolar lavage, endotracheal, or tracheal Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Type: Throat swab Supplies: Culturette (BBL Culture Swab) (T092) BD E-Swab (T853) Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Specimen Volume: Entire collection

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	48 hours

CPT Code Information: 87070-Bacteria, culture, cystic fibrosis, respiratory; 87077-Identification commercial kit (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria Identification (if appropriate); 87077-Additional Identification procedure (if appropriate); 87077-Identification Staphylococcus (if appropriate); 87077-Identification Streptococcus (if appropriate); 87147 x 1-3-Serologic agglut method 1 ident (if appropriate); 87147-Serologic agglut method 2 ident (if appropriate); 87147 x 4-Serologic agglut method 3 ident (if appropriate); 87147 x 2-6-Serologic Agglut Method 4 Ident (if appropriate); 87153-Aerobe Ident by sequencing (if appropriate); 87150-Identification by PCR (if appropriate);

BTWGS 65162

Bacterial Typing, Whole Genome Sequencing, Varies

Specimen Requirements: Aerobic Bacteria Supplies: Infectious Container, Large (T146) Container/Tube: Agar slant Specimen Volume: Isolates on separate agar slants in pure culture Collection Instructions: 1. Isolate the bacteria (must be *Acinetobacter baumannii*, *Campylobacter jejuni/coli*, *Enterobacter cloacae*, *Enterococcus faecalis*, *Enterococcus faecium*, *Escherichia coli*, *Klebsiella pneumoniae*, *Legionella pneumophila*, *Pseudomonas aeruginosa*, *Serratia marcescens*, *Staphylococcus aureus*, *Staphylococcus epidermidis*, *Staphylococcus lugdunensis*, *Streptococcus agalactiae*, or *Streptococcus pyogenes*). 2. Bacterial isolate must be in pure culture, actively growing. Do not submit mixed cultures. 3. Each isolate must be submitted under a separate order. Anaerobic Bacteria Supplies: -Anaerobe Transport Tube (T588) -Infectious Container, Large (T146) Container/Tube: Preferred: Anaerobic transport tube Acceptable: Thioglycollate broth or any other

suitable anaerobic transport system Specimen Volume: Isolates in separate transport tubes in pure culture Collection Instructions: 1. Isolate the bacteria (must be *Clostridioides difficile* or *Cutibacterium* [*Propionibacterium*] *acnes*). 2. Do not submit growth directly from a CHROMagar plate; subculture to anaerobic media to obtain pure isolate, and confirm identification prior to submission. 3. Bacterial isolate must be in pure culture, actively growing. Do not submit mixed cultures. 4. Each isolate must be submitted under a separate order.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 0010U-Bacterial Typing, Whole Genome Seq; 87900-Bioinformatics Reanalysis (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87153-Aerobe ident by sequencing (if appropriate); 87077-Additional identification procedure (if appropriate); 87076-Id MALDI-TOF mass spec anaerobe (if appropriate); 87076-Anaerobe Ident (if appropriate); 87153-Anaerobe ident by sequencing (if appropriate);

BAHG

82711

Bahia Grass, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

BYST

82759

Baker's Yeast, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

BCYP
82722**Bald Cypress, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

BAMB
82879**Bamboo Shoot, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FBANG
57635**Banana IgG**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

BANA
82746**Banana, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

BAP1 71481

BAP1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope (T693) Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

BARBX 62713

Barbiturates Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Container/Tube: Chain-of-Custody Kit (T282) containing the specimen containers, seals, and documentation required. Specimen Volume: 20 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting <20 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80345; G0480 (if appropriate);

BARBU 80372

Barbiturates Confirmation, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STATS are not accepted for this test.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80345; G0480 (if appropriate);

FBARS 57742

Barium, Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a EDTA metal-free royal blue-top tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL metal-free EDTA plasma refrigerated in a plastic vial. Serum Draw blood in a metal-free royal blue-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL metal-free serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 83018

BGRS 82785

Barley Grass, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FBARG 57578

Barley IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

BRLY 82687

Barley, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FBART 91439

Bartonella Antibody Panel, IFA CSF

Specimen Requirements: Specimen Type: Spinal Fluid Sources: CSF Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Collect 1 mL of spinal fluid (CSF). Ship refrigerate

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 86611 x 4

BART 81575

Bartonella Antibody Panel, IgG and IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: 86611 x 4

BARTB 89983

Bartonella, Molecular Detection, PCR, Blood

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by Bartonella species DNA is unlikely. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL Collection Instructions: Send specimen in original tube (preferred).

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	7 days	

CPT Code Information: 87801

BARRP 84440

Bartonella, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by Bartonella species DNA is unlikely. Submit only 1 of the following specimens: Specimen Type: Fresh tissue or biopsy Sources: Heart valve, liver, lymph node, spleen, or skin tissue papule/lesion/nodule Container/Tube: Sterile container Specimen Volume: Entire collection or 5 mm(3) - approximately the size of a pencil eraser Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit tissue only, do not add fluid to tissue. 3. Refrigerate or freeze specimen. Specimen Stability Information: Refrigerated (preferred) <7 days/ Frozen <7 days Preferred Paraffin-embedded tissue block: Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Heart valve, liver, lymph node, spleen, or skin tissue papule/lesion/nodule Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block to be cut and returned. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable: Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Heart valve, liver, lymph node, spleen, or skin tissue papule/lesion/nodule Container/Tube: Sterile container for each individual cut section (scroll). Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Fluid Sources:

Cerebrospinal or ocular (eg, vitreous humor fluid) Container/Tube: Sterile vial Specimen Volume: 0.5 mL Specimen Stability Information: Refrigerated (preferred) <7 days/Frozen <7 days Specimen Type: Synovial fluid Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Pink top (EDTA), royal blue top (EDTA), sterile vial containing EDTA-derived aliquot, red clot tube (no anticoagulant), or sterile container Specimen Volume: 0.5 mL Collection Instructions: Send specimen in original tube (preferred). Specimen Stability Information: Refrigerated (preferred) <7 days /Frozen <7 days

Specimen Minimum Volume: Fresh tissue or biopsy: 5 mm(3) Paraffin-embedded tissue block: two 10-micron sections Fluid: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87801

BMAMA Basic Metabolic Panel, Serum

113630

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated	24 hours	

CPT Code Information: 84132; 84295; 82435; 82374; 84520; 82565; 82310; 82947;

FBSLG Basil IgG

57660

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

BASL Basil, IgE, Serum

82489

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen

Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FBBLE **57546**

Bass Black (Sea Bass) (Centropristis striata) IgE

Specimen Requirements: Draw blood in a plain red top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

BAYL **82601**

Bay Leaf, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FBWME **57583**

Bayberry/Wax Myrtle (Myrica spp) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003**BCL2**
70362**BCL-2 Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope (T693) Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**BCL6**
70363**BCL-6 Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**BCOR**
605260**BCOR Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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TECHONLY	Ambient (preferred)
	Refrigerated

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

BCRFX 65248

BCR/ABL1 Qualitative Diagnostic Assay with Reflex to BCR/ABL1 p190 Quantitative Assay or BCR/ABL1 p210 Quantitative Assay, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 4 mL Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	72 hours	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81208 ; 81206; 81207;

BA190 83336

BCR/ABL1, p190, mRNA Detection, Reverse Transcription-PCR (RT-PCR), Quantitative, Monitoring Assay, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 4 mL Bone marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	5 days	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81207

B190R
48391

BCR/ABL1, p190, mRNA Detection, Reverse Transcription-PCR (RT-PCR), Quantitative, Reflex, Varies

Specimen Requirements: Only orderable as a reflex. For more information see BCRFX / BCR/ABL1 Qualitative Diagnostic Assay with Reflex to BCR/ABL1 p190 Quantitative Assay or BCR/ABL1 p210 Quantitative Assay, Varies.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	72 hours	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81207

BCRAB
89007

BCR/ABL1, p210, mRNA Detection, Reverse Transcription-PCR (RT-PCR), Quantitative, Monitoring Chronic Myeloid Leukemia (CML), Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 4 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	72 hours	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81206

B210R
48390

BCR/ABL1, p210, mRNA Detection, Reverse Transcription-PCR (RT-PCR), Quantitative, Reflex, Varies

Specimen Requirements: Only orderable as a reflex. See BCRFX / BCR/ABL1 Qualitative Diagnostic Assay with Reflex to BCR/ABL1 p190 Quantitative Assay or BCR/ABL1 p210.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	72 hours	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81206**BADX**
89006**BCR/ABL1, Qualitative, Diagnostic Assay, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Peripheral blood: 4 mL Bone marrow: 2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	5 days	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81206 ; 81207 ; 81208;**BAKDM**
89609**BCR/ABL1, Tyrosine Kinase Inhibitor Resistance, Kinase Domain Mutation Screen, Sanger Sequencing, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: EDTA (lavender top) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Acceptable: Specimen Type: Bone marrow Container/Tube: EDTA (lavender top) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 4 mL Bone Marrow: 2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	5 days	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81170-ABL1 (ABL proto-oncogene 1, non-receptor tyrosine kinase)(eg, acquired imatinib tyrosine kinase inhibitor resistance), gene analysis, variants in the kinase domain

FBEBE
57521

Bean Black (Phaseolus spp) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FBCGG
57673

Bean Coffee Green IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

FBGSG
57522

Bean Green/String IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

FBKG
57662

Bean Kidney IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

FBLME
57523

Bean Lima (Phaseolus limensis) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FNBE
57937

Bean Navy/White (Phaseolus vulgaris) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FBNWG Bean Navy/White IgG

57655

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

BWRS

35376

Beckwith-Wiedemann Syndrome/Russell-Silver Syndrome, Molecular Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. An additional 2 to 3 weeks is required to culture amniotic fluid before genetic testing can occur. Acceptable: Specimen Type: Confluent cultured amniocytes Container/Tube: T-25 flask Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured amniocytes from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Additional information: A separate culture charge will be assessed under FIBR / Fibroblast Culture, Tissue. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur.

Specimen Minimum Volume: Blood: 1 mL Amniotic Fluid: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81401-H19 (imprinted maternally expressed transcript [non-protein coding]) (eg, Beckwith-Wiedemann syndrome), methylation analysis; 81401-KCNQ1OT1 (KCNQ1 overlapping transcript 1 [non-protein coding]) (eg, Beckwith-Wiedemann syndrome) methylation

analysis ; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); 88235-Tissue culture for amniotic fluid (if appropriate); 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells (if appropriate);

BECH 82669

Beech, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FBEFG 57626

Beef IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

BEEF 82697

Beef, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for each 5 allergens requested Additional Information: Designate specific allergens from the list in Allergens – Immunoglobulin E (IgE) Antibodies in Special Instructions.

Specimen Minimum Volume: For 1 allergen: 0.3 mL; For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FBTRG Beet Root IgG

57689

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

BEETS Beets (Beetroot), IgE, Serum

82618

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL; For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FPHEN Benzene as Phenol, Occupational Exposure, Urine

91136

Specimen Requirements: Collect 10 mL random urine without preservatives. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	180 days	

CPT Code Information: 82570/Creatinine; 84600/Volatiles;

FBEN
90294

Benzene, Occupational Exposure, Blood

Specimen Requirements: Draw blood in a green-top (sodium heparin) tube(s) and send 20 mL in two tubes of sodium heparin whole blood refrigerated. Blood should be drawn at end of shift. Tubes should be filled to prevent loss of volatile compound into headspace.

Specimen Minimum Volume: 2.5 mL (in two tubes)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Refrigerated (preferred)	14 days	
	Frozen	365 days	

CPT Code Information: 84600

BNZX
608279

Benzodiazepines Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain-of-Custody Kit (T282) Container/Tube: Chain-of-Custody Kit containing the specimen containers, seals, and documentation required. Specimen Volume: 20 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting <20 mL will compromise the ability to perform all necessary testing.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	14 days	

CPT Code Information: 80347; G0480 (if appropriate);

BNZU
608255

Benzodiazepines Confirmation, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STAT requests are not accepted for this test.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Urine	Refrigerated (preferred)	7 days
	Frozen	14 days

CPT Code Information: 80347; 80339; 80368; G0480 (if appropriate);

FBENZ Benztropine (Cogentin), Serum

90092

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80299

BEREP Ber-EP4 (Epithelial Cell Adhesion Molecule/EPCAM) Immunostain, Technical Component Only

70364

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope (T693) Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

BBEET Berlin Beetle, IgE, Serum

82838

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

BERG 82892

Bermuda Grass, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FBERY 91092

Beryllium, Blood

Specimen Requirements: Draw blood in a metal free, royal blue-top with EDTA tube(s). Send 2 mL of EDTA whole blood refrigerated.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA - Metal Free (ERB)	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 83018

BETV2 609436

BET v2 (Profilin), IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen	90 days
Ambient	7 days

CPT Code Information: 86008

WBSEQ Beta Globin Gene Sequencing, Varies

62128

Specimen Requirements: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD), green top (sodium heparin) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in the original tube. Specimen Stability Information: Refrigerate 30 days(preferred)/Ambient 14 days Specimen Type: Extracted DNA from whole blood Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen 2. Provide volume and concentration of the DNA Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 50 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81364-HBB (hemoglobin, beta) full sequence

FBLGG Beta Lactoglobulin IgG

57667

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

AB2GP Beta-2 Glycoprotein 1 Antibodies, IgA, Serum

86180

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	21 days
	Frozen	21 days

CPT Code Information: 86146

B2GMG 62926

Beta-2 Glycoprotein 1 Antibodies, IgG and IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86146 x 2

GB2GP 86182

Beta-2 Glycoprotein 1 Antibodies, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86146

MB2GP 86181

Beta-2 Glycoprotein 1 Antibodies, IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86146

B2MU
602026**Beta-2 Microglobulin, Random, Urine**

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, urine tube Specimen Volume: 3 mL Collection Instructions: 1. Patient should empty bladder. 2. Have patient drink at least 0.5 liters of water. 3. Within 1 hour, collect a random urine specimen. 4. Add 1 M sodium hydroxide (NaOH) as preservative to the collection. This preservative is intended to achieve a pH of between approximately 6 and 8.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	14 days	
	Refrigerated	48 hours	

CPT Code Information: 82232

BETA2
80351**Beta-2 Transferrin: Detection of Spinal Fluid in Other Body Fluid**

Specimen Requirements: Specimen Type: Body fluid Sources: Nasal, otic, wound, etc Container/Tube: Preferred: Sterile container, syringe, test tube, or microtube Acceptable: Plain cotton swab or gauze Specimen Volume: 0.5 mL Collection Instructions: 1. If submitting a syringe, remove needle. Add cap to end of syringe. 2. If direct collection is not feasible, specimen may be collected using a plain cotton swab or gauze. 3. If gauze is used to collect specimen, circle area on the gauze where specimen was collected. 4. Place cotton swab or gauze in as small a container as possible (eg, plain test tube or collection container). 5. Do not collect specimen with a culture swab. 6. Do not add any liquid to the swab or gauze. Additional Information: 1. Samples collected from above the shoulders risk salivary contamination, which can degrade the beta-2 transferrin protein. These samples should be frozen immediately following collection and kept frozen until testing is performed. 2. Although results may be obtainable on smaller specimens (perhaps as little as 0.05 mL, depending on the protein concentrations and percentage of spinal fluid in the specimen), reliable results are best obtained with an adequate specimen volume. 3. Samples collected with additives such as microbiology media (eg, Stuart or Amies liquid medium) or TransFix/EDTA (used for analyses in flow cytometry) yield uninterpretable results and will be rejected.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Frozen (preferred)		
	Ambient		
	Refrigerated		

CPT Code Information: 86335

B2MC
60546**Beta-2-Microglobulin (Beta-2-M), Spinal Fluid****Specimen Requirements:** Container/Tube: Sterile vial Specimen Volume: 1 mL**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 82232**B2M**
9234**Beta-2-Microglobulin, Serum****Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 82232**BAMY**
70634**Beta-Amyloid Immunostain, Technical Component Only****Specimen Requirements:** Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**CTNNB**
92360**Beta-Catenin (CTNNB1) Mutation Analysis, Tumor****Specimen Requirements:** This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area:

tissue 36 mm(2). -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. In this document, the sizes are given as 4mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3mm x 1mm x 10 slides: approximate/equivalent to 36mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and cover slipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81403; 88381;

BCATN 70361

Beta-Catenin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CTX 83175

Beta-CrossLaps, Serum

Specimen Requirements: Patient Preparation: 1. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. 2. Patient should be fasting. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial, 5 mL Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen prior to 10 a.m. 2. Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Refrigerated	72 hours	

CPT Code Information: 82523**BGAW**

60987

Beta-Galactosidase, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 82657**BGABS**

60986

Beta-Galactosidase, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood spot collection card (T493) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper and Whatman Protein Saver 903 paper Specimen Volume: 2 blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is fingerstick. See Dried Blood Spot Collection Tutorial for how to collect blood spots via fingerstick: <https://vimeo.com/508490782> . 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	28 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Refrigerated	90 days	FILTER PAPER

CPT Code Information: 82657

BGA
8486**Beta-Galactosidase, Leukocytes**

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 82657

WBDDR
48052**Beta-Globin Cluster Locus Deletion/Duplication, Blood**

Specimen Requirements: Only orderable as a reflex. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -HBEL1 / Hemoglobin Electrophoresis Evaluation, Blood -MEV1 / Methemoglobinemia Evaluation, Blood -REVE1 / Erythrocytosis Evaluation, Whole Blood -THEV1 / Thalassemia and Hemoglobinopathy Evaluation, Blood and Serum Specimen Type: Peripheral blood Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in the original tube.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated		

CPT Code Information: 81363-HBB (hemoglobin, beta, beta-globin) (eg, beta thalassemia), duplication/deletion analysis; ;

WBDD
65200**Beta-Globin Cluster Locus, Deletion/Duplication, Varies**

Specimen Requirements: Specimen Type: Peripheral blood Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in the original tube. Specimen Stability Information: Refrigerated (preferred)/Ambient

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81363-HBB (hemoglobin, beta, beta-globin) (eg, beta thalassemia), duplication/deletion analysis

WBSQR Beta-Globin Gene Sequencing, Blood

47959

Specimen Requirements: Only orderable as a reflex. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -HBEL1 / Hemoglobin Electrophoresis Evaluation, Blood -MEV1 / Methemoglobinemia Evaluation, Blood -REVE1 / Erythrocytosis Evaluation, Whole Blood -THEV1 / Thalassemia and Hemoglobinopathy Evaluation, Blood and Serum

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	14 days	

CPT Code Information: 81364-HBB (hemoglobin, beta) full sequence

GBAW Beta-Glucosidase, Leukocytes

606273

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	
	Ambient	6 days	

CPT Code Information: 82963

BHCG Beta-Human Chorionic Gonadotropin, Quantitative, Serum

61718

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	
	Ambient	7 days	

CPT Code Information: 84702

BHSF
8877**Beta-Human Chorionic Gonadotropin, Quantitative, Spinal Fluid**

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Sterile vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 84702

BHYD
9251**Beta-Hydroxybutyrate, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 82010

BLACT
8118**Beta-Lactamase**

Specimen Requirements: Specimen Type: Pure culture of actively growing Enterococcus species, Haemophilus influenzae, Moraxella catarrhalis, Neisseria gonorrhoeae, or Staphylococcus species Container/Tube: Slant Specimen Volume: Entire specimen Collection Instructions: Send specimen in an approved mailing container and label as an etiologic agent/infectious substance.

Specimen Minimum Volume: NA

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87185

BLAC 82896

Beta-Lactoglobulin, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86008

HCO3 876

Bicarbonate, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated	24 hours	

CPT Code Information: 82374

FBIUR 75383

Bicarbonate, Urine

Specimen Requirements: Send 1 mL from a random urine collection. Send specimen refrigerated in a preservative free plastic urine container.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	30 days	
	Frozen	30 days	
	Ambient	48 hours	

CPT Code Information: 82374

BAPS 62538

Bile Acid Profile, Serum

Specimen Requirements: Patient Preparation: Patient must be fasting for 12 to 14 hours.

Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	90 days	
	Ambient	90 days	
	Frozen	90 days	

CPT Code Information: 82542

BAIPD 41445

Bile Acids for Peroxisomal Disorders, Serum

Specimen Requirements: Patient Preparation: Patient must be fasting for 12 to 14 hours. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	90 days	
	Ambient	90 days	
	Frozen	90 days	

CPT Code Information: 82542

BA48F 607368

Bile Acids, Bowel Dysfunction, 48 Hour, Feces

Specimen Requirements: Patient Preparation: For 3 days prior to and during the collection period: 1. Patient should be on a fat-controlled diet (100-150 g fat per day) 2. No laxatives (particularly mineral oil and castor oil) 3. No synthetic fat substitutes (eg, Olestra) or fat-blocking nutritional supplements Supplies: Stool Containers - 24, 48, 72 Hours Kit (T291) Collection Container/Tube: Stool container (T291); complies with shipping requirements, do not use other containers Specimen Volume: Entire 48-hour collection Collection Instructions: 1. Do not use other containers. 2. All containers must be sent together. 3. The entire collection must contain at least 5 g of feces. 4. The number of containers sent should be indicated on the labels (1 of 4, for example). Additional Information: 1. Patient may store sample at refrigerate temperature during collection period. 2. Barium interferes with test procedure; a waiting period of 48 hours before stool collection analysis is recommended.

Specimen Minimum Volume: 5 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen	30 days	

CPT Code Information: 82542

BAFS 62234

Bile Acids, Fractionated and Total, Serum

Specimen Requirements: Patient Preparation: Patient must be fasting for 12 to 14 hours.
Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube:
Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	90 days	
	Ambient	90 days	
	Frozen	90 days	

CPT Code Information: 82542

BILEA 84689

Bile Acids, Total, Serum

Specimen Requirements: Patient Preparation: 12-hour minimum fasting is required.
Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2
hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	24 hours	

CPT Code Information: 82239

FBAC 75012

Bile Acids, Urine

Specimen Requirements: Collection Container: Plastic urine container Specimen Volume: 5-25
mL Collection Instructions: Collect 5-25 mL random urine without preservative. Ship frozen in a plastic
container. NOTE: Submit with specimen: 1. Clinical history/Preliminary diagnosis -Because URSO can
mask detection of bile acid synthetic defects it is preferable for patients to be off Urso or Actigall for 5
days before sample collection. -If possible, send Urine & Serum (ZW166 - Bile Acids Serum, referral
lab code 9001004). Urine is analyzed for all patients - if Urine shows evidence of a metabolic
abnormality, Serum will be tested. Urine and serum must be ordered separately as they are 2 separate
tests with separate charges.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)		
	Ambient	48 hours	
	Refrigerated		

CPT Code Information: 83789

BILAO 71917

Biliary Tract Malignancy, FISH, Varies

Specimen Requirements: Supplies: PreservCyt Vial (T536) Specimen Type: Bile duct brushing, bile duct aspirate, hepatobiliary brushing, or hepatobiliary aspirate (fine-needle aspiration is not acceptable) Container/Tube: Separate ThinPrep vial containing 20 mL PreservCyt or CytoLyt solution for each specimen Specimen Volume: Entire collection Collection Instructions: 1. If performing local cytology in addition to fluorescence in situ hybridization testing, aliquot half of the specimen into another ThinPrep vial before processing the specimen. 2. Submission of residual specimen (after processing other testing) may compromise the sensitivity of the test. 3. Label each specimen with specific source (eg, right hepatic duct or common bile duct).

Specimen Minimum Volume: 20 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88377

FBILM 70587

Biliary Tract Malignancy-Cytology, FISH, Varies

Specimen Requirements: Supplies: PreservCyt Vial (T536) CytoLyt Solution (T564) Specimen Type: Bile duct brushing, bile duct aspirate, hepatobiliary brushing, or hepatobiliary aspirate Container/Tube: Separate ThinPrep vial containing 20 mL PreservCyt or CytoLyt solution for each specimen Specimen Volume: Entire collection Collection Instructions: Label with site specimen was collected from (eg, right hepatic duct or common bile duct).

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88112; 88377-BILMA/BILMB/etc (if appropriate);

BILID 81787

Bilirubin Direct, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T192) Collection

Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber tube (T192) Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	24 hours	LIGHT PROTECTED
	Frozen	30 days	LIGHT PROTECTED
	Ambient	6 hours	LIGHT PROTECTED

CPT Code Information: 82248

AFBIL 8390

Bilirubin, Amniotic Fluid

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Amniotic fluid container Submission Container/Tube: Opaque, amber vial (T192) Specimen Volume: 3.5 mL Collection Instructions: 1. Centrifuge, separate supernatant, and send both supernatant and sediment. 2. Label specimens as sediment and supernatant.

Specimen Minimum Volume: 1.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Amniotic Fld	Frozen	70 days	LIGHT PROTECTED

CPT Code Information: 82247

BFBL 606895

Bilirubin, Body Fluid

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T192) Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Pericardial fluid Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Opaque, amber vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into an amber vial to protect from light. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Frozen (preferred)	70 days	LIGHT PROTECTED
	Refrigerated	14 days	LIGHT PROTECTED

CPT Code Information: 82247

BILUR 609779

Bilirubin, Random, Urine

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T192) Submission Container/Tube: Amber vial Specimen Volume: 5 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	LIGHT PROTECTED
	Frozen	90 days	LIGHT PROTECTED

CPT Code Information: 81002

BILI3 8452

Bilirubin, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber vial (T192) Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	24 hours	LIGHT PROTECTED
	Frozen	30 days	LIGHT PROTECTED
	Ambient	6 hours	LIGHT PROTECTED

CPT Code Information: 82247-Bilirubin, total; 82248-Bilirubin, direct;

BILIT 81785

Bilirubin, Total, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber vial (T192) Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	LIGHT PROTECTED
	Frozen	30 days	LIGHT PROTECTED
	Ambient	24 hours	LIGHT PROTECTED

CPT Code Information: 82247

ADBIO **610322**

Biogen Program, Alzheimer Disease Evaluation, Spinal Fluid

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Alzheimer's Disease Evaluation (ADEVL) Collection Kit (T836) Collection Container/Tube: Preferred: CSF AD Biomarker Tube Acceptable: Sarstedt 72.703.600 (1.5 mL) or Sarstedt 72.694.600 (2 mL) Specimen Volume: 2 mL Collection Instructions: 1. Perform lumbar puncture and discard the first 1 to 2 mL of cerebrospinal fluid (CSF). 2. Collect 2 mL of CSF directly into 1 of the collection tubes listed above* Note: Polystyrene collection tubes are not acceptable. Exposure of CSF to polystyrene tubes may result in falsely low Abeta42 concentrations. For more information see Cautions. *The Alzheimer's Association consensus protocol for handling of CSF for clinical measurements of Abeta42 and tau recommends using the drip method for CSF collection and directly collecting into a low bind polypropylene tube. Although some clinicians prefer the syringe pull method due to speed of collection, the drip method reduces the risk of Abeta42 binding to the plastic of any syringe used.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	BlueTop SARSTEDT
	Frozen	30 days	BlueTop SARSTEDT
	Ambient	12 hours	BlueTop SARSTEDT

CPT Code Information: 83520 x 3

BIOTN **606867**

Biotin, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 84591

BTDZ **35375**

Biotinidase Deficiency, BTD Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred:

Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL
Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81404-BTD (biotinidase) (eg, biotinidase deficiency), full gene sequence

BIOTS

88205

Biotinidase, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge immediately and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	21 days	
	Refrigerated	5 days	

CPT Code Information: 82261

FBFPI

57925

Bird Fancier's Precipitin Panel I

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 86331 x 10

FLCNZ

35425

Birt-Hogg-Dube Syndrome, FLCN Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who

have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: Specimen preferred to arrive within 96 hours of collection. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81479-Unlisted molecular pathology procedure code

BIWB

64274

Bismuth, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free B-D Tube (EDTA), 6 mL (T183) Collection Container/Tube: Preferred: Royal blue-top (EDTA) plastic trace element blood collection tube Specimen Volume: 0.8 mL Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83018

FBIS

91125

Bismuth, Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in an EDTA metal-free royal blue-top tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL metal-free EDTA plasma refrigerated. Serum Draw blood in a metal-free plain royal blue top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of metal-free serum refrigerated.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	

Ambient

72 hours

CPT Code Information: 83018**FBISU**

91142

Bismuth, Urine

Specimen Requirements: 10 mL from a random or spot urine collected in a metal-free or acid-washed container. Send specimen refrigerated.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 83018**LCBKP**

89982

BK Virus, Molecular Detection, PCR, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Screw-capped, sterile container Specimen Volume: 1 mL Collection Instructions: Spin down and separate plasma within 24 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 87798**LCBK**

88910

BK Virus, Molecular Detection, PCR, Random, Urine

Specimen Requirements: Container/Tube: Sterile urine container Specimen Volume: 1 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 87798

QBK
83187

BK Virus, Molecular Detection, Quantitative, PCR, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot plasma within 24 hours of collection.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 87799

QBKU
87859

BK Virus, Molecular Detection, Quantitative, PCR, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 87799

BLPEP
82814

Black/White Pepper, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

BLACK
82361**Blackberry, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SBL
8237**Blastomyces Antibody Immunodiffusion, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86612

CBL
81541**Blastomyces Antibody Immunodiffusion, Spinal Fluid**

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86612

BLAST
35793**Blastomyces Antibody, Enzyme Immunoassay, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86612

UBLAS
607746

Blastomyces Antigen, Quantitative, Enzyme Immunoassay, Random, Urine

Specimen Requirements: Supplies: Aliquot tube, 5 mL (T465) Container/Tube: Plastic vial
Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Do not centrifuge to remove particulates.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 87449

ALBLD
603305

Bleeding Diathesis Profile, Limited, Plasma

Specimen Requirements: Patient Preparation: 1. Patient should not be receiving anticoagulant treatment (eg, warfarin, heparin). Treatment with heparin causes false-positive results of in vitro coagulation testing for lupus anticoagulant. Coumadin (warfarin) treatment may impair ability to detect the more subtle varieties of lupus-like anticoagulants. 2. Patient should also not be receiving fibrinolytic agents (streptokinase, urokinase, tissue plasminogen activator: tPA). 3. If patient has been recently transfused, it is best to perform this study pretransfusion, if possible. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: 6 Plastic vials Specimen Volume: 6 mL in 6 plastic vials, each containing 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma (1-2 mL per aliquot) into 6 separate plastic vials, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 4 mL in 4 plastic vials, 1 mL each

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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CPT Code Information: 85610-PTSC; 85730-APTSC; 85670-TTSC; 85384-CLFIB; 85379-DIMER; 85390-26-ALBLI; 85240-F8A; 85250-F 9; 85291-FXIII; 85246-VWAG; 85397-VWACT; 85130-Chromogenic factor VIII (if appropriate); 85130-Chromogenic factor IX (if appropriate); 85210-Factor II (if appropriate); 85220-Factor V (if appropriate); 85230-Factor VII (if appropriate); 85245-Ristocetin cofactor (if appropriate); 85247-von Willebrand factor multimer (if appropriate); 85260-Factor X (if appropriate); 85270-Factor XI (if appropriate); 85280-Factor XII (if appropriate); 85300-Antithrombin activity (if appropriate); 85301-Antithrombin antigen (if appropriate); 85335-Bethesda units (if appropriate); 85335-Factor II inhibitor screen (if appropriate); 85335-Factor V inhibitor screen (if appropriate); 85335-Factor VII Inhibitor screen (if appropriate); 85335-Factor VIII inhibitor screen (if appropriate); 85335-Factor IX inhibitor screen (if appropriate); 85335-Factor X inhibitor screen (if appropriate); 85335-Factor XI inhibitor screen (if appropriate); 85366-Soluble fibrin monomer (if appropriate); 85385-PT-Fibrinogen (if appropriate); 85410-Alpha-2 plasmin inhibitor (if appropriate); 85415-PAI-1 Ag (if appropriate); 85420-Plasminogen Activity (if appropriate); 85597-Platelet neutralization for lupus inhibitor (if appropriate); 85598-Staclot LA (if appropriate); 85611-PT mix 1:1 (if appropriate); 85613-DRVVT (if appropriate); 85613-DRVVT mix (if appropriate); 85613-DRVVT confirm (if appropriate); 85635-Reptilase time (if appropriate); 85732-APTT mix 1:1 (if appropriate);

BTR0P Blomia tropicalis, IgE, Serum

82374

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for each 5 allergens requested Additional Information: Designate specific allergens from the list in Allergens “ Immunoglobulin E (IgE) Antibodies in Special Instructions.

Specimen Minimum Volume: For 1 allergen: 0.3 mL; For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

BUN Blood Urea Nitrogen (BUN), Serum

81793

Specimen Requirements: Patient Preparation: Fasting Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	365 days	

CPT Code Information: 84520

BWOR
82840

Blood Worm, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MUSS
82548

Blue Mussel, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FBLUG
57658

Blueberry IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

BLUE
82359**Blueberry, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

BMPRZ
35368**BMPR1A Gene, Full Gene Analysis, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81479; Hereditary Colon Cancer CGH Array, additional test; 81228;

BOB1
70365**BOB-1 Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

BAP
82985**Bone Alkaline Phosphatase, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.6 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	60 days	

CPT Code Information: 84080

BHISI
70314**Bone Histomorphometry, Consultant Interpretation, Slides Only**

Specimen Requirements: Supplies: Bone Histomorphometry Specimen Preparation (T579) Specimen Type: Bone Source: Anterior iliac crest Container/Tube: Slides Collection Instructions: A minimum of 1 Goldner Trichrome-stained slide and 1 hematoxylin and eosin-stained slide are required. Additional Information: For more information, see Bone Histomorphometry Specimen Preparation (T579) in Special Instructions.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient		

CPT Code Information: 88321

BHISC
70312**Bone Histomorphometry, Gross Microscopic Exam**

Specimen Requirements: Supplies: -Metal Free Specimen Vial (T173) -Bone Histomorphometry Specimen Preparation (T579) Specimen Type: Bone Preferred: Anterior iliac crest Container/Tube: Metal-free container (T173) Specimen Volume: Entire specimen Collection Instructions: 1. Fix specimen in 70% ethanol. 2. Quantitation of bone turnover requires 2 time-spaced tetracycline labels. 3. The use of metal-free containers is required to avoid aluminum or iron contamination. Additional Information: 1. Consultation with a Mayo Clinic Laboratories pathologist or endocrinologist/nephrologist is recommended for first-time users of this service. Written instructions are available upon request. 2. For more information, see Bone Histomorphometry Specimen Preparation (T579) in Special Instructions.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88346; 88307; 88313;

BMAPC
113350**Bone Marrow Aspirate (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 85097 GC

BMBPC
113351**Bone Marrow Biopsy (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88305

BMCP
113352**Bone Marrow Clot (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88305

BPRP
80910**Bordetella pertussis and Bordetella parapertussis, Molecular Detection, PCR, Varies**

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by Bordetella pertussis or Bordetella parapertussis DNA is unlikely. Submit only 1 of the following specimens: Preferred: Supplies: Nasopharyngeal Swab (Rayon Mini-Tip Swab) (T515) Specimen Type: Nasopharyngeal swab Container/Tube: Rayon swab with an aluminum shaft placed in transport medium such as a green-top nasopharyngeal swab (rayon mini-tip) with Stuart's media (no charcoal) (T515), or Stuart's with charcoal, or Amies with or without charcoal (Transwab Nasopharyngeal with Charcoal System). Additional Information: 1. Swab transport containers without charcoal must contain a pledget saturated with either Stuart's or Amies liquid media. Clear semi-solid/solid media is gel and will be rejected. 2. Other swab or

media types may be inhibitory to PCR testing and will be rejected. Acceptable: Specimen Type: Nasopharyngeal (not throat) aspirate/wash or nasal aspirate/wash Container/Tube: Sterile container with a screw top cap (no transport media) Specimen Volume: Entire collection

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	7 days	

CPT Code Information: 87798 x 2

BORDG Bordetella pertussis Antibody, IgG, Serum

64780

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: 86615

BOAC Boron, Serum/Plasma

9723

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a trace metal free royal blue-top, no additive tube(s). (Serum gel tube is not acceptable.) Spin down and send 2 mL serum in an acid washed plastic screw capped vial (MCL supply number T619), ship refrigerate in a plastic vial. Note: Label specimen appropriately (serum) Plasma Draw blood in a trace metal free royal blue-top EDTA tube(s). (Plasma gel tube is not acceptable.) Spin down and send 2 mL plasma in an acid washed plastic screw capped vial (MCL supply number T619), ship refrigerate in a plastic vial. Note: Label specimen appropriately (plasma)

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	30 days	Acid Washed Plastic (MML Supply T619)
	Ambient	30 days	Acid Washed Plastic (MML Supply T619)
	Frozen	30 days	Acid Washed Plastic (MML Supply T619)

CPT Code Information: 83018

BMIYB
64970

Borrelia miyamotoi Detection PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	7 days	

CPT Code Information: 87798

BMIYC
64969

Borrelia miyamotoi Detection PCR, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

BOT
82715

Botrytis cinerea, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

BOV
82135

Bovine Serum Albumin, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86008

BXMPL
82876

Box Elder/Maple, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

BRACH
70366

Brachyury Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

BBRAF
35893

BRAF Analysis (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies			

CPT Code Information: 81210-BRAF (v-raf murine sarcoma viral oncogene homolog B1) (eg, colon cancer), gene analysis, V600E variant

BRAFV **70367**

BRAF V600E Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

BRAFD **608305**

BRAF V600E/V600K Somatic Mutation Analysis, Tumor

Specimen Requirements: Preferred: Specimen Type: Tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Acceptable: Specimen Type: Tissue Container/Tube: Slides Specimen Volume: 1 stained and 5 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 5 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81210; 88381-Microdissection, manual;

FBNC1 **75583**

Brazil Nut Component rBer e 1

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)		28 days
	Frozen		365 days
	Ambient		28 days

CPT Code Information: 86008

BRAZ

82899

Brazil Nut, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FBRAC

75633

BRCANext-Expanded

Specimen Requirements: Container/Tube: Preferred: EDTA (purple top) Acceptable: Yellow top (citric acetate) or grey top (potassium oxalate/sodium fluoride) tube Specimen volume: 10 mL Collection Instructions: Draw blood in EDTA (purple top) tube(s) and send 10 mL of whole blood refrigerate. Complete Ambry Cancer test Comprehensive requisition form. NOTE: For transfusion patients, wait at least 2 weeks after a packed cell or platelet transfusion and at least 4 weeks after a whole blood transfusion prior to blood draw.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Ambient	72 hours	

CPT Code Information: 81432

C2729

606583

Breast Carcinoma-Associated Antigen, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection and the serum aliquoted into a plastic vial prior to sending (aliquot does not need to be within 2 hours). 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection. 3. Send refrigerated.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	

Frozen	90 days
Ambient	4 days

CPT Code Information: 86300

BRG1 71537

BRG1 (SMARCA4) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FBRIV 75682

Brivaracetam, Plasma

Specimen Requirements: Specimen Type: Plasma Collection Container/Tube: Lavender top or pink top (EDTA) Specimen Volume: 1 mL Collection Instructions: Draw blood in an EDTA (lavender top or pink top) tube(s). (Plasma gel tube is not acceptable.) Spin down and send 2 mL of plasma refrigerated in a preservative-free plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	30 days	
	Frozen	90 days	
	Ambient	30 days	

CPT Code Information: 80299

BRBPS 65058

Broad Range Bacterial PCR and Sequencing, Varies

Specimen Requirements: Fresh tissue is preferred over formalin-fixed, paraffin-embedded tissue. Submit only 1 of the following specimens: Preferred Specimen Type: Specimen Type: Fresh tissue or biopsy Sources: Normally sterile tissue such as bone, lymph node, joint, heart valve, brain, viscera, organ, lung Container/Tube: Sterile container Specimen Volume: Entire collection or 5 mm(3)-approximately the size of a pencil eraser Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit tissue only, do not add fluid to tissue. 3. Freeze specimen. Specimen Stability Information: Frozen <14 days (preferred)/Refrigerated <14 days Alternate Specimen Type: Preferred: Paraffin-embedded tissue block: Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded (FFPE) tissue block Sources: Normally sterile or deep tissues such as bone, lymph node, joint, heart valve, brain,

viscera, organ, lung Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block to be cut and returned. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable: Paraffin-embedded tissue block: Specimen Type: Section (scrolls) of FFPE tissue block Sources: Normally sterile or deep tissues such as bone, lymph node, joint, heart valve, brain, viscera, organ, lung Container/Tube: Sterile container for each individual cut section (scroll) Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Fluid Sources: Normally sterile body fluids such as cerebrospinal, vitreous humor, pleural, abdominal, peritoneal, ascites, pericardial, pelvic Container/Tube: Screw-capped, sterile container Specimen Volume: 1 mL Collection Instructions: 1. Collect fresh fluid specimen. 2. Freeze specimen. Specimen Stability Information: Frozen <14 days(preferred)/Refrigerated <14 days Specimen Type: Synovial fluid Container/Tube: Preferred: Red top or sterile container Acceptable: Lavender top (EDTA), pink top (EDTA), royal blue top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL Collection Instructions: Send specimen in original tube (preferred). Specimen Stability Information: Frozen <14 days (preferred)/ Refrigerated <14 days

Specimen Minimum Volume: Fluid: 0.5 mL Fresh tissue or biopsy: 5 mm(3) Paraffin-embedded tissue block: two 10-micron sections

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87801-Broad Range Bacterial PCR and Sequencing; 87798-Bacterial Ident by Sequencing (if appropriate); 87798-Specimen Identification by PCR (if appropriate); 87798-Ident by Next Generation Sequencing (if appropriate); 87483-Meningitis Encephalitis Panel, PCR (if appropriate);

FBRCG 57642

Broccoli IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

BROC 82817

Broccoli, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

BROM 82919

Brome Grass, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FBROM 75695

Bromine - Total, Blood

Specimen Requirements: Specimen Type: Blood Collection Container/Tube: Royal Blue top tube (Trace metal-free; EDTA) Specimen Volume: 2 mL Collection Instructions: Draw blood in a royal blue top (trace metal-free; EDTA) tube(s). Send 2 mL refrigerated. NOTE: Avoid exposure to gadolinium or iodine based contrast media for 96 hours prior to sample collection. Do not use disinfectants containing iodine, such as Betadine, during venipuncture.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA - Metal Free (ERB)	Refrigerated (preferred)	30 days	METAL FREE
	Frozen	365 days	METAL FREE
	Ambient	30 days	METAL FREE

CPT Code Information: 82542

BRCMG 607346

Brucella Antibody Screen, IgM and IgG, ELISA, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86622 x 2-Brucella antibody, IgG and IgM; 86622-Brucella total antibody, agglutination (if appropriate);

BRUCB

87345

Brucella Culture, Blood

Specimen Requirements: Container/Tube: Blood Isolator tube Specimen Volume: Entire collection

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood Culture	Ambient	24 hours

CPT Code Information: 87081-Brucella Culture, Blood; 87153-Aerobic Ident by Sequencing (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate);

BRUC

8077

Brucella Culture, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Stability Information: Ambient <24 hours Alternate: Specimen Type: Abscess, respiratory specimen, spinal fluid, sterile body fluid, or tissue Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Stability Information: Refrigerated <24 hours

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Varies	

CPT Code Information: 87081-Brucella culture; 87077-Identification by MALDI-TOF mass spec (if appropriate); 87153-Aerobe identification by sequencing (if appropriate); 87176-Tissue processing (if appropriate) ;

BRUTA

8112

Brucella Total Antibody Confirmation, Agglutination, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

14 days

CPT Code Information: 86622**BRGGP Brugada Syndrome Multi-Gene Panel, Blood**

63163

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send specimen in original tube. Additional Information: Prior Authorization is available for this assay; see Special Instructions. Submit the required form with the specimen.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81479; 81406; 81404; 81407;**BSPR Brussels Sprouts, IgE, Serum**

82480

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**BTKFP Bruton Tyrosine Kinase (BTK) Genotype and Protein Analysis, Full Gene Sequence and Flow Cytometry, Blood**

89742

Specimen Requirements: Two separate EDTA specimens and the patient information sheet are required. Specimen Type: Blood for BTKSP / Bruton Tyrosine Kinase (BTK) Genotype, Full Gene Sequence Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Send specimen in original tube. 2. Label as BTKSP. Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Blood for BTK / Bruton Tyrosine Kinase (Btk), Protein Expression, Flow Cytometry, Blood Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: 1. Send specimen in original tube. Do not aliquot. 2. Ship at ambient temperature only. 3. Label as BTK. Specimen Stability Information: Ambient 72 hours Additional Information: For flow cytometry serial monitoring, we recommend that specimen draws be performed at the same time of day.

Specimen Minimum Volume: BTKSP: 0.35 mL BTK: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Varies	72 hours	

CPT Code Information: 81406-Bruton Tyrosine Kinase (BTK) Genotype, Full Gene Sequence; 88184-Bruton Tyrosine Kinase (Btk), Protein Expression, Flow Cytometry, Blood;

BTKS 89307

Bruton Tyrosine Kinase (BTK) Genotype, Full Gene Sequence, Blood

Specimen Requirements: Multiple whole blood EDTA genotype tests can be performed on a single specimen after a single extraction. See Multiple Whole Blood EDTA Genotype Tests in Special Instructions for a list of tests that can be ordered together. Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 81406

BTK 89011

Bruton Tyrosine Kinase (Btk), Protein Expression, Flow Cytometry, Blood

Specimen Requirements: For serial monitoring, we recommend that specimen draws be performed at the same time of day. Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 88184

BUCW 82727

Buckwheat, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**BDRP****82791****Budgerigar Droppings, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**BFTH****82779****Budgerigar Feathers, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**BPAB****606816****Bullous Pemphigoid, BP180 and BP230, IgG Antibodies, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
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Serum Red	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	14 days

CPT Code Information: 83516 x 2

FMARC 75307

Bupivacaine (Marcaine)

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen (preferred)	180 days	
	Ambient	72 hours	
	Refrigerated	72 hours	

CPT Code Information: 80299

BUPMX 65215

Buprenorphine and Norbuprenorphine, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain-of-Custody Kit containing the specimen containers, seals, and documentation required. Specimen Volume: 20 mL Collection Instructions: Collect specimen in the provided container, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80348; G0480 (if appropriate);

BUPM 66200

Buprenorphine and Norbuprenorphine, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Aliquot tube, 5 mL Specimen Volume: 5 mL Collection Instructions: 1. No preservative. 2. If submitting for multiple tests on 1 order, submit 5 mL per test ordered in a single plastic urine container.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80348; G0480 (if appropriate);

BUPR 63222

Buprenorphine Screen with Reflex, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Aliquot Tube, 5 mL Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 5 mL in 1 plastic bottle. 3. No preservative. 4. If submitting for multiple urine drug confirmation tests on 1 order, submit 5 mL per test ordered in a single plastic, 60 mL urine container (T313). Additional Information: If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADULT / Adulterants Survey, Urine.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80307

BUPS 63119

Buprenorphine Screen, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Aliquot Tube, 5 mL Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 5 mL in 1 plastic bottle. 3. No preservative. 4. If submitting for multiple urine drug confirmation tests on 1 order, submit 5 mL per test ordered in a single plastic, 60 mL urine container (T313). Additional Information: If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADULT / Adulterants Survey, Urine.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80307

FBUMT
75387

Bupropion and Metabolite, Serum

Specimen Requirements: Specimen Type: Serum Container/Tube: Red-top Preferred: Red-top Specimen volume: 1 mL Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	30 days	

CPT Code Information: 80338

FBUS
91115

Buspirone (Buspar)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80299

BUAUC
83188

Busulfan, Intravenous Dose, Area Under the Curve, Plasma

Specimen Requirements: Four plasma specimens with different draw times (keep all specimens under 1 order) are required. Collection Container/Tube: Green top (sodium heparin) Submission Container/Tube: Plastic vials Specimen Volume: 1 mL Collection Instructions: 1. The first specimen should be collected immediately after completion of the first intravenous infusion of 0.8 mg/kg busulfan. 2. Additional specimens should also be collected at 1 hour, 2 hours, and 4 hours after completion of infusion. 3. Label each specimen with exact time of collection. 4. Busulfan degrades quickly at ambient temperature. Specimens must be kept in wet ice slurry or refrigerated at 4°C. Specimens must be centrifuged within 2 hours after collection. Separate the plasma and transfer to individual 5-mL plastic vials, labeled with exact time of draw. Immediately freeze at -20°C. Additional Information: This test should only be ordered when the following criteria are met: -Busulfan dosing protocol must be intravenous (IV) administration of 0.8 mg/kg doses every 6 hours over 4 days, for a total of 16 doses -Specimens must be drawn as described below: -1 specimen collected immediately after completion of the first 2-hour IV infusion of busulfan -1 specimen collected 1 hour after the infusion is completed -1 specimen collected 2 hours after the infusion is completed -1 specimen collected 4 hours after the infusion is completed and prior to the next infusion of busulfan

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Heparin	Frozen (preferred)	28 days	
	Refrigerated	72 hours	

CPT Code Information: 80299 x 4

BUTAS 8427

Butalbital, Serum

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80345; G0480 (if appropriate);

CPR 8804

C-Peptide, Serum

Specimen Requirements: Patient Preparation: 1. Patient should fast for 8 hours. 2. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	7 days	

CPT Code Information: 84681

CRPRO 70409

C-Reactive Protein (CRP) Immunostain, Technical Component

Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CRP 9731

C-Reactive Protein (CRP), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tube should be centrifuged within 2 hours of collection. 2. Red-top tube should be centrifuged and the serum aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 86140

HSCRP 82047

C-Reactive Protein, High Sensitivity, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 86141

C1ES 8198

C1 Esterase Inhibitor Antigen, Serum

Specimen Requirements: Patient Preparations: Fasting preferred but not required. Collection

Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge and aliquot serum into plastic vial. 3. Freeze specimen within 30 minutes.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	28 days	
	Refrigerated	28 days	
	Ambient	72 hours	

CPT Code Information: 83883

FC1EQ 81493

C1 Esterase Inhibitor, Functional Assay, Serum

Specimen Requirements: Patient Preparation: Patient should be fasting. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge at 4°C and aliquot serum into a 5-mL plastic vial. 3. Freeze specimen within 30 minutes.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	28 days	

CPT Code Information: 83520

FCQBA 57301

C1Q Binding Assay

Specimen Requirements: Draw blood in a plain, red-top tube(s). (Serum gel tube is acceptable.) Separate from cells and freeze immediately. Send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	14 days	

CPT Code Information: 86332

C1QFX 83374

C1q Complement, Functional, Serum

Specimen Requirements: Patient Preparation: Fasting preferred Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2.

Centrifuge and aliquot serum into plastic vial. 3. Immediately freeze specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	14 days	

CPT Code Information: 86161

C2FXN 32137

C2 Complement, Functional, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge and aliquot serum into plastic vial. 3. Immediately freeze specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	21 days	

CPT Code Information: 86161

C2 81835

C2 Complement, Functional, with Reflex, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge and aliquot serum into plastic vial. 3. Immediately freeze specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	21 days	

CPT Code Information: 86161; 86160 x 2 (if appropriate);

C3FX 81090

C3 Complement, Functional, Serum

Specimen Requirements: Patient Preparation: Fasting preferred Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge and aliquot serum into plastic vial. 3. Immediately freeze specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	14 days	

CPT Code Information: 86161

FC3AR 75729

C3a Level By RIA

Specimen Requirements: Container/Tube: Lavender top tube Preferred: Lavender top tube Acceptable: Lavender top tube Specimen Volume: 2 mL Collection Instructions: Draw blood in a lavender-top (EDTA) tube(s), plasma gel tube(s) is not acceptable. Mix well, centrifuge at ambient temperature within one half hour of draw and freeze immediately. Send 1 mL of EDTA plasma frozen in plastic vial. Complete and submit with specimen: National Jewish Complement request form

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	365 days	

CPT Code Information: 86160

C4U 88829

C4 Acylcarnitine, Quantitative, Urine

Specimen Requirements: Patient Preparation: If clinically feasible, discontinue L-carnitine supplementation at least 72 hours before specimen collection. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10 mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Freeze specimen immediately.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	7 days	
	Refrigerated	24 hours	

CPT Code Information: 82017

C4FX 83391

C4 Complement, Functional, Serum

Specimen Requirements: Patient Preparation: Fasting preferred Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge and aliquot serum into plastic vial. 3. Immediately freeze specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	14 days	

CPT Code Information: 86161

FC4AL

75726

C4 Level by RIA

Specimen Requirements: Container/Tube: Lavender top tube Preferred: Lavender top tube Acceptable: Lavender top tube Specimen Volume: 2 mL Collection Instructions: Draw blood in a lavender-top (EDTA) tubes(s), plasma gel tube(s) is not acceptable. Mix well, centrifuge at room temperature within one half hour of draw (preferable immediately after venipuncture) and freeze immediately on dry ice or at -70 C. Send 1 mL of EDTA plasma frozen in plastic vial. Complete and submit with specimen: 1. National Jewish Complement request form

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	365 days	

CPT Code Information: 86160

C5AG

9266

C5 Complement, Antigen, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and separate serum from clot.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	60 days	
	Refrigerated	28 days	
	Ambient	7 days	

CPT Code Information: 86160

C5FX

83392

C5 Complement, Functional, Serum

Specimen Requirements: Patient Preparation: Fasting preferred Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge and aliquot serum into plastic vial. 3. Immediately freeze specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	14 days	

CPT Code Information: 86161

C5DCU C5-DC Acylcarnitine, Quantitative, Urine

88831

Specimen Requirements: Patient Preparation: If clinically feasible, discontinue L-carnitine supplementation at least 72 hours before specimen collection. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Freeze specimen immediately.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	7 days	
	Refrigerated	24 hours	

CPT Code Information: 82017

C5OHU C5-OH Acylcarnitine, Quantitative, Urine

88830

Specimen Requirements: Patient Preparation: If clinically feasible, discontinue L-carnitine supplementation at least 72 hours before specimen collection. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Freeze specimen immediately.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	7 days	
	Refrigerated	24 hours	

CPT Code Information: 82017

C6FX C6 Complement, Functional, Serum

83393

Specimen Requirements: Patient Preparation: Fasting preferred Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	14 days	

CPT Code Information: 86161

C7FX 81064

C7 Complement, Functional, Serum

Specimen Requirements: Patient Preparation: Fasting preferred Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge and aliquot serum into plastic vial. 3. Immediately freeze specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	14 days	

CPT Code Information: 86161

C8FX 81065

C8 Complement, Functional, Serum

Specimen Requirements: Patient Preparation: Fasting preferred Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge and aliquot serum into plastic vial. 3. Immediately freeze specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	14 days	

CPT Code Information: 86161

C9FX 81066

C9 Complement, Functional, Serum

Specimen Requirements: Patient Preparation: Fasting preferred Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge and aliquot serum into plastic vial. 3. Immediately freeze specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	14 days	

CPT Code Information: 86161

C9ORF
35377

C9orf72 Hexanucleotide Repeat, Molecular Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81479; ;

FCABB
57672

Cabbage IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

CABB
86327

Cabbage, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

COCOA Cacao/Cocoa, IgE, Serum

60112

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CDOMB Cadmium for Occupational Monitoring, Blood

89539

Specimen Requirements: Container/Tube: Royal blue-top (EDTA) Vacutainer plastic trace element blood collection tube (T183) Specimen Volume: Full tube Collection Instructions: Send specimen in original tube. Additional Information: 1. High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. 2. If ordering the trace element blood collection tube from BD, order catalog #368381.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82300

CDOE Cadmium Occupational Exposure, Random, Urine

48554

Specimen Requirements: Only orderable as part of profile. See CDUO / Cadmium Occupational Exposure, Random, Urine or HMSOR / Heavy Metals Occupational Exposure with Reflex, Urine.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	

Ambient	28 days
Frozen	28 days

CDOU 608892

Cadmium Occupational Exposure, Random, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: -CDUOE / Cadmium Occupational Exposure, Random, Urine -HMUOE / Heavy Metal Occupational Exposure, with Reflex, Random, Urine

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CDUOE 608896

Cadmium Occupational Exposure, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect urine a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 82300 ; 82570 ;

CDU 8678

Cadmium, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Trace Metals Analysis Specimen

Collection and Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82300

CDB

8682

Cadmium, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Royal blue-top (EDTA) plastic trace element blood collection tube Specimen Volume: Full tube Collection Instructions: Send specimen in original tube. Additional Information: If ordering the trace element blood collection tube from BD, order catalog #368381.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82300

CDUCR

608906

Cadmium/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect urine a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	

Frozen	28 days
Ambient	14 days

CPT Code Information: 82300; 82570;

CDRC 48544

Cadmium/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of profile. See CDRCR / Cadmium/Creatinine Ratio, Random, Urine or HMCUR / Heavy Metal/Creatinine Ratio, with Reflex, Urine.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CDCU 608902

Cadmium/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of profile. For more information, see: CDUCR / Cadmium/Creatinine Ratio, Random, Urine HMUCR / Heavy Metal/Creatinine Ratio, with Reflex, Random, Urine

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CAFF 8754

Caffeine, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	28 days	
	Ambient	72 hours	

CPT Code Information: 80155**CALCI**
70368**Calcitonin (CALCI) Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CATLN
61527**Calcitonin, Fine-Needle Aspiration Biopsy Needle Wash, Lymph Node**

Specimen Requirements: Patient Preparation: For 12 hours before this procedure do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 1 to 1.5 mL Collection Instructions: 1. Needle wash specimens for analysis should be collected in conjunction with cytology specimens. 2. Have saline available prior to start of procedure. Saline is the only acceptable solution for needle washings. 3. After each fine-needle aspiration biopsy (FNAB) has been collected and the material in the needle has been expelled onto a slide for cytologic analysis, attach the used FNAB needle to an empty syringe. 4. Withdraw between 0.10 mL and 0.25 mL of saline up through the needle until the saline starts to fill the hub of the needle or end of the syringe. 5. Expel this fluid back through the needle into a separate tube. This is the needle washing used for analysis. 6. Repeat steps 2 through 4 for each needle pass of the same biopsied site and empty into the same tube, accumulating a total of 0.5 mL to 1.5 mL of fluid to send to the laboratory. (If more than 1 site is biopsied, see Additional Information) 7. Inspect specimen for visible blood or tissue contamination: -a. If bloody, centrifuge specimen and transfer supernatant to a new plastic aliquot tube (5-mL standard tube) to send to laboratory. The supernatant, not the cellular material, is used for analysis. -b. If specimen is clear, centrifugation is not necessary. 8. Freeze within 2 to 4 hours of collection. Additional Information: 1. If more than 1 site is biopsied, each washing material should be submitted on a separate tube and under a different order number. 2. A minimum of 0.5 mL is required for testing; however, the total collection volume should not exceed 1.5 mL. Sample volumes outside these parameters may be rejected. 3. Do not send saline control. This test has been validated to rule-out saline matrix effect.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fine Needle Wash	Frozen (preferred)	7 days	
	Refrigerated	4 hours	

CPT Code Information: 82308

CATN
9160

Calcitonin, Serum

Specimen Requirements: Patient Preparation: For the 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. After collection, immediately place specimen on ice. 2. Refrigerate specimen during centrifugation and immediately transfer serum to a plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Refrigerated	24 hours	
	Ambient	8 hours	

CPT Code Information: 82308

CALU
610595

Calcium, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Patient cannot have a laxative during the 24-hour collection period. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	72 hours	

CPT Code Information: 82340

CAI
8378

Calcium, Ionized, Serum

Specimen Requirements: Container/Tube: Serum gel or serum gel microtainer Specimen Volume: Full tube Collection Instructions: 1. Allow blood to clot for 30 minutes. 2. Serum gel tube/microtainer must be centrifuged within 1 hour of draw time. Centrifuge with stopper in place for 7 minutes at 3,000 rpm to ensure that the gel barrier separates the serum and cells. 3. Keep specimen anaerobic do not aliquot.

Specimen Minimum Volume: 1.75 mL in a 3.5 mL (50% full) in serum gel tube or 1 full serum gel microtainer

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Refrigerated	7 days	SERUM GEL TUBE

CPT Code Information: 82330

CACR2

610644

Calcium, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see SSATR / Supersaturation Profile, Random, Urine.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	72 hours	

CPT Code Information: 82310

CALC5

610591

Calcium, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see CACR3 / Calcium/Creatinine Ratio, Random, Urine
Supplies: Aliquot Tube, 5 mL (T465)
Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert
Submission Container/Tube: Plastic, 5-mL tube or a clean, plastic aliquot container with no metal cap or glued insert
Specimen Volume: 4 mL
Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	72 hours	

CPT Code Information: 82310

CA

601514

Calcium, Total, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial
Specimen Volume: 0.5 mL
Collection Instructions: 1. If drawing for more than total calcium, send first tube drawn. 2. Serum gel tubes should be centrifuged

within 2 hours of collection. 3. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	240 days	
	Refrigerated	21 days	

CPT Code Information: 82310

CCTR 610592

Calcium/Creatinine Ratio, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see CACR3 / Calcium/Creatinine Ratio, Random, Urine Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5-mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	72 hours	

CACR3 610594

Calcium/Creatinine Ratio, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5-mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	72 hours	

CPT Code Information: 82310; 82570;

CALD 70369

Caldesmon Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen

Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CAVPC
83900

California Virus (La Crosse) Encephalitis Antibody Panel, IgG and IgM, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.8 mL

Specimen Minimum Volume: 0.50 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86651 x 2

CAVP
83153

California Virus (La Crosse) IgG and IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86651 x 2

CAMTA
603417

Calmodulin-Binding Transcription Activator 1 (CAMTA1), Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CALPN 70370

Calponin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CALPR 63016

Calprotectin, Feces

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz Random (T288) Submission Container/Tube: Stool container Specimen Volume: 5 g Collection Instructions: 1. Collect a fresh random fecal specimen, no preservative. 2. If specimen is sent refrigerate, send immediately after collection. 3. If specimen cannot be sent immediately, freeze and send frozen (preferred). Additional Information: 1. Separate specimens must be submitted when multiple tests are ordered. Specimen must be split prior to transport. 2. Testing cannot be added on to a previously collected specimen.

Specimen Minimum Volume: 1 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	7 days	
	Refrigerated	72 hours	

CPT Code Information: 83993

CALX 36997

CALR Mutation Analysis, Myeloproliferative Neoplasm (MPN), Reflex, Varies

Specimen Requirements: Only orderable as a reflex. For more information see MPNR / Myeloproliferative Neoplasm (MPN), JAK2 V617F with Reflex to CALR and MPL.

Specimen Minimum Volume: Blood and Bone marrow: 0.05 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	7 days	

CPT Code Information: 81219-CALR (calreticulin) (eg, myeloproliferative disorders), gene analysis, common variants in exon 9

CALR 62912

CALR Mutation Analysis, Myeloproliferative Neoplasm (MPN), Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: EDTA (lavender top) or ACD-B (yellow top) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Bone marrow Container/Tube: EDTA (lavender top) or ACD-B (yellow top) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood or bone marrow and include indication of volume and concentration of the DNA. Specimen Stability: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	7 days	

CPT Code Information: 81219-CALR (calreticulin) (eg, myeloproliferative disorders), gene analysis, common variants in exon 9

CALRC 71486

Calreticulin ex9mut Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CALNN 70371

Calretinin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CAMPC Campylobacter Culture, Feces

606218

Specimen Requirements: Patient Preparation: Medications: Do not use barium or bismuth before collection of specimen. Supplies: C and S vial (T058) Specimen Type: Preserved Feces Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Ambient (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 87046-Campylobacter Culture, Stool-with isolation and preliminary examination; 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate);

CFTH Canary Feathers, IgE, Serum

82778

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CAGR 82829

Canary Grass, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CANP 35380

Canavan Disease, ASPA Mutation Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD) or lavender top (EDTA) Acceptable: Any anticoagulant Specimen Volume: 2.6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4days/Refrigerated/Frozen Prenatal Specimens Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Blood: 0.5 mL Amniotic Fluid: 10 mL Chorionic Villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81200-ASPA aspartoacylase (eg, Canavan disease) gene analysis, common variants (eg, E285A, Y231X); ; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate) ; 88235-Tissue culture for amniotic fluid (if appropriate) ; 88240-Cryopreservation (if appropriate); 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells (if appropriate);

CA25 9289

Cancer Antigen 125 (CA 125), Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in

hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	5 days	
	Frozen	180 days	

CPT Code Information: 86304

CA153 81607

Cancer Antigen 15-3 (CA 15-3), Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 86300

FCARP 75447

Cancer-Associated Retinopathy Panel (CARP) by Immunoblot and IHC

Specimen Requirements: Submit only one of the following specimens: Serum: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 5 mL serum refrigerated in a plastic vial. Plasma: Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 5 mL EDTA plasma refrigerated in a plastic vial. Complete and submit with specimen: 1. Completed OHSU Ocular request form 2. Clinical history 3. Referring physician information (name & phone number) -NOTE: Without this information, testing cannot be completed.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated	7 days	

CPT Code Information: 84182 x 8

FCNEX

75231

CancerNext

Specimen Requirements: Container/Tube: Preferred: EDTA (purple top) Acceptable: Yellow top (citric acetate) or grey top (potassium oxalate/sodium fluoride) tube Specimen volume: 10 mL Collection instructions: Draw blood in EDTA (purple top) tube(s) and send 10 mL of whole blood refrigerate. Complete Ambry Cancer test requisition form. NOTE: For transfusion patients, wait at least 2 weeks after a packed cell or platelet transfusion and at least 4 weeks after a whole blood transfusion prior to blood draw.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Ambient	72 hours	

CPT Code Information: 81162; 81201; 81292; 81294; 81295; 81297; 81298; 81300; 81317; 81319; 81321;

CDAB

82690

Candida albicans (Monilia), IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FCANG

75605

Candida albicans IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Container/Tube: Red Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum Frozen in a sterile, screw top tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	365 days	
	Refrigerated	28 days	
	Ambient	7 days	

CPT Code Information: 86001

CAURS 607883

Candida auris Surveillance, Molecular Detection, PCR, Varies

Specimen Requirements: Preferred: Specimen Type: Swab Source: Axilla and groin composite Container/Tube: ESwabs in liquid Amies medium Specimen Volume: Swab Collection Instructions: 1. Swab transport containers without charcoal must contain a pledget saturated with either Stuart's or Amies liquid media. 2. Swab used for this test cannot be shared with fungal culture. When fungal culture is ordered with this test, send separate swabs for each. Acceptable: Specimen Type: Swab Source: Nares Container/Tube: Rayon swab with an aluminum shaft Specimen Volume: Swab Collection Instructions: 1. Rayon swab with an aluminum shaft placed in transport medium such as a nasopharyngeal swab (rayon mini-tip) with Stuart's or Amies medium. 2. Swab used for this test cannot be shared with fungal culture. When fungal culture is ordered with this test, send separate swabs for each.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Swab	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87481

CAURB 607880

Candida auris, Molecular Detection, PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87481

CAURP 607878

Candida auris, Molecular Detection, PCR, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 1 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87481

FCBDS 75527

Cannabidiol, Serum

Specimen Requirements: Specimen Type: Serum Collection Container/Tube: Red top Specimen Volume: 1 mL Collection Instructions: Draw blood in a red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 1 mL of serum refrigerated in a plastic, preservative-free vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	30 days	
	Ambient	14 days	
	Frozen		

CPT Code Information: 80349; G0480, if appropriate;

FMARI 75172

Cannabinoid Analysis, Whole Blood

Specimen Requirements: Draw blood in a purple-top (EDTA), green-top (sodium-heparin) or grey-top (NaF/oxalate) tube(s). Send 7 mL of whole blood refrigerated in a plastic vial.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80307; 80349- if applicable;

CWAY 82493

Caraway, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CARBR 610048

Carbamazepine Hypersensitivity Pharmacogenomics, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Supplies: Saliva Swab Collection Kit (T786) Patient Preparation: Patient should not eat, drink smoke, or chew gum 30 minutes prior to collection. Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81381 x 2

CARTF 37037

Carbamazepine Profile, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 2 mL Collection Instructions: 1. Draw blood 12 hours (trough value) after last dose. 2. Tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	48 hours	

CPT Code Information: 80156-Carbamazepine, total; 80157-Carbamazepine, free; 80161-Carbamazepine-10,11-Epoxy;

CARFT 37039

Carbamazepine, Free and Total, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 2 mL Collection Instructions: Tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum Red	Refrigerated (preferred)	7 days
	Frozen	28 days
	Ambient	48 hours

CPT Code Information: 80156-Carbamazepine, Total, S; 80157-Carbamazepine, Free, S;

CARF 37038

Carbamazepine, Free, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 2 mL Collection Instructions: Tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	48 hours	

CPT Code Information: 80157

CARTA 37035

Carbamazepine, Total, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 0.5 mL Collection Instructions: Tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	48 hours	

CPT Code Information: 80156

CARBG 37036

Carbamazepine-10,11-Epoxy, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 2 mL Collection Instructions: Draw blood 12 hours (trough value) after last dose.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	

Frozen	28 days
Ambient	48 hours

CPT Code Information: 80156-Carbamazepine, Tot, S; 80161-Carbamazepine-10,11-EpoxydeÂ ;

CARNB 35953

Carbapenemase Detection-Carba NP Test (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87185

CARNP 62606

Carbapenemase Detection-Carba NP Test, Varies

Specimen Requirements: Specimen Type: Organism Supplies: Infectious Container, Large (T146) Container/Tube: Slant Specimen Volume: Isolate Collection Instructions: Submit Enterobacteriaceae or Pseudomonas aeruginosa isolate in pure culture (ie, not mixed with other organisms), actively growing.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

199PC 89508

Carbohydrate Antigen 19-9 (CA 19-9), Pancreatic Cyst Fluid

Specimen Requirements: Patient Preparation: For 12 hours before this procedure do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Pancreatic Cyst Fluid	Frozen (preferred)	30 days	
	Refrigerated	7 days	

CPT Code Information: 86301

199PT
61530

Carbohydrate Antigen 19-9 (CA 19-9), Peritoneal Fluid

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Plain, plastic, screw-top tube
Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Peritoneal	Frozen (preferred)	90 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 86301

PF199
60230

Carbohydrate Antigen 19-9 (CA 19-9), Pleural Fluid

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Plain, plastic, screw-top tube
Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL (Samples <0.5 mL may be rejected)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Pleural Fluid	Frozen (preferred)	90 days	
	Refrigerated	14 days	
	Ambient	7 days	

CPT Code Information: 86301

CA19
9288

Carbohydrate Antigen 19-9 (CA 19-9), Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

Ambient

8 hours

CPT Code Information: 86301**CDG**
89891**Carbohydrate Deficient Transferrin for Congenital Disorders of Glycosylation, Serum****Specimen Requirements:** Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 0.1 mL**Specimen Minimum Volume:** 0.05 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	45 days	
	Refrigerated	28 days	
	Ambient	7 days	

CPT Code Information: 82373**CDTA**
82425**Carbohydrate Deficient Transferrin, Adult, Serum****Specimen Requirements:** Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 0.1 mL**Specimen Minimum Volume:** 0.05 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	45 days	
	Refrigerated	28 days	
	Ambient	7 days	

CPT Code Information: 82373**CHOU**
9255**Carbohydrate, Urine****Specimen Requirements:** Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: Collect an early-morning (preferred) random urine specimen.**Specimen Minimum Volume:** 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	21 days	

Refrigerated

21 days

CPT Code Information: 84377-Carbohydrate; 82760-Galactose (if appropriate);

COHBB
8649

Carbon Monoxide, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL
Collection Instructions: Avoid exposure of specimen to atmosphere.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)	14 days	
	Frozen	14 days	
	Refrigerated	14 days	

CPT Code Information: 82375

CAIX
606251

Carbonic Anhydrase IX (CA-IX) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

THCX
62743

Carboxy-Tetrahydrocannabinol (THC) Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain-of-Custody Kit containing the specimen containers, seals, and documentation required. Specimen Volume: 10 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Urine	Refrigerated (preferred)	14 days
	Frozen	14 days
	Ambient	72 hours

CPT Code Information: 80349; G0480 (if appropriate);

THCU 8898

Carboxy-Tetrahydrocannabinol (THC) Confirmation, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container Tube: Plastic urine container Submission Container/Tube: 10 mL tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STATS are not accepted for this test.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80349; G0480 (if appropriate);

CEAPC 89509

Carcinoembryonic Antigen (CEA), Pancreatic Cyst Fluid

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Pancreatic Cyst Fluid	Frozen (preferred)	90 days	
	Refrigerated	72 hours	
	Ambient	24 hours	

CPT Code Information: 82378

CEAPT 61528

Carcinoembryonic Antigen (CEA), Peritoneal Fluid

Specimen Requirements: Container/Tube: Plain, plastic, screw top tube Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL (Samples <0.5 mL may be rejected)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Peritoneal	Frozen (preferred)	90 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 82378

PFCEA 83742

Carcinoembryonic Antigen (CEA), Pleural Fluid

Specimen Requirements: Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL (Specimens <0.5 mL may be rejected)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Pleural Fluid	Frozen (preferred)	90 days	
	Refrigerated	14 days	
	Ambient	7 days	

CPT Code Information: 82378

CEA 8521

Carcinoembryonic Antigen (CEA), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 82378

CEASF 90695

Carcinoembryonic Antigen (CEA), Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial Submission Container/Tube: 13 x 75-mm tube Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	90 days	
	Ambient	7 days	

CPT Code Information: 82378

MCEA 70506

Carcinoembryonic Antigen, Monoclonal Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PCEAI 70535

Carcinoembryonic Antigen, polyclonal Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CARD 82491

Cardamom, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CVRMP Cardiovascular Risk Marker Panel, Serum

37002

Specimen Requirements: Patient Preparation: 1. Patients must be fasting for at least 12 to 14 hours. 2. Patient must not consume any alcohol for 24 hours before the specimen is drawn.

Container/Tube: Serum gel Specimen Volume: 2.5 mL

Specimen Minimum Volume: 1.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 80061-Lipid panel (includes: HDL [CPT Code 83718], total cholesterol [CPT Code 82465], and triglycerides [CPT Code 84478]); 83695-Lipoprotein (a); 86141-C-reactive protein; high sensitivity (hsCRP);

FCRDE Carmine Dye/Red Dye Cochineal (Dactylopius coccus) IgE (Red # 4)

57524

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

CPT2Z Carnitine Palmitoyltransferase II Deficiency, Full Gene Analysis, Varies

35398

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times

to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable: Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin, T115). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 Blood spots on collection card (Whatman Protein Saver 903 Paper; Ahlstrom 226 filter paper; or Blood Spot Collection Card, T493) Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches-3 mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81404-CPT2 (carnitine palmitoyltransferase 2) (eg, carnitine palmitoyltransferase II deficiency), full gene sequence; ; Fibroblast Culture for Genetic Test; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

CARN 8802

Carnitine, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA), green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen (preferred)	60 days	
	Refrigerated	21 days	
	Ambient	7 days	

CPT Code Information: 82379

CARNU 81123

Carnitine, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL

urine tube Specimen Volume: 1.5 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	365 days	
	Refrigerated	72 hours	

CPT Code Information: 82379

CARNS 60449

Carnitine, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	60 days	
	Refrigerated	21 days	
	Ambient	7 days	

CPT Code Information: 82379

CACTZ 35379

Carnitine-Acylcarnitine Translocase Deficiency, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, Blood Spot Collection Card Specimen Volume: 2 to 5 Blood Spots on collection card (Whatman Protein Saver 903 Paper; Ahlstrom 226 filter paper; or Blood Spot Collection Card) Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions

in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81405 SLC25A20 (solute carrier family 25 [carnitine/acylcarnitine translocase], member 20) (eg, carnitine- acylcarnitine translocase deficiency), full gene sequence; ; Fibroblast Culture for Genetic Test; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

CAROB Carob, IgE, Serum

82368

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FCARO Carotene, Beta

75178

Specimen Requirements: Supplies: Amber vial (T192) Specimen Type: Serum Container/Tube: Red Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain, red-top tube(s). (Serum gel tube is acceptable.) Spin Down and send 1 mL of serum ambient in an amber vial (T192) to protect from light. Note: 1. Protect from light within 1 hour of collection. 2. Patient must be fasting overnight (12 hours). 3. Abstain from alcohol for 24 hours prior to collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Ambient (preferred)	14 days	LIGHT PROTECTED
	Frozen	14 days	LIGHT PROTECTED
	Refrigerated	14 days	LIGHT PROTECTED

CPT Code Information: 82380

FCRTG 57630

Carrot IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

CROT 82742

Carrot, IgE, Serum

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FCASG 57555

Casein IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

CASE 82895

Casein, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86008

FCCA3 **75556**

Cashew Component rAn a o 3

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86008

FCASH **57687**

Cashew IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

CASH **82881**

Cashew, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FCASO
91995

Caspofungin (Cancidas)

Specimen Requirements: Container/Tube: Agar slant or other appropriate media Specimen Volume: Organism in pure culture Complete and submit with specimen: 1. Fungus Testing Lab request form Collection Instructions: 1. Organism must be in pure culture, actively growing 2. Place specimen in a large infectious container (T146) and label as an etiologic agent/infectious substance.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient		

CPT Code Information: 84999 - Unlisted Chemistry Procedure (Refer to patient report to apply the appropriate CPT code in place of this unlisted CPT code based on specimen source.); 87188 - mould - MIC microdilution or agar dilution (if appropriate); 87186 - yeast - MIC microdilution or agar dilution (if appropriate);

CASRZ
37439

CASR Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81405-CASR (calcium-sensing receptor) (eg, hypocalcemia), full gene sequence

CAT
82665

Cat Epithelium, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

COMTQ 610049

Catechol-O-Methyltransferase (COMT) Genotype, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 µL (microliters) Collection Instructions: 1. The preferred volume is 100 µL at a concentration of 50 ng/mL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 0032U

CATU 9276

Catecholamine Fractionation, Free, 24 Hour, Urine

Specimen Requirements: Patient Preparation: 1. Discontinue drugs that release or hinder metabolism of epinephrine, norepinephrine, or dopamine for at least 1 week before specimen collection (see Cautions for details). If this is not possible for medical reasons, contact the laboratory to discuss whether a shorter drug-withdrawal period may be acceptable. 2. Unless the reason for testing is drug monitoring, discontinue any epinephrine, norepinephrine, or dopamine injections or infusions for at least 12 hours before specimen collection. Supplies: Plastic, 10-mL urine tube (T068) Specimen Volume: 2 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Add 25 mL of 50% acetic acid as preservative at start of collection. Use 15 mL of 50% acetic acid for children less than 5 years old. This preservative is intended to achieve a pH of between approximately 2 and 4. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	14 days	
	Ambient	7 days	

CPT Code Information: 82384**CATP**
8532**Catecholamine Fractionation, Free, Plasma**

Specimen Requirements: Patient Preparation: Discontinue drugs that release epinephrine, norepinephrine, or dopamine, or hinder their metabolism for at least 1 week before obtaining the specimen (see Cautions for details). If this is not possible for medical reasons, contact the laboratory and discuss whether a shorter drug withdrawal period may be possible in a particular case. The patient must refrain from eating, using tobacco, and drinking caffeinated beverages for at least 4 hours before the specimen is drawn. Supplies: Catecholamine tubes containing EDTA-sodium metabisulfite solution (T066) (tubes have a 6-month expiration time) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Drawing from a catheter is required. 2. Calm the patient by giving complete instructions and reassurance regarding the procedure. 3. Insert an indwelling intravenous catheter. Flush with 3 mL of NaCl, using positive pressure. 4. Have the patient rest for 30 minutes in the supine position in a quiet room. 5. At the end of the 30 minutes, withdraw and discard a minimum of 3 mL of blood to remove the saline out of the catheter. 6. If provocative sampling (eg, standing specimen) is required, perform provocative maneuver immediately after obtaining supine specimen. Obtain standing specimen immediately. 7. For each specimen, draw 10 mL of blood into the chilled EDTA-sodium metabisulfite 10-mL tube. 8. Specimens must remain at refrigerated temperature during processing and transport. 9. Separate plasma in a refrigerated centrifuge within 30 minutes of draw. 10. Freeze specimen immediately.

Specimen Minimum Volume: 2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma EDTA Meta	Frozen	7 days	

CPT Code Information: 82384**FCATE**
57554**Catfish (Siluriformes spp) IgE**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FCLPF

75676

Cathartic Laxatives Profile, Stool

Specimen Requirements: Specimen Type: Stool Container/Tube: Acid-washed or trace metal-free plastic container, MCL supply T656 Specimen Volume: 10 g Collection Instructions: Collect 10 g of stool with no preservative. Send specimen in an acid-washed or trace metal-free plastic container, MCL supply T656. Send specimen refrigerated.

Specimen Minimum Volume: 10 mL stool liquid or 10 g stool solid

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Refrigerated (preferred)	30 days	
	Ambient	30 days	
	Frozen	30 days	

CPT Code Information: 83735; 84100;

CTSK

607887

Cathepsin K Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FCAFG

57680

Cauliflower IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

CALFL **82617**

Cauliflower, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CD10 **70373**

CD10 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD103 **70372**

CD103 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD11C 70412

CD11c Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD123 70413

CD123 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD13 70374

CD13 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD138 70414

CD138 (Syndecan) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable:

Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD14I
70375

CD14 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD15
70376

CD15 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD163
70415

CD163 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		

Refrigerated

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

C19BM 603205

CD19 Immunostain, Bone Marrow, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick; B5 fixed, decalcified, paraffin-embedded bone marrow tissue. Acceptable: B5 fixed, decalcified, paraffin-embedded bone marrow tissue block.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD19I 70377

CD19 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD1A 70378

CD1a Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD2B 603203

CD2 Immunostain, Bone Marrow, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick; B5 fixed, decalcified, paraffin-embedded bone marrow tissue. Acceptable: B5 fixed, decalcified, paraffin-embedded bone marrow tissue block.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD2 70384

CD2 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CEE20 65660

CD20 Cell Expression Evaluation, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 10 mL Collection Instructions: 1. Send specimen in original tube. Do not aliquot. 2. Label specimen as blood. Specimen Stability Information: Ambient/Refrigerated Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 1-5 mL Collection Instructions: 1. Label specimen as bone marrow. 2. Submission of bilateral specimens is not required. Specimen Stability Information: Ambient/Refrigerated

Specimen Minimum Volume: Blood: 3 mL Bone Marrow Aspirate: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	4 days	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 3-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker; 88187-Flow Cytometry Interpretation, 2 to 8 Markers;

CD20I 70379

CD20 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD20B 89584

CD20 on B Cells, Blood

Specimen Requirements: For serial monitoring, we recommend that specimen collection be performed at the same time of day. Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Do not aliquot. Additional Information: 1. Secondary aliquot tubes will be rejected. 2. Testing will be canceled if the specimen is not received ambient.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	4 days	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86355; 86356;

CD21 70380

CD21 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD22I 70381

CD22 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD23

70382

CD23 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD25

70383

CD25 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD273

601986

CD273 (PD-L2) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD279 70417

CD279 (PD-1) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD3I 70391

CD3 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD30 70385

CD30 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD303

607891

CD303 (BDCA-2) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD31

70386

CD31 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD33

70387

CD33 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD34I

70388

CD34 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD35

70389

CD35 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD38

70390

CD38 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TCD4

84348

CD4 Count for Immune Monitoring, Blood

Specimen Requirements: For serial monitoring, we recommend that specimen draws be performed at the same time of day. Container/Tube: 4 mL Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA
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CPT Code Information: 86359-T cells, total count; 86360-Absolute CD4/CD8 count with ratio;

CD4NY 28334

CD4 Count for Monitoring, New York, Blood

Specimen Requirements: For serial monitoring, we recommend that specimen draws be performed at the same time of day. Container/Tube: 4 mL Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86359; 86360;

CD4I 70393

CD4 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD4RT 89504

CD4 T-Cell Recent Thymic Emigrants, Blood

Specimen Requirements: Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Container/Tube: Lavender top (EDTA) Specimen Volume 3 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86356

CD43 70392

CD43 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD45 70348

CD45 Leukocyte Common Antigen (LCA) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CEE49 65658

CD49d Cell Expression Evaluation, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 10 mL Collection Instructions: 1. Send specimen in original tube. Do not aliquot 2. Label specimen as blood. Specimen Stability Information: Ambient/Refrigerated Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 1-5 mL Collection Instructions: 1. Label specimen as bone marrow. 2. Submission of bilateral specimens is not required. Specimen Stability Information: Ambient/Refrigerated

Specimen Minimum Volume: Blood: 3 mL Bone Marrow Aspirate: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	4 days	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 3-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker; 88187-Flow Cytometry Interpretation, 2 to 8 Markers;

CD5 70396

CD5 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CEE52 65659

CD52 Cell Expression Evaluation, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 10 mL Collection Instructions: 1. Send specimen in original tube. Do not aliquot. 2. Label specimen as blood. Specimen Stability Information: Ambient/Refrigerated Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 1-5 mL Collection Instructions: 1. Label specimen as bone marrow. 2. Submission of bilateral specimens is not required. Specimen Stability Information: Ambient/Refrigerated

Specimen Minimum Volume: Blood: 3 mL Bone Marrow Aspirate: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	4 days	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 3-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker; 88187-Flow Cytometry Interpretation, 2 to 8 Markers;

CD56 70394

CD56 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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TECHONLY	Ambient (preferred)
	Refrigerated

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD57 70395

CD57 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD61 70397

CD61 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CDKPB 603209

CD68 (KP1) Immunostain, Bone Marrow, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick; B5 fixed, decalcified, paraffin-embedded bone marrow tissue Acceptable: B5 fixed, decalcified, paraffin-embedded bone marrow tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		

Refrigerated

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CDKP1 70486

CD68 (KP1) Immunostain, Tissue, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PGM1 70536

CD68 (PG-M1) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD7 70399

CD7 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD71 70398

CD71 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD79 70418

CD79a Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CD8I 70400

CD8 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GLICP 89369

CD8 T-Cell Immune Competence Panel, Global, Whole Blood

Specimen Requirements: For serial monitoring, we recommend that specimen collections be

performed at the same time of day. Supplies: Ambient Shipping Box-Critical Specimens Only (T668)
Two separate whole blood specimens are required. Specimen Type: EDTA whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Send specimen in original tube. Do not aliquot. 2. Label specimen as blood for TBBS / Quantitative Lymphocyte Subsets: T, B, and Natural Killer (NK) Specimen Type: Sodium heparin whole blood Container/Tube: Green top (sodium heparin) Specimen Volume: 15 mL Collection Instructions: Label specimen as blood for GLIC / CD8 T-Cell Immune Competence, Global, Blood.

Specimen Minimum Volume: Sodium heparin whole blood: 10 mL EDTA whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP
Whole Blood EDTA	Ambient	52 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: QN Lymphocyte Subsets: T, B, and NK; 86355-B cells, total count ; 86357-Natural killer (NK) cells, total count ; 86359-T cells, total count ; 86360-Absolute CD4/CD8 count with ratio ; ; CD8 T-Cell Immune Competence, Global, Blood; 86356 x 2;

GLIC 89317

CD8 T-Cell Immune Competence, Global, Blood

Specimen Requirements: Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Container/Tube: Green top (sodium heparin) Specimen Volume: 15 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86356 x 2

CD99 70508

CD99 (MIC-2) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CDH1Z 35383

CDH1 Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81406; Hereditary Colon Cancer CGH Array, additional test; 81228;

CDKZ 35385

CDKN1C Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient

Specimen Minimum Volume: Blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

CDX2 70401

CDX2 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CEBPA 60444

CEBPA Mutations, Gene Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral Blood Container/Tube: EDTA (lavender top) or ACD (yellow top) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Bone marrow Container/Tube: EDTA (lavender top) or ACD (yellow top) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood or bone marrow and provide indication of volume and concentration of the DNA. Specimen Stability: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	7 days	

CPT Code Information: 81218-CEBPA (CCAAT/enhancer binding protein [C/EBP], alpha) (eg, acute myeloid leukemia), gene analysis, full gene sequence

FRCE 57952

Cedar Red (Juniperus virginiana) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

CEDR 82482

Cedar, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FCELG 57638

Celery IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

CELY 82766

Celery, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CELI 88906

Celiac Associated HLA-DQ Alpha 1 and DQ Beta 1 DNA Typing, Blood

Specimen Requirements: Container/Tube: Yellow top (ACD solution B) Specimen Volume: 6 mL Collection Instructions: Do not transfer blood to other containers.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 81376 x 2-HLA Class II typing, low resolution (eg, antigen equivalents); one locus (eg, HLA-DRB1/3/4/5, -DQB1, -DQA1, -DPB1, or -DPA1), each; ;

CDCOM 89201

Celiac Disease Comprehensive Cascade, Serum and Whole Blood

Specimen Requirements: Both blood and serum are required. Specimen Type: Blood Container/Tube: Yellow top (ACD [solution B]) Specimen Volume: 6 mL Collection Instructions: Do not transfer blood to other containers. Specimen Type: Serum Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 2 mL

Specimen Minimum Volume: Blood: 3 mL Serum: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	21 days	
Whole Blood ACD-B	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 82784; 81376 x 2; 83516-Deamidated gliadin IgA (if appropriate); 83516-Deamidated gliadin IgG (if appropriate); 83516-tTG IgA (if appropriate); 83516-tTG IgG (if appropriate); 86255-Endomysial antibodies (if appropriate);

CDGF 89200

Celiac Disease Gluten-Free Cascade, Serum and Whole Blood

Specimen Requirements: Both blood and serum are required. Specimen Type: Blood Container/Tube: Yellow top (ACD solution B) Specimen Volume: 6 mL Collection Instructions: Do not transfer blood to other containers. Specimen Type: Serum Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 2 mL

Specimen Minimum Volume: Blood: 3 mL Serum 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	
Whole Blood ACD-B	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 81376 x 2; 82784-IgA (if appropriate); 83516-Deamidated gliadin IgA (if appropriate); 83516-Deamidated gliadin IgG (if appropriate); 83516-tTG IgA (if appropriate); 83516-tTG IgG (if appropriate);

CDSP 89199

Celiac Disease Serology Cascade, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 2 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	21 days	

CPT Code Information: 82784; 83516-Deamidated gliadin IgA (if appropriate); 83516-Deamidated gliadin IgG (if appropriate); 83516-tTG IgA (if appropriate); 83516-tTG IgG (if appropriate); 86255-Endomysial antibodies (if appropriate);

NCSPC 113338

Cell Concentration (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88108

CCBF 8419

Cell Count and Differential, Body Fluid

Specimen Requirements: For Local Accounts Only Sources: Synovial, pleural, peritoneal, pericardial Container/Tube: Preferred: Body fluid container Acceptable: EDTA or heparin Specimen Volume: 1 mL

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Ambient (preferred)	24 hours	
	Refrigerated	24 hours	

CPT Code Information: 89051-Cell count with differential count; 88184 if applicable; 88185 if applicable; 88187 if applicable; 88188 if applicable; 88189 if applicable; 88104 if applicable; 88108 if applicable; 88112 if applicable; 88161 if applicable; 88162 if applicable; 88305 if applicable;

BRAFB **65100**

Cell-Free DNA BRAF V600, Blood

Specimen Requirements: Supplies: Streck Black/Tan Top Tube Kit (T715) Specimen Volume: Two, 10-mL Streck cell-free DNA (cfDNA) blood collection tubes Additional Information: 1. Only blood collected in Streck cfDNA tubes will be accepted for analysis. 2. Whole blood will be processed to produce platelet-poor plasma before cfDNA isolation.

Specimen Minimum Volume: One 10 mL Streck cell-free DNA tube

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 81210

T790M **113410**

Cell-Free DNA EGFR T790M Mutation Analysis, Blood

Specimen Requirements: Supplies: Streck Black/Tan Top Tube Kit (T-715) Specimen Volume: Two 10-mL Streck Cell-Free DNA blood collection tubes Additional Information: 1. Only blood collected in Streck Cell-Free DNA BCT tubes will be accepted for analysis. Whole blood will be processed to produce platelet poor plasma before cfDNA isolation. 2. Samples should be transported at room temperature or refrigerated (4°C) 3. Samples are viable for 7 days in the Streck Cell-Free DNA BCT tube.

Specimen Minimum Volume: One 10 mL Streck tube

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	Streck Black/Tan top
	Refrigerated	7 days	Streck Black/Tan top

CPT Code Information: 81235

KRASD **68003**

Cell-Free DNA KRAS 12, 13, 61,146, Blood

Specimen Requirements: Supplies: Streck Black/Tan Top Tube Kit (T715) Container/Tube: Streck Cell-Free DNA blood collection kit (T715) Specimen Volume: Two 10-mL Streck Cell-Free DNA blood collection tubes Additional Information: Only blood collected in Streck Cell-Free DNA BCT tubes will be accepted for analysis. Whole blood will be processed to produce platelet-poor plasma before cfDNA isolation.

Specimen Minimum Volume: One 10 mL Streck tube

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	Streck Black/Tan top

Refrigerated

7 days

Streck Black/Tan top

CPT Code Information: 81275; 81276;**CNSA**
70644**Central Nervous System Consultation, Autopsy, Varies**

Specimen Requirements: Hematoxylin-and-eosin stained sections are also acceptable, but must be accompanied by paraffin blocks and/or remaining wet tissue. In cases submitted as part of a research protocol, contact 507-284-3887 for further guidance. Supplies: Central Nervous System Consult Kit (T633) Sources: Brain (and spinal cord when indicated) Container/Tube: Plastic container Specimen Volume: 1 cm(3) cube Collection Instructions: 1. Take a small (1 cm[3]) cube of brain from 1 of the frontal lobes (typically, right inferior frontal). 2. Wrap in aluminum foil and place in plastic container. 3. Label container with identifying information (ie, patient name, date of birth, autopsy number, and date of collection). 4. Freeze and store in a -70°C freezer. 5. Place the remaining brain in 10% formalin if non-CJD, and 15% formalin for suspected cases of CJD, suspended by a thread under the basilar artery and fixed for 7 to 10 days. Additional Information: Upon completion of consultation, the brain tissue will be stored 10 years in the Mayo Clinic Tissue Registry. The Mayo Clinic policy precludes our evaluation of cases under litigation that involve non-Mayo Clinic patients.

Specimen Minimum Volume: Entire collection**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 88037 (if appropriate); 88036 (if appropriate);**CMA**
9278**Centromere Antibodies, IgG, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.35 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516**CEAC**
82387**Cephalosporium acremonium, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x

number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CTSU
606147

Ceramide Trihexosides and Sulfatides, Random, Urine

Specimen Requirements: Patient Preparation: Baby wipes or wipes containing soaps and lotions should not be used prior to urine collection because these may interfere with results. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic, 5-mL urine tube Specimen Volume: 2 mL Collection Instructions: Collect a first-morning, random urine specimen. Specimen Stability Information: Refrigerated (preferred) 45 days/Ambient 45 days/Frozen 19 months

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	45 days	
	Ambient	45 days	
	Frozen		

CPT Code Information: 83789

SFIG
610783

Cerebrospinal Fluid (CSF) IgG Index Profile, Serum and Spinal Fluid

Specimen Requirements: Both serum and spinal fluid are required. Spinal fluid must be obtained within 7 days of serum collection. 2 individual serum samples are required. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: 2 Plastic vials Specimen Volume: 2 mL in 2 plastic vials, each containing 1 mL Collection Instructions: Centrifuge and aliquot serum within 2 hours of collection. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Label specimen as SFINC.

Specimen Minimum Volume: Serum 1 mL in 2 plastic vials, each containing 0.5 mL Spinal fluid: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	
Serum	Refrigerated (preferred)	14 days	
	Frozen	28 days	

Ambient

7 days

CPT Code Information: 82040; 82042; 82784 x 2;**SFINC**

2762

Cerebrospinal Fluid (CSF) IgG Index, Spinal Fluid

Specimen Requirements: Only orderable as part of a profile. For more information see SFIG / Cerebrospinal Fluid (CSF) IgG Index Profile, Serum and Spinal Fluid. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Label specimen as spinal fluid.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 82042; 82784;

CTXWB

113444

Cerebrotendinous Xanthomatosis, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin, lithium heparin), yellow top (ACD B) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	72 hours	
	Ambient	48 hours	

CPT Code Information: 82542

CTXBS

65630

Cerebrotendinous Xanthomatosis, Blood Spot

Specimen Requirements: Supplies: -Card-Blood Spot Collection (Filter Paper) (T493) -Card-Postmortem Screening (Filter Paper) (T525) Container/Tube: Preferred: Blood Spot Collection (Filter Paper) Acceptable: Ahlstrom 226 filter paper, Munktel filter paper, Postmortem Screening Card or collected with EDTA, sodium heparin, lithium heparin, or ACD B-containing devices Specimen Volume: 2 Blood spots Collection Instructions: 1. Let blood dry completely on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 2. At least 1 spot should be complete (ie, unpunched). 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	10 days	FILTER PAPER
	Frozen	59 days	FILTER PAPER
	Ambient	10 days	FILTER PAPER

CPT Code Information: 82542

CTXP 65631

Cerebrotendinous Xanthomatosis, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Lavender top (EDTA)
Acceptable: Green top (sodium heparin, lithium heparin), yellow top (ACD B) Submission
Container/Tube: Plastic vial Specimen Volume: 0.3 mL Collection Instructions: 1. Centrifuge at 4°C, if possible 2. Aliquot plasma into plastic vial, taking care not to disturb or transfer the buffy coat layer. 3. Send frozen.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	65 days	

CPT Code Information: 82542

FCZAC 75563

Certolizumab and Anti-Certolizumab Antibody, DoseASSURE CTZ

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 2 mL of serum frozen in a plastic vial. To avoid delays in turnaround time when requesting multiple tests, please submit separate frozen specimens for each test requested.

Specimen Minimum Volume: 0.60 mL (Note: This volume does not allow for repeat testing.)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	14 days	
	Refrigerated	14 days	

CPT Code Information: 80299; 82397;

CERS 614504

Ceruloplasmin, Serum

Specimen Requirements: Patient Preparation: Patient should be fasting: 4 hours preferred, nonfasting acceptable Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission

Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 82390

CFTRZ 35388

CFTR Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: 1. To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. 2. Patient education brochures in English (T548) and Spanish (T563) are available upon request.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81223; 81222;

G162 605195

CGO Custom Gene Panel (LPGD) (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CHGL 82384

Chaetomium globosum, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

90 days

CPT Code Information: 86003**FAMCE****57914****Cheese American IgE**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003**FCCGG****57573****Cheese Cheddar IgG**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001**FSCE****57936****Cheese Swiss IgE**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

CCHZ
82752

Cheese, Cheddar, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MCHZ
82751

Cheese, Mold, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for each 5 allergens requested Additional Information: Designate specific allergens from the list in Allergens “ Immunoglobulin E (IgE) Antibodies in Special Instructions.

Specimen Minimum Volume: For 1 allergen: 0.3 mL; For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CHER
82798

Cherry, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CTRE 82607

Chestnut Tree, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CNUT 82870

Chestnut, Sweet, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CHXP 82494

Chick Pea, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CDROP

82142

Chicken Droppings, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CHCK

82713

Chicken Feathers, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FCHXG

57625

Chicken IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

CSPR

82351

Chicken Serum Proteins, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CHIC 82703

Chicken, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CHIKG 63868

Chikungunya IgG, Antibody, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see CHIKV / Chikungunya IgM and IgG, Antibody, Serum.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: 86790

CHIKV 64173

Chikungunya IgM and IgG, Antibody, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: IgM: 86790; IgG: 86790;

CHIKM 63867

Chikungunya IgM, Antibody, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see CHIKV / Chikungunya IgM and IgG, Antibody, Serum.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: 86790

CHIKI 37102

Chikungunya Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see CHIKV / Chikungunya IgM and IgG, Antibody, Serum.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CHIKS 603833

Chikungunya Virus, PCR, Molecular Detection, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Sterile container Specimen Volume: 0.5 mL Collection Instructions: 1. Collect whole blood in a serum gel tube. 2. Centrifuge and aliquot the serum into a sterile container within 6 hours of collection. 3. Label specimen as serum.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

CHIKC 603832

Chikungunya Virus, PCR, Molecular Detection, Spinal Fluid

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Preferred: 12 x 75-mm screw cap vial Acceptable: Sterile screw cap vial Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

CHILI 82499

Chili Pepper, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CHIMU 62983

Chimerism Transplant No Cell Sort, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Only 1 tube is required. 2. Invert several times to mix blood. 3. Send specimen in original tube. Do not aliquot. 4. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 3 mL Bone Marrow: 2 mL Lesser volumes may be acceptable, depending on white cell count. Call 800-533-1710 or 507-266-5700 with questions.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	PURPLE OR PINK TOP/EDTA

Refrigerated

7 days

PURPLE OR PINK
TOP/EDTA

CPT Code Information: 81267-Chimerism (engraftment) analysis, post hematopoietic stem cell transplantation specimen, includes comparison to previously performed baseline analyses, without cell selection

CHIMS

62984

Chimerism Transplant Sorted Cells, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Only 1 tube is required. 2. Invert several times to mix blood. 3. Send specimen in original tube. Do not aliquot. 4. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 3 mL Bone Marrow: 2 mL Lesser volumes may be acceptable, depending on white cell count.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	4 days	PURPLE OR PINK TOP/EDTA
	Refrigerated	4 days	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81268-Chimerism (engraftment) analysis, post hematopoietic stem cell transplantation specimen, includes comparison to previously performed baseline analyses; with cell selection (eg, CD3, CD33), each cell type (if appropriate)

CHIDB

83182

Chimerism-Donor, Varies

Specimen Requirements: Complete chimerism analysis also requires submission of CHRGB / Chimerism-Recipient Germline (Pre) and CHIMU / Chimerism Transplant No Cell Sort or CHIMS / Chimerism Transplant Sorted Cells specimens. These tests must be ordered on both the pre- and post-specimens under separate order numbers. The 3 specimens do not need to be submitted at the same time. Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: ACD Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: ACD Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Type: Buccal swab Supplies: Buccal Swab Kit (T543) Container/Tube: Buccal Smear Collection Kit (T543) Specimen Volume: 2 Cyto-Pak brushes-1 per cheek Collection Instructions: 1. Patient should rinse out mouth vigorously with mouthwash for approximately 15 seconds. 2. Remove Cyto-Pak brush from container only touching "stick" end. Save container. 3. Using medium pressure, rotate brush several times on inside of cheek. 4. Return brush to container and cap. 5. Repeat steps 2 through 4 on other cheek using second brush. 6. It is important that patient's buccal cells are not contaminated with cells from any other source. Do not touch bristles. Do not brush too vigorously. If blood appears, discard brush. Restart collection process. 7. Label each container with patient's name and order number or hospital/clinic number. Additional Information: It is important that the cells do not dry out during shipping. Ensure that container is tightly sealed.

Specimen Minimum Volume: Blood: 3 mL Bone Marrow: 2 mL Lesser volumes may be acceptable, depending on white cell count. Call 800-533-1710 or 507-266-5700 with questions.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 81265-Comparative analysis using short tandem repeat (STR) markers; patient and comparative specimen (e.g., pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [e.g., buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells)

CHRGB
83186

Chimerism-Recipient Germline (Pretransplant), Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Type: Buccal swab Supplies: Buccal Swab Kit (T543) Container/Tube: Buccal Smear Collection Kit Specimen Volume: 2 Cyto-Pak brushes-1 per cheek Collection Instructions: 1. Patient should rinse out mouth vigorously with mouthwash for approximately 15 seconds. 2. Remove Cyto-Pak brush from container only touching "stick" end. Save container. 3. Using medium pressure, rotate brush several times on inside of cheek. 4. Return brush to container and cap. 5. Repeat steps 2 through 4 on other cheek using second brush. 6. It is important that patient's buccal cells are not contaminated with cells from any other source. Do not touch bristles. Do not brush too vigorously. If blood appears, discard brush and restart collection process. 7. Label each container with patient's name and order number or hospital/clinic number. Additional Information: It is important that the cells do not dry out during shipping. Ensure that container is tightly sealed.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (e.g., pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [e.g., buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells)

SCLAM
8142

Chlamydia Serology, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.2 mL

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: 86631 x 3-IgG; 86632 x 3-IgM;

MCTGC
43721

Chlamydia trachomatis and Neisseria gonorrhoeae, Miscellaneous Sites, Nucleic Acid Amplification, Varies

Specimen Requirements: Swab specimens must be collected using an Aptima Collection Unisex Swab (T583), or Aptima Collection Multitest Swab (T584). These swabs are contained in the Aptima Collection Kit. Submit only 1 of the following specimens: Supplies: Swab, Aptima Male/Female Collection (T583) Swab, Aptima Multitest Swab Specimen Collection Kit (T584) Specimen Type: Ocular (corneal/conjunctiva) Container/Tube: Aptima Collection Multitest Swab or Aptima Swab Collection System Specimen Volume: Swab Collection Instructions: 1. Swab site using Aptima Collection Multitest Swab or Aptima Collection Unisex Swab. Note: The white swab provided within the collection kit is a cleaning swab and should not be used for collection. Discard the white cleaning swab. 2. Place collection swab in transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 3. Cap tube securely and label tube with patient's entire name and collection date and time. 4. Transport swab container and store (refrigerated is preferred) within 60 days of collection. Supplies: Aptima Thin Prep Transport Tube (T652) Specimen Type: Peritoneal fluid (pelvic wash, cul-de-sac fluid) Container/Tube: Aptima Specimen Transfer Tube Specimen Volume: 1 mL Collection Instructions: 1. Transfer specimen into the Aptima Specimen Transfer Tube within 24 hours of collection. 2. Cap tube securely and label tube with patient's entire name and collection date and time. 3. Transport Aptima Specimen Transfer Tube (refrigerated is preferred) within 30 days of collection.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		APTIMA VIAL
	Ambient		APTIMA VIAL
	Frozen		APTIMA VIAL

CPT Code Information: MCRNA-87491; MGRNA-87591;

CGRNA
61553

Chlamydia trachomatis and Neisseria gonorrhoeae, Nucleic Acid Amplification, Varies

Specimen Requirements: Submit only 1 of the following specimens: Swab specimen must be collected using an Aptima Collection Unisex Swab (T583) or Aptima Collection Multitest Swab (T584). These swabs are contained in the Aptima Collection Kit. Supplies: Swab, Aptima Male/Female Collection (T583) Specimen Type: Endocervix Container/Tube: Aptima Collection Unisex Swab Specimen Volume: Swab Collection Instructions: 1. Use cleaning swab (white shaft) to remove excess mucus from endocervix and discard. 2. Insert second swab (blue shaft) 1 to 1.5 cm into endocervical canal, and rotate swab gently for 30 seconds. Avoid touching vaginal wall when removing swab. 3. Place second swab into transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 4. Cap tube securely, and label tube with patient's entire name, and date and time of collection. 5. Transport and

store swab container at 2 to 30°C (refrigerate is preferred temperature) within 60 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Supplies: Swab, Aptima Multitest Swab Specimen Collection Kit (T584) Specimen Type: Vaginal Container/Tube: Aptima Collection Multitest Swab Specimen Volume: Swab Collection Instructions: 1. Insert swab (pink shaft) about 5 cm past introitus and rotate gently for 30 seconds. 2. Place swab into transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 3. Cap tube securely, and label tube with patient's entire name, and date and time of collection. 4. Transport and store swab container at 2 to 30°C (refrigerate is preferred temperature) within 60 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Supplies: Swab, Aptima Male/Female Collection (T583) Specimen Type: Urethra (Males Only) Container/Tube: Aptima Collection Unisex Swab Specimen Volume: Swab Collection Instructions: 1. Patient should not have urinated for at least 1 hour prior to collection. 2. With a rotating movement, insert swab (blue shaft) 2 to 4 cm into urethra. 3. Once inserted, rotate swab gently at least 1 full rotation using sufficient pressure to ensure swab comes into contact with all urethral surfaces. Allow swab to remain inserted for 2 to 3 seconds. 4. Place swab in transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 5. Cap tube securely, and label tube with patient's entire name, and date and time of collection. 6. Transport and store swab container at 2 to 30°C (refrigerate is preferred temperature) within 60 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Supplies: Aptima Urine Transport Tube (T582) Specimen Type: Urine (Males and Females) Container/Tube: Aptima Urine Specimen Transport Tube Specimen Volume: 15-20 mL Collection Instructions: 1. Patient should not have urinated for at least 1 hour prior to specimen collection. 2. Patient should collect first portion of random voided urine (first part of stream) into a sterile, plastic, preservative-free container. 3. Transfer 2 mL of urine into the urine specimen transport tube using the disposable pipette provided within 24 hours of collection. The correct volume of urine has been added when the fluid level is between the black fill lines on the urine transport tube. Place the labels on the transport tube so the black fill lines are still visible for volume confirmation at Mayo Clinic Laboratories. 4. Transport and store urine specimen transport container at 2 to 30°C (refrigerate is preferred temperature) within 30 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Supplies: Aptima Thin Prep Transport Tube (T652) Specimen Type: ThinPrep Specimen (Endocervix) Container/Tube: ThinPrep (also called PreservCyt) Collection Kit Specimen Volume: 1 mL Collection Instructions: 1. Aliquot ThinPrep specimen for Chlamydia and/or Neisseria testing before processing for Pap smear. For each specimen, use a new pair of clean gloves. 2. Vortex ThinPrep/PreservCyt vial 3 to 10 seconds. Within 1 minute of vortexing: a. Transfer 1 mL of specimen into the Aptima Specimen Transfer Tube using a disposable transfer pipette or a pipette tip containing a filter (aerosol barrier or hydrophobic plug). b. Process only 1 ThinPrep and transfer tube set at a time. c. Recap Aptima Specimen Transfer Tube tightly and gently invert 3 times to mix. 3. Label Aptima transfer tube with appropriate label. 4. Use remainder of ThinPrep specimen for Pap testing. 5. Transport and store specimen transfer container at 2 to 30°C (refrigerate is preferred temperature) within 60 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Swab, Aptima Male/Female Collection (T583) Swab, Aptima Multitest Swab Specimen Collection Kit (T584) Specimen Type: Oral/throat or rectal/anal Container/Tube: Aptima Collection Multitest Swab or Aptima Swab Collection System Specimen Volume: Swab Collection Instructions: 1. Swab site using Aptima Collection Multitest Swab or Aptima Collection Unisex Swab. Note: The white swab provided within the collection kit is a cleaning swab and should not be used for collection. Discard the white cleaning swab. 2. Place collection swab in transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 3. Cap tube securely and label tube with patient's entire name and collection date and time. 4. Transport swab container and store (refrigerated is preferred) within 60 days of collection.

Specimen Minimum Volume: Endocervical in PreservCyt: 1mL Urine: 2 mL Swabs (Throat/Oral, Anal/Rectal, Endocervical, Urethral, Vaginal): Entire Collection

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		APTIMA VIAL
	Ambient		APTIMA VIAL
	Frozen		APTIMA VIAL

CPT Code Information: 87491-Chlamydia trachomatis; 87591-Neisseria gonorrhoeae;

MCRNA 61554

Chlamydia trachomatis, Miscellaneous Sites, Nucleic Acid Amplification, Varies

Specimen Requirements: Swab specimens must be collected using an Aptima Collection Unisex Swab (T583), or Aptima Collection Multitest Swab (T584). These swabs are contained in the Aptima Collection Kit. Submit only 1 of the following specimens: Supplies: Swab, Aptima Male/Female Collection (T583) Swab, Aptima Multitest Swab Specimen Collection Kit (T584) Specimen Type: Ocular (corneal/conjunctiva) Pediatric Specimen Type: Nasopharyngeal (NP: only acceptable for patients 6 months old or younger) Container/Tube: Aptima Collection Multitest Swab (T584) or Aptima Swab Collection System (T583) Collection Instructions: 1. Swab site using Aptima Collection Multitest Swab or Aptima Collection Unisex Swab. Note: The white swab provided within the collection kit is a cleaning swab and should not be used for collection. Discard the white cleaning swab. 2. Place collection swab in transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 3. Cap tube securely and label tube with patient's entire name and collection date and time. Specimen Type: Peritoneal fluid (pelvic wash, cul-de-sac fluid) Container/Tube: Aptima Specimen Transfer Tube (T652) Specimen Volume: 1 mL Collection Instructions: 1. Transfer specimen into the Aptima Specimen Transfer Tube within 24 hours of collection. 2. Cap tube securely and label tube with patient's entire name and collection date and time. Container/Tube: Aptima Collection Multitest Swab or Aptima Swab Collection System Specimen Volume: Swab Collection Instructions: 1. Swab site using Aptima Collection Multitest Swab or Aptima Collection Unisex Swab. Note: The white swab provided within the collection kit is a cleaning swab and should not be used for collection. Discard the white cleaning swab. 2. Place collection swab in transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 3. Cap tube securely and label tube with patient's entire name and collection date and time. 4. Transport swab container and store (refrigerated is preferred) within 60 days of collection. Supplies: Aptima Thin Prep Transport Tube (T652) Specimen Type: Peritoneal fluid (pelvic wash, cul-de-sac fluid) Container/Tube: Aptima Specimen Transfer Tube Specimen Volume: 1 mL Collection Instructions: 1. Transfer specimen into the Aptima Specimen Transfer Tube within 24 hours of collection. 2. Cap tube securely and label tube with patient's entire name and collection date and time. 3. Transport Aptima Specimen Transfer Tube (refrigerated is preferred) within 30 days of collection.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		APTIMA VIAL
	Ambient		APTIMA VIAL
	Frozen		APTIMA VIAL

CPT Code Information: 87491

CTRNA 61551

Chlamydia trachomatis, Nucleic Acid Amplification, Varies

Specimen Requirements: Submit only 1 of the following specimens: Swab specimen must be collected using an Aptima Collection Unisex Swab (T583), or Aptima Collection Multitest Swab (T584). These swabs are contained in the Aptima Collection Kit. Supplies: Swab, Aptima Male/Female Collection (T583) Specimen Type: Endocervix Container/Tube: Aptima Collection Unisex Swab Specimen Volume: Swab Collection Instructions: 1. Use cleaning swab (white shaft) to remove excess mucus from endocervix and discard. 2. Insert second swab (blue shaft) 1 to 1.5 cm into endocervical canal, and rotate swab gently for 30 seconds. Avoid touching vaginal wall when removing swab. 3. Place second swab into transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 4. Cap

tube securely, and label tube with patient's entire name, and date and time of collection. 5. Transport and store swab container at 2 to 30°C (refrigerate is preferred temperature) within 60 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Supplies: Swab, Aptima Multitest Swab Specimen Collection Kit (T584) Specimen Type: Vaginal Container/Tube: Aptima Collection Multitest Swab Specimen Volume: Swab Collection Instructions: 1. Insert swab (pink shaft) about 5 cm past introitus and rotate gently for 30 seconds. 2. Place swab into transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 3. Cap tube securely, and label tube with patient's entire name, and date and time of collection. 4. Transport and store swab container at 2 to 30°C (refrigerate is preferred temperature) within 60 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Supplies: Swab, Aptima Male/Female Collection (T583) Specimen Type: Urethra (Males Only) Container/Tube: Aptima Collection Unisex Swab Specimen Volume: Swab Collection Instructions: 1. Patient should not have urinated for at least 1 hour prior to collection. 2. With a rotating movement, insert swab (blue shaft) 2 to 4 cm into urethra. 3. Once inserted, rotate swab gently at least 1 full rotation using sufficient pressure to ensure swab comes into contact with all urethral surfaces. Allow swab to remain inserted for 2 to 3 seconds. 4. Place swab in transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 5. Cap tube securely, and label tube with patient's entire name, and date and time of collection. 6. Transport and store swab container at 2 to 30°C (refrigerate is preferred temperature) within 60 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Supplies: Aptima Urine Transport Tube (T582) Specimen Type: Urine (Males and Females) Container/Tube: Aptima Urine Specimen Transport Tube Specimen Volume: 15-20 mL Collection Instructions: 1. Patient should not have urinated for at least 1 hour prior to specimen collection. 2. Patient should collect first portion of random voided urine (first part of stream) into a sterile, plastic, preservative-free container. 3. Transfer 2 mL of urine into the urine specimen transport tube using the disposable pipette provided within 24 hours of collection. The correct volume of urine has been added when the fluid level is between the black fill lines on the urine transport tube. Place the labels on the transport tube so the black fill lines are still visible for volume confirmation at Mayo Clinic Laboratories. 4. Transport and store urine specimen transport container at 2 to 30°C (refrigerate is preferred temperature) within 30 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Supplies: Aptima Thin Prep Transport Tube (T652) Specimen Type: ThinPrep Specimen (Endocervix) Container/Tube: ThinPrep (also called PreservCyt) Collection Kit Specimen Volume: 1 mL Collection Instructions: 1. Aliquot ThinPrep specimen for Chlamydia and/or Neisseria testing before processing for Pap smear. For each specimen, use a new pair of clean gloves. 2. Vortex ThinPrep/PreservCyt vial 3 to 10 seconds. Within 1 minute of vortexing: a. Transfer 1 mL of specimen into the Aptima Specimen Transfer Tube using a disposable transfer pipette or a pipette tip containing a filter (aerosol barrier or hydrophobic plug). b. Process only 1 ThinPrep and transfer tube set at a time. c. Recap Aptima Specimen Transfer Tube tightly and gently invert 3 times to mix. 3. Label Aptima transfer tube with appropriate label. 4. Use remainder of ThinPrep specimen for Pap testing. 5. Transport and store specimen transfer container at 2 to 30°C (refrigerate is preferred temperature) within 60 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Supplies: Swab, Aptima Male/Female Collection (T583) Swab, Aptima Multitest Swab Specimen Collection Kit (T584) Specimen Type: Oral/throat or rectal/anal Container/Tube: Aptima Collection Multitest Swab or Aptima Swab Collection System Specimen Volume: Swab Collection Instructions: 1. Swab site using Aptima Collection Multitest Swab or Aptima Collection Unisex Swab. Note: The white swab provided within the collection kit is a cleaning swab and should not be used for collection. Discard the white cleaning swab. 2. Place collection swab in transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 3. Cap tube securely and label tube with patient's entire name and collection date and time. 4. Transport swab container and store (refrigerated is preferred) within 60 days of collection.

Specimen Minimum Volume: Endocervix in PreservCyt: 1mL Urine: 2 mL Swabs (Endocervical, Urethral, Vaginal, Oral/Throat, Anal/Rectal): Entire Collection

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		APTIMA VIAL
	Ambient		APTIMA VIAL
	Frozen		APTIMA VIAL

CPT Code Information: 87491

FCHLM
90343

Chlordane and Metabolites, Serum/Plasma

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 3 mL of serum refrigerated. Note: 1. Indicate serum on report form. 2. Label specimen appropriately (serum). Plasma Draw blood in a lavender-top (EDTA) tube(s). (Plasma gel tube is not acceptable.) Spin down and send 3 mL of EDTA plasma refrigerated. Note: 1. Indicate plasma on report form. 2. Label specimen appropriately (plasma).

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	150 days	
	Frozen	150 days	
	Ambient	14 days	

CPT Code Information: 82441

CDP
8610

Chlordiazepoxide and Metabolite, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Red top Submission Container/Tube: Amber vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into amber vial within 2 hours of collection.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	LIGHT PROTECTED
	Frozen	14 days	LIGHT PROTECTED
	Ambient	24 hours	LIGHT PROTECTED

CPT Code Information: 80346; G0480 (if appropriate);

CLU
614058

Chloride, 24 Hour, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: 24-Hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 82436

CL_F
606755

Chloride, Feces

Specimen Requirements: Patient Preparation: No barium, laxatives, or enemas may be used for 96 hours prior to start of, or during, collection. Supplies: Stool containers - 24, 48, 72 Hour Kit (T291) Container/Tube: Stool container Specimen Volume: 10 g Collection Instructions: Collect a very liquid stool specimen.

Specimen Minimum Volume: 5 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	14 days	
	Refrigerated	7 days	
	Ambient	48 hours	

CPT Code Information: 82438

RCHLU
610607

Chloride, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 82436

CL
8460

Chloride, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 82435

FCHPZ **57719**

Chlorpromazine (Thorazine)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 1 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80342

FCHCG **57644**

Chocolate/Cacao IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

FCCK **90162**

Cholecystokinin (CCK)

Specimen Requirements: Container/Tube: Special tube containing G.I. preservative (MCL Supply T125) Specimen Volume: 3 mL Collection Instructions: 1. Patient should fast for 10 to 12 hours prior to collection. 2. Collect 10 mL of blood in special tube. 3. Specimen should be separated immediately and

plasma frozen as soon as possible. Additional Information: Antacid medications and medications that affect intestinal motility should be discontinued, if possible, for at least 48 hours prior to collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
GI Plasma	Frozen	30 days	

CPT Code Information: 83519

CHLGP 608018

Cholestasis Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443

CHLBF 606915

Cholesterol, Body Fluid

Specimen Requirements: Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Pericardial fluid Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Frozen (preferred)	30 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 84311-Spectrophotometry, analyte not specified (cholesterol)

HDCH

Cholesterol, High-Density Lipoprotein (HDL), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tube must be centrifuged within 2 hours of draw time. 2. Red-top tube must be centrifuged and aliquoted within 2 hours of draw time.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 83718

CHOL 8320

Cholesterol, Total, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 82465

CHLE 8324

Cholesteryl Esters, Serum

Specimen Requirements: Patient Preparation: 1. Fasting-overnight (12-14 hours). 2. Patient must not consume any alcohol for 24 hours before the specimen is drawn. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	60 days	
	Ambient	24 hours	

CPT Code Information: 84311

FCNAB Chromatin (Nucleosomal) Antibody

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	4 days	

CPT Code Information: 86235

CRCOF 606424

Chromium and Cobalt, Synovial Fluid

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for at least 96 hours Supplies: Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Royal blue top (metal-free EDTA) Specimen Volume: 1 mL Collection Instructions: See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: Cobalt and chromium are present in the black rubber plunger seals found in most disposable syringes. As a result, synovial fluid should not be collected in these devices as contamination may occur.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Synovial Fluid	Refrigerated (preferred)	90 days	
	Ambient	90 days	
	Frozen	90 days	

CPT Code Information: 82495; 83018;

CRUO 65719

Chromium Occupational Exposure, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 5-mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	

Ambient

14 days

CPT Code Information: 82495 ; 82570;**CRU**
8593**Chromium, 24 Hour, Urine**

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: 1. 24-Hour volume is required. 2. See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 0.4 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82495**CRWB**
65601**Chromium, Blood**

Specimen Requirements: Supplies: Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Royal blue-top (EDTA) Vacutainer plastic trace element blood collection tube Specimen Volume: 1 mL Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82495**CRS**
8638**Chromium, Serum**

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free B-D Tube (No Additive), 6 mL (T184) -Metal Free Specimen Vial (T173) Collection Container/Tube: Plain, royal

blue-top Vacutainer plastic trace element blood collection tube (T184) Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, polypropylene vial (T173) Specimen Volume: 1.6 mL Collection Instructions: 1. Allow the specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into a Mayo metal-free, polypropylene vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: If ordering the trace element blood collection tube from BD, order catalog #368380.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Ambient	28 days	METAL FREE
	Frozen	28 days	METAL FREE

CPT Code Information: 82495

CRSY 606353

Chromium, Synovial Fluid

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for at least 96 hours Supplies: Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Royal blue top (metal-free EDTA) Specimen Volume: 1 mL Collection Instructions: See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: Chromium is present in the black rubber plunger seals found in most disposable syringes. As a result, synovial fluid should not be collected in these devices as contamination may occur.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Synovial Fluid	Refrigerated (preferred)	90 days	
	Ambient	90 days	
	Frozen	90 days	

CPT Code Information: 82495

CRCRU 607758

Chromium/Creatinine Ratio, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic vial or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 82495 ; 82570 ;**CH9**
65029**Chromogenic Factor IX Activity Assay, Plasma**

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Polypropylene vial Specimen Volume: 1 mL Collection Instructions: 1. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 2. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 3. Aliquot plasma into a separate plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 4. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally at < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85130**CHF8**
610419**Chromogenic Factor VIII Activity Assay, Plasma**

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma into plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85130

CH8BI
606844

Chromogenic Factor VIII Inhibitor Bethesda Profile Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390

CHF8P
610420

Chromogenic Factor VIII Inhibitor Bethesda Profile, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vials Specimen Volume: 2 mL in 2 plastic vials, each containing 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. If collecting sample through a port/line, be sure to waste the appropriate amount prior to collection. 3. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 4. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 5. Aliquot plasma (1 mL per aliquot) into 2 separate plastic vials leaving 0.25 mL in the bottom of centrifuged vial. 6. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or = -40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: CHF8-85130; CH8B-85335; CH8BI-85390 -26;

CH8B
606843

Chromogenic Factor VIII Inhibitor Bethesda Titer, Plasma

Specimen Requirements: Only orderable as part of a profile. For more information see CH8BP / Chromogenic Factor VIII Inhibitor Bethesda Profile, Plasma.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85335

CGAK
34641

Chromogranin A, Serum

Specimen Requirements: Patient Preparation: Proton pump inhibitor medications should be discontinued for at least 2 weeks before collection. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum into plastic vial. Do not submit in original tube.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Ambient	7 days	
	Refrigerated	24 hours	

CPT Code Information: 86316

CHRO 70402

Chromogranin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CMAFF 35263

Chromosomal Microarray (CMA) Familial Testing, FISH

Specimen Requirements: Specimen Type: Whole blood Container/Tube: Green top (sodium heparin) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. Additional Information: Provide the name of the child (originally tested family member) on the request form. If testing was performed outside of Mayo Clinic Laboratories, consultation with the laboratory is required prior to ordering this test.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 Æâ, Æœ DNA probe, each (first probe set), Interpretation and report; 88271x2 Æâ, Æœ DNA probe, each; each additional probe set (if

appropriate); 88271x1 \hat{A} \hat{A} DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 \hat{A} \hat{A} DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 \hat{A} \hat{A} DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88273 w/modifier 52-Chromosomal in situ hybridization, less than 10 cells (if appropriate); 88273-Chromosomal in situ hybridization, 10-30 cells (if appropriate); 88274 w/modifier 52 \hat{A} \hat{A} Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 \hat{A} \hat{A} Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 \hat{A} \hat{A} Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate); ;

CMAPC 63042

Chromosomal Microarray, Autopsy, Products of Conception, or Stillbirth, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Products of conception or stillbirth Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's solution, Ringer's solution, or normal saline Specimen Volume: 1 cm(3) of placenta (including 50-mg chorionic villi) and 1 cm(3) biopsy specimen of muscle/fascia from the thigh Collection Instructions: 1. Attempt to identify and send only fetal tissue for analysis. 2. If a fetus cannot be specifically identified, collect 50-mg villus material or tissue that appears to be of fetal origin. 3. If multiple specimen types are sent, send each specimen in a separate container. Multiple specimens received (eg, placenta and fetal thigh) will be ordered under 1 test. All specimens will be processed separately. Additional Information: 1. Do not send entire fetus. 2. While fresher specimens prepared as described above are preferred, we can attempt analysis on specimens that have been in less-than-ideal conditions. Specimen Type: Autopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's solution, Ringer's solution, or normal saline Specimen Volume: 1 cm(3) biopsy specimen of muscle/fascia from the thigh Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis. Specimen Type: Amniotic fluid Supplies: Refrigerate/Ambient Shipping Box, 5 lb (T329) Container/Tube: Amniotic fluid container Specimen Volume: 20-30 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Provide gestational age at the time of amniocentesis. 2. Discard the first 2 mL of amniotic fluid. 3. Place the tubes in a Refrigerate/Ambient Shipping Box, 5 lb. 4. Fill remaining space with packing material. Additional Information: 1. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 2. Bloody specimens are undesirable. 3. Results will be reported and also telephoned or faxed, if requested. Specimen Type: Chorionic villus Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 50 mg Collection Instructions: 1. Collect chorionic villus specimen (CVS) by transabdominal or transcervical method. 2. Transfer CVS to a Petri dish containing transport medium (Such as CVS Media [RPMI] and Small Dish). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of villi and remove any blood clots and maternal decidua. Acceptable Specimen Type: Cultured cells Container/Tube: T25 flasks with culture media Specimen Volume: 2 T25 flasks Specimen Type: Tissue Supplies: Hank Solution (T132) Container/Tube: In sterile Hank's solution

Specimen Minimum Volume: Chorionic villus: 10 mg Muscle-fascia: 1 cm(3)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81229

CMAMT
62667**Chromosomal Microarray, Autopsy/Products of Conception/Stillbirth, Tissue**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Container/Tube: Formalin-fixed, paraffin-embedded block containing fetal or placental (including chorionic villi) tissue. Additional Information: A pathology report and reason for referral must be submitted with each specimen. The laboratory will not reject testing if this information is not provided, but appropriate testing and interpretation may be compromised or delayed. Specimen Type: Slides Specimen Volume: 6 Consecutive, unstained, 5-micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Formalin-fixed, paraffin-embedded tissue block 5 Consecutive, unstained slides and 1 hematoxylin and eosin-stained slide

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81229

CMACB
35247**Chromosomal Microarray, Congenital, Blood**

Specimen Requirements: This test requires 2 blood specimens: 1 sodium heparin and 1 EDTA. Specimen Type: Whole blood Container/Tube: Green top (sodium heparin) and lavender top (EDTA) Specimen Volume: 3 mL EDTA tube and 4 mL sodium heparin tube Collection Instructions: 1. Invert several times to mix blood. 2. Send specimens in original tubes.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81229

CMAH
35899**Chromosomal Microarray, Hematologic Disorders, Varies**

Specimen Requirements: Provide a reason for referral with each specimen. The laboratory will not reject testing if this information is not provided, but appropriate testing and interpretation may be compromised or delayed. Submit only 1 of the following specimens: Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1-2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. If sodium heparin is not available, EDTA is acceptable. Specimen Type: Whole blood Container/Tube: Green top (sodium heparin) Specimen Volume: 7-10 mL Collection Instructions: 1. Invert several times to mix blood. 2. If sodium heparin is not available, EDTA is acceptable.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81277

CMAP 35898

Chromosomal Microarray, Prenatal, Amniotic Fluid/Chorionic Villus Sampling

Specimen Requirements: Submit only 1 of the following specimens: Supplies: CVS Media (RPMI) and Small Dish (T095) Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15-mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer chorionic villi to a Petri dish containing transport medium (Such as CVS Media [RPMI] and Small Dish). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Supplies: Refrigerate/Ambient Shipping Box, 5 lb (T329) Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20-30 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Provide gestational age at the time of amniocentesis. 2. Discard the first 2 mL of amniotic fluid. 3. Place the tubes in a Refrigerate/Ambient Shipping Box, 5 lb. 4. Fill remaining space with packing material. Additional Information: 1. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 2. Bloody specimens are undesirable. 3. Results will be reported and also telephoned or faxed, if requested.

Specimen Minimum Volume: Amniotic Fluid: 12 mL Chorionic Villi: 12 mg; If ordering in conjunction with other testing: If ordered with PADF: 14 mL or 14 mg; with CHRAF: 24 mL; with CHRCV: 24 mg; with PADF and CHRAF/CHRCV: 26 mL or 26 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 81229

CMAPT 35901

Chromosomal Microarray, Tumor, Formalin-Fixed Paraffin-Embedded

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Specimen Type: Slides Specimen Volume: 10 Consecutive, unstained, 5-micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81277

CMAT 35900

Chromosomal Microarray, Tumor, Fresh or Frozen using Affymetrix Cytoscan HD

Specimen Requirements: Submit only 1 of the following specimens: Supplies: Hank's Solution (T132) Specimen Type: Tumor biopsy Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 0.5-3 cm(3) or larger Specimen Type: Lymph node Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline. Specimen Volume: 1 cm(3) Specimen Type: Skin biopsy Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline. Specimen Volume: 4-mm diameter Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. A local anesthetic may be used. 5. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis.

Specimen Minimum Volume: Tumor Biopsy: 3 cm(3) Lymph Node: 1 cm(3) Skin Biopsy: 4 mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81277

CHRAF 35243

Chromosome Analysis, Amniotic Fluid

Specimen Requirements: Supplies: Refrigerate/Ambient Shipping Box, 5 lb (T329) Specimen Type: Amniotic fluid Submission Container/Tube: Centrifuge tube Specimen Volume: 20-25 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. 2. Discard the first 2 mL of amniotic fluid. 3. Place the tubes in a Refrigerate/Ambient Shipping Box, 5 lb (T329). 4. Fill remaining space with packing material. Additional Information: 1. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 2. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 3. Bloody specimens are undesirable. Supplies: Refrigerate/Ambient Shipping Box, 5 lb (T329) Specimen Type: Fetal body fluid Container/Tube: Sterile tube Specimen Volume: Entire specimen Collection Instructions: 1. Place the tubes in a Refrigerate/Ambient Shipping Box, 5 lb (T329). 2. Fill remaining space with packing material. Additional Information: 1. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 2. Clearly indicate on tube and paperwork that specimen is fetal body fluid.

Specimen Minimum Volume: Amniotic Fluid: 12 mL; Fetal Body Fluid: NA; If ordering in conjunction with other testing: If ordered with PADF: 14 mL, with CMAP: 24 mL, with PADF and CMAP: 26 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Amniotic Fld	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88235, 88291-Tissue culture for amniotic fluid or chorionic villus cells, Interpretation and report; 88269 w/modifier 52-Chromosome analysis, in situ for amniotic fluid cells, <6 colonies, 1 karyotype with banding (if appropriate); 88269-Chromosome analysis, in situ for amniotic fluid cells, 6 or greater colonies, 1 karyotype with banding (if appropriate); 88267, 88285-Chromosome analysis, amniotic fluid or chorionic villus, greater than 15 cells, 1 karyotype with banding (if appropriate); 88267 w/modifier 52-Chromosome analysis, amniotic fluid or chorionic villus, <15 cells, 1 karyotype with banding (if appropriate);

CHRCV Chromosome Analysis, Chorionic Villus Sampling

35251

Specimen Requirements: Supplies: CVS Media (RPMI) and Small Dish (T095) Source: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect chorionic villus specimen (CVS) by the transabdominal or transcervical method. 2. Transfer the CVS to a Petri dish containing transport medium (Such as CVS media (RPMI) and Small Dish [T095]). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua.

Specimen Minimum Volume: 12 mg If ordering in conjunction with other testing: PADF: 14 mg CMAP: 24 mg PADF and CMAP: 26 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88235, 88291-Tissue culture for amniotic fluid or chorionic villus cells, Interpretation and report; 88267 w/modifier 52-Chromosome analysis, amniotic fluid or chorionic villus, <15 cells, 1 karyotype with banding (if appropriate); 88267-Chromosome analysis, amniotic fluid or chorionic villus, 15 cells, 1 karyotype with banding (if appropriate); 88267, 88285-Chromosome analysis, amniotic fluid or chorionic villus, <15 cells, 1 karyotype with banding (if appropriate);

FCLPD Chromosome Analysis, CLL/LPD

75614

Specimen Requirements: Submit only one of the following specimens: Whole Blood Specimen Type: Whole Blood Container/Tube: Green-top (sodium heparin) Specimen Volume: 10 mL Collection Instructions: Draw blood in sodium heparin (green-top) tube with lymphocytosis in a sodium heparin (green-top) tube. Send ambient Min Volume: 5 mL Bone Marrow Specimen Type: Bone Marrow Container/Tube: Green-top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: Collect bone marrow in sodium heparin (green-top) tube with lymphocytosis in a sodium heparin (green-top) tube. Send ambient. Min Volume: 1 mL

Specimen Minimum Volume: Whole Blood 5 mL Bone Marrow 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88237; 88264

CHRCB

35248

Chromosome Analysis, Congenital Disorders, Blood

Specimen Requirements: Provide a reason for referral with each specimen. The laboratory will not reject testing if this information is not provided, but appropriate testing and interpretation may be compromised or delayed. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. 3. Label specimen as whole blood. Specimen Type: Cord whole blood Container/Tube: Green top (sodium heparin) Specimen Volume: As much as possible Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. 3. Label specimen as cord blood.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88230, 88291- Tissue culture for Lymphocytes, Interpretation and report; 88262 w/modifier 52-Chromosome analysis less than 15 cells (if appropriate); 88262-Chromosome analysis with 15 to 20 cells (if appropriate); 88262, 88285-Chromosome analysis with greater than 20 cells (if appropriate); 88280-Chromosome analysis, greater than 2 karyotypes (if appropriate); 88283-Additional specialized banding technique (if appropriate);

CHRHB

35308

Chromosome Analysis, Hematologic Disorders, Blood

Specimen Requirements: Provide a reason for referral with each specimen. The laboratory will not reject testing if this information is not provided, but appropriate testing and interpretation may be compromised or delayed. Container/Tube: Green top (sodium heparin) Specimen Volume: 5-10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. Additional Information: Advise Express Mail or equivalent if not on courier service.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88237, 88291- Tissue culture for neoplastic disorders; bone marrow, blood, Interpretation and report; 88264 w/ modifier 52-Chromosome analysis with less than 20 cells (if appropriate); 88264-Chromosome analysis with 20 to 25 cells (if appropriate); 88264, 88285-Chromosome analysis with greater than 25 cells (if appropriate); 88283-Additional specialized banding technique (if appropriate); ; ;

CHRBM

35245

Chromosome Analysis, Hematologic Disorders, Bone Marrow

Specimen Requirements: Container/Tube: Green-top (sodium heparin) Specimen Volume: 2 to 3 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88237, 88291-Tissue culture for neoplastic disorders; bone marrow, blood, Interpretation and report; 88264 w/ modifier 52-Chromosome analysis with less than 20 cells (if appropriate); 88264-Chromosome analysis with 20 to 25 cells (if appropriate); 88264, 88285-Chromosome analysis with greater than 25 cells (if appropriate); 88283-Additional specialized banding technique (if appropriate);

COGBL 113532

Chromosome Analysis, Hematologic Disorders, Children's Oncology Group Enrollment Testing, Blood

Specimen Requirements: Container/Tube: Green top (sodium heparin) Specimen Volume: 6 mL Collection Instructions: Invert several times to mix blood.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88237, 88291-Tissue culture for neoplastic disorders; bone marrow, blood, Interpretation and report; 88264 w/ modifier 52-Chromosome analysis with less than 20 cells (if appropriate); 88264-Chromosome analysis with 20 to 25 cells (if appropriate); 88264, 88285-Chromosome analysis with greater than 25 cells (if appropriate); 88283-Additional specialized banding technique (if appropriate);

COGBM 113531

Chromosome Analysis, Hematologic Disorders, Children's Oncology Group Enrollment Testing, Bone Marrow

Specimen Requirements: Container/Tube: Green top (sodium heparin) Specimen Volume: 4 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88237, 88291-Tissue culture for neoplastic disorders; bone marrow, blood, Interpretation and report; 88264 w/ modifier 52-Chromosome analysis with less than 20 cells (if appropriate); 88264-Chromosome analysis with 20 to 25 cells (if appropriate); 88264, 88285-Chromosome analysis with greater than 25 cells (if appropriate); 88283-Additional specialized banding technique (if appropriate);

CHFXH 64922

Chromosome Analysis, Hematologic Disorders, Fixed Cells

Specimen Requirements: Provide a reason for referral and specimen type with each specimen. The laboratory will not reject testing if this information is not provided, but appropriate testing and interpretation may be compromised or delayed. Specimen Volume: 2 mL Additional Information: Advise Express Mail or equivalent if not on courier service.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88291; 88264 w/modifier 52 (if appropriate); 88264 (if appropriate); 88264, 88285 (if appropriate); 88283 (if appropriate);

FCAHM 75612

Chromosome Analysis, Hematologic Malignancy

Specimen Requirements: Submit only one of the following specimens: Whole Blood Specimen Type: Whole Blood Container/Tube: Green-top (sodium heparin) Specimen Volume: 10 mL Collection Instructions: Draw blood in sodium heparin (green-top) tube, send ambient. Bone Marrow Specimen Type: Bone Marrow Container/Tube: Green-top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: Collect bone marrow in sodium heparin (green-top) tube, send ambient. Min Volume: 1 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88237; 88264; ;

CHRTI 35250

Chromosome Analysis, Skin Biopsy

Specimen Requirements: Provide a reason for referral with each specimen. The laboratory will not reject testing if this information is not provided, but appropriate testing and interpretation may be compromised or delayed. Container/Tube: Sterile container with sterile RPMI transport media, Ringer's solution, or normal saline-RPMI transport media (T095-Petri dish is not needed for this test). Specimen Volume: 4 mm diameter Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. A local

anesthetic may be used. 5. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis. Additional Information: Advise Express Mail or equivalent if not on courier service.

Specimen Minimum Volume: 4-mm punch biopsy

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88233, 88291- Tissue culture for skin/biopsy, Interpretation and report; 88262 w/modifier 52-Chromosome analysis less than 15 cells(if appropriate); 88262-Chromosome analysis with 15 to 120 cells (if appropriate); 88262, 88285-Chromosome analysis with greater than 20 cells (if appropriate); 88280-Chromosome analysis, greater than 2 karyotypes (if appropriate); 88283-Additional specialized banding technique (if appropriate);

CRHEP 113119

Chronic Hepatitis (Unknown Type), Serum

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions. 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 2.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	5 days	

CPT Code Information: 86704; 86706; 86803 ; 87340; 87341 (if appropriate); 87522 (if appropriate);

CHSBP 9023

Chronic Hepatitis Profile (Type B), Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 3.5 mL Collection Instructions: 1. Centrifuge per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Transfer serum into aliquot tube.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 86707; 87340; 87350; 87341 (if appropriate);

CLLMV 65175

Chronic Lymphocytic Leukemia (CLL) Monitoring Minimal Residual Disease (MRD) Detection, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Sodium heparin, EDTA Specimen Volume: 10 mL Slides: Include 5- to 10-unstained blood smears, if possible. Collection Instructions: Do not transfer blood to other containers. Specimen Type: Bone Marrow Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Sodium heparin, EDTA Specimen Volume: 1-5 mL Slides: Include 5- to 10-unstained bone marrow aspirate smears, if possible. Collection Instructions: 1. Submission of bilateral specimens is not required. 2. Label specimen appropriately (bone marrow)

Specimen Minimum Volume: Blood: 4 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	72 hours	
	Refrigerated	72 hours	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 7-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each); 88187-Flow Cytometry Interpretation, 2 to 8 markers;

CHUB 82822

Chub Mackerel, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CSU 81980

Chyluria Screen, Random, Urine

Specimen Requirements: Patient Preparation: Patient should collect specimen prior to eating foods rich in vitamin C or taking vitamin C supplements. Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 15 mL Collection Instructions: Collect a first-morning, random urine collection.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	10 days	
	Refrigerated	10 days	
	Ambient	4 hours	

CPT Code Information: 82664-Electrophoretic technique, not elsewhere specified; 84311-SP, analyte not elsewhere specified; 84478-Triglycerides;

FCHYS

57806

Chymotrypsin, Stool

Specimen Requirements: Collect 1 gm random stool in sterile leak proof container, ship refrigerate. Note: Dietary restrictions: Patients receiving pancreatic enzymes should discontinue taking the enzymes at least 5 days before the collection of the stool sample.

Specimen Minimum Volume: 0.5 gram

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Refrigerated (preferred)	14 days	
	Frozen	30 days	

CPT Code Information: 84311

FCING

57676

Cinnamon IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

CINN

82624

Cinnamon, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FCIC 91497

Circulating Immune Complexes (CIC)

Specimen Requirements: Draw blood in a plain, red-top tube(s) or a serum gel tube(s). Spin down and send 3 mL of serum refrigerated.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	365 days	
	Ambient	14 days	

CPT Code Information: 86332

CITAL 83730

Citalopram, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood before next scheduled dose. 2. Centrifuge and remove serum from cells within 2 hours of collection.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80299

CITR2 606637

Citrate Concentration, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see CITRA / Citrate Excretion, Random, Urine. Patient Preparation: Any drug that causes alkalemia or acidemia may be expected to alter citrate excretion and should be avoided, if possible. The patient must avoidÂ laxative use for 24 hours prior to collection. Supplies: Aliquot Tube, 5-mL (T465) Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 82507**CITR**
606710**Citrate Excretion, 24 Hour, Urine**

Specimen Requirements: Patient Preparation: Any drug that causes alkalemia or acidemia may be expected to alter citrate excretion and should be avoided, if possible. The patient must avoid laxative use for 24 hour collection period. Supplies: -Diazolidinyl Urea (Germall) 5.0 mL (T822) -Aliquot Tube, 5 mL (T465) Container/Tube: Plastic tube Specimen Volume: 4 mL Collection Instructions: 1. Add 5 mL of diazolidinyl urea (Germall) as preservative at start of collection or refrigerate specimen during and after collection. 2. Collect urine for 24 hours. 3. Mix well before taking 4-mL aliquot. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 82507**CITRA**
606715**Citrate Excretion, Random, Urine**

Specimen Requirements: Patient Preparation: Any drug that causes alkalemia or acidemia may be expected to alter citrate excretion and should be avoided, if possible. The patient must avoid laxative use for 24 hours prior to collection. Supplies: Aliquot Tube, 5-mL (T465) Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 82507; 82570;**RAT10**
606642**Citrate/Creatinine Ratio, Urine**

Specimen Requirements: Only orderable as part of a profile. For more information see CITRA / Citrate Excretion, Random, Urine.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 82507

CLAD 82912

Cladosporium, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CLAM 82884

Clam, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CLAUD 70403

Claudin-1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CLDN4

607334

Claudin-4 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FCLCN

75262

CLCN1 DNA Sequencing Test

Specimen Requirements: Draw blood in a lavender-top (EDTA) tube(s) and send 8 mL of whole blood. Ship Ambient. Note: Collection date and informed consent are required.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81406

CLIR

605136

CLIR Supplemental Report

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CLOBZ 65483

Clobazam and Metabolite, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum to plastic vial within 2 hours of collection. 3. Trough specimens are recommended as therapeutic ranges are based on specimens drawn at trough (ie, immediately before the next dose).

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80339 (G0480 if appropriate)

CLOM 80902

Clomipramine, Serum

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose (minimum 12 hours after last dose). 2. Centrifuge and aliquot serum into plastic vial. Serum must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.25

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 80335 ; G0480 (if appropriate);

CZPS 65044

Clonazepam and 7-Aminoclonazepam, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose (minimum 12 hours after last dose). 2. Within 2 hours of collection, the specimen must be centrifuged and the serum aliquoted into a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	

Frozen	28 days
Ambient	72 hours

CPT Code Information: 80346; G0480 (if appropriate);

FCLON 91107

Clonidine (Catapres)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80299

CDIF 64354

Clostridioides difficile Culture, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Preserved feces Supplies: C and S Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of feces; 5 mL Collection Instructions: 1. Collect fresh fecal specimen and submit in container with transport medium. 2. Place feces in preservative within 2 hours of collection. Additional Information: Only diarrheal (ie, unformed) feces should be tested. Testing formed feces for Clostridioides difficile is generally not clinically indicated. Specimen Stability Information: Ambient (preferred) 96 hours/Refrigerated 96 hours/Frozen 7 days Acceptable: Specimen Type: Unpreserved feces Supplies: Stool container, Small (Random), 4 oz (T288) Stool Collection Kit, Random (T635) Container/Tube: Stool container Specimen Volume: Representative portion of feces Collection Instructions: Collect fresh feces and submit representative sample in stool container. Additional Information: Only diarrheal (ie, unformed) feces should be tested. Testing formed feces for C difficile is generally not clinically indicated. Specimen Stability Information: Ambient (preferred) 72 hours/Frozen 7 days Specimen Type: Fresh tissue or biopsy Sources: Colon Supplies: Anaerobe Transport Tube (T588) Specimen Volume: Entire collection, 1-2 cm(3) Collection Instructions: Aseptically collect a 1 to 2 cm(3) piece of tissue whenever possible. In general, a larger piece of tissue is preferred. Submit in an anaerobic transport tube. Specimen Stability Information: Ambient 72 hours

Specimen Minimum Volume: Stool: 1 g or 5 mL Tissue: 5 mm(3)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87081-C. difficile Culture; 87076-Anaerobe Ident (if appropriate); 87076-Id MALDI-TOF Mass Spec Anaerobe (if appropriate); 87153-Anaerobe Ident by Sequencing (if appropriate);

CDFRP 35149

Clostridioides difficile Toxin, Molecular Detection, PCR, Feces

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by Clostridioides difficile toxin DNA is unlikely. Submit only 1 of the following specimens: Preferred: Specimen Type: Preserved feces Supplies: C and S Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of nonnutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of feces; 5 mL Collection Instructions: 1. Collect fresh fecal specimen and submit in container with transport medium. 2. Place feces in preservative within 2 hours of collection. Specimen Stability Information: Ambient (preferred) <7 days/Refrigerated <7 days Acceptable: Specimen Type: Unpreserved feces Supplies: Stool container, Small (Random), 4 oz Random (T288) Stool Collection Kit, Random (T635) Container/Tube: Fecal container Specimen Volume: Representative portion of feces Collection Instructions: Collect fresh fecal specimen and submit representative sample in fecal container. Specimen Stability Information: Refrigerated (preferred) <7 days/Frozen <7 days

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Varies	7 days	

CPT Code Information: 87493

CLOV 82490

Clove, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CLZ 42366

Clozapine, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 1 mL Additional Information: Therapeutic range (trough level) applies to specimens drawn immediately prior to next dose.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 80159**CLUS**
70404**Clusterin Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**CMET**
70405**cMET Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**FCMVQ**
91734**CMV by PCR****Specimen Requirements:** 1 mL amniotic fluid shipped frozen.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Amniotic Fld	Frozen	180 days	

CPT Code Information: 87497

FDMZ
57859

CNBP DNA Test (DM2)

Specimen Requirements: Specimen Type: Whole Blood Container/Tube: Lavender top (EDTA)
Specimen Volume: 8 mL Collection Instructions: Send 8 mL whole blood (lavender-top) EDTA tubes
Note: Collection date is required.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	10 days	
	Refrigerated	10 days	

CPT Code Information: 81187; ;

CDS1
65565

CNS Demyelinating Disease Evaluation, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, we recommend blood drawing the specimen before initiation of immunosuppressant medication. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 3 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255 X2; 86256 X2 (if appropriate);

F_2
9121

Coagulation Factor II Activity Assay, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Patient Preparation: Patient must not be receiving Coumadin or heparin therapy. Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma into a plastic vial, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or = -40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85210**F_9**
9065**Coagulation Factor IX Activity Assay, Plasma**

Specimen Requirements: Specimen Type: Platelet-poor plasma Patient Preparation: Patient must not be receiving Coumadin or heparin therapy. Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma into a plastic vial, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85250**FACTV**
9054**Coagulation Factor V Activity Assay, Plasma**

Specimen Requirements: Patient Preparation: Patient must not be receiving Coumadin (warfarin) or heparin therapy Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma into a plastic vial, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85220

F₇
9055

Coagulation Factor VII Activity Assay, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Patient Preparation: Patient must not be receiving Coumadin or heparin therapy. Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma into a plastic vial, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85230

F8A
9070

Coagulation Factor VIII Activity Assay, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Patient Preparation: Patient must not be receiving Coumadin (warfarin) or heparin therapy. Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma into a plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85240

F8IS
7289

Coagulation Factor VIII Inhibitor Screen, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: 8INHE / Factor VIII Inhibitor Evaluation, Plasma ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma AVWPR / von Willebrand Disease Profile, Plasma See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions: Guidelines for Specimen Handling and Processing.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85335

F₁₀ 9066

Coagulation Factor X Activity Assay, Plasma

Specimen Requirements: See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Within 4 hours of collection, centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. Aliquot plasma into separate plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 2. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C, or, ideally at < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85260

FXCH 89042

Coagulation Factor X Chromogenic Activity Assay, Plasma

Specimen Requirements: See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. Patient Preparation: Fasting preferred Collection Container/Tube: Light-blue top (citrate) Submission Container/Tube: Polypropylene vial Specimen Volume: 1 mL Collection Instructions: 1. Spin down, remove plasma, and spin plasma again. 2. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial. 3. If priority specimen, mark request form, give reason, and request a call-back.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85260

F₁₁ 9067

Coagulation Factor XI Activity Assay, Plasma

Specimen Requirements: Patient Preparation: Patient must not be receiving Coumadin or heparin therapy. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection

Instructions: 1. Specimen must be collected prior to factor replacement therapy 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma into a plastic vial, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85270

F_12
9069

Coagulation Factor XII Activity Assay, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Patient Preparation: Patient must not be receiving Coumadin or heparin therapy. Collection Container/Tube: Light-blue top (citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma into a plastic vial, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85280

CMMPP
606103

Cobalamin, Methionine, and Methylmalonic Acid Pathways, Plasma

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin) Specimen Volume: 1 mL Collection Instructions: 1. Immediately place specimen on ice. 2. Centrifuge and aliquot plasma into plastic vial within 4 hours of collection. 3. If blood cannot be placed on wet ice immediately, centrifuge and aliquot plasma into plastic vial within 1 hour of collection. 4. A refrigerated centrifuge is not required if the above time restrictions are met.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Refrigerated (preferred)	28 days	

Frozen	309 days
Ambient	28 days

CPT Code Information: 83090; 83918; 82136;

CMMPS 606111

Cobalamin, Methionine, and Methylmalonic Acid Pathways, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	309 days	
	Ambient	28 days	

CPT Code Information: 83090; 83918; 82136;

COUO 607762

Cobalt Occupational Exposure, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic vial or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. At the end of the work week, collect a random urine specimen at the end of the employee's work shift. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 83018 ; 82570 ;

COU 80083

Cobalt, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Trace Metals Analysis Specimen Collection and

Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83018

COWB 60355

Cobalt, Blood

Specimen Requirements: Supplies: Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Royal blue top (EDTA) Vacutainer plastic trace element blood collection tube Specimen Volume: 1 mL Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83018

COS 80084

Cobalt, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free B-D Tube (No Additive), 6 mL (T184) -Metal Free Specimen Vial (T173) Collection Container/Tube: Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, polypropylene vial Specimen Volume: 1.6 mL Collection Instructions: 1. Allow the specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into a Mayo metal-free, polypropylene vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: If ordering the trace element blood collection tube from BD, order catalog #368380.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Ambient	28 days	METAL FREE
	Frozen	28 days	METAL FREE

CPT Code Information: 83018

COSY 606352

Cobalt, Synovial Fluid

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for at least 96 hours Supplies: Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Royal blue top (metal-free EDTA) Specimen Volume: 1 mL Collection Instructions: See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: Cobalt is present in the black rubber plunger seals found in most disposable syringes. As a result, synovial fluid should not be collected in these devices as contamination may occur.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Synovial Fluid	Refrigerated (preferred)	90 days	
	Ambient	90 days	
	Frozen	90 days	

CPT Code Information: 83018

COBRU 607760

Cobalt/Creatinine Ratio, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 83018 ; 82570;

FCOKE
75174**Cocaine Analysis - Whole Blood**

Specimen Requirements: Draw blood in a purple-top (EDTA), green-top (sodium-heparin) or grey-top (NaF/oxalate) tube(s). Send 7 mL of whole blood refrigerated in a plastic vial.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80307; 80353 if applicable;

COKMX
62720**Cocaine and Metabolite Confirmation, Chain of Custody, Meconium**

Specimen Requirements: Supplies: Chain of Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required. Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen. Additional Information: 1. Specimen that arrives with a broken seal does not meet the chain of custody requirements. 2. The laboratory recommends sending chain-of-custody specimens by overnight shipment.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	21 days	
	Refrigerated	21 days	
	Ambient	72 hours	

CPT Code Information: 80353; G0480 (if appropriate);

COKEX
62719**Cocaine and Metabolite Confirmation, Chain of Custody, Random, Urine**

Specimen Requirements: Container/Tube: Chain-of-Custody Kit (T282) containing the specimen containers, seals, and documentation required Specimen Volume: 20 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting <20 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	

Frozen	14 days
Ambient	72 hours

CPT Code Information: 80353; G0480 (if appropriate);

COKEU Cocaine and Metabolite Confirmation, Random, Urine

9286

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Plastic urine container Submission Container/Tube: 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STATS are not accepted for this test.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80353; G0480 (if appropriate);

COKEM Cocaine and Metabolites Confirmation, Meconium

84140

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288) Container/Tube: Stool container Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	21 days	
	Refrigerated	21 days	
	Ambient	72 hours	

CPT Code Information: 80353; G0480 (if appropriate);

RSCOC Coccidioides Antibody Reflex, Complement Fixation and Immunodiffusion, Serum

35928

Specimen Requirements: Only orderable as a reflex. For more information see COXIS / Coccidioides Antibody Screen with Reflex, Serum.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86635 x 3

COXIS 62079

Coccidioides Antibody Screen with Reflex, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 2 mL

Specimen Minimum Volume: 1.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86635

SCOC 8295

Coccidioides Antibody, Complement Fixation and Immunodiffusion, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1.8 mL

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86635 x 3

CCOC 81542

Coccidioides Antibody, Complement Fixation and Immunodiffusion, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 2 mL

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CIMT
62204**Coccidioides immitis/posadasii, Molecular Detection, PCR, Paraffin, Tissue**

Specimen Requirements: Preferred Paraffin-embedded tissue block: Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Body tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block to be cut and returned. Acceptable Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Body tissue Container/Tube: Sterile container for each individual cut section (scroll). Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission.

Specimen Minimum Volume: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue, Paraffin	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87798

CIMRP
88804**Coccidioides immitis/posadasii, Molecular Detection, PCR, Varies**

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by Coccidioides species DNA is unlikely. Preferred Specimens: Body fluid, cerebrospinal fluid (CSF), ocular fluid, respiratory (eg, bronchoalveolar lavage [BAL], bronchial washing, sputum), fresh tissue, or bone Acceptable Specimens: If no fresh specimen is available, digested respiratory specimens treated with N-acetyl-L-cysteine (NALC)/NaOH are acceptable (eg, bronchoalveolar lavage fluid, bronchial washing, respiratory fluid, sputum, or tracheal secretion) Submit only 1 of the following specimens: Specimen Type: Body fluid Sources: Body, ocular, or CSF Container/Tube: Sterile container Specimen Volume: 1 mL Additional Information: Only fresh, non-NALC/NaOH-digested body fluid is acceptable. Specimen Type: Respiratory Sources: BAL, bronchial washing, or sputum Container/Tube: Sterile container Specimen Volume: 1 mL if only PCR ordered or 3 mL if PCR ordered with smear and culture Specimen Type: Tissue Sources: Fresh tissue or bone Container/Tube: Sterile container Specimen Volume: 5-10 mm Collection Instructions: Keep moist with sterile water or sterile saline Additional Information: Only fresh, non-NALC/NaOH-digested tissue is acceptable. Acceptable Specimen Type: NALC/NaOH-digested respiratory specimens Sources: Lavage fluid, bronchial washing, respiratory fluid, sputum, or tracheal secretion Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: 1. Submit digested specimen treated with NALC/NaOH. 2. Clearly indicate on container and order form that specimen is a digested specimen.

Specimen Minimum Volume: Body fluid: 0.5 mL; Respiratory specimen nondigested: 0.5 mL; Fresh tissue or bone: 5 mm; NALC-NaOH-digested specimen: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87798

FCKTF 57966

Cockatiel Feathers IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

CBUR 82802

Cocklebur, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FCAIG 75561

Cockroach American (Periplaneta americana) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	

Frozen	365 days
Ambient	28 days

CPT Code Information: 86003

COCR 82693

Cockroach, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FCOCH 57668

Coconut IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

CCNT 82739

Coconut, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

90 days

CPT Code Information: 86003**COD**
82889**Codfish, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**Q10**
87853**Coenzyme Q10, Reduced and Total, Plasma**

Specimen Requirements: Patient Preparation: Fasting (8 hours) Collection Container/Tube: Green top (lithium or sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Immediately after collection, place specimen on wet ice. Maintain on wet ice and process within 3 hours of collection. 2. Centrifuge, separate plasma from cells, and immediately freeze specimen.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Heparin	Frozen (preferred)	14 days	
	Refrigerated	8 hours	

CPT Code Information: 82542**TQ10**
63148**Coenzyme Q10, Total, Plasma**

Specimen Requirements: Patient Preparation: Fasting (8 hours) Collection Container/Tube: Green top (lithium or sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Immediately after collection, place specimen on wet ice. Maintain on wet ice and process within 3 hours of collection. 2. Centrifuge, separate plasma from cells, and immediately freeze specimen.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Plasma Heparin	Frozen (preferred)	14 days
	Refrigerated	10 days

CPT Code Information: 82542

FCOFE 57525

Coffee (Coffea spp) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

ML20C 605263

COG Metaphases, 1-19 (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88264

M25C 605264

COG Metaphases, 20-25 (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88264

MG25C 605265

COG Metaphases, >25 (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88264; 88285;

CATR 113385

Cold Agglutinin Titer, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Aliquot tube Specimen Volume: 4 mL Pediatric Volume: 1 mL Collections Instructions: 1. Use a warm pack to keep specimen at 37°C prior to and after collecting. 2. Allow specimens to clot at 37°C. 3. Centrifuge at 37°C and separate serum from red cells immediately after blood clots, or within one hour of collection. 4. Do not refrigerate prior to separation of serum from red cells.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)		
	Ambient		
	Frozen		

CPT Code Information: 86157

COLIV 70408

Collagen IV Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FFTYC 91496

Collagen Type II Antibodies

Specimen Requirements: Container/Tube: Plain Red tube, SST tube is also acceptable. Specimen Volume: 3 mL Collection Instructions: Draw blood in a plain, red-top tube(s) or a serum-gel tube(s). Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 83520

CRMWS 83107

Collapsin Response-Mediator Protein-5-IgG, Western Blot, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.5 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 84182

CRMWC 21747 Collapsin Response-Mediator Protein-5-IgG, Western Blot, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 3 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 84182

MITOT 65212 Combined Mitochondrial Analysis, Mitochondrial Full Genome and Nuclear Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Tissue biopsy Supplies: Muscle Biopsy Kit (T541) Collection Instructions: Prepare and transport specimen per instructions in Muscle Biopsy Specimen Preparation Sheet in Special Instructions. Specimen Volume: 10-80 mg Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 1 mL Tissue Biopsy: 20 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81460-Whole Mitochondrial Genome; 81440-Nuclear Encoded Mitochondrial Genes; 81465-Whole Mitochondrial Genome Large Deletion Analysis; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

CMIL 82833

Common Millet, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

REED 82902

Common Reed, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CVID 87993

Common Variable Immunodeficiency Confirmation Flow Panel, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: < or =14 years: 4 mL >14 years: 10 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: < or =14 years: 3 mL >14 years: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 88184; 88185 x 2;

CO4D 70407

Complement 4d (C4d, Comp 4d) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

C1Q 8851

Complement C1q, Serum

Specimen Requirements: Patient Preparation: Fasting Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	21 days	

CPT Code Information: 86160

C3 8174

Complement C3, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86160

C4 8171

Complement C4, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86160

COM 8167

Complement, Total, Serum

Specimen Requirements: Patient Preparation: Fasting preferred. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge and aliquot serum into plastic vial. 3. Immediately freeze specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	28 days	

CPT Code Information: 86162

AHUSP 64663

Complement-Mediated Atypical Hemolytic-Uremic Syndrome (aHUS)/Thrombotic Microangiopathy (TMA) Gene Panel, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Blood spot Supplies: Card-Blood Spot Collection Filter Paper (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Whatman FTA Classic paper, Ahlstrom 226 filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient <1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Peripheral blood mononuclear cells (PBMCs) Container/Tube: Cell pellet Collection Instructions: Send as a suspension in freezing medium or cell pellet frozen on dry

ice. Specimen Stability Information: Frozen Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Additional Information: Indicate the tests to be performed on the fibroblast culture cells. A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes of culture media can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Additional Information: A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479

CBC 9109

Complete Blood Count (CBC) with Differential, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	48 hours	
	Ambient	24 hours	

CPT Code Information: 85025; 85007 (if appropriate); 85060 (if appropriate);

CCMGP 63164

Comprehensive Cardiomyopathy Multi-Gene Panel, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Additional Information: Prior Authorization is available for this assay; see Special Instructions. Submit the required form with the specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81439

G109
65824

Comprehensive CDG Panel (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 81443

FCDUC
75472

Comprehensive Drug Screen, Umbilical Cord Tissue

Specimen Requirements: Specimen Type: Umbilical Cord Tissue Container/Tube: Plastic, preservative-free container Specimen Volume: 10 grams Collection Instructions: Collect at least 6 inches of umbilical cord (approximately the length of an adult hand). Drain and discard any blood. Rinse the exterior of the cord segment with normal saline or sterile water. Pat the cord dry and place in container for transport. Ship refrigerated in a preservative-free, plastic container. Unacceptable Specimens: Cords soaking in blood or other fluid. Formalin fixed. Tissue that is obviously decomposed. Samples received without cold pack.

Specimen Minimum Volume: 10 grams

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Refrigerated (preferred)	7 days	
	Frozen	14 days	

CPT Code Information: 80307

CMAMA
113631

Comprehensive Metabolic Panel, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated	24 hours	

CPT Code Information: KS-84132; NAS-84295; CL-82435; HCO3-82374; AGAP-NA; BUN-84520; CRTS1-82565; CA-82310; GLURA-82947; TP-84155; ALB-82040; AST-84450; ALP-84075; ALT-84460; BILIT-82247;

TBT
80667

Concentration, Mycobacteria (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87015

FFCAH 75305

Congenital Adrenal Hyperplasia (CAH) Pediatric Profile 6, Comprehensive Screen

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Specimen Volume: 3.5 mL Collection Instructions: Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and separate within 1 hour of collection and send 3.5 mL of serum frozen in plastic vial.

Specimen Minimum Volume: 2 mL NOTE: Minimum volume does not allow for repeat analysis.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	90 days	

CPT Code Information: 82633/DOC; 82634/ 11-Desoxycortisol; 82157/Androstenedione; 82533/Cortisol; 82626/DHEA; 84143/17-OH-Pregnenolone; 84144/Progesterone; 83498/17-OH-Progesterone; 84403/Testosterone;

CAH21 87815

Congenital Adrenal Hyperplasia (CAH) Profile for 21-Hydroxylase Deficiency, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 0.6 mL Collection Instructions: 1. Morning (8 a.m.) and afternoon (4 p.m.) specimens are preferred. 2. Include time of draw. Additional Information: If multiple specimens are drawn, send separate order for each specimen.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 82157-Androstenedione; 82533-Cortisol; total; 83498-Hydroxyprogesterone, 17-d;

CAH2T 42202

Congenital Adrenal Hyperplasia Newborn Screen, Blood Spot

Specimen Requirements: Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Local newborn screening card, Whatman 903 filter paper, PerkinElmer 226 (formerly Ahlstrom 226) filter paper, Munktell filter paper Specimen Volume: 2 Blood spots Collection Instructions: 1. Do not use device or capillary tube containing EDTA to collect specimen. 2. An alternative blood collection option for a patient older than

1 year of age is fingerstick. See Dried Blood Spot Collection Tutorial for how to collect blood spots via fingerstick: <https://vimeo.com/508490782>. 3. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. 7. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood spot: 1

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	90 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Refrigerated	90 days	FILTER PAPER

CPT Code Information: 82542

CDGGP 608010

Congenital Disorders of Glycosylation Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443

CDGN 65485

Congenital Disorders of N-Glycosylation, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.15 mL

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	91 days	
	Ambient	91 days	
	Frozen	91 days	

CPT Code Information: 83789

NGCDA
64924

Congenital Dyserythropoietic Anemia Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood (preferred) Container/Tube: Preferred: Lavender top (EDTA) or Yellow top (ACD) Acceptable: Green top (heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability: Refrigerated < or =30 days Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL Specimen Volume: Entire specimen Collection Instructions: 1. Indicate volume and concentration of the DNA. 2. Label specimen as extracted DNA and source of specimen. Specimen Stability: Frozen/Refrigerated/Ambient < or =30 days

Specimen Minimum Volume: Blood: 1 mL; Extracted DNA: 100 mcL at 20 ng/mL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81364; 81479;

FIBNG
64867

Congenital Fibrinogen Disorders, FGA, FGB, and FGG Genes, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or green top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Provide indication of volume and concentration of the DNA. Specimen Stability: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 100 mcL at 50 ng/mL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Frozen	14 days	
	Refrigerated	7 days	

CPT Code Information: 81479

CLADP **Congenital Lactic Acidosis Panel, Varies**

608019

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443; 81460; 81465;

SCNGP 65669

Congenital Neutropenia, Primary Immunodeficiency Disorder Panel (18 genes), Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 5 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: Please note that for patients with severe neutropenia, DNA yield may be insufficient for testing. Consider sending additional volume or an alternate specimen type. Specimen Stability Information: Ambient (preferred)4 days/Refrigerated 14 days Specimen Type: Blood spot Supplies: Card-Blood Spot Collection Filter Paper (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Whatman FTA Classic paper, Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 5 blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient <1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. Please note that for patients with severe neutropenia, DNA yield may be insufficient for testing. Consider sending additional volume or an alternate specimen type. 2. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 3. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 4. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Peripheral blood mononuclear cells (PBMCs) Container/Tube: Cell pellet Collection Instructions: Send as a suspension in freezing medium or cell pellet frozen on dry ice. Specimen Stability Information: Frozen Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Additional Information: Indicate the tests to be performed on the fibroblast culture cells. A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes of culture media can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Additional Information: A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443**CONGR**
82466**Congo Red Stain (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test. Order MPCT / Muscle Pathology Consultation or MBCT / Muscle Biopsy Consultation, Outside Slides and/or Paraffin Blocks. The consultant will determine the need for special stains.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Varies		

CPT Code Information: 88314**CTDC**
83631**Connective Tissue Diseases Cascade, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.7 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86038; 86200; 83516-Centromere (if appropriate); 83516-Ribosome (if appropriate); 86225-ds-DNA Ab with Reflex (if appropriate); 86255-ds-DNA Ab by Crithidia IFA (if appropriate); 86235 x 6-RNP, Sm, SS-B, SS-A, Jo 1, and Scl 70 (if appropriate);

COSPC
113326**Consult, Outside Slide (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88321

CRHPC
113329**Consult, w/Comp Rvw of His (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88325

CSPPC
113327**Consult, w/Slide Prep (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88323

CUPPC
113328**Consult, w/USS Prof (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88323-26

CSMPU
610271**Controlled Substance Monitoring Panel, Random, Urine**

Specimen Requirements: Supplies: Urine Container, 60 mL (T313) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine container Specimen Volume: 30 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 30 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. Submitting less than 30 mL may compromise the ability to perform all necessary testing. 3. STATS are not accepted for this procedure.

Specimen Minimum Volume: 20 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Urine	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 80364; 80347; 80307; 80326; G0482 (if appropriate);

CPAVP 603599

Copeptin proAVP, Plasma

Specimen Requirements: Patient Preparation: For water-deprived testing, have the patient fast and thirst for at least 8 hours (no liquids, including water, are allowed) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic screw-top vial Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot plasma into plastic vial. Do not submit in original tube.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 84588

CUU 8590

Copper, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of barium are known to interfere with this test. If barium-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container with no metal cap or glued insert Submission Container/Tube: Plastic urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82525

CUT 8687

Copper, Liver Tissue

Specimen Requirements: Patient Preparation: Gadolinium is known to interfere with most metal tests. If gadolinium-containing contrast media has been administered a specimen should not be collected for 96 hours. Supplies: Metal Free Specimen Vial (T173) Container/Tube: Preferred: Mayo metal-free specimen vial (blue label) Acceptable: Paraffin block if no more than 1 or 2 cuts have been made to it for slides Specimen Volume: 2 mg Collection Instructions: 1. Two mg of liver tissue is required. This is typically a piece of tissue from a 22-gauge needle biopsy at least 2 cm long. If an 18-gauge needle is used, the tissue must be at least 1 cm in length. 2. Any specimen vial other than a Mayo metal-free vial used should be plastic, leached with 10% nitric acid for 2 days, rinsed with redistilled water, and dried in clean air. Additional Information: Paraffin blocks will be returned 3 days after analysis.

Specimen Minimum Volume: 2 cm (22-gauge needle) 1 cm (18-gauge needle) 2 mm x 2 mm (punch) 0.3 mg by dry weight

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Liver Tissue	Refrigerated (preferred)		
	Ambient		
	Frozen		

CPT Code Information: 82525

FCOPP 75391

Copper, RBCs

Specimen Requirements: Specimen Type: RBCs Collection Container/Tube: Royal Blue top tube (Trace metal-free; EDTA) Specimen Volume: 1 mL Collection Instructions: Draw blood in a royal blue top (trace metal free; EDTA) tube(s). Centrifuge and separate plasma within two hours of collection. Leave RBCs in the original collection container and replace stopper. Send 1 mL RBC's refrigerated. NOTE: Tubes containing Heparin based anticoagulants are not acceptable.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
RBCS	Refrigerated	14 days	METAL FREE

CPT Code Information: 82525

CUS 8612

Copper, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium, iodine, and barium are known to interfere with most metals tests. If gadolinium-, iodine, or barium-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: -Metal Free B-D Tube (No Additive), 6 mL (T184) -Metal Free Specimen Vial (T173) Collection Container/Tube: 6-mL Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Metal-free, screw-capped, polypropylene vial Specimen Volume: 0.8 mL Collection Instructions: 1. Allow the specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into metal-free, polypropylene vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Ambient	28 days	METAL FREE
	Frozen	28 days	METAL FREE

CPT Code Information: 82525

CUCRU 60427

Copper/Creatinine Ratio, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82525-Copper Concentration; 82570-Creatinine Concentration;

CORI 82476

Coriander, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FCORG 57526

Corn IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube is acceptable.

Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

FCOR4 57569

Corn IgG4

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

CRNP 82718

Corn Pollen, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CORN 82705

Corn-Food, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CORTC
88221

Corticosterone, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL Collection Instructions: Morning (8 a.m.) specimen is preferred.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 82528

CORTO
65484

Cortisol, Free and Total, Serum

Specimen Requirements: Container/Tube: Red top (serum gel/SST are not acceptable) Specimen Volume: 1.85 mL Collection Instructions: Morning (8 a.m.) specimens are preferred. The 8 a.m. cortisol can be referred to as the a.m. cortisol and can be collected anywhere between 6 a.m. and 10:30 a.m. in the morning. Additional Information: If multiple specimens are collected, send separate order for each specimen.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82530; 82533;

CORTU
8546

Cortisol, Free, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Tubes, 10-mL (T068) Submission Container/Tube:

Plastic, urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Add 10 g of boric acid as preservative at start of collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 82530

CRANU 82920

Cortisol, Free, Random, Urine

Specimen Requirements: Container/Tube: Plastic, 10-mL urine tube (T068) Specimen Volume: 5 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	28 days	
	Refrigerated	14 days	
	Ambient	7 days	

CPT Code Information: 82530

CORTF 65423

Cortisol, Free, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 1.25 mL Collection Instructions: Morning (8 a.m.) specimens are preferred. The 8 a.m. cortisol can be referred to as the a.m. cortisol and can be collected any time between 6 a.m. and 10:30 a.m. in the morning. Additional Information: If multiple specimens are collected, send separate order for each specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82530

CIVC
6347**Cortisol, Inferior Vena Cava, Serum**

Specimen Requirements: Container/Tube: Red top Specimen Volume: 1.5 mL Collection Instructions: Morning (8 a.m.) and afternoon (4 p.m.) specimens are preferred. Additional Information: 1. Include time of draw. 2. If multiple specimens are drawn, send separate order for each specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82533

CLAV
6346**Cortisol, Left Adrenal Vein, Serum**

Specimen Requirements: Container/Tube: Red top Specimen Volume: 1.5 mL Collection Instructions: Morning (8 a.m.) and afternoon (4 p.m.) specimens are preferred. Additional Information: 1. Include time of draw. 2. If multiple specimens are drawn, send separate order for each specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82533

CINP
9369**Cortisol, Mass Spectrometry, Serum**

Specimen Requirements: Container/Tube: Red top (serum gel/SST are not acceptable) Specimen Volume: 0.6 mL Collection Instructions: Morning (8 a.m.) and afternoon (4 p.m.) specimens are preferred. Additional Information: 1. Include time of collection. 2. If multiple specimens are collected, send separate order for each specimen.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82533

CRAV
6345

Cortisol, Right Adrenal Vein, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 1.5 mL Collection Instructions: Morning (8 a.m.) and afternoon (4 p.m.) specimens are preferred. Additional Information: 1. Include time of draw. 2. If multiple specimens are drawn, send separate order for each specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82533

SALCT
84225

Cortisol, Saliva

Specimen Requirements: Patient Preparation: 1. Do not brush teeth before collecting specimen. 2. Do not eat or drink for 15 minutes prior to specimen collection. Supplies: Cortisol, Saliva Collection Kit (T514) Container/Tube: SARSTEDT Salivette Specimen Volume: 1.5 mL Collection Instructions: 1. Provide patient with a Saliva Collection Kit (Salivette) containing the Cortisol - Saliva Collection Instructions and ask them to follow the instructions as written. 2. Instruct patient to collect specimen between 11 p.m. and midnight and record collection time on the Cortisol - Saliva Collection Instructions sheet. 3. Instruct patient to return Cortisol - Saliva Collection Instructions with the appropriately labeled Salivette to the laboratory. Additional Information: 1. Reference values are also available for an 8 a.m. (7 a.m.-9 a.m.) or a 4 p.m. (3 p.m.-5 p.m.) collection, however, the 11 p.m. to midnight collection is preferred. 2. If multiple specimens are collected, submit each vial under a separate order.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Saliva	Refrigerated (preferred)	28 days	
	Frozen	60 days	
	Ambient	28 days	

CPT Code Information: 82533

CORT
8545

Cortisol, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: 1. Morning (8 a.m.) and afternoon (4 p.m.) specimens are preferred. 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection. Additional Information: 1. Include time of collection. 2. If multiple specimens are collected, send separate order for each specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 82533

COCOU **82948**

Cortisol/Cortisone, Free, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Tubes, 10-mL (T068) Submission Container/Tube: Plastic, urine tube (T068) Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Add 10 g of boric acid as preservative at start of collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 82530-Cortisol; free; 82542;

COCRU **88903**

Cortisol/Cortisone, Free, Random, Urine

Specimen Requirements: Container/Tube: Plastic, 10 mL urine tube (T068) Specimen Volume: 5 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	28 days	
	Refrigerated	14 days	
	Ambient	72 hours	

CPT Code Information: 82530; 82542 ;

CDIP **89860**

Corynebacterium diphtheriae Culture, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Throat or pharynx Supplies: Culturette (BBL Culture Swab) (T092) Container/Tube: Culture transport

swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium)
 Specimen Volume: Entire specimen Additional information: A swab from beneath the pseudomembrane is preferred Acceptable: Specimen Type: Nasopharyngeal swab Supplies: Nasopharyngeal swab
 Container/Tube: Rayon swab with an aluminum shaft placed in transport medium such as a green-top nasopharyngeal swab (rayon mini-tip) with Stuart's media Specimen Volume: Entire specimen

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	24 hours
	Refrigerated	24 hours

CPT Code Information: 87081-Corynebacterium diphtheriae culture; 87077-Identification by MALDI-TOF mass spec (if appropriate); 87077-Additional identification procedure (if appropriate); 87153-Aerobe identification by sequencing (if appropriate);

COTT 82859

Cotton Fiber, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CSED 82804

Cottonseed, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CTWD 82748

Cottonwood, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

COW 82873

Cow Epithelium, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

COX2 70633

COX-2 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope (T693) Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CBBRP 62248

Coxiella burnetii (Q fever), Molecular Detection, PCR, Blood

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by Coxiella burnetii DNA is

unlikely. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL Collection Instructions: Send specimen in original tube (preferred).

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

CBSRP 62194

Coxiella burnetii (Q Fever), Molecular Detection, PCR, Serum

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by *Coxiella burnetii* DNA is unlikely. Collection Container/Tube: Preferred: 5-mL red top Acceptable: Serum gel Submission Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: All tubes should be centrifuged and the serum aliquoted into a sterile vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 87798

CBRP 62193

Coxiella burnetii (Q fever), Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by *Coxiella burnetii* DNA is unlikely. Submit only 1 of the following specimens: Specimen Type: Fresh tissue or biopsy Sources: Lung, bone, liver, heart valve, aorta, or endocardium Container/Tube: Sterile container Specimen Volume: Entire collection or 5 mm(3) - approximately the size of a pencil eraser Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit tissue only, do not add fluid to tissue 3. Refrigerate or freeze specimen. Specimen Stability Information: Refrigerated (preferred) <7 days/ Frozen <7 days Preferred Paraffin-embedded tissue block: Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Lung, bone, liver, heart valve, aorta, or endocardium Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block to be cut and returned. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Lung, bone, liver, heart valve, aorta, or endocardium Container/Tube: Sterile container for each individual cut section (scroll). Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Fresh tissue or biopsy: 5 mm(3) Paraffin-embedded tissue block:

two 10-micron sections

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87798

CPOXZ
35395

CPOX Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 3

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81405-CPOX; Fibroblast Culture for Genetic Test; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

FCRAB
57674

Crab IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

CRAB

82745

Crab, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CRANB

86307

Cranberry, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CRAY

82343

Crayfish, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

CRDPU Creatine Disorders Panel, Random, Urine

88697

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10 mL urine tube Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. Immediately freeze specimen. 3. If possible, do not send other tests ordered on same vial of urine. In doing so, the other tests may have increased turnaround time due to the strict frozen criteria of this assay.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen	29 days	

CPT Code Information: 82540-Creatine; 82570-Creatinine; 82542-Guanidinoacetate;

CK

8336

Creatine Kinase (CK), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	48 hours	

CPT Code Information: 82550

CKELR

35063

Creatine Kinase Isoenzyme Reflex, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 2 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	7 days
	Frozen	28 days

CPT Code Information: 82550-CK, total; 82552-CK isoenzymes (If appropriate);

CRCL 113357

Creatinine Clearance, Serum and 24 Hour Urine

Specimen Requirements: Both serum and urine are required. Serum must be collected no earlier than 24 hours before start of urine collection and no later than 24 hours after urine collection is completed. Specimen Type: Serum Container/Tube: Red top or serum gel Specimen Volume: 1 mL Collection Instructions: Label specimen as serum. Specimen Type: Urine Supplies: Aliquot Tube, 5 mL (T465) Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. Label specimen as urine. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: Serum: 0.5 mL Urine: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)		
	Frozen		
Urine	Refrigerated (preferred)		
	Ambient		
	Frozen		

CPT Code Information: 82575

CRTS1 48216

Creatinine with Estimated Glomerular Filtration Rate (eGFR), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	
	Ambient	24 hours	

CPT Code Information: 82565

CTU
610601**Creatinine, 24 Hour, Urine**

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: 1. This test does not require the use of a chemical preservative; if a chemical preservative is used, it must be added to the specimen within 4 hours of completion of 24-hour collection. 2. See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	30 days	
	Frozen	30 days	
	Ambient	14 days	

CPT Code Information: 82570

CRT24
610597**Creatinine, 24 Hour, Urine**

Specimen Requirements: Only orderable as part of a profile. For more information see: -NMH24 / N-Methylhistamine, 24 Hour, Urine -RBP24 / Retinol-Binding Protein, 24 Hour, Urine

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	30 days	
	Frozen	30 days	
	Ambient	14 days	

CPT Code Information: 82570

CRBF
606601**Creatinine, Body Fluid**

Specimen Requirements: Specimen Type: Body fluid Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Peritoneal dialysate (dialysis fluid) -Pericardial Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Body Fluid	Refrigerated (preferred)	7 days
	Frozen	30 days
	Ambient	24 hours

CPT Code Information: 82570

RCTUR Creatinine, Random, Urine

610603

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 6 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	30 days	
	Frozen	30 days	
	Ambient	14 days	

CPT Code Information: 82570

CRETR Creatinine, Random, Urine

610598

Specimen Requirements: Only orderable as part of a profile. See information on orderable test ID. Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	30 days	
	Frozen	30 days	
	Ambient	14 days	

CPT Code Information: 82570

CRE2 Creatinine, Urine

614427

Specimen Requirements: Only orderable as part of a profile. For more information see: ALBR / Albumin, Random, Urine RALB / Albumin, Random, Urine. Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	30 days	
	Ambient	30 days	
	Frozen	30 days	

CPT Code Information: 82570**CRGSP**
83659**Cryoglobulin and Cryofibrinogen Panel, Serum and Plasma**

Specimen Requirements: Both plasma and serum are required. Cryofibrinogen Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Tube must remain at 37°C. 2. Centrifuge at 37°C. (Do not use a refrigerated centrifuge. If absolutely necessary, ambient temperature is acceptable.) It is very important that the specimen remain at 37°C until after separation of plasma from red cells. 3. Place plasma into an appropriately labeled plastic vial. Cryoglobulin Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: 1. Tube must remain at 37°C. 2. Allow blood to clot at 37°C. 3. Centrifuge at 37°C. (Do not use a refrigerated centrifuge. If absolutely necessary, ambient temperature is acceptable.) It is very important that the specimen remain at 37°C until after separation of serum from red cells. 4. Place serum into an appropriately labeled plastic vial. Additional Information: Analysis cannot be performed with less than 3 mL of serum. Smaller volumes are insufficient to detect clinically important trace (mixed) cryoglobulins. Less than 3 mL will require draw of a new specimen.

Specimen Minimum Volume: Plasma: 0.5 mL Serum: 3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)		
	Frozen		
Serum Red	Refrigerated (preferred)		
	Frozen		

CPT Code Information: 82585; 82595; 86334-Immunofixation (if appropriate);**CRY_S**
80988**Cryoglobulin, Serum**

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: 1. Tube must remain at 37°C. 2. Allow blood to clot at 37°C. 3. Centrifuge at 37°C. (Do not use a refrigerated centrifuge. If absolutely necessary, ambient temperature is acceptable.) It is very important that the specimen remain at 37°C until after separation of serum from red cells. 4. Place serum into an appropriately labeled plastic vial. Additional Information: Analysis cannot be performed with less than 3 mL of serum. Smaller volumes are insufficient to detect clinically important trace (mixed) cryoglobulins. Less than 3 mL will require draw of a new specimen.

Specimen Minimum Volume: 3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)		
	Frozen		

CPT Code Information: 82595

SLFA 62075

Cryptococcus Antigen Screen with Titer, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)		
	14 days		
	Frozen		
	14 days		

CPT Code Information: 87899

CLFA 62074

Cryptococcus Antigen Screen with Titer, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)		
	14 days		
	Frozen		
	14 days		

CPT Code Information: 87899-Cryptococcus screen; 87899-Cryptococcus titer (if appropriate);

PLFA 42396

Cryptococcus Antigen Screen, Lateral Flow Assay, Pleural Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.25

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Pleural Fluid	Refrigerated (preferred)		
	21 days		
	Frozen		
	30 days		

CPT Code Information: 87899-Cryptococcus Ag Screen, LFA, PF; 87899-Cryptococcus Ag Titer, LFA, PF (if appropriate);

ULFA 604095

Cryptococcus Antigen Screen, Lateral Flow Assay, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 1 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 87899-Cryptococcus Ag Screen, LFA, U; 87899-Cryptococcus Ag Titer, LFA, U (if appropriate);

PLFAT 48431

Cryptococcus Antigen Titer, Lateral Flow Assay, Pleural Fluid

Specimen Requirements: Only orderable as a reflex. For more information see PLFA / Cryptococcus Antigen Screen, Lateral Flow Assay, Pleural Fluid.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Pleural Fluid	Refrigerated (preferred)	21 days	
	Frozen	30 days	

CPT Code Information: 87899

SLFAT 62077

Cryptococcus Antigen Titer, Lateral Flow Assay, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 87899

CLFAT
62076**Cryptococcus Antigen Titer, Lateral Flow Assay, Spinal Fluid****Specimen Requirements:** Container/Tube: Sterile vial Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 87899**ULFAT**
604369**Cryptococcus Antigen Titer, Lateral Flow Assay, Urine****Specimen Requirements:** Only orderable as a reflex. For more information see ULFA / Cryptococcus Antigen Screen, Lateral Flow Assay, Urine.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 87899**LFACX**
62703**Cryptococcus Antigen with Reflex, Spinal Fluid****Specimen Requirements:** Container/Tube: Sterile vial Specimen Volume: 1 mL**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 87899-Cryptococcus Ag Screen w/Titer, CSF; 87899-Cryptococcus Ag Titer, LFA, CSF (as appropriate); 87102-Fungal Culture, CSF (as appropriate);**CRYPS**
80335**Cryptosporidium Antigen, Feces****Specimen Requirements:** Submit only 1 of the following specimens: Specimen Type: Preserved feces Supplies: -Formalin 10% Buffered Neutral 15 mL (T466) -Stool Collection Kit, Random (T635) Container/Tube: Preferred: Stool container with 10% buffered formalin preservative Acceptable: SAF

(sodium acetate formalin) Specimen Volume: 5 g Specimen Stability Information: Ambient (preferred) 60 days Specimen Type: Unpreserved feces Supplies: -Stool container, Small (Random) -4 oz (T288); Stool Collection Kit, Random (T635) Container/Tube: Stool container Specimen Volume: 5 g Specimen Stability Information: Frozen 60 days

Specimen Minimum Volume: 1 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Varies		

CPT Code Information: 87328

SFC

8719

Crystal Identification, Synovial Fluid

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (heparin) Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Refrigerated (preferred)		
	Ambient	24 hours	
	Frozen		

CPT Code Information: 89060

CSF3R

64604

CSF3R Exon 14 and 17 Mutation Detection by Sanger Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: EDTA (lavender top) or ACD (yellow top) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred)/Refrigerate Specimen Type: Bone marrow aspirate Container/Tube: EDTA (lavender top) or ACD (yellow top) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred)/Refrigerate Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood or bone marrow and provide indication of volume and concentration of the DNA. Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Specimen Stability Information: Ambient Specimen Type: Paraffin-embedded bone marrow aspirate clot Container/Tube: Paraffin block Specimen Stability: Ambient Specimen Type: Tissue Slides: Unstained slides Specimen Volume: 10 Slides Specimen Stability Information: Ambient

Specimen Minimum Volume: Blood, bone marrow: 1 mL Extracted DNA from blood or bone marrow: 50 microliters (mcL) at 20 ng/mcL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	10 days	

CPT Code Information: 81479 Unlisted molecular pathology procedure

FCUIP

57590

CU (Chronic Urticaria) Index Panel

Specimen Requirements: Patient preparation: Patients taking calcineurin inhibitors should stop medication 72 hours prior to draw. Patients taking prednisone should be off their medication for 2 weeks prior to draw. Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 3 mL Collection Instructions: Draw blood in Red-top tube (SST is acceptable). Separate from cells within 2 hours of draw. Send 3 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	7 days	
	Ambient	5 days	

CPT Code Information: 84443; 86343; 86376; 86800;

FCUIX

57549

CU Index

Specimen Requirements: Patient Preparation: Patients taking calcineurin inhibitors should stop medication 72 hours prior to draw. Patients taking prednisone should be off their medication for 2 weeks prior to draw. Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 2 mL Collection Instructions: Draw 5 mL blood in a serum separator tube (SST) (plain, red-top tube is acceptable). Separate from cells within 2 hours of draw. Send 2 mL of serum ambient in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Ambient (preferred)	14 days	
	Frozen	14 days	
	Refrigerated	14 days	

CPT Code Information: 86343

FCUKG

57651

Cucumber IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001**CUKE**
82861**Cucumber, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**OATC**
82916**Cultivated Oat, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**CRYE**
82918**Cultivated Rye, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

WHTC 82915

Cultivated Wheat, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CULAF 35244

Culture for Genetic Testing, Amniotic Fluid

Specimen Requirements: Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Container/Tube: Amniotic fluid container Supplies: Refrigerate/Ambient Shipping Box, 5 lb (T329) Specimen Volume: 5 to 10 mL Collection Instructions: 1. Discard the first 2 mL of amniotic fluid. If the culture will be performed in conjunction with other cytogenetic testing such as CHRAF / Chromosome Analysis, Amniotic Fluid or CMAP / Chromosomal Microarray, Prenatal, Amniotic Fluid/Chorionic Villus Sampling, a total of 25 to 30 mL will be needed. 2. Place the tubes in a Styrofoam container. 3. Fill remaining space with packing material. 4. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 5. Bloody specimens are undesirable.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Amniotic Fld	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88235; 88240;

CULTU 604296

Culture for Genetic Testing, Tumor Tissue

Specimen Requirements: Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 0.5-3 cm(3) or larger

Specimen Minimum Volume: 0.5 cm(3)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88239

FUNID
8223

Culture Referred for Identification, Fungus

Specimen Requirements: Specimen Type: Organism in pure culture Supplies: Infectious Container, Large (T146) Container/Tube: Preferred: Sabouraud dextrose agar slant Acceptable: Inhibitory mold agar slant Specimen Volume: Isolated mold or yeast Collection Instructions: Organism must be in pure culture, actively growing. Do not submit mixed cultures.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87107-Culture, fungi, definitive identification; 87106-Culture, fungi, definitive identification, each organism; yeast (if appropriate); 87106-Id MALDI-TOF Mass Spec Yeast (if appropriate); 87107-Id MALDI-TOF Mass Spec Fungi (if appropriate); 87107-Culture, fungi, definitive identification, each organism; mold (if appropriate); 87107-Fungal identification Panel A (if appropriate); 87107-Fungal identification Panel B (if appropriate); 87150-Identification rapid PCR coccidioides (if appropriate); 87150 x 2-Identification Histoplasma/Blastomyces, PCR (if appropriate); 87153-D2 fungal sequencing Identification (if appropriate); 87150-Id, Candida auris Rapid PCR (if appropriate);

TBIDS
64714

Culture Referred for Identification, Mycobacterium and Nocardia with Antimicrobial Susceptibility Testing, Varies

Specimen Requirements: Specimen Type: Organism in pure culture Supplies: Infectious Container, Large (T146) Container/Tube: Middlebrook (7H10 or 7H11) or Lowenstein-Jensen medium slant or in broth (eg, Mycobacteria Growth Indicator Tube [7H9] broth) Specimen Volume: Isolate Collection Instructions: Organism must be in pure culture, actively growing. Do not submit mixed cultures.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: Culture Referred for Identification, Mycobacterium; 87118-Identification of mycobacteria; 87158-Identification of mycobacteria by other methods (if appropriate); 87118 -Id MALDI-TOF Mass Spec AFB (if appropriate); 87153-Mycobacteria Identification by Sequencing (if appropriate); 87150-Mycobacteria Probe Ident, Solid (if appropriate); 87150-Mycobacteria Probe Ident,

Broth (if appropriate); 87150-Id, Mtb Speciation, PCR (if appropriate); 87186-Susceptibility Rapid Grower (if appropriate); 87186-Susceptibility Slow Grower (if appropriate); 87186-Susceptibility Nocardia species (if appropriate); 87188 x 3-Antimicrobial Susceptibility, Mycobacterium tuberculosis Complex, Broth Method (if appropriate); 87186-Susceptibility, Mtb Cx, 2nd Line (if appropriate); 87188-Susceptibility, Mycobacterium tuberculosis Complex, Pyrazinamide (if appropriate); 87153-Mtb PZA Confirmation, pncA Sequencing (if appropriate); 87150- Id, MTB complex Rapid PCR (if appropriate);

CTBID 80278

Culture Referred for Identification, Mycobacterium and Nocardia, Varies

Specimen Requirements: Specimen Type: Organism in pure culture Supplies: Infectious Container, Large (T146) Container/Tube: Middlebrook (7H10 or 7H11) or Lowenstein-Jensen medium slant or in broth (eg, Mycobacteria Growth Indicator Tube [7H9] broth) Specimen Volume: Visible growth of isolate on solid media Isolate in broth media: > or =3 mL A minimum volume of 3 mL is recommended in order to perform all initial testing, this may include: stains, sub-culture media, nucleic acid probes, and any additional testing that may be required to determine the identification. If the broth sample volume is <3 mL, initial testing may be limited, and increased turnaround time is likely. Collection Instructions: Organism must be in pure culture, actively growing. Do not submit mixed cultures.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: Culture Referred for Identification, Mycobacterium; 87118-Identification of mycobacteria; 87158-Identification of mycobacteria by other methods (if appropriate); 87118 -Id MALDI-TOF Mass Spec AFB (if appropriate); 87153-Mycobacteria Identification by Sequencing (if appropriate); 87150-Mycobacteria Probe Ident, Solid (if appropriate); 87150-Mycobacteria Probe Ident, Broth (if appropriate); 87150-Id, Mtb Speciation, PCR (if appropriate); 87150- Id, MTB complex Rapid PCR (if appropriate);

VRID2 5190

Culture Referred for Identification, Virus

Specimen Requirements: Supplies: Infectious Container, Large (T146) Specimen Type: Pure culture of organism from source cultured Container/Tube: Cell (viral) culture tube Specimen Volume: Entire specimen Collection Instructions: 1. Organism must be in pure culture, actively growing. 2. Completely fill culture tube with appropriate culture medium before shipment.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87253-Additional Testing Virus Identification (if appropriate); 87254-Viral Smear, Shell Vial(if appropriate);

CURR

82498

Curry, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CURL

82852

Curvularia lunata, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FCURV

57898

Curvularia spicifera/Bipolaris IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

CGPH

605198

Custom Gene Panel, Hereditary, Next-Generation Sequencing,

Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81223 (if appropriate); 81249 (if appropriate); 81286 (if appropriate); 81403 (if appropriate); 81404 (if appropriate); 81405 (if appropriate); 81406 (if appropriate); 81407 (if appropriate); 81408 (if appropriate); 81443 (if appropriate); 81479 (if appropriate);

CIB 607602

Cutaneous Direct Immunofluorescence Assay (IFA), Varies

Specimen Requirements: Two or more biopsies from same site and sent in 1 specimen vial will be processed as 1 specimen. Two or more biopsies from different sites require separate specimen vials, however, they can be ordered together. Test performed on each site will be billed accordingly. Transport Medium Method Supplies: Michel's Transport Media for Immunofluorescent Testing on Tissue (T321) Specimen Type: Tissue Sources: Skin or 1 of the following mucosa: oral (oropharyngeal), nasal, genital, esophageal, conjunctival, laryngeal, or epiglottis Container/Tube: Transport medium (Michel's, also called Zeus media) Specimen Volume: 2-8 mm punch specimen, intact or bisected; excisional biopsy specimen intact or bisected Collection Instructions: 1. Collect biopsy of uninvolved or involved skin. Refer to Recommended Biopsy Site Selection Based On Disease State below. 2. Immediately place specimen into a labeled vial of transport medium and seal tightly. Specimen Stability Information: Ambient (preferred)/Refrigerated Snap-Frozen Method Specimen Type: Tissue Sources: Skin or 1 of the following mucosa: oral (oropharyngeal), nasal, genital, esophageal, conjunctival, laryngeal, or epiglottis Container/Tube: Plastic vial Specimen Volume: 2-8 mm punch specimen, intact or bisected; excisional biopsy specimen, intact or bisected Collection Instructions: 1. Collect biopsy of uninvolved or involved skin. Refer to Recommended Biopsy Site Selection Based On Disease State below. 2. Immediately place specimen into liquid nitrogen and allow to freeze thoroughly (do not allow specimen to desiccate). If liquid nitrogen is not available, specimen may be frozen by placing it on a small square of aluminum foil on a block of dry ice. Liquid nitrogen is preferred. 3. Immediately wrap specimen carefully in aluminum foil. At no time should the specimen be allowed to thaw. 4. Place the wrapped specimen into the prelabeled plastic vial and seal tightly. Specimen Stability Information: Frozen Recommended Biopsy Site Selection Based on Disease State 1. Pemphigus and pemphigoid groups (including linear IgA bullous dermatosis and chronic bullous disease of childhood): Biopsy erythematous perilesional skin or mucosa. Avoid erosions, ulcers, and bullae while obtaining tissue adjacent to active lesions. Label as perilesional skin. 2. Dermatitis herpetiformis: Biopsy normal-appearing skin, 0.5-1 cm away from lesion. Label as perilesional skin. 3. Lupus erythematosus: Involved areas of skin such as erythematous or active borders are preferred biopsy sites to confirm the diagnosis of lupus erythematosus, either discoid or systemic. Label as involved skin. Avoid ulcers, old lesions, and facial lesions, if possible. Uninvolved, nonexposed skin is the preferred site to detect a lupus band as may be found in systemic lupus erythematosus. Should unexposed skin be desired, buttock or medial thigh is suggested. Label as uninvolved, nonexposed skin. 4. Mixed connective tissue disease: Biopsy as for lupus erythematosus except when sclerodermoid features are present. For sclerodermoid features, biopsy inflamed area. Label as involved or uninvolved, exposed or nonexposed skin. 5. Vasculitis and urticaria: The erythematous or active border of a new lesion is preferred. Avoid old lesions and ulcers. Label as involved skin. If appropriate, skin lesion is not present, diagnosis may sometimes be made from uninvolved skin. 6. Porphyria cutanea tarda: Biopsy involved skin. Avoid old

lesions and ulcers. Label as involved skin. 7. Lichen planus and lichenoid reactions: Biopsy involved skin. Avoid old lesions and ulcers. Label as involved skin.

Specimen Minimum Volume: Entire specimen

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen	120 days	
	Refrigerated		

CPT Code Information: Per biopsy site;; 88346; 88350 x 4;

CIFS 8052

Cutaneous Immunofluorescence Antibodies (IgG), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	14 days	

CPT Code Information: 88346; 88350;

CXC13 113163

CXCL13 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CXLPL 64759

CXCR4 Mutation Analysis, Somatic, Lymphoplasmacytic Lymphoma/Waldenstrom Macroglobulinemia, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Bone marrow aspirate Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood or bone marrow and provide indication of volume and concentration of the DNA Specimen Stability Information: Frozen (preferred)/Refrigerated/Ambient Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Specimen Stability Information: Ambient Specimen Type: Tissue Slides: Unstained slides Specimen Volume: 10 slides Additional Information: Tissue must demonstrate involvement by a hematologic neoplasm (eg, acute myelocytic leukemia), not solid tumors. Specimen Stability Information: Ambient

Specimen Minimum Volume: Blood, Bone marrow: 1 mL Extracted DNA: at least 20 mcL with a concentration of at least 10 nanograms per mcL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	10 days	

CPT Code Information: 81479-Unlisted molecular pathology procedure

FCYNB 75370

Cyanide, Blood Test

Specimen Requirements: Container/Tube: Gray top (potassium oxalate/sodium fluoride) Specimen volume: 2 mL Collection instructions: Collect 2 mL whole blood in potassium oxalate/sodium fluoride Gray top tube, send frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood NaFl-KOx	Frozen (preferred)	90 days	
	Refrigerated	7 days	

CPT Code Information: 82600

CARU 609739

Cyclic Adenosine Monophosphate (cAMP), Urinary Excretion, Serum and Urine

Specimen Requirements: Both serum and urine are required. Serum must be obtained at time of urine collection. Specimen Type: Serum Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL Collection Instructions: Label specimen as serum. Specimen Type: Urine Supplies: Urine Container, 60 mL (T313) Container/Tube: Plastic urine container Specimen Volume: 16 mL Collection Instructions: 1. Collect a random urine specimen. 2. Label specimen as urine.

Specimen Minimum Volume: Serum: 0.5 mL Urine: 6.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	

CPT Code Information: 82030; 82570; 82565;**CCP**
84182**Cyclic Citrullinated Peptide Antibodies, IgG, Serum****Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.4 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86200**CYC1**
70411**Cyclin D1 Immunostain, Technical Component Only****Specimen Requirements:** Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**FFLEX**
90085**Cyclobenzaprine (Flexeril)****Specimen Requirements:** Submit only 1 of the following specimens: Plasma Specimen Type: Plasma Container/Tube: Green Top Specimen Volume: 2 mL Collection Instructions: Draw blood in a green-top (sodium heparin) tube, plasma gel tube is not acceptable. Spin down and send 2 mL of sodium heparin plasma refrigerated in a plastic vial. Serum Specimen Type: Serum Container/Tube: Red Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain, red-top tube, serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	72 hours	

CPT Code Information: 80369

CYCL 81506

Cyclospora Stain, Feces

Specimen Requirements: Patient Preparation: Patient should avoid use of antidiarrheal medication (ie, loperamide or Pepto-Bismol). The presence of barium will interfere with this test. Supplies: -ECOFIX Stool Transport Vial (Kit) (T219) -Formalin-Meridian 10% Buffered Neutral (T466) -Stool container, Small (Random), 4 oz (T288) -Sodium Acetate Formalin (SAF) -Stool Collection Kit, Random (T635) Submit only 1 of the following specimens: Preferred: Specimen Type: Preserved stool Preferred: ECOFIX Stool Transport Vial (Kit) (T219) Acceptable: 10% Buffered Formalin Stool Transport (Kit) (T466), Sodium Acetate Formalin (SAF) Specimen Volume: 10 g Specimen Stability Information: Ambient 21 days (preferred)/Refrigerated 21 days Specimen Type: Unpreserved stool Container/Tube: Stool container (T288) Specimen Volume: 5 g Specimen Stability Information: Refrigerated 3 days (preferred)

Specimen Minimum Volume: Preserved stool: 1 g Unpreserved stool: 2 g

Transport Temperature:

Specimen Type	Temperature	Time
Fecal	Varies	

CPT Code Information: 87015-Concentration; 87207-Stain;

CYSPR 35143

Cyclosporine, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Draw specimen immediately before a scheduled dose. 2. Do not centrifuge. 3. Send specimen in original tube. Additional Information: Therapeutic range applies to trough specimens drawn immediately prior to a.m. dose.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80158

CYCPK
42427**Cyclosporine, Peak, Blood**

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: 1. Do not centrifuge. 2. Send specimen in original tube. Additional Information:
No definitive therapeutic or toxic ranges have been established for this Peak testing.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80158

2D66Z
610616**CYP2D6 3' Gene Duplication/Multiplication (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA			

CPT Code Information: 0076U

2D65Z
610615**CYP2D6 5' Gene Duplication/Multiplication (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA			

CPT Code Information: 0075U

2D61Z
610611**CYP2D6 Full Gene Sequence (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA			

CPT Code Information: 0071U

2D62Z
610612

CYP2D6 Gene CYP2D6-2D7 Hybrid (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA			

CPT Code Information: 0072U

2D63Z
610613

CYP2D6 Gene CYP2D7-2D6 Hybrid (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA			

CPT Code Information: 0073U

2D64Z
610614

CYP2D6 Nonduplicated Gene (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA			

CPT Code Information: 0074U

CSTCE
614154

Cystatin C with Estimated Glomerular Filtration Rate (eGFR), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CFP
35386**Cystic Fibrosis Mutation Analysis, 106-Mutation Panel, Varies**

Specimen Requirements: Additional Information: Patient education brochures in English (T548) and Spanish (T563) are available upon request. Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 2.5 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Prenatal specimens can be sent Monday through Thursday and must be received by 5 p.m. CST on Friday in order to be processed appropriately. All prenatal specimens must be accompanied by a maternal blood specimen. Order MATCC / Maternal Cell Contamination, Molecular Analysis on the maternal specimen. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 5 Blood spots on collection card (Whatman Protein Saver 903 Paper; Ahlstrom 226 filter paper; or Blood Spot Collection Card) Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Amniotic fluid: 10 mL Blood: 0.5 mL Chorionic Villi: 5 mg Blood Spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81220-CFTR; ; Fibroblast Culture for Genetic Test; 88233-(if appropriate); 88240-(if appropriate); ; Amniotic Fluid Culture/Genetic Test; 88235-(if appropriate); 88240-Cryopreservation (if appropriate); ; Maternal Cell Contamination, B; 81265-(if appropriate);

CYSTS
65872**Cysticercosis Antibody, IgG, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: 86682

FCAEC Cysticercus Antibody (IgG), ELISA, CSF

75587

Specimen Requirements: Specimen Type: Spinal Fluid Sources: CSF Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Submit 1 mL of spinal fluid (CSF) in a sterile, plastic screw-cap vial. Refrigerate specimen after collection and ship at refrigerate temperature.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 86682

CYSGP Cystinuria Gene Panel, Varies

608027

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479

CYSQN Cystinuria Profile, Quantitative, 24 Hour, Urine

8376

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Specimen Volume: 5 mL Collection Instructions: 1. Collect before intravenous pyelogram. 2. Collect urine for 24 hours. 3. Add 20 mL of toluene as preservative at start of collection. If toluene is not available, refrigerate during collection. 4. Mix well before taking 5-mL aliquot. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	70 days	
	Refrigerated	14 days	

CPT Code Information: 82136

CYSR 81067

Cystinuria Profile, Quantitative, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Specimen Volume: 2 mL
Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	70 days	
	Refrigerated	14 days	

CPT Code Information: 82136

METR1 65609

Cytochrome b5 Reductase Enzyme Activity, Blood

Specimen Requirements: Collection Container/Tube: Preferred: Yellow top (ACD) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	18 days	

CPT Code Information: 82657

CYOX 80873

Cytochrome Oxidase Stain (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test. Order MPCT / Muscle Pathology Consultation or MBCT / Muscle Biopsy Consultation, Outside Slides and/or Paraffin Blocks. The consultant will determine the need for special stains.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Varies		

CPT Code Information: 88319

1A2Q
610041

Cytochrome P450 1A2 Genotype, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 0031U

2B6Q
610042

Cytochrome P450 2B6 Genotype, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 1 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479

2C19R
610043

Cytochrome P450 2C19 Genotype, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be

ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81225

2C9QT 610044

Cytochrome P450 2C9 Genotype, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81227

2D6Q 610045

Cytochrome P450 2D6 Comprehensive Cascade, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send

specimen per kit instructions. Additional Information: Due to lower concentration of DNA yielded from saliva, testing cannot proceed to tier 2 sequencing and will stop after tier 1 testing is complete. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 75 ng/mL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 1 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 0070U; 0071U-0076U (if appropriate);

3A4Q 610046

Cytochrome P450 3A4 Genotype, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: One swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81230-CYP3A4

3A5Q 610047

Cytochrome P450 3A5 Genotype, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: One swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mL. 2. Include concentration and volume on tube.

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81231-CYP3A5

FCYTP 75139

Cytokine Panel 13

Specimen Requirements: Serum Draw blood in a plain, red-top tube(s), serum gel tube is acceptable. Spin down within 2 hours and send 1 mL of serum frozen in a plastic vial. Note: Critical frozen. Additional specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen	365 days	

CPT Code Information: 83520 x 13

CYPAN 610259

Cytokine Panel, Plasma

Specimen Requirements: Collection Container/Tube: Lavender-top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge at 1500 x g for 10 minutes and aliquot plasma into plastic vial. Note: Do not use AccuSpin to centrifuge specimen. 3. Freeze specimen within 30 minutes.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	21 days	

CPT Code Information: 83520 x 12

CFNPC 113344

Cytology FNA (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88173

CTPPC
113340

Cytology Touch Prep (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88333

CTAPC
113341

Cytology Touch Prep Additional (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88334

CMVG
34970

Cytomegalovirus (CMV) Antibodies, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86644

CMVP
62067

Cytomegalovirus (CMV) Antibodies, IgM and IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Aliquot tube Specimen Volume: 1 mL

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86644-CMV, IgG; 86645-CMV, IgM;

CMVM 34971

Cytomegalovirus (CMV) Antibodies, IgM, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86645

CMVC8 88826

Cytomegalovirus (CMV) CD8 T-Cell Immune Competence, Quantitative Assessment by Flow Cytometry, Blood

Specimen Requirements: For serial monitoring, we recommend that specimen draws be performed at the same time of day. Timing and consistency in timing of blood collection is critical when serially monitoring patients for lymphocyte subsets. See data under Clinical Information. Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Container/Tube: Green top (sodium heparin) Specimen Volume: 20 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86356 x6; 86359; 86352; ;

CMVQN 601954

Cytomegalovirus (CMV) DNA Detection and Quantification by Real-Time PCR, Plasma

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	84 days	
	Refrigerated	6 days	

CPT Code Information: 87497**CMVNG**
603607**Cytomegalovirus (CMV) Drug Resistance, Next-Generation Sequencing, Plasma**

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: Centrifuge and aliquot plasma. Additional Information: Plasma submitted for next-generation sequencing testing must have been collected within 7 days of a viral load assay (ie, CMVQN) with a result of > or =500 IU/mL

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	30 days	
	Refrigerated	14 days	

CPT Code Information: 87910**CMVI**
70406**Cytomegalovirus (CMV) Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**LCMV**
81240**Cytomegalovirus (CMV), Molecular Detection, PCR, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Supplies: Aliquot Tube, 5 mL (T465) Specimen Type: Fluid Sources: Spinal, pleural, peritoneal, ascites, pericardial, amniotic, or ocular Container/Tube: Preferred: Sterile screw-cap 5-mL aliquot tube Acceptable: Sterile Container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Supplies: Aliquot Tube, 5 mL

(T465) Specimen Type: Fluid Sources: Respiratory; bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate Container/Tube: Preferred: Sterile screw-cap 5-mL aliquot tube Acceptable: Sterile container Specimen Volume: 1.5 mL Supplies: -Culturette (BBL Culture Swab) (T092) -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Specimen Type: Swab Sources: Genital; cervix, vagina, urethra, anal/rectal, or other genital sources Container/Tube: multimicrobe media (M4-RT) (T605) and ESswabs Collection Instructions: Place swab back into multimicrobe media (M4-RT, M4, or M5) Supplies: -Culturette (BBL Culture Swab) (T092) -M4-RT Media (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Specimen Type: Swab Sources: Miscellaneous; dermal, eye, nasal, saliva, or throat Container/Tube: multimicrobe media (M4-RT) (T605) and ESswabs Collection Instructions: Place swab back into multimicrobe media (M4-RT, M4, or M5) Supplies: -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Specimen Type: Tissue Sources: Brain, colon, kidney, liver, lung, etc. Container/Tube: Sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT [T605], M4, or M5) Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue in multimicrobe media (M4-RT) (T605) or a sterile container with 1 to 2 mL sterile saline Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Collect a random urine specimen. Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) Specimen Volume: 0.5 mL

Specimen Minimum Volume: Body Fluid, Ocular Fluid, Spinal Fluid, or Urine: 0.3 mL
Respiratory Specimens: 1 mL Tissue: 2 x 2-mm biopsy

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87496

FCYTG 75445

Cytomegalovirus IgG Avidity

Specimen Requirements: Draw blood in a plain, red-top tube(s). Serum gel tube is acceptable. Spin down and send 1 mL of serum refrigerated in plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 86644

ANCA2 610030

Cytoplasmic Neutrophil Antibodies, Inflammatory Bowel Disease Panel, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see IBDP2 / Inflammatory Bowel Disease Serology Panel, Serum.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86255**ANCA**
9441**Cytoplasmic Neutrophil Antibodies, Serum****Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.8 mL**Specimen Minimum Volume:** 0.4 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86255; 86256 (if appropriate);**DDITT**
40936**D-Dimer, Plasma****Specimen Requirements:** Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge, remove plasma, and centrifuge plasma again. 2. Aliquot plasma into plastic vial leaving 0.25 mL in the bottom of centrifuged vial. Additional Information: Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen (preferred)	90 days	
	Ambient	4 hours	

CPT Code Information: 85379**DIMER**
602174**D-Dimer, Plasma****Specimen Requirements:** Only orderable as part of a profile or reflex. For more information see: ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma ALUPP / Lupus Anticoagulant Profile, Plasma**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85379

DLAC 8878

D-Lactate, Plasma

Specimen Requirements: Collection Container/Tube: Sodium Fluoride/Potassium Oxalate Tube, 2 mL (T275) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge, aliquot plasma in plastic vial, and freeze immediately .

Specimen Minimum Volume: 0.55 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma NaFl-KOx	Frozen (preferred)	365 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 83605

DLAU 8873

D-Lactate, Urine

Specimen Requirements: Container/Tube: Plastic, 10-mL urine tube (T068) Specimen Volume: 2.5 mL Collection Instructions: 1. Collect a timed or random urine specimen. 2. No preservative. 3. Immediately freeze specimen.

Specimen Minimum Volume: 0.65 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	365 days	
	Refrigerated	7 days	
	Ambient	72 hours	

CPT Code Information: 83605

DABIE 609423

Dabigatran, Ecarin, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Specimen should be drawn 1 to 3 hours (peak) after a dose or just prior (trough) to the next dose for dabigatran concentrations. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma into a plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after

collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	42 days	

CPT Code Information: 80299

DAGR **31768**

Dairy and Grain Allergen Profile, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.7 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003 x 5

DAND **82694**

Dandelion, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for each 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

DATE **82358**

Date, Fruit, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**DATRE****82481****Date, Tree, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**DOCK8****608112****Dedicator of Cytokinesis 8 (DOCK8) Deficiency, Blood**

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86356 x 4**DHEA****81405****Dehydroepiandrosterone (DHEA), Serum**

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen (preferred)	28 days	

Refrigerated	21 days
Ambient	6 hours

CPT Code Information: 82626

DHES1 Dehydroepiandrosterone Sulfate, Serum

113595

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	

CPT Code Information: 82627

DLL3 Delta-Like 3 Protein (SP347), Semi-Quantitative Immunohistochemistry, Manual, Tissue

603332

Specimen Requirements: Specimen Type: Tissue Supplies: -Pathology Packaging Kit (T554) -Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Collection Instructions: Formalin-fixed, paraffin-embedded tissue block; or 3 unstained glass, "positively charged" slides with 4-microns, formalin-fixed, paraffin-embedded tissue Additional Information: One slide will be stained with hematoxylin and eosin and returned.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88360

DMS2 Dementia, Autoimmune Evaluation, Serum

92114

Specimen Requirements: Patient Preparation: 1. For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication or intravenous immunoglobulin treatment. 2. This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed, or canceled if radioactivity remains. 3. Patient should have no general anesthetic or muscle-relaxant drugs in the previous 24 hours. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 4 mL

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255 x 18; 86341; 83519-ARBI (if appropriate); 84182-AGNBS (if appropriate); 86255-AINCS (if appropriate); 86256-AMPIS (if appropriate); 84182-AMIBS (if appropriate); 84182-AN1BS (if appropriate); 84182-AN2BS (if appropriate); 84182-CRMWS (if appropriate); 86255-DPPCS (if appropriate); 86256-DPPTS (if appropriate); 86256-GABIS (if appropriate); 86255-GFACS (if appropriate); 86256-GFATS (if appropriate); 86255-IG5CS (if appropriate); 86256-IG5TS (if appropriate); 86255-GL1CS (if appropriate); 86256-GL1TS (if appropriate); 86255-NFHCS (if appropriate); 86256-NIFTS (if appropriate); 86255-NFLCS (if appropriate); 86256-NMDIS (if appropriate); 84182-PC1BS (if appropriate); 86255-PCABP (if appropriate); 84182-PCTBS (if appropriate);

DMC2 92115

Dementia, Autoimmune Evaluation, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255 x18; 86341 x1; 84182 AGNBC (if appropriate); 86255 AINCC (if appropriate); 86256 AMPIC (if appropriate); 84182 AMIBC (if appropriate); 84182 AN1BC (if appropriate); 84182 AN2BC (if appropriate); 84182 CRMWC (if appropriate); 86255 DPPCC (if appropriate); 86256 DPPTC (if appropriate); 86256 GABIC (if appropriate); 86255 GFACC (if appropriate); 86256 GFATC (if appropriate); 86255 IG5CC (if appropriate); 86256 IG5TC (if appropriate); 86255 GL1CC (if appropriate); 86256 GL1TC (if appropriate); 86255 NFHCC (if appropriate); 86256 NIFTC (if appropriate); 86255 NFLCC (if appropriate); 86256 NMDIC (if appropriate); 84182 PC1BC (if appropriate); 84182 PCTBC (if appropriate); 86255 PCA1C (if appropriate);

DCME 609795

Dendritic Cell and Monocyte Enumeration, Blood

Specimen Requirements: Container/Tube: Green top (sodium heparin) Specimen Volume: 3 mL
Collection Instructions: Send specimen in original tube. Do not open tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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CPT Code Information: 86356 x 3**DENG M****83865****Dengue Virus Antibody, IgG and IgM, Serum****Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.4 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: IgM-86790; IgG-86790;**DENV P****62869****Dengue Virus Antibody/Antigen Panel, Serum****Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL**Specimen Minimum Volume:** 0.8 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: IgG-86790; IgM-86790; NS1-86790;**DNSAG****36781****Dengue Virus NS1 Antigen, Serum****Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.4 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86790-NS1 Ag

DENG606372

Dengue Virus, Molecular Detection, PCR, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Sterile container Specimen Volume: 0.5 mL Collection Instructions: 1. Collect whole blood in a serum gel tube. 2. Centrifuge and aliquot the serum into a sterile container within 6 hours of collection. 3. Label specimen as serum.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

DENG606371

Dengue Virus, Molecular Detection, PCR, Spinal Fluid

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Preferred: 12 x 75-mm screw cap vial Acceptable: Sterile screw cap vial Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

DRPL35402

Dentatorubral-Pallidoluysian Atrophy (DRPLA) Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81177-ATN1 (ataxin 2) (eg, dentatorubral-pallidoluysian atrophy)

gene analysis, evaluation to detect abnormal (eg, expanded) alleles

FDCU **58048**

Deoxyypyridinoline Crosslinks, Urine

Specimen Requirements: Transfer 3.5 mL aliquot from well-mixed first morning urine collection, no preservatives, shipped frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	90 days	
	Refrigerated	7 days	

CPT Code Information: 82523

DMIC **82828**

Dermatophagoides microceras, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

DEXT **70596**

DermPath Consultation, Wet Tissue

Specimen Requirements: Supplies: Dermatopathology Media (T101) Sources: Skin or oral mucosa Container/Tube: Regular serum vials with 10% formalin (T101) Specimen Volume: Entire specimen Collection Instructions: For scalp biopsies when the differential diagnosis includes a scarring alopecia, 2 separate 4-mm punch biopsies are recommended (1 for vertical and 1 for horizontal sections). If a single scalp biopsy is received with the clinical diagnosis of a scarring alopecia, the specimen will be processed with horizontal sections.

Specimen Minimum Volume: Size needed depends on diagnosis and size of lesion.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient		

CPT Code Information: Level II Surg Path Gross and Micro Exam; 88302 (if appropriate); ; Level III Surg Path; 88304 (if appropriate); ; Level IV Surg Path; 88305 (if appropriate);

DCP
61844**Des-Gamma-Carboxy Prothrombin, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Refrigerated	7 days	

CPT Code Information: 83951

DESPR
37123**Desipramine, Serum**

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose (minimum 12 hours after last dose). 2. Centrifuge and aliquot serum into plastic vial. Serum must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 80335; G0480 (if appropriate);

DESMN
70421**Desmin Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

DSGAB
606818**Desmoglein 1 (DSG1) and Desmoglein 3 (DSG3), IgG Antibodies, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	14 days	

CPT Code Information: 83516 x 2

DESG3
70420**Desmoglein 3 (DSG3) Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FDXM
91956**Dexamethasone**

Specimen Requirements: Draw blood in a plain, red-top tube(s). Separate serum within an hour. Spin down and send 3 mL of serum frozen in a plastic vial. Note: Serum gel tube is acceptable, but must pour off into a plastic vial.

Specimen Minimum Volume: 1 mL Note: Does not allow for repeat analysis.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	365 days	
	Refrigerated	14 days	
	Ambient	6 days	

CPT Code Information: 80299

FDXAP
57720**Dexedrine (Dextroamphetamine)**

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	

CPT Code Information: 80324

FDM
90117**Dextromethorphan (DM), Serum**

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	

CPT Code Information: 80362

DBS1
48400**Diabetes Mellitus Type 1 Evaluation, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86337-Insulin antibodies; 86341 x3-Islet cell antibody;

DIA
8629**Diazepam and Nordiazepam, Serum**

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable)
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge
and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80346; G0480 (if appropriate);

FDICH
75393**Dichloromethane, Serum**

Specimen Requirements: Specimen Type: Serum Collection Container/Tube: Red top Specimen
Volume: 2 mL Collection Instructions: Draw blood in a red-top tube(s). (Serum gel tube is not
acceptable.) Tube should be filled to prevent loss of volatile compound into headspace. Ensure that
container remains tightly sealed. Spin down and send 2 mL of serum refrigerated in plastic vial.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	10 days	
	Frozen	14 days	
	Ambient	5 days	

CPT Code Information: 82441

FDGTX
75374**Digitoxin, Serum**

Specimen Requirements: Draw blood in a plain, red-top tube(s). (Serum gel tube is not
acceptable.) Spin down and send 1 mL of serum refrigerated in a plastic, preservative-free vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 80299

FRDIG 82130

Digoxin, Free, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: 1. Draw blood 6 to 8 hours after last dose of digoxin. 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged, and the serum aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	180 days	

CPT Code Information: 80163

DIG 8674

Digoxin, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: 1. Draw blood 6 to 8 hours after the last dose of digoxin. 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	180 days	

CPT Code Information: 80162

DPYDQ 610052

Dihydropyrimidine Dehydrogenase Genotype, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81232

DPYDG
65213

Dihydropyrimidine Dehydrogenase, DPYD Full Gene Sequencing, Varies

Specimen Requirements: Multiple whole blood EDTA genotype tests can be performed on a single specimen after a single extraction. See Multiple Whole Blood EDTA Genotype Tests in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.45 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81232

DHRF
62766

Dihydrorhodamine Flow Cytometric N-Formyl-Methionyl-Leucyl-Phenylalanine Test, Blood

Specimen Requirements: Both a whole blood sodium heparin specimen and a whole blood sodium heparin control specimen from an unrelated, healthy donor are required. Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Patient: Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: Send specimen in original tube. Do not aliquot. Normal Control: Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: 1. Draw a control specimen from a normal (healthy), unrelated person within an hour of the patient. 2. Label clearly on outermost label normal control. 3. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86352

DHRP
62765

Dihydrorhodamine Flow Cytometric Phorbol Myristate Acetate Test, Blood

Specimen Requirements: Both a whole blood sodium heparin specimen and a whole blood sodium heparin control specimen from an unrelated, healthy donor are required. Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Patient: Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: Send specimen in original tube. Do not aliquot. Normal Control: Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: 1. Draw a control specimen from a normal (healthy), unrelated person within an hour of the patient. 2. Label clearly on outermost label normal control. 3. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86352

DHR
62764

Dihydrorhodamine Flow Cytometric Test, Blood

Specimen Requirements: Both a whole blood sodium heparin specimen and a whole blood sodium heparin control specimen from an unrelated, healthy donor are required. Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Patient: Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: Send specimen in original tube. Do not aliquot. Normal Control: Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: 1. Draw a control specimen from a normal (healthy), unrelated person within an hour of the patient. 2. Label clearly on outermost label normal control. 3. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86352 x2

DHTS
81479

Dihydrotestosterone, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 82642; G0480 (if appropriate);

DCMGP 63159

Dilated Cardiomyopathy Multi-Gene Panel, Next-Generation Sequencing, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send specimen in original tube. Additional Information: Prior Authorization is available for this test. Submit the required form with the specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81439

DILL 82602

Dill, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FDILT 91118

Diltiazem (Cardizem, Dilacor)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80299

DRV13 602181

Dilute Russell Viper Venom Time (DRVVT) Confirmation Ratio, Plasma

Specimen Requirements: Only orderable as part of a reflex. For more information see DRV11 / Dilute Russell Viper Venom Time (DRVVT), with Reflex, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85613

DRV3 602178

Dilute Russell Viper Venom Time (DRVVT) Confirmation, Plasma

Specimen Requirements: Only orderable as part of a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85613

DRV14 603310

Dilute Russell Viper Venom Time (DRVVT) Interpretation

Specimen Requirements: Only orderable as a part of a profile. For more information see DRV11 / Dilute Russell Viper Venom Time (DRVVT), with Reflex, Plasma.

Specimen Minimum Volume: Only orderable as a part of a profile. For more information see DRV11 / Dilute Russell Viper Venom Time (DRVVT), with Reflex, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

DRV12

602180

Dilute Russell Viper Venom Time (DRVVT) Mix Ratio, Plasma

Specimen Requirements: Only orderable as part of a reflex. For more information see DRV11 / Dilute Russell Viper Venom Time (DRVVT), with Reflex, Plasma.

Specimen Minimum Volume: Only orderable as part of a reflex. For more information see DRV11 / Dilute Russell Viper Venom Time (DRVVT), with Reflex, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85613

DRV2

602177

Dilute Russell Viper Venom Time (DRVVT) Mix, Plasma

Specimen Requirements: Only orderable as part of a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85613

DRV1

602176

Dilute Russell Viper Venom Time (DRVVT), Plasma

Specimen Requirements: Only orderable as part of a profile or reflex. For more information see: ALUPP / Lupus Anticoagulant Profile), Plasma AATHR / Thrombophilia Profile), Plasma APROL / Prolonged Clot Time Profile), Plasma ALBLD / Bleeding Diathesis Profile, Limited), Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile), Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85613-DRVVT; 85613-DRVVT mix (if appropriate); 85613-DRVVT confirmation (if appropriate);

DRV11

602179

Dilute Russell Viper Venom Time (DRVVT), with Reflex, Plasma

Specimen Requirements: See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge, remove plasma, and centrifuge plasma again. 2. Freeze specimen immediately at or below

-40°C, if possible. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85613-DRVVT; 85613-DRVVT mix (if appropriate); 85613-DRVVT confirmation (if appropriate);

DIPGS

36664

Diphtheria Toxoid IgG Antibody, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: 86317

DTABS

36670

Diphtheria/Tetanus Antibody Panel, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: 86317 x 2

DCTR

113514

Direct Antiglobulin Test (Polyspecific), Blood

Specimen Requirements: Container/Tube: Pink top (EDTA) Specimen Volume: 6 mL

Specimen Minimum Volume: 3 mL Neonates: EDTA Micro tube 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)	48 hours	
	Refrigerated	48 hours	

CPT Code Information: 86880

DSAC 608236

Disaccharidase Activity Panel, Tissue

Specimen Requirements: Specimen Type: Tissue Source: Intestinal biopsy Container/Tube: Clean, screw-topped plastic vial Specimen Volume: 5 mg Collection Instructions: Specimen should not be placed on gauze or filter paper, nor should any saline, support or embedding material be added.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Frozen	28 days	OTHER

CPT Code Information: 82657

ADICI 603182

Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-26 Special Coagulation Interpretation

ADIC 603306

Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Specimen Requirements: Patient Preparation: Patient should not be receiving Coumadin or heparin. If so, note on request. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: 5 Plastic vials Specimen Volume: 5 mL in 5 plastic vials, each containing 1 mL Collection Instructions: 1. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 2. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 3. Aliquot plasma (1 mL per aliquot) into 5 separate plastic vials, leaving 0.25 mL in the bottom of centrifuged vial. 4. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally < or = -40°C. Additional Information: Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results.

Specimen Minimum Volume: 5 mL in 5 plastic vials, each containing 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85610 - PTSC 85730 - APTSC 85670 - TTSC 85379 - DIMER 85384
CLFIB 85390-26 - ADICI 85210-Factor II (if appropriate); 85220-Factor V (if appropriate);
85230-Factor VII (if appropriate); 85240-Coagulation factor VIII assay (if appropriate); 85250-Factor
IX (if appropriate); 85260-Factor X (if appropriate); 85270-Factor XI (if appropriate); 85280-Factor XII
(if appropriate); 85366-Soluble fibrin monomer (if appropriate); 85385-PT-Fibrinogen (if appropriate);
85597-Platelet neutralization for lupus inhibitor (if appropriate); 85598-StacLOT LA (if appropriate);
85611-PT mix 1:1 (if appropriate); 85613-DRVVT (if appropriate); 85613-DRVVT mix (if
appropriate); 85613-DRVVT confirm (if appropriate); 85635-Reptilase time (if appropriate);
85732-APTT mix 1:1 (if appropriate);

FDIRU 57280

Diuretic Screen, Urine

Specimen Requirements: 10 mL aliquot of random or spot urine collected without preservative
in a plastic container. Send specimen refrigerated.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80377

FDM1 91592

DMPK DNA Test (DM1)

Specimen Requirements: Specimen Type: Whole Blood Container/Tube: Lavender top (EDTA)
Specimen volume: 8 mL Collection instructions: Send 8 mL whole blood (lavender-top) EDTA tubes
Note: Collection date is required.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)	10 days	
	Refrigerated	10 days	

CPT Code Information: 81234

CRITH
62925**DNA Double-Stranded (dsDNA) Antibodies by Crithidia luciliae IFA, IgG, Serum**

Specimen Requirements: Only orderable as reflex. For more information see ADNAR / DNA Double-Stranded (dsDNA) Antibodies with Reflex, IgG, Serum.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86255

ADNAR
63073**DNA Double-Stranded (dsDNA) Antibodies with Reflex, IgG, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86225; 86225-CRITH (if appropriate);

ADNA
8178**DNA Double-Stranded Antibodies, IgG, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86225

DNJB9
71739**DNAJB9 Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively

charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable:
Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FDKYE
57528

Dock Yellow (*Rumex crispus*) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

DOGD
60108

Dog Dander, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FDFEN
75547

Dog Fennel (*Anthemis cotula*) IgE

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003**DOG1**
70422**DOG-1 Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**FDLS**
58007**Donath Landsteiner**

Specimen Requirements: Specimen Type: Serum Container/Tube: Â Red Specimen Volume: 3 mL Draw blood in a plain red-top tube. Maintain specimen at 37°C until serum is separated from cells. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Ambient	72 hours	

CPT Code Information: 86940, 86941**DFIR**
82485**Douglas Fir, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

DXPIN 63507

Doxepin and Nordoxepin, Serum

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose (minimum 12 hours after last dose). 2. Centrifuge and aliquot serum into plastic vial. Serum must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 80335; G0480 (if appropriate);

CDAUX 62718

Drug Abuse Panel with Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Container/Tube: Chain-of-Custody Kit (T282) containing the specimen containers, seals, and documentation required Specimen Volume: 30 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 30 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	14 days	

CPT Code Information: 80307

CDA5X 62715

Drug Abuse Survey with Confirmation, Panel 5, Chain of Custody, Random, Urine

Specimen Requirements: Container/Tube: Chain-of-Custody Kit (T282) containing the specimen containers, seals, and documentation required Specimen Volume: 30 mL Collection

Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 30 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80307

CDAU5 80373

Drug Abuse Survey with Confirmation, Panel 5, Random, Urine

Specimen Requirements: Supplies: Urine Container, 60 mL (T313) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 30 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 30 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. Additional drug panels and specific requests are available. Call 800-533-1710 or 507-266-5700. 3. Submitting less than 30 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80307; See individual reflex tests for appropriate CPT codes;

CDA7X 62716

Drug Abuse Survey with Confirmation, Panel 9, Chain of Custody, Random, Urine

Specimen Requirements: Container/Tube: Chain-of-Custody Kit (T282) containing the specimen containers, seals, and documentation required Specimen Volume: 30 mL Collection Instructions: Collect specimen in the provided container, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 30 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	14 days	

CPT Code Information: 80307

CDAU7
81410

Drug Abuse Survey with Confirmation, Panel 9, Random, Urine

Specimen Requirements: Supplies: Urine Container, 60 mL (T313) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 30 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 30 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. Additional drug panels and specific requests are available. Call 800-533-1710 or 507-266-5700. 3. Submitting less than 30 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	14 days	

CPT Code Information: 80307

CDAU
9446

Drug Abuse Survey with Confirmation, Random, Urine

Specimen Requirements: Supplies: Urine Container, 60 mL (T313) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine container (T313) Specimen Volume: 30 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 30 mL in 1 plastic container. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. Additional drug panels and specific requests are available. Call 800-533-1710 or 507-266-5700. 3. Submitting less than 30 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	14 days	

CPT Code Information: 80307

PNRCH
65061

Drug Immunoassay Panel, Urine

Specimen Requirements: Only orderable as part of profile. For more information see CSMPU / Controlled Substance Monitoring Panel, Random, Urine. Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 30 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative

Specimen Minimum Volume: 20 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80307

PDSUX 62741

Drug Screen, Prescription/Over the Counter, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain-of-Custody Kit (T282) containing the specimen containers, seals, and documentation is required. Specimen Volume: 30 mL Collection Instructions: Collect a random specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information 1. Submitting less than 30 mL will compromise the ability to perform all necessary testing. 2. See Prescription and Over-the-Counter (OTC) Drug Screens in Special Instructions.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	3 hours	

CPT Code Information: 80307

DSSX 62723

Drug Screen, Prescription/Over the Counter, Chain of Custody, Serum

Specimen Requirements: Supplies: Chain-of-Custody Kit (T282) containing the specimen seals and documentation are required Container/Tube: Red top (serum gel/SST tubes are not acceptable); kit contains the specimen seals and documentation required Preferred: One 10-mL red top Acceptable: One 5-mL red top Specimen Volume: 2.75 mL Collection Instructions: Collect specimen, centrifuge and aliquot serum into plastic vial within 2 hours of collection, cap and seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: See Table 1 in Prescription and Over-the-Counter (OTC) Drug Screens in Special Instructions.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	3 hours	

CPT Code Information: 80307

PDSU
88760

Drug Screen, Prescription/Over the Counter, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: See Prescription and Over-the-Counter (OTC) Drug Screens in Special Instructions.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	3 hours	

CPT Code Information: 80307

DSS
8421

Drug Screen, Prescription/Over the Counter, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2.75 mL Collection Instructions: Collect specimen, centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	3 hours	

CPT Code Information: 80307

FDA1S
75525

Drugs of Abuse (10 panel) and Alcohol Screen, Serum

Specimen Requirements: Specimen Type: Serum Container/Tube: Red top Specimen Volume: 5 mL Collection Instructions: A Collect sample using alcohol free skin preparation. Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic, preservative-free vial.

Specimen Minimum Volume: 2.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	14 days	

CPT Code Information: 80307x2; ;

FD10S **75352**

Drugs of Abuse Screen (10 panel), Serum

Specimen Requirements: Specimen Type: Serum Container/Tube: Red top Specimen Volume: 4 mL Collection Instructions: Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 4 mL of serum refrigerated in plastic, preservative-free vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	14 days	

CPT Code Information: 80307

DSM4X **62721**

Drugs of Abuse Screen 4, Chain of Custody, Meconium

Specimen Requirements: Container/Tube: Chain-of-Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen. Additional Information: 1. Specimen that arrives with a broken seal does not meet the chain-of-custody requirements. 2. The laboratory recommends sending chain-of-custody specimens by overnight shipment.

Specimen Minimum Volume: 0.45 g (approximately 0.5 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	14 days	
	Refrigerated	24 hours	

CPT Code Information: 80307

DSM5X **62722**

Drugs of Abuse Screen 5, Chain of Custody, Meconium

Specimen Requirements: Container/Tube: Chain-of-Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen. Additional Information: 1. Specimen that arrives with a broken seal does not meet the chain-of-custody requirements. 2. The laboratory recommends sending chain-of-custody specimens by overnight shipment.

Specimen Minimum Volume: 0.45 g (approximately 0.5 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	14 days	

Refrigerated

24 hours

CPT Code Information: 80307**DASM4**
60553**Drugs of Abuse Screen, Meconium 4**

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288)
 Container/Tube: Stool container (T288) Specimen Volume: 1 g (approximately 1 teaspoon) Collection
 Instructions: Collect entire random meconium specimen.

Specimen Minimum Volume: 0.45 g (approximately 0.5 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	14 days	
	Refrigerated	24 hours	

CPT Code Information: 80307; See individual reflex tests for appropriate CPT codes;

DASM5
60250**Drugs of Abuse Screen, Meconium 5**

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288)
 Container/Tube: Stool container (T288) Specimen Volume: 1 g (approximately 1 teaspoon) Collection
 Instructions: Collect entire random meconium specimen.

Specimen Minimum Volume: 0.45 g (approximately 0.5 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	14 days	
	Refrigerated	24 hours	

CPT Code Information: 80307; See individual reflex tests for appropriate CPT codes;

DBMD
58125**Duchenne/Becker Muscular Dystrophy, DMD Gene, Large Deletion/Duplication Analysis, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Prenatal specimens can be sent Monday through Thursday and must be received by 5 p.m. CST on Friday in order to be processed appropriately. All prenatal specimens must be accompanied by a maternal blood specimen. Order MATCC / Maternal Cell Contamination, Molecular Analysis on the maternal specimen. Specimen Type: Amniotic fluid Container/Tube:

Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Blood: 1 mL Amniotic Fluid: 10 mL Chorionic Villus: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81161-DMD (dystrophin) (eg, Duchenne/Becker muscular dystrophy) deletion analysis and duplication analysis, if performed; Fibroblast Culture for Genetic Test; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); ; Amniotic Fluid Culture/Genetic Test; 88235-Tissue culture for amniotic fluid (if appropriate); 88240-Cryopreservation (if appropriate); ; Maternal Cell Contamination, B; 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells (if appropriate);

DUCK 82708

Duck Feathers, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FDME 57926

Duck Meat IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

DULOX 89305

Duloxetine, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before the next scheduled dose (trough). 2. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80299

ECADB 603211

E-Cadherin Immunostain, Bone Marrow, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick; B5 fixed, decalcified, paraffin-embedded bone marrow tissue. Acceptable: B5 fixed, decalcified, paraffin-embedded bone marrow tissue block.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

ECAD 70423

E-Cadherin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		

Refrigerated

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

EEPC
83917

Eastern Equine Encephalitis Antibody Panel, IgG and IgM, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.8 mL

Specimen Minimum Volume: 0.70 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86652 x 2

EEEP
83155

Eastern Equine Encephalitis Antibody, IgG and IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86652 x 2

ESYC
82721

Eastern Sycamore, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

ECHNO
64985

Echinococcus Antibody, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: 86682

ECUMP
64722

Eculizumab Monitoring Panel, Serum

Specimen Requirements: Patient Preparation: Fasting preferred Supplies: Aliquot Tube, 5 mL (T465) Specimen Type: Serum Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Recommended timeframe for the blood collection is a trough, or immediately prior to next intravenous infusion. 2. Immediately after specimen collection, place the tube on wet ice. 3. Centrifuge and aliquot serum into plastic vial. 4. Freeze specimen within 30 minutes.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	14 days	

CPT Code Information: 86160; 86161;

ECULI
65676

Eculizumab, Serum

Specimen Requirements: Patient Preparation: Pembrolizumab/Keytruda must be discontinued at least 4 weeks prior to testing for eculizumab quantitation in serum. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Spin down within 2 hours of draw.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	30 days	
	Ambient	4 days	

CPT Code Information: 80299

EDOXA
606009**Edoxaban, Anti-Xa, Plasma**

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (citrate) Submission Container/Tube: Polypropylene vial Specimen Volume: 1 mL Collection Instructions: 1. Specimen should be drawn 1 to 3 hours (peak) after a dose or just prior (trough) to the next dose for edoxaban concentrations. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma into a plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. A double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	42 days	

CPT Code Information: 80299

EGFRD
113402**EGFR Exon 18, 19, 20, 21, Mutation Analysis, Cell-Free DNA, Plasma**

Specimen Requirements: Specimen Type: Plasma Collection Container/Tube: Lavender top (K2 EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 10 mL Collection Instructions: 1. Centrifuge within 4 hours of collection. 2. Aliquot plasma into plastic vial and freeze.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	365 days	

CPT Code Information: 81235

EGFRT
35404**EGFR Gene, Mutation Analysis, 29 Mutation Panel, Tumor**

Specimen Requirements: Pathology report must accompany specimen in order for testing to be performed. Preferred: Specimen Type: Tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Acceptable: Specimen Type: Tissue Container/Tube: Slides Specimen Volume: 1 stained and 5 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 5 unstained, non-baked slides with 5-micron thick sections of the tumor tissue.

Specimen Minimum Volume: Formalin-fixed, paraffin-embedded (FFPE) tissue block (preferred) or 1 slide stained with hematoxylin and eosin and 5 unstained, nonbaked slides with 5-microns thick sections of the tumor tissue.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: EGFR Gene, Mutation Analysis, 29 Mutation Panel, Tumor ; 81235-EGFR (epidermal growth factor receptor) (eg, non-small cell lung cancer) gene analysis, common variants (eg, exon 19 LREA deletion, L858R, T790M, G719A, G719S, L861Q); ; Slide Review; 88381-Microdissection, manual;

EGGPF Egg Comprehensive Profile, Serum

610705

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL; if needed, 0.5 mL for every 5 additional allergens requested

Specimen Minimum Volume: 0.5 mL For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003 x 3; 86008 x 2;

EGWTP Egg White Component Profile, Serum

610706

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.75 mL; if needed, 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: 0.4 mL For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003 x 1; 86008 x 2;

FEGWH Egg White IgG

57584

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

FEWG4 Egg White IgG4

57529

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

EGG Egg White, IgE, Serum

82872

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FEWHG Egg Whole IgG

57530

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

FEGYK 57582

Egg Yolk IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

YOLK 82753

Egg Yolk, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

EGGP 82477

Eggplant, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

EDSGP 65749

Ehlers-Danlos Syndrome Panel (12 Genes), Next-Generation Sequencing and Deletion/Duplication Analysis, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479; 81408 x 2 ;

EHRCP 81480

Ehrlichia Antibody Panel, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86666 x 2

EHRC 81478

Ehrlichia chaffeensis (HME) Antibody, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86666

EHRL
84319

Ehrlichia/Anaplasma, Molecular Detection, PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	7 days	

CPT Code Information: 87798 x 4

EHBAP
608396

Ehrlichia/Babesia Antibody Panel, Immunofluorescence, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86666 x 2; 86753;

FELAS
90158

Elastase, Pancreatic, Serum

Specimen Requirements: Draw blood in a plain, red-top or a serum gel tube(s). Separate immediately and send 3 mL of serum frozen in a plastic vial. Note: 1. Indicate serum on request form. 2. Label specimen appropriately (serum). Patient preparation: 1. The patient should fast for 10 to 12 hours prior to collection. 2. Medications that affect pancreatic activity should be discontinued, if possible, for at least 48 hours prior to collection of specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	180 days	

CPT Code Information: 83519

ELDR

82392

Elder, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

EFPO

35091

Electrolyte and Osmolality Panel, Feces

Specimen Requirements: Patient Preparation: No barium, laxatives, or enemas may be used for 96 hours prior to start of, or during, collection. Supplies: Stool containers - 24, 48, 72 Hour Kit (T291) Container/Tube: Stool container Specimen Volume: 10 g Collection Instructions: Collect a very liquid stool specimen.

Specimen Minimum Volume: 5 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	14 days	
	Refrigerated	7 days	
	Ambient	48 hours	

CPT Code Information: 82438-Chloride; 83735-Magnesium; 84302-Sodium; 84100-Phosphorus; 84999 x 2-Osmolality, Potassium;

ELPSR

113632

Electrolyte Panel, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated	24 hours	

CPT Code Information: 80051-Electrolyte Panel (if all 4 are performed); 82435-Chloride (if all 4 are not performed); 84295- Sodium (if all 4 are not performed); 84132-Potassium (if all 4 are not performed); 82374-Bicarbonate (if all 4 are not performed);

EM 70316

Electron Microscopy, Varies

Specimen Requirements: Specimen Type: Fixed wet tissue Supplies: Electron Microscopy Kit (T660) Container/Tube: Electron Microscopy Kit or leak-proof container Specimen Volume: Entire specimen Collection Instructions: Collect specimen according to the instructions in Electron Microscopy Procedures of Handling Specimens for Electron Microscopy in Special Instructions. Do not place on ice, dry ice, or freeze. Additional Information: PATHC / Pathology Consultation may be added if deemed necessary by the reviewing pathologist. For neuronal ceroid lipofuscinosis (NCL) testing only Specimen Type: Whole Blood Container/Tube: Green top (sodium heparin) or yellow top (ACD solution B) Specimen Volume: 5 mL Collection Instructions: Send specimen in original tube. Do not transfer blood to other containers. Additional Information: If test indication is for NCL, whole blood may be submitted in lieu of fixed wet tissue. This is only applicable for a presumptive diagnosis of NCL; whole blood specimens submitted for any other reason will be rejected.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
EM	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88348

EPU 82441

Electrophoresis, Protein, 24 Hour, Urine

Specimen Requirements: Supplies: -Urine Container, 60 mL (T313) -Aliquot Tube, 5 mL (T465) Submission Container/Tube: Plastic, 60-mL urine bottle and plastic, 5-mL tube Specimen Volume: 50 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Aliquot at least 25-mL specimen in plastic, 60-mL urine bottle and at least 1-mL of specimen in plastic, 5-mL tube. 3. Label specimens appropriately (60-mL bottle for protein electrophoresis and 5-mL tube for protein, total). Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	5 days	
	Ambient	24 hours	

CPT Code Information: 84156; 84166; 86335-Immunofixation (if appropriate);

REPU 60068

Electrophoresis, Protein, Random, Urine

Specimen Requirements: Supplies: -Urine Container, 60 mL (T313) -Aliquot Tube, 5 mL (T465)
 Submission Container/Tube: Plastic, 60-mL urine bottle and plastic, 5-mL tube Specimen Volume: 50 mL
 Collection Instructions: 1. Collect random urine specimen. 2. Aliquot at least 25-mL specimen in plastic, 60-mL urine bottle and at least 1-mL of specimen in plastic, 5-mL tube. 3. Label specimens appropriately (60-mL bottle for protein electrophoresis and 5-mL tube for protein, total).

Specimen Minimum Volume: 25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	5 days	
	Ambient	24 hours	

CPT Code Information: 84156; 84166; 86335-Immunofixation (if appropriate);

SPEP 97408

Electrophoresis, Protein, Serum

Specimen Requirements: Patient Preparation: Fasting (12 hour) preferred but not required
 Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	7 days	

CPT Code Information: 84155; 84165; 0077U (if appropriate); 86334 (if appropriate);

PEL 800301

Electrophoresis, Protein, Serum

Specimen Requirements: Patient Preparation: Fasting (12 hour) preferred but not required
 Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 84155; 84165; 86334-Immunofixation (if appropriate);
 86334-Immunofixation Delta and Epsilon (if appropriate);

ELM
82672**Elm, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

EMR
113366**EM, Renal Biopsy (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88348

EMICZ
610074**Emicizumab, Modified One Stage Assay Factor VIII, Plasma**

Specimen Requirements: Patient Preparation: It is preferred that the patient avoid infusions of factor VIII concentrates for at least 12 to 24 hours preceding sample collection for this assay. Supplies: Aliquot Tube, 5 mL (T465) Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial (polypropylene preferred) Specimen Volume: 1 mL Collection Instructions: 1. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 2. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 3. Aliquot plasma into a plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 4. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	42 days	

CPT Code Information: 80299

FENC 90087

Encainide (Enkaidr), ODE and MODE

Specimen Requirements: Submit only 1 of the following: Plasma Draw blood in a green-top (sodium heparin) tube(s). Plasma gel tube is not acceptable. Spin down and send 1 mL of sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s). Serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80299

ENS2 92116

Encephalopathy, Autoimmune Evaluation, Serum

Specimen Requirements: Patient Preparation: 1. For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication or intravenous immunoglobulin treatment. 2. This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed, or canceled if radioactivity remains. 3. Patient should have no general anesthetic or muscle-relaxant drugs in the previous 24 hours. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 4 mL

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255 x 19; 86341 x 1; 83519-ARBI (if appropriate); 84182-AGNBS (if appropriate); 86255-AINCS (if appropriate); 86256-AMPIS (if appropriate); 84182-AMIBS (if appropriate); 84182-AN1BS (if appropriate); 84182-AN2BS (if appropriate); 84182-CRMWS (if appropriate); 86255-DPPCS (if appropriate); 86256-DPPTS (if appropriate); 86256-GABIS (if appropriate); 86255-GFACS (if appropriate); 86256-GFATS (if appropriate); 86255-IG5CS (if appropriate); 86256-IG5TS (if appropriate); 86255-GL1CS (if appropriate); 86256-GL1TS (if appropriate); 86255-NFHCS (if appropriate); 86256-NIFTS (if appropriate); 86255-NFLCS (if appropriate); 86256-NMDIS (if appropriate); 84182-PC1BS (if appropriate); 84182-PCTBS (if appropriate);

ENC2

Encephalopathy, Autoimmune Evaluation, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255 x19; 86341 x1; 84182 AGNBC (if appropriate); 86255 AINCC (if appropriate); 86256 AMPIC (if appropriate); 84182 AMIBC (if appropriate); 84182 AN1BC (if appropriate); 84182 AN2BC (if appropriate); 84182 CRMWC (if appropriate); 86255 DPPCC (if appropriate); 86256 DPPTC (if appropriate); 86256 GABIC (if appropriate); 86255 GFACC (if appropriate); 86256 GFATC (if appropriate); 86255 IG5CC (if appropriate); 86256 IG5TC (if appropriate); 86255 GL1CC (if appropriate); 86256 GL1TC (if appropriate); 86255 NFHCC (if appropriate); 86256 NIFTC (if appropriate); 86255 NFLCC (if appropriate); 86256 NMDIC (if appropriate); 84182 PC1BC (if appropriate); 84182 PCTBC (if appropriate);

ESTUF 35851

Endometrial Stromal Tumors (EST), 7p15 (JAZF1), 6p21.32 (PHF1), 17p13.3 (YWHAE) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Six consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Three consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 $\tilde{\text{A}}\hat{\text{c}}\hat{\text{a}}, \neg\hat{\text{a}}\hat{\text{e}}\hat{\text{o}}$ DNA probe, each (first probe set), Interpretation and report; 88271x2 $\tilde{\text{A}}\hat{\text{c}}\hat{\text{a}}, \neg\hat{\text{a}}\hat{\text{e}}\hat{\text{o}}$ DNA probe, each; each additional probe set (if appropriate); 88271x1 $\tilde{\text{A}}\hat{\text{c}}\hat{\text{a}}, \neg\hat{\text{a}}\hat{\text{e}}\hat{\text{o}}$ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 $\tilde{\text{A}}\hat{\text{c}}\hat{\text{a}}, \neg\hat{\text{a}}\hat{\text{e}}\hat{\text{o}}$ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 $\tilde{\text{A}}\hat{\text{c}}\hat{\text{a}}, \neg\hat{\text{a}}\hat{\text{e}}\hat{\text{o}}$ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 $\tilde{\text{A}}\hat{\text{c}}\hat{\text{a}}, \neg\hat{\text{a}}\hat{\text{e}}\hat{\text{o}}$ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 $\tilde{\text{A}}\hat{\text{c}}\hat{\text{a}}, \neg\hat{\text{a}}\hat{\text{e}}\hat{\text{o}}$ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 $\tilde{\text{A}}\hat{\text{c}}\hat{\text{a}}, \neg\hat{\text{a}}\hat{\text{e}}\hat{\text{o}}$ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

EMA 9360

Endomysial Antibodies, IgA, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red Top Specimen

Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	14 days	

CPT Code Information: 86255-screen; 86256-titer (if appropriate);

EMAT **65091**

Endomysial Antibodies, IgA, Titer, Serum

Specimen Requirements: Only orderable as a reflex. For more information see EMA / Endomysial Antibodies, IgA, Serum.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	14 days	

CPT Code Information: 86256

EMAIG **608880**

Endomysial Antibodies, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	14 days	

CPT Code Information: 86255-screen; 86256-titer (if appropriate);

EGPL **82704**

English Plantain, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SAM
9049

Entamoeba histolytica Antibody, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	7 days	

CPT Code Information: 86753

FEHAG
75350

Entamoeba histolytica Antigen, EIA

Specimen Requirements: Preferred Specimen Type: Unpreserved stool Supplies: Sterile stool container Container/Tube: Sterile stool container Specimen Volume: 2 g Specimen Stability Information: Frozen Collection Instructions: Collect 2 grams of fresh unpreserved stool in sterile container. Send specimen frozen. NOTE: Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 1 gram

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	7 days	
	Refrigerated	48 hours	

CPT Code Information: 87337

STL
8098

Enteric Pathogens Culture, Feces

Specimen Requirements: Patient Preparation: Medications: Do not use barium or bismuth before collection of specimen. Supplies: C and S vial (T058) Specimen Type: Preserved Feces Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH

indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Ambient (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 87045-Enteric Pathogens Culture, Stool-with isolation and preliminary examination; 87046 x 3-Stool Culture Aerobic Bacteria, each; 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87147 x 3-Serologic Agglut Method 1 Ident (if appropriate); 87147 x 4-Serologic Agglut Method 3 Ident (if appropriate);

ENTP 89893

Enterovirus, Molecular Detection, PCR, Plasma

Specimen Requirements: Submit a raw clinical sample (not a culture isolate) for enterovirus PCR. This test will detect enterovirus, but will not differentiate viruses in this family or provide serotyping information. Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Screw-capped, sterile container Specimen Volume: 1 mL Collection Instructions: Spin down promptly.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87498

LENT 80066

Enterovirus, Molecular Detection, PCR, Varies

Specimen Requirements: Submit a raw clinical sample (not a culture isolate) for enterovirus PCR. Submit only 1 of the following specimens: Specimen Type: Body fluid Sources: Pericardial, peritoneal Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Swab Supplies: Culturette (BBL Culture Swab) (T092) Sources: Dermal, eye, rectal, genital, nasopharyngeal, oropharyngeal, throat, nasal, or urethral Container/Tube: Multimicrobe media (M4-RT) or similar viral transport media (M4 or M5) and Eswab Specimen Volume: Entire specimen Collection Instructions: 1. Rectal swab must have no visible fecal matter 2. Place swab back into multimicrobe media (M4-RT, M4, or M5)

Specimen Minimum Volume: Body Fluid, Spinal Fluid: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Varies	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87498

FECP 57809

Eosinophil Cationic Protein (ECP)

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is not acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 83520

EOSU1 610552

Eosinophils, Random, Urine

Specimen Requirements: Container/Tube: Unstained slide Specimen Volume: 1 slide Collection Instructions: 1. Collect a random urine specimen. 2. Centrifuge 10 mL of a random urine collection. 3. Pour off supernatant. Assess urine sediment for presence of white blood cells (WBC). If no WBCs are seen, the eosinophil test can't be performed. If WBCs are present, prepare slides using the centrifuged sediment. 4. Unstained slide should be prepared within 2 hours of collection. 5. Centrifuge urine in cytospin centrifuge at speed of 750 rpm for 5 minutes. 6. Guidelines for slide preparation. Use the sediment to prepare slides as follows: a. 150 mcL of sample for 1 to 3 WBC/high power field (hpf) b. 100 mcL of sample for moderate to normal sediment (<50 cell/hpf) c. 50 mcL of sample for heavier sediment (>50 cells/hpf) d. 25 mcL for packed fields of sediment

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Ambient (preferred)	14 days	CARTRIDGE
	Frozen	14 days	CARTRIDGE
	Refrigerated	14 days	CARTRIDGE

CPT Code Information: 85999

FEPHD 90109

Ephedrine, Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top sodium heparin tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. If specimen is not light protected foil wrap specimen to protect from light. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial. If specimen is not light protected foil wrap

specimen to protect from light.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	LIGHT PROTECTED
	Frozen	180 days	LIGHT PROTECTED
	Ambient	72 hours	LIGHT PROTECTED

CPT Code Information: 80324; G0480 (if appropriate);

EPUR 82854

Epicoccum purpurascens, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SPBX 70599

Epidermal Nerve Fiber Density Consultation, Varies

Specimen Requirements: Supplies: A Skin Punch Biopsy Kit containing fixatives, buffer, and cryoprotectant is required (no substitutions accepted). For ordering information, call 507-284-8065. Preferred: Specimen Type: Skin punch biopsy tissue Preferred source: Distal leg, mid-thigh, dorsal foot, and lower abdomen Collection Instructions: 1. The standard biopsy for evaluating distal small fiber sensory neuropathy includes two 3-mm skin punch biopsies from the same side of the body. 2. Prepare and transport specimen per instructions on the Epidermal Nerve Fiber Density Instructions (T703) in Special Instructions. Specimen Stability: Refrigerated (preferred)/Ambient Acceptable: Specimen Type: Slides Additional Information: 1. Slides reacted with PGP 9.5, using a PGP 9.5 protocol for visualizing epidermal nerve fibers, are required. 2. Hematoxylin and eosin-stained slides and Congo red-stained slides are optional. Specimen Stability: Ambient (preferred)/Refrigerated Specimen Type: Tissue block and PGP9.5-reacted slides Additional Information: 1. Slides reacted with PGP 9.5, using a PGP 9.5 protocol for visualizing epidermal nerve fibers, are required. 2. Tissue block may be used to create hematoxylin and eosin-stained slides and Congo red-stained slides. Note: Visualization of epidermal nerve fibers cannot be done on paraffin blocks. Specimen Stability: Ambient (preferred)/Refrigerated

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88305-(if appropriate); 88313-(if appropriate); 88321-(if appropriate); 88323-(if appropriate); 88323-26-(if appropriate); 88325-(if appropriate); 88348-(if appropriate); 88356-(if appropriate); 88342-(if appropriate);

FEPI 57960

Epidermophyton floccosum IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

EPS2 92118

Epilepsy, Autoimmune Evaluation, Serum

Specimen Requirements: Patient Preparation: 1. For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication or intravenous immunoglobulin (IVIg) treatment. 2. This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed, or canceled if radioactivity remains. 3. Patient should have no general anesthetic or muscle-relaxant drugs in the previous 24 hours. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 4 mL

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255 x 16; 86341 ; 83519-ARBI (if appropriate); 84182-AGNBS (if appropriate); 86256-AMPIS (if appropriate); 84182-AMIBS (if appropriate); 84182-AN1BS (if appropriate); 84182-AN2BS (if appropriate); 84182-CRMWS (if appropriate); 86255-DPPCS (if appropriate); 86256-DPPTS (if appropriate); 86256-GABIS (if appropriate); 86255-GFACS (if appropriate); 86256-GFATS (if appropriate); 86255-GL1CS (if appropriate); 86256-GL1TS (if appropriate); 86256-NMDIS (if appropriate); 84182-PC1BS (if appropriate); 84182-PCTBS (if appropriate); 86255-PCABP (if appropriate);

EPC2 92119

Epilepsy, Autoimmune Evaluation, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255x16; 86341 x1; 84182-AGNBC (if appropriate); 86256-AMPIC (if appropriate); 84182-AMIBC (if appropriate); 84182-AN1BC (if appropriate); 84182-AN2BC (if appropriate); 84182-CRMWC (if appropriate); 86255-DPPCC (if appropriate); 86256-DPPTC (if appropriate); 86256-GABIC (if appropriate); 86255-GFACC (if appropriate); 86256-GFATC (if appropriate); 86255-GL1CC (if appropriate); 86256-GL1TC (if appropriate); 86256-NMDIC (if appropriate); 84182-PC1BC (if appropriate); 84182-PCTBC (if appropriate); 86255-PCA1C (if appropriate);

ESPAN 603346

Epilepsy/Seizure Genetic Panels by Next-Generation Sequencing (NGS), Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81185 (if appropriate); 81189 (if appropriate); 81302 (if appropriate); 81403 (if appropriate); 81404 (if appropriate); 81405 (if appropriate); 81406 (if appropriate); 81407 (if appropriate); 81408 (if appropriate); 81443 (if appropriate); 81479 (if appropriate);

EPIP1 81709

Epithelia Panel # 1, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

EPIP2 81881

Epithelia Panel # 2, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

EMAI 70424

Epithelial Membrane Antigen (EMA) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

EBNA2 71487

Epstein Barr Nuclear Antigen 2 (EBNA2) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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TECHONLY	Ambient (preferred)
	Refrigerated

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LMP1 70502

Epstein Barr Virus Latency Membrane Protein 1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SEBV 84421

Epstein-Barr Virus (EBV) Antibody Profile, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86664-EBNA; 86665 x 2-VCA, IgG and IgM;

EBV 70469

Epstein-Barr Virus (EBV) In Situ Hybridization, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 4 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		

Refrigerated

CPT Code Information: 88365-TC, primary; 88364-TC, if additional ISH;

EBVE 56104

Epstein-Barr Virus (EBV), IgG Antibody to Early Antigen, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86663

LEBV 81239

Epstein-Barr Virus (EBV), Molecular Detection, PCR, Varies

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Specimen Type: Fluid Sources: Spinal fluid, sterile body fluids (peritoneal fluid/ascites, pericardial fluid, pleural fluid/thoracentesis, amniotic, or ocular Preferred: Sterile screw-cap 5-mL aliquot tube Acceptable: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Supplies: Aliquot Tube, 5 mL (T465) Specimen Type: Fluid Sources: Respiratory; bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate Container/Tube: Preferred: Sterile screw-cap 5-mL aliquot tube Acceptable: Sterile container Specimen Volume: 1.5 mL Supplies: -Culturette (BBL Culture Swab) (T092) -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Specimen Type: Swab Sources: Eye swabs and upper respiratory swabs (nasal, throat) Container/Tube: Multimicrobe media (M4-RT) and Eswabs Collection Instructions: Place swab back into multimicrobe media (M4-RT, M4 or M5) Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) only Specimen Volume: 0.5 mL Additional Information: Clotted specimens will be rejected. Supplies: -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Specimen Type: Tissue Sources: Brain, colon, kidney, liver, lung, etc. Preferred: Multimicrobe medium (M4-RT) Acceptable: Sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT, M4 or M5) Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue.

Specimen Minimum Volume: Body Fluid, Ocular Fluid, Spinal Fluid: 0.3 mL Respiratory Specimens: 1 mL Tissue: 2 x 2-mm biopsy

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

EBVQU
65754**Epstein-Barr Virus DNA Detection and Quantification, Plasma**

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions. 2. Pour off plasma into aliquot tube.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	30 days	
	Refrigerated	7 days	

CPT Code Information: 87799

ERG
70426**ERG Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

REVE1
608093**Erythrocytosis Evaluation, Whole Blood**

Specimen Requirements: A total of 3 specimens are required to perform this profile. The following specimens are required for testing: -Whole blood EDTA -Whole blood sodium heparin for P50* -Normal shipping control: Whole blood sodium heparin for P50* *Please note: If no sodium heparin patient or control specimens are received, the P50 test cannot be performed. Patient: Container/Tube: Lavender top (EDTA) and green top (heparin) Specimen Volume: EDTA: 5 mL Heparin: 4 mL Collection Instructions: 1. Immediately refrigerate specimens after collection. 2. Send specimen in original tube. Do not aliquot. 3. Rubber band patient specimen and control vial together. Normal Shipping Control: Container/Tube: Green top (heparin) Specimen Volume: 4 mL Collection Instructions: 1. Collect a control specimen from a normal (healthy), unrelated, nonsmoking person at the same time as the patient. 2. Label clearly on outermost label normal control. 3. Immediately refrigerate specimen after collection. 4. Send specimen in original tube. Do not aliquot. 5. Rubber band patient specimen and control vial together.

Specimen Minimum Volume: EDTA Blood: 2.5 mL Heparin Blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Control	Refrigerated	72 hours	GREEN TOP/HEP

WB Sodium Heparin	Refrigerated	72 hours	GREEN TOP/HEP
Whole Blood EDTA	Refrigerated	72 hours	

CPT Code Information: 83020-26-Erythrocytosis Interpretation; 83020-Hemoglobin Electrophoresis; 83021-HPLC Hb Variant; 82820-Hemoglobin O2 affinity (p50); 83789-Hemoglobin Variant by Mass Spectroscopy (MS), Blood; 83068 (if appropriate); 82664 (if appropriate); 88184 (if appropriate);

REVEI 608426

Erythrocytosis Interpretation

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	72 hours	

CPT Code Information: 83020-26

REVE0 608094

Erythrocytosis Summary Interpretation

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated		

EPOR 61679

Erythropoietin Receptor (EPOR) Gene, Exon 8 Sequencing, Whole Blood

Specimen Requirements: Only orderable as part of a profile. For more information see HEMP / Hereditary Erythrocytosis Mutations, Whole Blood.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	30 days	
	Ambient	14 days	

CPT Code Information: 81479-Unlisted molecular pathology procedure

EPO 80173

Erythropoietin, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: Morning collection, 7:30 a.m.-12 p.m. is preferred due to diurnal variation. For more information see Cautions.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	7 days	

CPT Code Information: 82668**E157C**
606219**Escherichia coli O157:H7 Culture, Feces**

Specimen Requirements: Patient Preparation: Medications: Do not use barium or bismuth before collection of specimen. Supplies: C and S Vial (T058) Specimen Type: Preserved Feces Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Fecal	Ambient (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 87046-Escherichia coli O157:H7 Culture, Stool-with isolation and preliminary examination; 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87147-Serologic Agglut Method 2 Ident (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate);

FFES
91215**Estradiol Free, Serum (includes Estradiol and SHBG)**

Specimen Requirements: Draw blood in a plain red-top tube (serum gel tube is not acceptable). Spin down, pour off into plastic vial within 1 hour of collection, and send 3 mL serum frozen.

Specimen Minimum Volume: 1.5 mL Note: This volume does not allow for repeat testing.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen (preferred)	180 days	
	Ambient	48 hours	
	Refrigerated	48 hours	

CPT Code Information: 82681 - Free Estradiol; 84270 - Sex Hormone binding globulin; 82670 - Estradiol;

ESTS 8575

Estradiol, Rapid, Immunoassay, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	180 days	
	Refrigerated	5 days	
	Ambient	24 hours	

CPT Code Information: 82670

EEST 81816

Estradiol, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. Centrifuge and remove serum from red blood cells within 2 hours of draw. 2. Aliquot serum to submission container. Additional Information: See Steroid Pathways in Special Instructions.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82670

UE3 81711

Estriol, Unconjugated, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.6 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82677

ESR1
65414

Estrogen Receptor 1 (ESR1) Mutation Analysis, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area: tissue 36 mm(2). -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. In this document, the sizes are given as 4mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3mm x 1mm x 10 slides: approximate/equivalent to 36mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and cover slipped with a preferred total minimum of 5000 total nucleated cells, minimum of 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81479; 88381;

ERBE1
71485

Estrogen Receptor Beta-1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

ESTR
70427

Estrogen Receptor Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen

Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

ERPR 70589

Estrogen/Progesterone Receptor, Semi-Quantitative Immunohistochemistry, Manual

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Breast carcinoma Preferred: A paraffin-embedded tissue block containing in-situ, invasive or metastatic breast carcinoma tissue that has been fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total of 6 to 72 hours and shipped at ambient temperature Acceptable: 3 unstained sections, containing carcinoma, on charged slides cut at 4 microns <1 month ago and shipped at ambient temperature Collection Instructions: Submit paraffin-embedded carcinoma tissue Specimen Type: Non-breast carcinoma Preferred: A paraffin-embedded tissue block containing carcinoma tissue that has been fixed in 10% neutral buffered formalin and shipped at ambient temperature Acceptable: 3 unstained sections, containing carcinoma, on charged slides cut at 4 microns <1 month ago and shipped at ambient temperature Collection Instructions: Submit paraffin-embedded carcinoma tissue Additional Information: 1. According to the American Society of Clinical Oncology (ASCO)/College of American Pathologists (CAP) guidelines, estrogen/progesterone receptor protein immunohistochemical test results are only valid for nondecalfied, paraffin-embedded specimens fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total time of 6 to 72 hours. Delay to fixation, under- or overfixation may affect these results. 2. Paraffin blocks will be returned with final report.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88360 x 2

ESTF 84230

Estrogens, Estrone (E1) and Estradiol (E2), Fractionated, Serum

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST is not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: Centrifuge and aliquot serum in plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	

Ambient	28 days
Frozen	28 days

CPT Code Information: 82670-Estradiol; 82679-Estrone; ; When performed together as test ESTF;; 82671 Estrogens, fractionated;

E1 81418

Estrone, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. Centrifuge and remove serum from red blood cells within 2 hours of draw. 2. Aliquot serum to submission container. Additional Information: See Steroid Pathways in Special Instructions.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82679

ALC 8264

Ethanol, Blood

Specimen Requirements: Container/Tube: Preferred: Grey top (potassium oxalate/sodium fluoride) Acceptable: Any anticoagulant Specimen Volume: 2 mL Collection Instructions: Specimen must be sent in original tube.

Specimen Minimum Volume: 0.5 mL or amount to fill 1 tube

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood NaFI-KOx	Refrigerated (preferred)	72 hours	
	Frozen	14 days	
	Ambient	24 hours	

CPT Code Information: 80320; G0480 (if appropriate);

ALCX 62709

Ethanol, Chain of Custody, Blood

Specimen Requirements: Supplies: Chain-of-Custody Kit (T282) Container/Tube: Chain-of-Custody Kit (T282) containing the specimen container seals and documentation required. Preferred: Grey top (potassium oxalate/sodium fluoride) Acceptable: Any anticoagulant Specimen Volume: 2 mL Collection Instructions: 1. Do not use alcohol to clean arm. Use alternative such as Betadine to cleanse arm before collecting any specimen for volatile testing. 2. Specimen must be sent in original tube. Collect specimen, seal, and submit with the associated documentation to satisfy the legal

requirements for chain-of-custody testing.

Specimen Minimum Volume: 0.5 mL or amount to fill 1 tube

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood NaFl-KOx	Refrigerated (preferred)	72 hours	
	Frozen	14 days	
	Ambient	24 hours	

CPT Code Information: 80320; G0480 (if appropriate);

ETX 8769

Ethosuximide, Serum

Specimen Requirements: Preferred: Serum gel Acceptable: Red top Submission
Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 80168

ETHO 80449

Ethotoin (Peganone)

Specimen Requirements: Submit only 1 of the following specimens Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in plastic vial. Serum Draw in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80339

ETGX
63418**Ethyl Glucuronide Confirmation, Chain of Custody, Random, Urine**

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain of Custody Kit (T282) containing the specimen containers, seals, and documentation required. Specimen Volume: 20 mL Collection Instructions: Collect specimen in the provided container, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting <20 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80307; 80321 (if appropriate);

ETGC
63421**Ethyl Glucuronide Confirmation, Random, Urine**

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Aliquot Tube, 5 mL (T465) Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 5 mL in 1 plastic bottle. 3. If submitting for multiple tests on 1 order, submit 5 mL per test ordered in a single plastic container. 4. No preservative. Additional Information: 3. For additional information, refer to ADULT / Adulterants Survey, Urine. 4. Submitting <5 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80321; G0480 (if appropriate)

ETGR
63419**Ethyl Glucuronide Screen with Reflex, Random, Urine**

Specimen Requirements: Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 20 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody testing, order ETGX / Ethyl Glucuronide Confirmation, Chain of Custody, Urine. 2. If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADULU / Adulterants Survey, Urine or ADULT / Adulterants Survey, Urine. 3. For additional information, refer to ADULU / Adulterants Survey, Urine or ADULT / Adulterants Survey, Urine.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80307**ETGS**
63420**Ethyl Glucuronide Screen, Random, Urine**

Specimen Requirements: Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 20 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody testing, order ETGX / Ethyl Glucuronide Confirmation, Chain of Custody, Urine. 2. If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADULU / Adulterants Survey, Urine or ADULT / Adulterants Survey, Urine. 3. For additional information, refer to ADULU / Adulterants Survey, Urine or ADULT / Adulterants Survey, Urine.

Specimen Minimum Volume: 2.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80307**FEGUC**
75521**Ethyl Glucuronide Screen, Umbilical Cord Tissue**

Specimen Requirements: Specimen Type: Umbilical Cord Tissue Container/Tube: Plastic, preservative-free container Specimen Volume: 10 grams Collection Instructions: Ensure sample is not exposed to ethanol-containing vapors or liquids during collection and storage. Collect at least 6 inches of umbilical cord (approximately the length of an adult hand). Drain and discard any blood. Rinse the exterior of the cord segment with normal saline or sterile water. Pat the cord dry and place in container for transport. Ship refrigerated in a preservative-free, plastic container. Unacceptable Specimens: Cords soaking in blood or other fluid. Formalin fixed. Tissue that is obviously decomposed. Samples received without cold pack.

Specimen Minimum Volume: 10 grams**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Tissue	Refrigerated (preferred)	7 days	
	Ambient	7 days	

Frozen

7 days

CPT Code Information: 80307**ETGL**
8749**Ethylene Glycol, Serum**

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80320; G0480 (if appropriate);

EOXD
82767**Ethylene Oxide, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

ETVBF
64338**ETV6 (12p13.2) Rearrangement, FISH**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Green top (sodium heparin) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1-2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Varies	Ambient (preferred)
	Refrigerated

CPT Code Information: 88271x2, 88291 - DNA probe, each (first probe set), Interpretation and report; 88271x2 - DNA probe, each; each additional probe set (if appropriate); 88271x1 - DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 - DNA probe, each; coverage for sets containing 4 probes (if appropriate); ; 88271x3 - DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 - Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 - Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 - Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

ETV6F 63433

ETV6 (12p13.2) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Specimen Type: Slides Specimen Volume: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: Two consecutive, unstained, 5- micron- thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 - DNA probe, each (first probe set), Interpretation and report; 88271x2 - DNA probe, each; each additional probe set (if appropriate); 88271x1 - DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 - DNA probe, each; coverage for sets containing 4 probes (if appropriate); ; 88271x3 - DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 - Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 - Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 - Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

EUCL 82758

Eucalyptus, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FECLT 57810

Euglobulin Clot Lysis Time

Specimen Requirements: Collect blood in 3.2% sodium citrate light blue top tube. Centrifuge within 30 minutes after collection, freeze immediately. Send 2 mL platelet-poor plasma in plastic vial frozen. Note: 1. Prohibit exercise prior to drawing sample. 2. To avoid release of plasminogen activator, do not massage vein vigorously, pump fist excessively or leave tourniquet in place for a prolonged period.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	21 days	

CPT Code Information: 85360

EMAY 82846

Euroglyphus maynei, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

EHOR 82662

European Hornet, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

EVROL 35146

Everolimus, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL

Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Do not centrifuge. 3. Send specimen in original tube. Additional Information: Therapeutic range applies to trough specimens drawn immediately prior to a.m. dose.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 80169

EWSF 35268

Ewing Sarcoma, 22q12 (EWSR1) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2 88291 - DNA probe, each (first probe set), Interpretation and report; 88271x2 - DNA probe, each; each additional probe set (if appropriate); 88271x1 - DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 - DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 - DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 - Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 - Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275 - Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

FEBGP 75552

Exotic Bird Panel IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	

Frozen	28 days
Ambient	7 days

CPT Code Information: 86001 x4

FACT 61620

F-Actin Ab, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516

F12NG 64865

F12 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or green top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Provide indication of volume and concentration of the DNA. Specimen Stability: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 100 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Frozen	14 days	
	Refrigerated	7 days	

CPT Code Information: 81479

F13NG 64866

F13A1 and F13B Genes, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or green top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Provide volume and concentration of the DNA. Specimen Stability: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 100 mcL at 50 ng/mL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Frozen	14 days	
	Refrigerated	7 days	

CPT Code Information: 81479

F2NGS
65167

F2 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or green top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Provide indication of volume and concentration of the DNA. Specimen Stability: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 100 mcL at 50 ng/mL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Frozen	14 days	
	Refrigerated	7 days	

CPT Code Information: 81479

F2ISO
607698

F2-Isoprostanes, Random, Urine

Specimen Requirements: Patient Preparation: Patient should not have taken nonsteroidal anti-inflammatory drugs within 72 hours or aspirin within 2 weeks prior to collection of a specimen. Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 82542

F5NGS

65166

F5 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or green top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Provide indication of volume and concentration of the DNA. Specimen Stability: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 100 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Frozen	14 days	
	Refrigerated	7 days	

CPT Code Information: 81479

FABRZ

35415

Fabry Disease, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) tube or yellow top (ACD) tube Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches-3 mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81405-GLA (galactosidase, alpha) (eg, Fabry disease), full gene sequence

FC13A 70428

Factor 13a Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FACR8 70430

Factor 8 Related Antigen Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

2INHE 607427

Factor II Inhibitor Evaluation, Plasma

Specimen Requirements: Patient Preparation: 1. Patient must not be receiving Coumadin (warfarin) or heparin therapy 2. Fasting preferred Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vials Specimen Volume: 3 mL in 3 plastic vials each containing 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot 1-2 mL of plasma into 3 separate plastic vials leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 2 mL in 2 plastic vials, 1 mL each

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Plasma Na Cit	Frozen	14 days
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CPT Code Information: 85390 - Factor II Tech Interp; 85210 - Factor II; 85335 - Factor inhibitor (if appropriate); 85335 - Bethesda units (if appropriate); 85390 - Factor II Professional Interp (if appropriate);

2AINH 607445

Factor II Inhibitor Profile, Professional Interpretation

Specimen Requirements: Only orderable as a reflex. For more information see 2INHE / Factor II Inhibitor Evaluation, Plasma.

Specimen Minimum Volume: Only orderable as a reflex. For more information see 2INHE / Factor II Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-26

2INHT 607438

Factor II Inhibitor Profile, Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see 2INHE / Factor II Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390

F2_IS 7806

Factor II Inhibitor Screen, Plasma

Specimen Requirements: Only orderable as part of a profile. For more information see: 2INHE / Factor II Inhibitor Evaluation, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions: Guidelines for Specimen Handling and Processing.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85335

9INHE 607425

Factor IX Inhibitor Evaluation, Plasma

Specimen Requirements: Patient Preparation: 1. Patient must not be receiving Coumadin (warfarin) or heparin therapy 2. Fasting preferred Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: 3 Plastic vials Specimen Volume: 3 mL in 3 plastic vials, each containing 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma (1-2 mL per aliquot) into 3 separate plastic vials, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 2 mL plasma in 2 plastic vials, 1 mL each

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-Factor IX Tech Interp; 85250-Factor IX activity assay; 85335-Bethesda titer (if appropriate); 85335-Factor IX inhibitor screen (if appropriate); 85390-Factor IX Professional Interp (if appropriate);

9INHT 607436

Factor IX Inhibitor Profile Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see 9INHE / Factor IX Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390

9AINH 607443

Factor IX Inhibitor Profile, Professional Interpretation

Specimen Requirements: Only orderable as a reflex. For more information see 9INHE / Factor IX Inhibitor Evaluation, Plasma

Specimen Minimum Volume: Only orderable as a reflex. For more information see 9INHE / Factor IX Inhibitor Evaluation, Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-26

F9_IS 7802

Factor IX Inhibitor Screen, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: 9INHE / Factor IX Inhibitor Evaluation, Plasma ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions: Guidelines for Specimen Handling and Processing.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85335

FC9K 83310

Factor IX Known Mutation Sequencing

Specimen Requirements: Only orderable as a reflex at order entry for unit code FIXKM / Hemophilia B, Factor IX Gene Known Mutation Screening (Carrier Detection).

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information:

5BETH 607433

Factor V Bethesda Units, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma 5INHE / Factor V Inhibitor Evaluation, Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85335

5INHE 607426

Factor V Inhibitor Evaluation, Plasma

Specimen Requirements: Patient Preparation: 1. Patient must not be receiving Coumadin (warfarin) or heparin therapy 2. Fasting preferred Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: 3 Plastic vials Specimen Volume: 3 mL in 3 plastic vials, each containing 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma (1-2 mL per aliquot) into 3 separate plastic vials, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately

(no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 2 mL in 2 plastic vials, 1 mL each

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-Factor V Tech Interp; 85220-Factor V; 85335-Factor inhibitor (if appropriate); 85335-Factor V Bethesda units (if appropriate); 85390-Factor V Professional Interp (if appropriate);

5AINH 607444

Factor V Inhibitor Profile, Professional Interpretation

Specimen Requirements: Only orderable as a reflex. For more information see 5INHE / Factor V Inhibitor Evaluation, Plasma.

Specimen Minimum Volume: Only orderable as a reflex. For more information see 5INHE / Factor V Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-26

5INHT 607437

Factor V Inhibitor Profile, Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see 5INHE / Factor V Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390

F5_IS 7808

Factor V Inhibitor Screen, Plasma

Specimen Requirements: Only orderable as part of a profile. For more information see: 5INHE / Factor V Inhibitor Evaluation, Plasma ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions: Guidelines for Specimen Handling and Processing.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85335

F5DNA 81419

Factor V Leiden (R506Q) Mutation, Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD solution B), light-blue top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	14 days	
	Frozen	14 days	
	Refrigerated	14 days	

CPT Code Information: 81241-F5 (coagulation factor V) (eg, hereditary hypercoagulability) gene analysis, Leiden variant ; ;

F7NGS 65165

Factor VII Deficiency, F7 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or green top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Provide indication of volume and concentration of the DNA. Specimen Stability: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 100 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Frozen	14 days	
	Refrigerated	7 days	

CPT Code Information: 81479

7INHE

Factor VII Inhibitor Evaluation, Plasma

Specimen Requirements: Patient Preparation: 1. Patient must not be receiving Coumadin (warfarin) or heparin therapy. 2. Fasting preferred Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL in 3 plastic vials, each containing 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma (1-2 mL per aliquot) into 3 separate plastic vials leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 2 mL in 2 plastic vials, 1 mL each

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-FVII Tech Interp; 85230-Factor VII; 85335-Factor inhibitor (if appropriate); 85335-Bethesda units (if appropriate); 85390-Factor VII Professional interp (if appropriate);

7AINH
607446

Factor VII Inhibitor Profile, Professional Interpretation

Specimen Requirements: Only orderable as a reflex. For more information see 7INHE / Factor VII Inhibitor Evaluation, Plasma.

Specimen Minimum Volume: Only orderable as a reflex. For more information see 7INHE / Factor VII Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-26

7INHT
607439

Factor VII Inhibitor Profile, Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see 7INHE / Factor VII Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390

F7_IS 7810

Factor VII Inhibitor Screen, Plasma

Specimen Requirements: Only orderable as part of a profile. For more information see: 7INHE / Factor VII Inhibitor Evaluation, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions: Guidelines for Specimen Handling and Processing.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85335

8INHE 607424

Factor VIII Inhibitor Evaluation, Plasma

Specimen Requirements: Patient Preparation: 1. Patient must not be receiving Coumadin (warfarin) or heparin therapy 2. Fasting preferred Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL in 3 plastic vials; each vial containing 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma (1-2 mL per aliquot) into 3 separate plastic vials, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 2 mL in 2 plastic vials, 1 mL each

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-Factor VIII Tech Interp; 85240-Factor VIII activity assay; 85335-Bethesda titer (if appropriate); 85335-Factor VIII inhibitor screen (if appropriate); 85390-Factor VIII Professional Interp (if appropriate);

8AINH 607442

Factor VIII Inhibitor Profile, Professional Interpretation

Specimen Requirements: Only orderable as a reflex. For more information see 8INHE / Factor VIII Inhibitor Evaluation, Plasma.

Specimen Minimum Volume: Only orderable as a reflex. For more information see 8INHE / Factor VIII Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-26

8INHHT
607435

Factor VIII Inhibitor Profile, Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see 8INHE / Factor VIII Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390

F10NG
65163

Factor X Deficiency, F10 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or blue top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Provide indication of volume and concentration of the DNA. Specimen Stability: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 100 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Frozen	14 days	
	Refrigerated	7 days	

CPT Code Information: 81479

10INE
607429

Factor X Inhibitor Evaluation, Plasma

Specimen Requirements: Patient Preparation: 1. Patient must not be receiving Coumadin (warfarin) or heparin therapy 2. Fasting preferred Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: 3 Plastic vials Specimen Volume: 3 mL in 3 plastic vials, each containing 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma (1-2 mL per aliquot) into 3 separate plastic vials, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 2 mL plasma in 2 plastic vials, 1 mL each

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-Factor X Tech Interp; 85260-Factor X Assay; 85335-Factor X inhibitor Scrn (if appropriate); 85335-Bethesda units (if appropriate); 85390-Factor X Professional Interp (if appropriate);

10AIH 607447

Factor X Inhibitor Profile, Professional Interpretation

Specimen Requirements: Only orderable as a reflex. For more information see 10INE / Factor X Inhibitor Evaluation, Plasma.

Specimen Minimum Volume: Only orderable as a reflex. For more information see 10INE / Factor X Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-26

10INT 607440

Factor X Inhibitor Profile, Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see 10INE / Factor X Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390

10_IS 7812

Factor X Inhibitor Screen, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: 10INE / Factor X Inhibitor Evaluation, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions: Guidelines for Specimen Handling and Processing.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85335**11INE**
607430**Factor XI Inhibitor Evaluation, Plasma**

Specimen Requirements: Patient Preparation: 1. Patient should not be receiving Coumadin (warfarin), heparin, direct thrombin inhibitors (argatroban, dabigatran), or direct factor Xa inhibitors (apixaban, rivaroxaban, and edoxaban). 2. Fasting preferred. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: 3 Plastic vials Specimen Volume: 3 mL in 3 plastic vials, each containing 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma (1-2 mL per aliquot) into 3 separate plastic vials, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 2 mL plasma in 2 plastic vials, 1 mL each

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-Factor XI Tech Interp; 85270-Factor XI Assay; 85335-Factor inhibitor Scrn (if appropriate); 85335-Bethesda units (if appropriate); 85390-Factor XI Professional Interp (if appropriate);

11AIH
607448**Factor XI Inhibitor Profile, Professional Interpretation**

Specimen Requirements: Only orderable as a reflex. For more information see 11INE / Factor XI Inhibitor Evaluation, Plasma.

Specimen Minimum Volume: Only orderable as a reflex. For more information see 11INE / Factor XI Inhibitor Evaluation, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-26

11INT
607441**Factor XI Inhibitor Profile, Technical Interpretation**

Specimen Requirements: Only orderable as part of a profile. For more information see 11INE / Factor XI Inhibitor Evaluation, Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390

11_IS
7804

Factor XI Inhibitor Screen, Plasma

Specimen Requirements: Only orderable as part of a profile. For more information see: 11INE / Factor XI Inhibitor Evaluation, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions: Guidelines for Specimen Handling and Processing.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85335

FXIII
9068

Factor XIII (13), Screen, Plasma

Specimen Requirements: Only orderable as part of a profile. For more information see ALBLD / Bleeding Diathesis Profile, Limited, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85291

FFX3F
75567

Factor XIII, Functional

Specimen Requirements: Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL platelet-poor plasma, in plastic vial Collection Instructions: Draw blood into a 3.2% sodium citrate (light blue-top) tube. Centrifuge light blue-top tube 15 minutes at approx. 1500 g within 60 minutes of collection. Using a plastic pipette, remove plasma, taking care to avoid the WBC/platelet buffy layer and place into a plastic vial. Centrifuge a second time and transfer platelet-poor plasma into a new plastic vial. Plasma must be free of platelets (<10,000/mcl). Freeze immediately, ship frozen. Note: Note oral anticoagulant therapy

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85290

FX13M

57302

Factor XIII, Qualitative, with Reflex to Factor XIII 1:1 Mix

Specimen Requirements: Specimen Type: Citrated plasma Collection Container/Tube: Light-blue top (3.2 % sodium citrate) Specimen Volume: 2 mL Collection Instructions: Draw blood in a light blue-top (3.2 % Sodium citrate) tube(s). Spin down immediately and send 2 mL platelet poor citrated plasma frozen in a plastic vial. Note: Critical frozen. Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85291/Factor XIII; 85291/1:1 Mix (if appropriate);

FRW

82684

False Ragweed, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FDP

35419

Familial Dysautonomia, Mutation Analysis, IVS20(+6T>C) and R696P, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 2.6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated/Frozen Prenatal Specimens Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Blood: 0.5 mL Amniotic Fluid: 10 mL Chorionic Villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81260-IKBPAP (inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase complex-associated protein) (eg, familial dysautonomia) gene analysis, common variants (eg, 2507+6T>C, R696P); ; 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells (if appropriate); ; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate) ; 88235-Tissue culture for amniotic fluid (if appropriate) ; 88240-Cryopreservation (if appropriate);

FHRGP 65748

Familial Hypercholesterolemia and Related Disorders Multi-Gene Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479; 81406 x 2; 81407;

FMTT 63032

Familial Mutation, Targeted Testing, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimen types: Preferred: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Whatman FTA Classic paper, Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 2 to 5 blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient 1 year of age or older is a fingerstick. For infants younger than 1 year, a heel stick should be used. See Dried Blood Spot Collection Tutorial for how to collect blood spots via fingerstick: <https://vimeo.com/508490782> 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks

Additional Information: Indicate the tests to be performed on the fibroblast culture cells. A separate culture charge will be assessed under FIBR / Fibroblast Culture, Tissue. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. **Specimen Stability Information:** Ambient (preferred)/Refrigerated <24 hours **Specimen Type:** Skin biopsy **Supplies:** Fibroblast Biopsy Transport Media (T115) **Container/Tube:** Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. **Specimen Volume:** 4-mm punch **Additional Information:** A separate culture charge will be assessed under FIBR / Fibroblast Culture, Tissue. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. **Specimen Stability Information:** Refrigerated (preferred)/Ambient **Specimen Type:** Cord blood **Container/Tube:** Lavender top (EDTA) **Specimen Volume:** 3 mL **Collection Instructions:** 1. Send specimen in original tube 2. Label specimen as cord blood **Specimen Stability Information:** Ambient (preferred) 4 days/Refrigerated 14 days **Specimen Type:** Extracted DNA **Container/Tube:** 2 mL screw top tube **Specimen Volume:** 100 mcL (microliters) **Collection Instructions:** 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL. 2. Include concentration and volume on tube. **Specimen Stability Information:** Frozen (preferred)/Ambient/Refrigerated **Prenatal Specimens** Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. **Specimen Type:** Amniotic fluid **Container/Tube:** Amniotic fluid container **Specimen Volume:** 20 mL **Additional Information:** A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. **Specimen Stability Information:** Refrigerated (preferred)/Ambient **Specimen Type:** Cultured amniocytes **Container/Tube:** T-25 flask **Specimen Volume:** 2 Full flasks **Collection Instructions:** Submit confluent cultured cells from another laboratory. **Specimen Stability Information:** Ambient (preferred)/Refrigerated **Specimen Type:** Chorionic villi **Container/Tube:** 15-mL tube containing 15-mL of transport media **Specimen Volume:** 20 mg **Additional Information:** A separate culture charge will be assessed under CULFB / Fibroblast Culture for Genetic Testing. **Specimen Stability Information:** Refrigerated **Specimen Type:** Cultured chorionic villi **Container/Tube:** T-25 flasks **Specimen Volume:** 2 Full flasks **Collection Instructions:** Submit confluent cultured cells from another laboratory. **Specimen Stability Information:** Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Amniotic Fluid: 10 mL Blood: 1 mL Chorionic Villi: 10 mg
Blood Spots: 2

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

FANCP 35416

Fanconi Anemia C Mutation Analysis, IVS4(+4)A->T and 322delG, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: **Specimen Type:** Whole blood **Container/Tube:** Preferred: Yellow top (ACD) or lavender top (EDTA) Acceptable: Any anticoagulant **Specimen Volume:** 2.6 mL **Collection Instructions:** 1. Invert several times to mix blood. 2. Send specimen in original tube. **Specimen Stability Information:** Ambient (preferred)/Refrigerated/Frozen **Prenatal Specimens** Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. **Specimen Type:** Amniotic fluid **Container/Tube:** Amniotic fluid container **Specimen Volume:** 20 mL **Specimen Stability Information:** Refrigerated (preferred)/Ambient **Specimen Type:** Chorionic villi **Container/Tube:** 15 mL tube containing 15 mL of transport media **Specimen Volume:** 20 mg **Specimen Stability Information:** Refrigerated Acceptable: **Specimen Type:** Confluent cultured cells **Container/Tube:** T-25 flask **Specimen Volume:** 2 flasks **Collection Instructions:** Submit confluent cultured cells from another laboratory. **Specimen Stability Information:** Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Blood: 0.5 mL; Amniotic Fluid: 10 mL; Chorionic Villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81242-FANCC (Fanconi anemia, complementation group C) (eg, Fanconi anemia, type C) gene analysis, common variant (eg, IVS4+4A->T); ; Fibroblast Culture for Genetic Test; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); ; Amniotic Fluid Culture/Genetic Test; 88235-Tissue culture for amniotic fluid (if appropriate); 88240-Cryopreservation (if appropriate); ; Maternal Cell Contamination, B; 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells (if appropriate);

FASC 70431

Fascin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FATF 607701

Fat, Feces

Specimen Requirements: Patient Preparation: 1. For 3 days prior to and during the collection period: a. Patient should be on a fat-controlled diet (100-150 g fat per day). b. No laxatives (particularly mineral oil and castor oil). c. No synthetic fat substitutes (eg, Olestra) or fat-blocking nutritional supplements. 2. The use of diaper rash ointments will falsely elevate test results. Discontinue use during collection period. 3. Barium interferes with test procedure; a waiting period of 48 hours before stool collection analysis is recommended. Supplies: Stool Containers - 24, 48, 72 Hour Kit (T291) Container/Tube: Stool container complies with shipping requirements, do not use other containers. Specimen Volume: Preferred: Entire 48-, or 72-hour collection Acceptable: Entire 24-hour or random collection Collection Instructions: 1. All containers must be sent together. 2. The entire collection must contain at least 5 g of feces. 3. For a random collection, a minimum of 5 g (do not send entire collection) is required. 4. The number of containers sent should be indicated on the labels (1 of 4, for example). Additional Information: 1. Patient can store sample at refrigerate temperature during collection period. 2. A separate order and collection should take place if stool bicarbonate, calcium, chloride, magnesium, osmolality, pH, potassium, sodium, or any microbiology testing is desired.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	180 days	

Refrigerated

180 days

CPT Code Information: 82710**HFAOP**
608028**Fatty Acid Oxidation Gene Panel, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443**FAO**
81927**Fatty Acid Oxidation Probe Assay, Fibroblast Culture**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated 24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Varies		

CPT Code Information: 82017-Acylcarnitines; quantitative, each specimen; 88233-Fibroblast culture; 88240-Cryopreservation for biochemical studies;

PFAPC
60466**Fatty Acid Profile, Comprehensive (C8-C26), Plasma**

Specimen Requirements: Patient Preparation: 1. For nutritional assessment, patient should fast overnight (12-14 hours); for patients with a suspected fatty acid oxidation disorder, collect prior to next feeding as fasting is contraindicated. 2. Patient must not consume any alcohol for 24 hours before the specimen is collected. Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen (preferred)	92 days	
	Refrigerated	72 hours	

CPT Code Information: 82542**FAPCP**
82042**Fatty Acid Profile, Comprehensive (C8-C26), Serum**

Specimen Requirements: Patient Preparation: 1. For nutritional assessment, patient should fast overnight (12-14 hours); for patients with a suspected fatty acid oxidation disorder, collect prior to next feeding as fasting is contraindicated. 2. Patient must not consume any alcohol for 24 hours before the specimen is collected. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.15 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	92 days	
	Refrigerated	72 hours	

CPT Code Information: 82542**PFAPE**
60464**Fatty Acid Profile, Essential, Plasma**

Specimen Requirements: Patient Preparation: 1. For nutritional assessment, patient should fast overnight (12-14 hours); for patients with a suspected fatty acid oxidation disorder, collect prior to next feeding as fasting is contraindicated. 2. Patient must not consume any alcohol for 24 hours before the specimen is collected. Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.15 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen (preferred)	92 days	
	Refrigerated	72 hours	

CPT Code Information: 82542**FAPEP**
82426**Fatty Acid Profile, Essential, Serum**

Specimen Requirements: Patient Preparation: 1. For nutritional assessment, patient should fast overnight (12-14 hours); for patients with a suspected fatty acid oxidation disorder, collect prior to next

feeding as fasting is contraindicated. 2. Patient must not consume any alcohol for 24 hours before the specimen is collected. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	92 days	
	Refrigerated	72 hours	

CPT Code Information: 82542

FAPM 81939

Fatty Acid Profile, Mitochondrial (C8-C18), Serum

Specimen Requirements: Patient Preparation: 1. For nutritional assessment, patient should fast overnight (12-14 hours); for patients with a suspected fatty acid oxidation disorder, collect prior to next feeding as fasting is contraindicated. 2. Patient must not consume any alcohol for 24 hours before the specimen is collected. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	92 days	
	Refrigerated	72 hours	

CPT Code Information: 82542

POXP 60468

Fatty Acid Profile, Peroxisomal (C22-C26), Plasma

Specimen Requirements: Patient Preparation: 1. Fasting-overnight (12-14 hours). If fasting not possible for babies or infants, collect specimen prior to next feeding. 2. Patient must not consume any alcohol for 24 hours before the specimen is collected. Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen (preferred)	92 days	
	Refrigerated	15 days	

CPT Code Information: 82726

POX
81369**Fatty Acid Profile, Peroxisomal (C22-C26), Serum**

Specimen Requirements: Patient Preparation: 1. Fasting-overnight (12-14 hours). If fasting not possible for babies or infants, collect specimen prior to next feeding. 2. Patient must not consume any alcohol for 24 hours before the specimen is collected. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	92 days	
	Refrigerated	15 days	

CPT Code Information: 82726

FBN1B
64514**FBN1 Full Gene Sequence, Varies**

Specimen Requirements: Prior Authorization is available for this test. Submit the required form with the specimen. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81408

FETH2
81880**Feather Panel # 2, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

LEU
8046

Fecal Leukocytes, Feces

Specimen Requirements: Supplies: ECOFIX Stool Transport Vial (Kit) (T219) Container/Tube: Preferred: ECOFIX preservative Acceptable: Polyvinyl alcohol (PVA) preservative Specimen Volume: Representative portion of collection Collection Instructions: 1. Collect a random fecal specimen. 2. Carefully follow instructions on container.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Ambient (preferred)	21 days	PVA OR ECOFIX
	Refrigerated	21 days	PVA OR ECOFIX

CPT Code Information: 89055

FOBT
607700

Fecal Occult Blood, Colorectal Cancer Screen, Qualitative, Immunochemical, Feces

Specimen Requirements: Supplies: Fecal Occult Blood Test Kit (T682) Container/Tube: Fecal Occult Blood Test Kit Specimen Volume: Specimen must fill the grooved portion of the sample probe Collection Instructions: 1. Collect a random stool specimen. 2. See Fecal Occult Blood Test Kit package insert for instructions. 3. Specimen must be collected in specific sample vial within 4 hours of defecation.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Refrigerated (preferred)	30 days	FOBT
	Ambient	15 days	FOBT

CPT Code Information: 82274; G0328-Government payers (if appropriate);

FELBA
80782

Felbamate (Felbatol), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	

Frozen

28 days

CPT Code Information: 80167**FNTSX**
62727**Fentanyl and Metabolite, Chain of Custody, Serum**

Specimen Requirements: Supplies: Chain-of-Custody Kit (T282) Collection Container/Tube: Red top (Serum gel/SST are not acceptable); Chain-of-Custody Kit containing the specimen seals and documentation required. Submission Container/Tube: Plastic vial Specimen Volume: 2.3 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 1.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen (preferred)	14 days	
	Refrigerated	14 days	
	Ambient	72 hours	

CPT Code Information: 80354; G0480 (if appropriate);

FENR
63061**Fentanyl Screen with Reflex, Random, Urine**

Specimen Requirements: Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 20 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody testing, order FENTX / Fentanyl with Metabolite Confirmation, Chain of Custody, Urine. 2. If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADULU / Adulterants Survey, Urine or ADULT / Adulterants Survey, Urine. 3. For additional information, refer to ADULU / Adulterants Survey, Urine or ADULT / Adulterants Survey, Urine.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80307

FENS
63060**Fentanyl Screen, Random, Urine**

Specimen Requirements: Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 20 mL in 1 plastic bottle. 3. No preservative. Additional Information:

1. For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody testing, order FENTX / Fentanyl with Metabolite Confirmation, Chain of Custody, Urine. 2. If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADULU / Adulterants Survey, Urine or ADULT / Adulterants Survey, Urine. 3. For additional information, refer to ADULU / Adulterants Survey, Urine or ADULT / Adulterants Survey, Urine.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80307

FENTX 62726

Fentanyl with Metabolite Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Container/Tube: Chain-of-Custody Kit (T282) containing the specimen containers, seals, and documentation required. Specimen Volume: 20 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting <20 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80354; G0480 (if appropriate);

FENTU 89655

Fentanyl with Metabolite Confirmation, Random, Urine

Specimen Requirements: Supplies: Plastic, 10-mL urine tube (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. No STATS are accepted for this procedure. 3. Submitting less than 3 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	

Frozen	14 days
Ambient	72 hours

CPT Code Information: 80354; G0480 (if appropriate);

FENTS 89654

Fentanyl, Serum

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable)
Submission Container/Tube: Plastic vial Specimen Volume: 2.3 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 1.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen (preferred)	28 days	
	Refrigerated	14 days	
	Ambient	72 hours	

CPT Code Information: 80354; G0480 (if appropriate);

FEEP 82143

Ferret Epithelium, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FERR 88153

Ferritin, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	7 days
	Frozen	90 days

CPT Code Information: 82728

FECHZ 35421

Ferrochelatase (FECH) Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 Blood spots on collection card (Whatman Protein Saver 903 Paper; Ahlstrom 226 filter paper; or Blood Spot Collection Card, T493) Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches-3 mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure

FMB 88841

Fetomaternal Bleed, Flow Cytometry, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: Full tube Collection Instructions: 1. Do not centrifuge. 2. Invert several times to mix blood. 3. Send specimen in original tube. Do not aliquot as aliquoting into or out of a sample tube can adversely affect test results.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	5 days	
	Ambient	5 days	

CPT Code Information: 88184-Flow cytometry, cell surface, cytoplasmic

FMBNY
30320**Fetomaternal Bleed, New York, Blood**

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: Full tube
Collection Instructions: 1. Do not centrifuge. 2. Invert several times to mix blood. 3. Send specimen in original tube. Do not aliquot as aliquoting into or out of a sample tube can adversely affect test results.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	5 days	
	Ambient	5 days	

CPT Code Information: 88184-Flow cytometry; cell surface cytoplasmic

TFGFR
608313**FGFR Mutation and Fusion Analysis, Tumor**

Specimen Requirements: This assay requires at least 10% tumor nuclei. The amount of tissue needed is dependent on a variety of preanalytical factors (eg, cellularity, ischemic time, fixation). The FFPE input required is equivalent to a 4â€“5 micron slide thickness with a total tumor surface area between 100 mm(2) and 500 mm(2) (inclusive). This can be created by combining material from multiple slides from one tissue block. Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 0154U; Slide Review; 88381;

FGF1F
58124**FGFR1 (8p11.2) Amplification, FISH, Tissue**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Tissue	Ambient (preferred)
	Refrigerated

CPT Code Information: 88271x2, 88291 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ DNA probe, each (first probe set), Interpretation and report; 88271x2 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ DNA probe, each; each additional probe set (if appropriate); 88271x1 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

FGFRF 35271

FGFR1 (8p11.2) Rearrangement, FISH

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Green top (sodium heparin) Specimen Volume: 7-10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1-2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ DNA probe, each (first probe set), Interpretation and report; 88271x2 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ DNA probe, each; each additional probe set (if appropriate); 88271x1 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\neg\hat{\text{a}}\text{€œ}$ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

FGFR2 63432

FGFR2 (10q26.1) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Specimen Type: Slides Specimen Volume: Four consecutive, unstained, 5-micron thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: Two consecutive, unstained, 5- micron- thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Tissue	Ambient (preferred)
	Refrigerated

CPT Code Information: 88271x2, 88291 - DNA probe, each (first probe set), Interpretation and report; 88271x2 - DNA probe, each; each additional probe set (if appropriate); 88271x1 - DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 - DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 - DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 - Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 - Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 - Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

MSFGN 113012 Fibrillary Glomerulonephritis Confirmation, Mass Spectrometry, Paraffin Tissue

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Formalin-fixed or B5-fixed, paraffin-embedded tissue block Collection Instructions: 1. Do not send fixed tissue slides. Testing can only be done on paraffin-embedded tissue blocks. 2. Attach the green pathology address label included in the kit to the outside of the transport container.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
AMYLOID	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 82542; 88380;

FGAZ 35423 Fibrinogen Alpha-Chain (FGA) Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81479-Unlisted molecular pathology procedure

FIBAG 64605 Fibrinogen Antigen, Plasma

Specimen Requirements: Collection Container/Tube: Light-blue top (3.2% sodium citrate at 9:1

ratio) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	72 hours	

CPT Code Information: 85385

CLFIB 602173

Fibrinogen, Clauss, Plasma

Specimen Requirements: Only orderable as part of a profile or reflex. For more information, see: ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma AATHR / Thrombophilia Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma ALUPP / Lupus Anticoagulant Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85384

FIBTP 40937

Fibrinogen, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 2. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 3. Aliquot plasma into plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 4. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen (preferred)	14 days	
	Ambient	24 hours	

CPT Code Information: 85384

CULFB

Fibroblast Culture for Genetic Testing, Tissue

35257

Current as of July 13, 2021 2:45 am CDT

800-533-1710 or 507-266-5700 or mayocliniclabs.com

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Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Autopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 4-mm diameter Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis. Specimen Type: Chorionic villi Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer the chorionic villi specimen to a Petri dish containing transport medium. 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Type: Products of conception or stillbirth Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 1 cm(3) of placenta (including 20 mg of chorionic villi) and a 1 cm(3) biopsy specimen of muscle/fascia from the thigh Collection Instructions: If a fetus cannot be specifically identified, collect 50 mg villus material or tissue that appears to be of fetal origin. Additional Information: Do not send entire fetus. Specimen Type: Skin biopsy Supplies: Hank's Solution (T132) Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline Specimen Volume: 4-mm diameter Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. A local anesthetic may be used. 5. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88233; 88240;

FIBR 8482

Fibroblast Culture, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient/Refrigerated Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes of culture media can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated/Ambient

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Varies		

CPT Code Information: 88233-Fibroblast culture; 88240-Cryopreservation for biochemical studies;

FGFRC 71483

Fibroblast Growth Factor Receptor 1 IHC, Technical Component

Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PRKAF 64777

Fibrolamellar Carcinoma, 19p13.1 (PRKACA) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Specimen Type: Slides Slides/Slide Count: Three consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271x1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274-w/modifier 52 -Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

FIBRO 38292

FibroTest-ActiTest, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber vial Specimen Volume: 3 mL Collection Instructions: 1. Centrifuge and aliquot serum within 2 hours of collection. 2. Centrifuged serum must be light protected within 4 hours of collection. It is acceptable to draw the blood and then protect it from light after centrifugation as long as it is within 4 hours of collection.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	LIGHT PROTECTED
	Frozen	14 days	LIGHT PROTECTED
	Ambient	24 hours	LIGHT PROTECTED

CPT Code Information: 81596

3FBLN 609271

Fibulin 3 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FIGE 57916

Fig (Ficus carica) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FFAG4 57875

Filaria IgG4 Antibody, ELISA

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.2 mL serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	14 days
	Frozen	30 days
	Ambient	7 days

CPT Code Information: 86682

FIL 9232

Filaria, Blood

Specimen Requirements: Container/Tube: Light-blue top (sodium citrate) Specimen Volume: 2.7 mL Collection Instructions: Certain microfilariae have a nocturnal periodicity therefore the blood specimen is best drawn at night between 10 p.m. and 2 a.m.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole Blood Na Cit	Ambient (preferred)	72 hours
	Refrigerated	72 hours

CPT Code Information: 87015; 87210;

FINCH 82146

Finch Feathers, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FANT 82698

Fire Ant, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

90 days

CPT Code Information: 86003**FBSH**
82735**Firebush (Kochia), IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**1STT1**
113397**First Trimester Maternal Screen, Serum****Specimen Requirements:** Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot within 2 hours of collection Additional Information: 1. Blood draw and ultrasound must be completed between 10 weeks, 0 days and 13 weeks, 6 days, which corresponds to a crown-rump length (CRL) range of 31 to 80 mm. 2. Initial or repeat testing is determined in the laboratory at the time of report and will be reported accordingly. To be considered a repeat test for the patient, the testing must be within the same pregnancy and trimester, with interpretable results for the same test and both tests are performed at Mayo Clinic.**Specimen Minimum Volume:** 0.75 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 81508**FFSPG**
57927**Fish and Shellfish Panel IgG****Specimen Requirements:** Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.**Specimen Minimum Volume:** 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	7 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001 x 12

FBCEL 75613

FISH, B-Cell Chronic Lymphocytic Leukemia Panel

Specimen Requirements: Submit only one of the following specimens: Whole Blood Specimen Type: Whole Blood Container/Tube: Green-top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: Collect blood in sodium heparin (green-top), send ambient Min Volume: 3 mL Bone Marrow Specimen Type: Bone Marrow Container/Tube: Green-top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: Collect bone marrow in sodium heparin (green-top) tube, send ambient. Min Volume: 1 mL

Specimen Minimum Volume: Whole Blood 3 mL Bone Marrow 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 5; 88275 x 5;

FF4QF 75630

FISH, HES/Leukemia, 4q12 Rearrangement (FIP1L1-PDGFR)

Specimen Requirements: Submit only one of the following specimens: Whole Blood Specimen Type: Whole Blood Container/Tube: Green-top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: Collect blood in sodium heparin (green-top), send ambient Min Volume: 3 mL Bone Marrow Specimen Type: Bone Marrow Container/Tube: Green-top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: Collect bone marrow in sodium heparin (green-top) tube, send ambient. Min Volume: 1 mL

Specimen Minimum Volume: Whole Blood 3 mL Bone Marrow 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 3; 88275;

FFMDS 75611

FISH, MDS/Myeloid Panel, -5/5q-, -7/7q-, +8,20q

Specimen Requirements: Submit only one of the following specimens: Whole Blood Specimen Type: Whole Blood Container/Tube: Green-top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: Draw blood in sodium heparin (green-top), send ambient Bone Marrow Specimen Type: Bone Marrow Container/Tube: Green-top (sodium heparin) Specimen Volume: 3 mL

Collection Instructions: Collect bone marrow in sodium heparin (green-top) tube, send ambient.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 6; 88275 x 3;

FFPDG 75629

FISH, PDGFRB, 5q33.1

Specimen Requirements: Submit only one of the following specimens: Whole Blood Specimen Type: Whole Blood Container/Tube: Green-top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: Collect blood in sodium heparin (green-top), send ambient Min Volume: 3 mL Bone Marrow Specimen Type: Bone Marrow Container/Tube: Green-top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: Collect bone marrow in sodium heparin (green-top) tube, send ambient. Min Volume: 1 mL

Specimen Minimum Volume: Whole Blood 3 mL Bone Marrow 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2; 88275;

FLEC 9243

Flecainide, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge within 2 hours of draw and aliquot to remove serum from spun RBCs.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80181; ;

FLI1 70432

FLI-1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FLNDR
57895

Flounder (Bothidae/Pleuronectidae Fam) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

80997

Flow Cytometry, Cell Surface, First (Bill Only)

Specimen Requirements: Only orderable by internal pathology clients. This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies			

CPT Code Information: 88184

FLT
19739

FLT3 Mutation Analysis, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collections Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 2 mL Collections Instructions: 1. Invert several times to mix bone marrow. 2. Send specimens in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability: Ambient

(preferred)/Refrigerate Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA from blood or bone marrow 2. Indicate volume and concentration of DNA on the label. Specimen Stability: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood, Bone Marrow: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	7 days	

CPT Code Information: 81245-FLT3 ITD mutation detection. CPT Code Description: FLT3 (fms-related tyrosine kinase) (eg, acute myeloid leukemia), gene analysis, internal tandem duplication (ITD) variants (ie, exons 14, 15); 81246-FLT3 (fms-related tyrosine kinase 3) (eg, acute myeloid leukemia), gene analysis; tyrosine kinase domain (TKD) variants (eg, D835, I836);

FFLUC 91996

Fluconazole (Diflucan)

Specimen Requirements: Container/Tube: Agar slant or other appropriate media Specimen Volume: Organism in pure culture Complete and submit with specimen: Fungus Testing Lab request form Collection Instructions: 1. Organism must be in pure culture, actively growing. 2. Place specimen in a large infectious container (T146) and label as an etiologic agent/infectious substance.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient		

CPT Code Information: 84999 - Unlisted Chemistry Procedure (Refer to patient report to apply the appropriate CPT code in place of this unlisted CPT code based on specimen source.); 87188 - mould - MIC microdilution or agar dilution (if appropriate); 87186 - yeast - MIC microdilution or agar dilution (if appropriate); 87187 - mould or yeast - MLC microdilution or agar dilution (if appropriate);

FFLRO 91795

Flunitrazepam Confirmation, Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	365 days	
	Ambient	48 hours	

CPT Code Information: 80346

FL
8641

Fluoride, Plasma

Specimen Requirements: Collection Container/Tube: Green top (sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: Centrifuge and aliquot plasma into a plastic vial. Glass tubes are not acceptable.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Heparin	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 82735

FLUOX
80228

Fluoxetine, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80299

PROLX
80458

Fluphenazine (Prolixin), Serum

Specimen Requirements: Specimen Type: Serum Container/Tube: Red top Specimen Volume: 3 mL Collection Instructions: Draw blood in a plain, red-top tube(s), serum-gel tube is not acceptable. Spin down and send 3 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80342

FFLUR
90091**Flurazepam (Dalmane) and Desalkylflurazepam**

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma frozen in plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum frozen in plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen	180 days	

CPT Code Information: 80346

17BFP
89739**Fluticasone 17-Beta-Carboxylic Acid, Random, Urine**

Specimen Requirements: Collection Container/Tube: Clean, plastic urine collection container
Submission Container/Tube: Plastic, 10-mL urine tube (T068) Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	14 days	
	Refrigerated	72 hours	
	Ambient	24 hours	

CPT Code Information: 80299

FFVOX
57731**Fluvoxamine (Luvox)**

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top sodium heparin tube(s), plasma gel tube is not acceptable. Spin down and send 3mL of plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80332

IAPC
113345

FNA Immediate Adequacy (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88172

IAAPC
113346

FNA Immediate Adequacy Add'l (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88177

PGXQP
610057

Focused Pharmacogenomics Panel, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Additional Information: Due to lower concentration of DNA yielded from saliva, testing cannot proceed to reflex testing for 2D6 sequencing and will stop after initial testing is complete. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 1 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 0029U; 0071U (if appropriate); 0072U (if appropriate); 0073U (if appropriate); 0074U (if appropriate); 0075U (if appropriate); 0076U (if appropriate);

FOL
9198**Folate, Serum**

Specimen Requirements: Patient preparation: 1. Patient should be fasting for 8 hours. 2. Do not order on patients who have recently received methotrexate or other folic acid antagonists. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 82746

FSHB
70433**Follicle Stimulating Hormone, Beta Subunit (Beta FSH)
Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope (T693) Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FSH
602753**Follicle-Stimulating Hormone (FSH), Serum**

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	180 days	

Ambient

24 hours

CPT Code Information: 83001**FDP1**
86207**Food Panel #2, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**FFPG4**
58090**Food Panel IgG4 (532)****Specimen Requirements:** Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001 x 8; ;**FFPII**
57850**Food Panel II IgG****Specimen Requirements:** Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1.5 mL of serum refrigerated in a plastic vial.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001 X 19

FOOD6

81874

Food Panel, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FOOD2

81869

Food-Fruit Panel, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FOOD4

81872

Food-Grain Panel, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FOOD8

81876

Food-Nut Panel # 1, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen

Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FOOD1 81868

Food-Nut Panel # 2, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen
Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FOOD7 81875

Food-Seafood Panel, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen
Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FRMH 82869

Formaldehyde, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen
Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FORAC Formic Acid, Serum

75402

Specimen Requirements: Draw blood in a red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 2 mL of serum refrigerated in plastic vial.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	30 days	
	Ambient	7 days	
	Frozen		

CPT Code Information: 83921

FORAU Formic Acid, Urine

75405

Specimen Requirements: Collection Container: Plastic, preservative-free urine container
Specimen Volume: 3 mL Collection Instructions: 1. Collect 3 mL random urine without preservative. 2. Ship frozen in a plastic container.

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen	90 days	

CPT Code Information: 82570; 83921; 81002, if appropriate;

BFOS FosB, Immunostain, Technical Component Only

603419

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

XL2 92362

FOXL2 Mutation Analysis, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area: tissue 36 mm(2). -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. In this document, the sizes are given as 4mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3mm x 1mm x 10 slides: approximate/equivalent to 36mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and cover slipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81479; 88381;

FOXP1 70435

FOXP1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FOXP3 70436

FOXP3 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FMIL
82832

Foxtail Millet, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FXS
35428

Fragile X Syndrome, Molecular Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Prenatal Specimens Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Blood: 0.5 mL Amniotic Fluid: 10 mL Chorionic Villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81243; 88233-(if appropriate); 88240-(if appropriate); 88235-(if appropriate); 88240-(if appropriate); 81265-(if appropriate); 81244-(if appropriate);

FUFXS 35427

Fragile X, Follow up Analysis

Specimen Requirements: This is not an orderable test. This follow-up test is added by the laboratory dependent upon on the result of the PCR analysis (FXS / Fragile X Syndrome, Molecular Analysis).

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81244-FMR1 (Fragile 1 mental retardation1) gene analysis, characterization of alleles (eg, expanded size and methylation status)

TULG 605952

Francisella tularensis Antibody, IgG, ELISA, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see Francisella tularensis Antibody, IgM and IgG, ELISA, Serum. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 86668

TULAB 605950

Francisella tularensis Antibody, IgM and IgG, ELISA, Serum

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 86668 x 2

TULI 605953

Francisella tularensis Antibody, IgM and IgG, Technical

Interpretation, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see Francisella tularensis Antibody, IgM and IgG, ELISA, Serum.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

TULM 605951

Francisella tularensis Antibody, IgM, ELISA, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see Francisella tularensis Antibody, IgM and IgG, ELISA, Serum. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 86668

NEFA 606892

Free Fatty Acids, Total, Serum

Specimen Requirements: Patient Preparation: 1. Fasting-overnight (12-14 hours). 2. Patient must not consume any alcohol for 24 hours before the specimen is collected. 3. Patient should not be receiving therapeutic heparin. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge within 45 minutes of collection and aliquot 1 mL of serum into a plastic vial. 2. Immediately freeze specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	7 days	

CPT Code Information: 82725

FRTUP 62583

Free Thyroxine Index (FTI), Serum

Specimen Requirements: Patient Preparation: 1. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. 2. If patient is receiving treatment with lipid-lowering agents containing D-T4, discontinue for 4 to 6 weeks prior to specimen collection. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	72 hours	

CPT Code Information: 84479-Thyroxine binding capacity(TUP); 84436-Thyroxine total (T4S);

FLARP 64718

Free-Living Amebae, Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Cerebrospinal fluid Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Send vial #2. Specimen Type: Tissue: Fresh Sources: Brain, skin, lung Container/Tube: Sterile container Specimen Volume: 5-10 mm Collection Instructions: Submit tissue in a sterile container with 1 mL of sterile saline or minimal essential media (MEM). Preferred Paraffin-embedded tissue block: Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Brain, skin, lung Container/Tube: Tissue block Collection Instructions: Submit a FFPE tissue block to be cut and returned. Acceptable Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Brain, skin, lung Container/Tube: Sterile container for each individual cut section (scroll). Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission.

Specimen Minimum Volume: CSF: 0.3 mL; Tissue: 5 mm biopsy

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798 x 3; 87798 (if appropriate for government payers);

FFRED 91819

Friedreich Ataxia Repeat Expansion Analysis - Unknown Mutation

Specimen Requirements: Collect EDTA (lavender-top) tube. Ship ambient. Adults/Children 3 - 5 mL; Infant 3 mL Note: Completed and submit with specimen - Baylor Molecular form

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81284

FFRWB
60477**Friedreich Ataxia, Frataxin, Quantitative, Blood**

Specimen Requirements: Collection Container/Tube: Preferred: Lavender top (EDTA)
Acceptable: Green top (sodium or lithium heparin) Submission Container/Tube: Plastic vial Specimen
Volume: 2 mL

Specimen Minimum Volume: 1.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Frozen (preferred)	70 days	
	Ambient	70 days	
	Refrigerated	70 days	

CPT Code Information: 83520

FFRBS
60476**Friedreich Ataxia, Frataxin, Quantitative, Blood Spot**

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493)
Container/Tube: Preferred: Blood spot collection card Acceptable: PerkinElmer 226 (formerly Ahlstrom
226) Filter Paper and Whatman Protein Saver 903 Paper Specimen Volume: 2 blood spots Collection
Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is fingerstick.
See Dried Blood Spot Collection Tutorial for how to collect blood spots via fingerstick:
<https://vimeo.com/508490782> . 2. Let blood dry on the filter paper at ambient temperature in a horizontal
position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack
wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood
Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood
Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in
Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	30 days	FILTER PAPER
	Frozen	30 days	FILTER PAPER
	Refrigerated	30 days	FILTER PAPER

CPT Code Information: 83520

PCIFS
113333**Frozen Section, 1st Block (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		

Refrigerated

CPT Code Information: 88331

PCAFS
113334

Frozen Section, Additional Blocks (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88332

FRUCT
81610

Fructosamine, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	7 days	
	Ambient	72 hours	

CPT Code Information: 82985

FROS2
92187

Fructose, Qualitative, Semen

Specimen Requirements: Patient Preparation: Patient should have 2 to 7 days of sexual abstinence at the time of semen collection. Submit only 1 of the following specimens: Specimen Type: Semen Collection Container/Tube: Sterile container Submission Container/Tube: Plastic container Specimen Volume: Total ejaculate Collection Instructions: Do not dilute specimen. Freeze specimen at -20°C. Specimen Type: Seminal plasma Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. After semen collection, wait 30 to 40 minutes until the semen is liquefied, then centrifuge the semen for 10 minutes at maximum centrifuge speed. 2. Remove top 3/4 of specimen with a pipet and place in a plastic vial. Freeze specimen at -20°C. 3. Discard remainder of centrifuged specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Semen

Frozen

CPT Code Information: 82757**FFPG**

57932

Fruit Panel IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001 x16

GFDZ

35440

FTCD Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 Blood Spots on collection card (Whatman Protein Saver 903 Paper; Ahlstrom 226 filter paper; or Blood Spot Collection Card, T493) Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches-3 mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure; ; Fibroblast Culture for Genetic Test; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

IHCFH 606334

Fumarate Hydratase Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FBL 50022

Fungal Culture, Blood

Specimen Requirements: Container/Tube: Preferred: Green top (heparin) Acceptable: SPS/Isolator tube Specimen Volume: 10 to 30 mL Collection Instructions: 1. Send specimen in original tube. Do not aliquot. 2. If collecting in an Isolator tube, draw blood in tube, and send 8 mL of whole blood in the original Isolator tube.

Specimen Minimum Volume: 5 mL Pediatric: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 87015-Concentration (any type) for infectious agents; 87103-Blood; 87106-Id MALDI-TOF Mass Spec Yeast (if appropriate); 87107-Id MALDI-TOF Mass Spec Fungi (if appropriate); 87107-Fungal identification panel A (if appropriate); 87107-Fungal identification panel B (if appropriate); 87150-Identification rapid PCR coccidioides (if appropriate); 87150 x 2- Identification Histoplasma/Blastomyces, PCR (if appropriate); 87153-D2 fungal sequencing identification (if appropriate); 87150- Id, Candida auris Rapid PCR (if appropriate);

FDERM 87283

Fungal Culture, Dermal

Specimen Requirements: Note: -Aseptic techniques should be used when collecting specimens to minimize contamination. -For optimal recovery of organisms, sufficient clinical material should be collected. Specimen Type: Hair Container/Tube: Dry sterile container or specimen collection envelope Specimen Volume: 10 to 12 Collection Instructions: Using forceps collect affected hairs with base of the shaft intact. Specimen Type: Nails Container/Tube: Dry sterile container or specimen collection envelope Specimen Volume: Entire collection Collection Instructions: 1. Wipe the nail with 70% alcohol using gauze (not cotton). 2. Clip away a generous portion of the affected area. 3. Collect

material or debris from under the nail. Specimen Type: Skin Container/Tube: Dry sterile container or specimen collection envelope Specimen Volume: Entire specimen Collection Instructions: 1. Cleanse the affected area with 70% alcohol. 2. Gently scrape the surface of the skin at the active margin of the lesion, being careful to not draw blood.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient	7 days

CPT Code Information: 87101-Fungal culture, dermal; 87106-Id MALDI-TOF Mass Spec Yeast (if appropriate); 87107-Id MALDI-TOF Mass Spec Fungi (if appropriate); 87107-Fungal identification panel A (if appropriate); 87107-Fungal identification panel B (if appropriate); 87150-Identification rapid PCR Coccidioides (if appropriate); 87150 x 2-Identification Histoplasma/Blastomyces, PCR (if appropriate); 87153-D2 fungal sequencing identification (if appropriate); 87150-Id, Candida auris Rapid PCR (if appropriate);

FGEN
84389

Fungal Culture, Routine

Specimen Requirements: Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Type: Bone marrow Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Type: Fresh tissue Container/Tube: Sterile container Specimen Volume: Pea sized Collection Instructions: Tissue should be placed in small amount of sterile saline or sterile water. Specimen Type: Respiratory specimen Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Type: Swab Fresh tissue or body fluid is the preferred specimen type instead of a swab specimen. Sources: Dermal, ear, mouth, ocular, throat, or wound Container/Tube: Culture transport swab (noncharcoal) Culturette Specimen Volume: Swab Collection Instructions: 1. Before collecting specimen, wipe away any excessive amount of secretion and discharge, if appropriate. 2. Obtain secretions or fluid from source with sterile swab. 3. If smear and culture are requested or both a bacterial culture and fungal culture are requested, collect a second swab to maximize test sensitivity. Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: Bone Marrow or Body Fluid: 1 mL Respiratory Specimen: 1.5 mL Tissue: pea-sized piece

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 87102-Fungal culture, routine; 87106-Id MALDI-TOF Mass Spec Yeast (if appropriate); 87107-Id MALDI-TOF Mass Spec Fungi (if appropriate); 87107-Fungal identification panel A (if appropriate); 87107-Fungal identification panel B (if appropriate); 87150 x 2-Identification Histoplasma/Blastomyces, PCR (if appropriate); 87153-D2 fungal sequencing identification (if appropriate); 87176-Tissue processing (if appropriate); 87150- Id, Candida auris Rapid PCR (if appropriate);

FVAG
5184

Fungal Culture, Vaginal

Specimen Requirements: Specimen Type: Swab Source: Vaginal secretions Container/Tube: Culture transport swab (noncharcoal) Collection Instructions: 1. Before collecting specimen, wipe away

any excessive amount of secretion and discharge. 2. Obtain secretions from the mucosal membrane of the vaginal vault with a sterile swab. 3. If smear and culture are requested or both a bacterial culture and fungal culture are requested, collect a second swab to maximize test sensitivity.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 87102-Fungal culture, vaginal; 87106-Id MALDI-TOF Mass Spec Yeast (if appropriate); 87107-Id MALDI-TOF Mass Spec Fungi (if appropriate); 87107-Fungal identification panel A (if appropriate); 87107-Fungal identification panel B (if appropriate); 87150-Identification rapid PCR Coccidioides (if appropriate); 87150 x 2-Identification Histoplasma/Blastomyces, PCR (if appropriate); 87153-D2 fungal sequencing identification (if appropriate); 87150-Id, Candida auris Rapid PCR (if appropriate);

FUNA 45196

Fungal Ident Panel A (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87107

FUNB 45205

Fungal Ident Panel B (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87107

D2F 45079

Fungal Sequencing Identification

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87153

FS
84390

Fungal Smear, Varies

Specimen Requirements: Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Type: Bone marrow Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Type: Fresh tissue or stool Supplies: Stool Collection Kit, Random (T635) Container/Tube: Sterile container Specimen Volume: Pea sized Collection Instructions: Tissue should be placed in small amount of sterile saline or sterile water. Specimen Type: Respiratory specimen Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: Collect a random urine specimen. Acceptable Fresh tissue or body fluid is the preferred specimen type instead of a swab specimen. Specimen Type: Swab Sources: Dermal, ear, mouth, ocular, throat, or wound Container/Tube: Culture transport swab (noncharcoal) Culturette Specimen Volume: Swab Collection Instructions: 1. Before collecting specimen, wipe away any excessive amount of secretion and discharge, if appropriate. 2. Obtain secretions or fluid from source with sterile swab. 3. If smear and culture are requested or both a bacterial culture and fungal culture are requested, collect a second swab to maximize test sensitivity.

Specimen Minimum Volume: Bone Marrow or Body Fluid: 1 mL; Respiratory Specimen: 1.5 mL; Tissue: pea-sized piece

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 87206; 87176-Tissue processing (if appropriate);

FUNBL
57873

Fungitell, BAL

Specimen Requirements: Specimen Type: BAL Sources: Bronchoalveolar lavage Container/Tube: Sterile container Specimen Volume: 1 – 3 mL Note: Ship frozen

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Lavage	Frozen (preferred)	30 days	
	Refrigerated	7 days	
	Ambient	4 days	

CPT Code Information: 87449

FUNBW
57872

Fungitell, bronch wash

Specimen Requirements: Collect 1-3 mL Bronchial Wash in a sterile screw top tube, ship frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bronchial Washing	Frozen (preferred)	30 days	
	Refrigerated	7 days	
	Ambient	4 days	

CPT Code Information: 87449

FUNSF 57871

Fungitell, CSF

Specimen Requirements: Specimen Type: Spinal Fluid Sources: CSF Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: Collect 2 mL of spinal fluid (CSF) in a sterile container. Ship frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)		
	Refrigerated	7 days	
	Ambient	4 days	

CPT Code Information: 87449

FFURO 91119

Furosemide (Lasix)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 1 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80299; ;

FUSI 70434

FUS Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable:

Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FUSM
82750

Fusarium moniliforme, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FFOVE
57531

Fusarium oxysporum/vasinfectum IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

GABA
80826

Gabapentin, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST is not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80171**FGABA**
51115**Gabapentin, Urine****Specimen Requirements:** Collect 10 mL random urine without preservatives. Ship refrigerated in a plastic container.**Specimen Minimum Volume:** 0.25 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80307**GDU**
89301**Gadolinium, 24 Hour, Urine**

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83018

GDT
89302**Gadolinium, Dermal, Tissue**

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free Specimen Vial (T173) Container/Tube: Preferred: Mayo metal-free specimen vial (blue label) Acceptable: Paraffin block is also acceptable if not more than 1 or 2 cuts have been made to it for slides. Specimen Volume: 5 mg (wet weight) Collection Instructions: 1. 5 mg (wet weight) of tissue from a skin-punch biopsy is required, at least 5 mm in diameter. 2. Any specimen vial other than a Mayo metal-free vial used should be plastic, leached with 10% nitric acid for 2 days, rinsed with redistilled water, and dried in clean air. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: Paraffin blocks will be returned 3 days after analysis.

Specimen Minimum Volume: 5 mm (punch) 2.0 mg by dry weight

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Dermal Tissue	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 83018

GDS
89299**Gadolinium, Serum**

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free B-D Tube (No Additive), 6 mL (T184) -Metal Free Specimen Vial (T173) Collection Container/Tube: Royal blue-top (metal-free, no additive) Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, vial Specimen Volume: 0.8 mL Collection Instructions: 1. Allow the specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into Mayo metal-free, screw-capped vial, avoiding transfer of the cellular components of blood. Do not insert a pipette into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: If ordering the trace element blood collection tube from BD, order catalog #368380.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	METAL FREE
	Ambient	14 days	METAL FREE
	Frozen	14 days	METAL FREE

CPT Code Information: 83018

GDCRU
60428 **Gadolinium/Creatinine Ratio, Random, Urine**

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83018-Gadolinium Concentration; 82570-Creatinine Concentration;

GATOL 62440

Galactitol, Quantitative, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube (T068) Specimen Volume: 2 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	

CPT Code Information: 82542

GALCR 606280

Galactocerebrosidase Reflex, Leukocytes

Specimen Requirements: Only orderable as a reflex. For more information see LSD6W / Lysosomal Storage Disorders, Six-Enzyme Panel, Leukocytes.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	
	Ambient	6 days	

CPT Code Information: 82542

GALCW Galactocerebrosidase, Leukocytes

606270

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	
	Ambient	6 days	

CPT Code Information: 82657

GALK Galactokinase, Blood

8628

Specimen Requirements: Multiple whole blood tests for galactosemia can be performed on 1 specimen. Prioritize order of testing when submitting specimens. See Galactosemia-Related Test List in Special Instructions for a list of tests that can be ordered together. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin) or yellow top (ACD) Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	10 days	
	Ambient	72 hours	

CPT Code Information: 82759

GALP Galactose, Quantitative, Plasma

83638

Specimen Requirements: Collection Container/Tube: Green top (sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Heparin	Frozen (preferred)	365 days	
	Ambient	20 days	
	Refrigerated	20 days	

CPT Code Information: 82760

GALU 8765

Galactose, Quantitative, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 1 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	365 days	
	Ambient	20 days	
	Refrigerated	20 days	

CPT Code Information: 82760

GALTP 80341

Galactose-1-Phosphate Uridyltransferase Biochemical Phenotyping, Erythrocytes

Specimen Requirements: Multiple whole blood tests for galactosemia can be performed on 1 specimen. Prioritize order of testing when submitting specimens. See Galactosemia-Related Test List in Special Instructions for a list of tests that can be ordered together. Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	28 days	
	Ambient	14 days	

CPT Code Information: 82664; 82775;

GALT 8333

Galactose-1-Phosphate Uridyltransferase, Blood

Specimen Requirements: Multiple whole blood tests for galactosemia can be performed on 1 specimen. Prioritize order of testing when submitting specimens. See Galactosemia-Related Test List in Special Instructions for a list of tests that can be ordered together. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin) or yellow top (ACD) Specimen Volume: 5 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	28 days	
	Ambient	14 days	

CPT Code Information: 82775

GAL1P 80337

Galactose-1-Phosphate, Erythrocytes

Specimen Requirements: Multiple whole blood tests for galactosemia can be performed on 1 specimen. Prioritize order of testing when submitting specimens. See Galactosemia-Related Test List in Special Instructions for a list of tests that can be ordered together. Patient Preparation: Specimens collected following a meal can exhibit postprandial elevations. For infants, collect a specimen immediately prior to feeding to avoid this. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin) Specimen Volume: 3 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	72 hours	

CPT Code Information: 84378

APGAL 609738

Galactose-Alpha-1,3-Galactose (Alpha-Gal) Mammalian Meat Allergy Profile, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.5 mL

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003 x 5

ALGAL 609737

Galactose-Alpha-1,3-Galactose (Alpha-Gal), IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GAL14

55071

Galactosemia Gene Analysis, 14-Mutation Panel, Varies

Specimen Requirements: Multiple whole blood tests for galactosemia can be performed on 1 specimen. Prioritize order of testing when submitting specimens. See Galactosemia-Related Test List in Special Instructions for a list of tests that can be ordered together. Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Frozen/Refrigerated Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 3

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81401-GALT (galactose-I-phosphate uridylyltransferase) (eg, galactosemia), full gene sequence

GCT

84360

Galactosemia Reflex, Blood

Specimen Requirements: Multiple whole blood tests for galactosemia can be performed on 1 specimen. Prioritize order of testing when submitting specimens. See Galactosemia-Related Test List in Special Instructions for a list of tests that can be ordered together. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 5 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	28 days	
	Ambient	14 days	

CPT Code Information: 82775; ; 81401-GALT (galactose-1-phosphate uridylyltransferase) (eg, galactosemia), common variants (eg, Q188R, S135L, K285N, T138M, L195P, Y209C, IVS2-2A->G, P171S, del5kb, N314D, L218L/N314D, if appropriate;

GALZ 608016

Galactosemia, GALT Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81406

GAL1 606832

GALAD Score, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see HCCGS / Hepatocellular Carcinoma Risk Panel with GALAD Score, Serum Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Refrigerated	5 days	

GALN3 70438

Galectin-3 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GAL3 86202

Galectin-3, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen (preferred)	365 days	
	Refrigerated	24 hours	

CPT Code Information: 82777-Galectin-3

GGT 8677

Gamma-Glutamyltransferase (GGT), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Aliquot tube Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 82977

FGHSP 58034

Gamma-Hydroxybutyric Acid (GHB), Serum/Plasma

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial. Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL of sodium heparin plasma refrigerated in a plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80307

FGHSU
58036**Gamma-Hydroxybutyric Acid (GHB), Urine**

Specimen Requirements: Collect 10 mL random urine without preservatives. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80307

FGANP
75518**Ganciclovir, Plasma**

Specimen Requirements: Container/Tube: EDTA (lavender top) or Pink top Specimen Volume: 3 mL Draw blood in EDTA (lavender top) or Pink top tube(s) (Plasma gel tube is not acceptable.) Spin down and send 1 mL of plasma refrigerate in preservative-free plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	30 days	
	Frozen	120 days	
	Ambient	30 days	

CPT Code Information: 80299

FGAGM
58017**Ganglioside (Asialo-GM1, GM1, GM2, GD1a, GD1b, and GQ1b) Antibodies**

Specimen Requirements: Draw blood in a serum gel tube(s). Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Refrigerated (preferred)	14 days	
	Frozen	365 days	

CPT Code Information: 83516 x 6

GM1B

83189

Ganglioside Antibody Panel, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 83516 x 6; 83520 x 6 (if applicable);

FGQ1B

57248

Ganglioside GQ1b Antibody (IgG), EIA

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial. Note: Overnight fasting is preferred.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	21 days	
	Ambient	7 days	

CPT Code Information: 83520

FGARG

57634

Garlic IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

GARL

82760

Garlic, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GASTN 70439

Gastrin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GAST 8512

Gastrin, Serum

Specimen Requirements: Patient Preparation: 1. Fasting (8 hours) required 2. For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. 3. If medically feasible, proton pump inhibitor (omeprazole, lansoprazole, dexlansoprazole, esomeprazole, pantoprazole, and rabeprazole) therapy should be discontinued 1 week before measurement of serum gastrin levels. 4. Drugs that interfere with gastrointestinal motility (eg, opioids) should be discontinued for at least 2 weeks before serum gastrin testing. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. If multiple specimens are collected, submit each vial under a separate order. 2. Label specimens with corresponding collection time. 3. Centrifuge at refrigerated temperature within 2 hours of collection and immediately aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	24 hours	

CPT Code Information: 82941

GIP
63169

Gastrointestinal Pathogen Panel, PCR, Feces

Specimen Requirements: Supplies: C and S Vial (T058) Container/Tube: Cary-Blair transport system is required. Specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator; Cary Blair media: Remel Cary Blair, Protocol Cary Blair, Para Pak C and S [modified Cary Blair]). Submit sample in original Cary Blair medium container (not an aliquot). Specimen Volume: Representative portion of feces; 1 gram or 5 mL Collection Instructions: 1. Collect fresh fecal specimen and submit in container with transport medium. 2. Place feces in preservative within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Ambient (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 0097U

GISTP
35342

Gastrointestinal Stromal Tumor (GIST) Targeted Gene Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area: tissue 36 mm(2). -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. In this document, the sizes are given as 4mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3mm x 1mm x 10 slides: approximate/equivalent to 36mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and cover slipped with a preferred total minimum of 5000 total nucleated cells, minimum of 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81272-KIT (v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog) (eg, gastrointestinal stromal tumor [GIST], acute myeloid leukemia, melanoma), gene analysis, targeted sequence analysis (eg, exons 8, 11, 13, 17, 18); 81314-PDGFR (platelet-derived growth factor receptor alpha polypeptide) (eg, gastrointestinal stromal tumor [GIST]), gene analysis, targeted sequence analysis (eg, exons 12, 18); 88381-Microdissection, manual;

GATA3 70440

GATA Binding Protein 3 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GATA2 65481

GATA-Binding Protein 2 (GATA2), Full Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Peripheral blood mononuclear cells (PBMCs) Container/Tube: Cell pellet Collection Instructions: Send as a suspension in freezing medium or cell pellet frozen on dry ice. Specimen Stability Information: Frozen Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Additional Information: Indicate the tests to be performed on the fibroblast culture cells. Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes of culture media can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Additional Information: A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479

GATAB 603213

GATA-Binding Protein 3 Immunostain, Technical Component Only, Bone Marrow,

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick; B5 fixed, decalcified, paraffin-embedded bone marrow tissue. Acceptable: B5 fixed, decalcified, paraffin-embedded bone marrow tissue block.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GBAZ 35438

Gaucher Disease, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood Spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure code; 88233-Tissue culture, skin, or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

GAUP 35436

Gaucher Disease, Mutation Analysis, GBA, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 2.6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated/Frozen Prenatal Specimen Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Blood: 0.5 mL Amniotic Fluid: 10 mL Chorionic Villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81251-GBA (glucosidase, beta, acid) (eg, Gaucher disease) gene analysis, common variants (eg, N370S, 84GG, L444P, IVS2+IG>A); Fibroblast Culture for Genetic Test; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); ; Amniotic Fluid Culture/Genetic Test; 88235-Tissue culture for amniotic fluid (if appropriate); 88240-Cryopreservation (if appropriate); ; Maternal Cell Contamination, B; 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells (if appropriate);

GCDF 70441

GCDFP-15 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FGPE 57919

Gelatin Porcine IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

GELA

86326

Gelatin, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GSNZ

35448

Gelsolin (GSN) Gene, Full Gene Analysis

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81479-Unlisted molecular pathology procedure

GBETH

607434

General Factor Bethesda Units, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: ALBLD / Bleeding Diathesis Profile, Limited, Plasma APROL / Prolonged Clot Time Profile, Plasma 2INHE / Factor II Inhibitor Evaluation, Plasma 7INHE / Factor VII Inhibitor Evaluation, Plasma 10INE / Factor X Inhibitor Evaluation, Plasma 11INE / Factor XI Inhibitor Evaluation, Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85335

FGENT

57728

Gentamicin in Cerebrospinal Fluid (CSF)

Specimen Requirements: Submit 1 mL of spinal fluid (CSF). Send refrigerate in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80170

GENPA

37042

Gentamicin, Peak, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80170

GENRA

37044

Gentamicin, Random, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of

collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80170

GENTA **37043**

Gentamicin, Trough, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80170

GERB **82545**

Gerbil Epithelium, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GCTF **35270**

Germ Cell Tumor (GCT), Isochromosome 12p, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE)

tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 Æâ, Æâœ DNA probe, each (first probe set), Interpretation and report; 88271x2 Æâ, Æâœ DNA probe, each; each additional probe set (if appropriate); 88271x1 Æâ, Æâœ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 Æâ, Æâœ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 Æâ, Æâœ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 Æâ, Æâœ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 Æâ, Æâœ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 Æâ, Æâœ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

GCET
70442

Germinal Center B-cell Expressed Transcript 1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FGHTL
57902

Ghrelin Total, Plasma

Specimen Requirements: Patient preparation: Patient should be fasting 10 - 12 hours prior to collection. Patient should not be on any medications or supplements that may influence: Cholecystokinin (CCK), Glucose, Growth Hormone, Insulin and/or Somatostatin levels, if possible for at least 48 hours prior to specimen collection Specimen Type: GI Plasma Container/Tube: Special tube containing G.I. Preservative (MCL supply number T125). Specimen Volume: 10mL Collection Instructions: Draw 10 mL of blood in special tube containing G.I. Preservative (MCL supply number T125). Specimen should be separated in refrigerated centrifuge as soon as possible and send 3 - 5 mL plasma frozen. Ship frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
GI Plasma	Frozen (preferred)	180 days	
	Refrigerated	24 hours	

CPT Code Information: 83520

GRW 82685

Giant Ragweed, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GIAR 80231

Giardia Antigen, Feces

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Preserved feces Supplies: Formalin 10% Buffered Neutral (T466); Stool Collection Kit, Random (T635) Container/Tube: Preferred: Fecal container with 10% buffered formalin preservative Acceptable: SAF (sodium acetate formalin) Specimen Volume: 5 g Specimen Stability Information: Ambient (preferred) 60 days Acceptable: Specimen Type: Unpreserved feces Supplies: Stool container, Small (Random), 4 oz (T288); Stool Collection Kit, Random (T635) Container/Tube: Fecal container Specimen Volume: 5 g Specimen Stability Information: Frozen 60 days

Specimen Minimum Volume: 2 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Varies		

CPT Code Information: 87329

GING 82488

Ginger, IgE

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

DGLDN 89031 **Gliadin (Deamidated) Antibodies Evaluation, IgG and IgA, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516 x 2

DAGL 89029 **Gliadin (Deamidated) Antibody, IgA, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516

DGGL 89030 **Gliadin (Deamidated) Antibody, IgG, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516

GFAP 70443

Glial Fibrillary Acidic Protein Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FGLIP 91097

Glipizide (Glucotrol)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80299

LGBWB 602351

Globaltriaosylsphingosine, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin, lithium heparin) and yellow top (ACD B) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	72 hours	
	Ambient	48 hours	

CPT Code Information: 82542

LGBBS

113521

Globotriaosylsphingosine, Blood Spot

Specimen Requirements: Supplies: -Card-Blood Spot Collection (Filter Paper) (T493) -Card-Postmortem Screening (Filter Paper) (T525) Container/Tube: Preferred: Blood Spot Collection (Filter Paper) Acceptable: Ahlstrom 226 filter paper, Munktel filter paper, Postmortem Screening Card or collected with EDTA, sodium heparin, lithium heparin, or ACD B-containing devices Specimen Volume: 2 blood spots Collection Instructions: 1. Let blood dry completely on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 2. At least 1 spot should be complete, (ie, unpunched). 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	10 days	FILTER PAPER
	Frozen	59 days	FILTER PAPER
	Ambient	10 days	FILTER PAPER

CPT Code Information: 82542

LGB3S

65532

Globotriaosylsphingosine, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Refrigerated	72 hours	

CPT Code Information: 82542

GBM

8106

Glomerular Basement Membrane Antibodies, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516

GLUCG 70445

Glucagon Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GLP 9358

Glucagon, Plasma

Specimen Requirements: Patient Preparation: Fasting (8 hours) Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Pre-chill tube at 4°C before drawing the specimen. 2. Draw into the pre-chilled tube, and process as follows: a. After drawing specimen, chill tube in wet ice for 10 minutes. b. Centrifuge in a refrigerated centrifuge or in chilled centrifuge carrier. c. Immediately after centrifugation, aliquot plasma into a plastic vial, and freeze.

Specimen Minimum Volume: 0.45 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	90 days	

CPT Code Information: 82943

GPSYW 113430

Glucopsychosine, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin, lithium heparin) or yellow top (ACD B) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	72 hours	

Ambient

48 hours

CPT Code Information: 82542**GPSY**

62236

Glucopsychosine, Blood Spot

Specimen Requirements: Supplies: -Card-Blood Spot Collection (Filter Paper) (T493) -Card-Postmortem Screening (Filter Paper) (T525) Collection Container/Tube: Preferred: Blood Spot Collection (Filter Paper) Acceptable: Whatman Protein Saver 903 filter paper, Ahlstrom 226 filter paper, Munktell filter paper, Postmortem Screening card, or collected with heparin or EDTA containing Specimen Volume: 2 blood spots Collection Instructions: 1. Let blood dry completely on filter paper at ambient temperature in a horizontal position for a minimum of 3hours. 2. At least 1 spot should be complete, (ie, unpunched) 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood spot: 1**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	10 days	FILTER PAPER
	Frozen	59 days	FILTER PAPER
	Ambient	10 days	FILTER PAPER

CPT Code Information: 82542**GPSYP**

65632

Glucopsychosine, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin, lithium heparin), yellow top (ACD B) Submission Container/Tube: Plastic vial Specimen Volume: 0.3 mL Collection Instructions: 1. Centrifuge at 4°C, if possible 2. Aliquot plasma into plastic vial, taking care not to disturb or transfer the buffy coat layer. 3. Send frozen

Specimen Minimum Volume: 0.25 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	65 days	

CPT Code Information: 82542**G6PDC**

608417

Glucose 6 Phosphate Dehydrogenase Enzyme Activity, Blood

Specimen Requirements: Only orderable as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 82955

G6PD1 607460

Glucose 6-Phosphate Dehydrogenase Enzyme Activity, Blood

Specimen Requirements: Collection Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) or yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 82955

GPI1 608419

Glucose Phosphate Isomerase Enzyme Activity, Blood

Specimen Requirements: Only available as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 84087

GPI1 607463

Glucose Phosphate Isomerase Enzyme Activity, Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 84087

GLBF
606609

Glucose, Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Peritoneal dialysate (dialysis fluid) -Pericardial -Amniotic Fluid -Synovial Fluid Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	24 hours	

CPT Code Information: 82945

GLURA
89115

Glucose, Random, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 82947

GLUR1
609796

Glucose, Random, Urine

Specimen Requirements: Container/Tube: Plastic urine container Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	72 hours	
	Ambient	2 hours	

CPT Code Information: 82945

GLSF 152

Glucose, Spinal Fluid

Specimen Requirements: Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge to remove any cellular material.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	30 days	
	Refrigerated	7 days	

CPT Code Information: 82945

G6PDB 64567

Glucose-6-Phosphate Dehydrogenase (G6PD) Full Gene Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.45 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81249

HEX4 64174

Glucotetrasaccharides, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, 5-mL urine tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	87 days	
	Refrigerated	28 days	
	Ambient	14 days	

CPT Code Information: 82542; 82570;

GLUT 70446

GLUT-1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GD65S 81596

Glutamic Acid Decarboxylase (GAD65) Antibody Assay, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.5 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86341

GD65C 84221

Glutamic Acid Decarboxylase (GAD65) Antibody Assay, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1.5 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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CSF	Refrigerated (preferred)	28 days
	Frozen	28 days
	Ambient	72 hours

CPT Code Information: 86341

GLUTS 70450

Glutamine Synthetase Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GA2P 608029

Glutaric Aciduria Type II Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479

GSH 608409

Glutathione, Blood

Specimen Requirements: Collection Container/Tube: Preferred: Yellow top (ACD solution B) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 82978

FGLUT

57559

Gluten IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

GLT

82894

Gluten, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GLYCS

606972

Glycine Receptor Alpha1 IgG, Cell Binding Assay, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	

Ambient

72 hours

CPT Code Information: 86255**GLYCC**
606973**Glycine Receptor Alpha1 IgG, Cell Binding Assay, Spinal Fluid****Specimen Requirements:** Container/Tube: Sterile vial Specimen Volume: 2 mL**Specimen Minimum Volume:** 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255**GSDGP**
608012**Glycogen Storage Disease Gene Panel, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443**G161**
605194**Glycogen Storage Disease Panel (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**CPT Code Information:** 81443**FGLMA**
91742**GlycoMark**

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 1 mL of serum ambient in a plastic vial. Plasma Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 1 mL of EDTA plasma ambient in a plastic vial.

Specimen Minimum Volume: 0.75 mL Note: This volume does not allow for repeat testing.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Refrigerated	7 days	
	Frozen		

CPT Code Information: 84378

GLYCF
70448

Glycophorin A (CD235a) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4 microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GDOM
82847

Glycyphagus domesticus, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GLYP3
70447

Glypican-3 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-micron thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GNPTZ

35442

GNPTAB Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen preferred to arrive within 96 hours of collection. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure code; ; Fibroblast Culture for Genetic Test; ; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); ; 88240-Cryopreservation (if appropriate);

GOAT

82783

Goat Epithelium, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)		14 days
	Frozen		90 days

CPT Code Information: 86003

GMILK

82550

Goat's Milk, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GLDR

82717

Goldenrod, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FGAGA

75564

Golimumab and Anti-Golimumab Antibody, DoseASSURE GOL

Specimen Requirements: Specimen Type: Serum Container/Tube: SST or Red Specimen Volume: 3 mL Collection Instructions: Draw blood in a serum gel tube(s), plain red-top tube(s) is acceptable. Serum must be separated from cells within 45 minutes of venipuncture. Spin down and send 3 mL of serum frozen in a plastic vial. To avoid delays in turnaround time when requesting multiple tests, please submit separate frozen specimens for each test requested.

Specimen Minimum Volume: 1 mL (Note: This volume does not allow for repeat testing.)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	7 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 80299; 82397;

FGNRH
90165**Gonadotropin Releasing Hormone (Gn-RH, Luteinizing Hormone-Releasing Hormone LH-RH)**

Specimen Requirements: Patient preparation: Patient should not be on any Steroid, ACTH, Gonadotropin, or Estrogen medications, if possible, for at least 48 hours prior to collection. Serum Specimen Type: Serum Container/Tube: Red top or SST Specimen Volume: 3 mL Collection Instructions: Draw blood in a plain, red-top tube(s), serum-gel tube(s) is acceptable. Separate immediately and send 3 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Refrigerated	7 days	

CPT Code Information: 83727

GOOS
82714**Goose Feathers, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GSBV
61565**Gram Stain for Bacterial Vaginosis, Varies**

Specimen Requirements: Preferred: Specimen Type: Vaginal swab Collection Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium: T092) or ESwab Specimen Volume: Entire collection Specimen Stability Information: ESwab: Refrigerated (preferred) 7 days/Ambient 7 days Culture Transport Swab: Ambient (preferred) 24 hours/Refrigerated 24 hours Acceptable: Specimen Type: Prepared microscope slide Source: Vaginal swab Collection Container/Tube: Culturette swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium: T092) or ESwab Submission Container/Tube: Slide container Specimen Volume: Slide Collection Instructions: Apply original sample to surface of standard microscope slide using appropriate application method (determined by consistency of specimen type) to assure adequate transfer of specimen onto slide. Allow specimen to dry and then heat-fix the slide. Place in slide container for transport.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Varies

Varies

CPT Code Information: 87205**GRAM**

8078

Gram Stain, Varies

Specimen Requirements: Sources: Closed/open abscess, lower respiratory, fluid, tissue, or swab
 Supplies: Culturette (BBL Culture Swab) (T092) Container/Tube: Sterile container or culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium)
 Specimen Volume: Entire collection Acceptable: Slides: Prepared microscope slide Collection
 Container/Tube: Sterile container or culture transport swab Submission Container/Tube: Slide container
 Collection Instructions: Apply original sample to surface of standard microscope slide using appropriate application method (determined by consistency of specimen type) to assure adequate transfer of specimen onto slide. Allow specimen to dry and then heat-fix the slide. Place in slide container for transport.

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	24 hours
	Ambient	24 hours

CPT Code Information: 87205**LAGGT**

8976

Granulocyte Antibodies, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 1.5 mL Additional Information: Only pretransfusion reaction specimen is acceptable.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	30 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86021**GRANB**

70449

Granzyme B Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		

Refrigerated

FGRPG

57653

Grape IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

GRAP

82800

Grape, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GRFR

82836

Grapefruit, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GRAS1

81706

Grass Panel # 1, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GRAS2

81707

Grass Panel # 2, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GRAS3

81708

Grass Panel # 3, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GAB1

70437

GRB2-Associated Binding Protein 1 (GAB1) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen

Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

GRFE

82365

Greek Fennel, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GCBN

82769

Green Coffee Bean, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GPEA

82887

Green Pea, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**GPEP**
82623**Green Pepper, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**GSTB**
82610**Green String Bean, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**ALDR**
82671**Grey Alder, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GRHPZ 35444

GRHPR Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81479-Unlisted molecular pathology procedure

CGAS 62989

Group A Streptococcus (Streptococcus pyogenes) Culture, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Rectal, perirectal, perianal, or anal Supplies: Culturette (BBL Culture Swab) (T092) Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Specimen Volume: Swab Additional Information: Primarily to be collected from pediatric patients Acceptable: Specimen Type: Vaginal Supplies: Culturette (BBL Culture Swab) (T092) Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Specimen Volume: Swab Additional Information: Submission of a vaginal source is limited to Infection Prevention and Control test orders Specimen Type: Throat or pharynx Supplies: Culturette (BBL Culture Swab) (T092) Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Specimen Volume: Swab Additional Information: Submission of throat or pharynx sources is limited to Infection Prevention and Control test orders Specimen Type: Skin or wound Supplies: Culturette (BBL Culture Swab) (T092) Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Specimen Volume: Swab Additional Information: Submission of skin or wound sources is limited to Infection Prevention and Control test orders

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	24 hours	

Refrigerated

24 hours

CPT Code Information: 87081-Strep Grp A (*S. pyogenes*) culture; 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria identification (if appropriate); 87077-Identification Streptococcus (if appropriate); 87147 x 2-6-Serologic Agglut Method 4 Ident (if appropriate); 87153-Aerobe ident by sequencing (if appropriate);

CGBS 87346

Group B Streptococcus (*Streptococcus agalactiae*) Culture, Varies

Specimen Requirements: Supplies: Culturette (BBL Culture Swab) (T092) Specimen Type: Swab Sources: Vaginal/rectal combination swab Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Specimen Volume: Swab Additional Information: Vaginal/rectal combination swab is the only acceptable specimen according to American College of Obstetricians and Gynecologists (ACOG) guidelines. Vaginal only, rectal only, as well as other sources are not acceptable.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	24 hours	
	Refrigerated	24 hours	

CPT Code Information: 87081-Strep Grp B (*S. agalactiae*) culture; 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria identification (if appropriate); 87077-Identification Streptococcus (if appropriate); 87147 x 2-6-Serologic Agglut Method 4 Ident (if appropriate); 87153-Aerobe ident by sequencing (if appropriate);

GDF15 64637

Growth Differentiation Factor 15, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood and centrifuge immediately. 2. Do not expose specimen to heat or direct sunlight.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Refrigerated (preferred)	90 days	
	Frozen	90 days	
	Ambient	28 days	

CPT Code Information: 83520

GRH 70444

Growth Hormone Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively

charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4- microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HGH
8688

Growth Hormone, Serum

Specimen Requirements: Patient Preparation: Fasting, 8 hours Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: 1. If multiple specimens are drawn, submit each vial under a separate order. 2. Label specimens appropriately with the corresponding collection times.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 83003

FIRGH
90161

Growth Hormone-Releasing Hormone (IR-GH-RH) (Immunoreactive GH-RH)

Specimen Requirements: Patient preparation Patient should not be on any medications that may influence pituitary secretion. Serum Specimen Type: Serum Container/Tube: Red top or SST Specimen Volume: 3 mL Collection Instructions: Draw blood in a plain, red-top tube(s), serum-gel tube(s) is acceptable. Separate immediately and send 3 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	90 days	

CPT Code Information: 83520

GGUM
82479

Guar Gum, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number

of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GUIN
82706

Guinea Pig Epithelium, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

GUM
82367

Gum Arabic, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FCGUM
57969

Gum Carageenan IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FGUMX 57974

Gum Xanthan IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FHACK 57951

Hackberry (*Celtis occidentalis*) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FHADE 57556

Haddock (*Melanogrammus aeglefinus*) IgE

Specimen Requirements: Draw blood in a plain, red-top tube(s). (Serum gel tube(s) is acceptable.) Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

HIBS 83261

Haemophilus influenzae Type B Antibody, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 86684

DBA4 70419

Hairy Cell Leukemia (DBA44) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HAKE 82348

Hake, Fish, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

90 days

CPT Code Information: 86003**FHALG**
57637**Halibut IgG****Specimen Requirements:** Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001**HALI**
82633**Halibut, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**HALO**
80339**Haloperidol, Serum****Specimen Requirements:** Container/Tube: Red top (serum gel/SST are not acceptable) Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.**Specimen Minimum Volume:** 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	

Frozen

28 days

CPT Code Information: 80173**HEPI**
82780**Hamster Epithelium, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**FHVGM**
75240**Hantavirus Antibody (IgG, IgM)****Specimen Requirements:** Container/Tube: Preferred: Red top tube Acceptable: Serum gel tube Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.**Specimen Minimum Volume:** 0.50 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 86790 x 2**HAPT**
9168**Haptoglobin, Serum****Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	

Ambient

14 days

CPT Code Information: 83010**FHZCP**
75565**Hazelnut Component Panel**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86008 x 4

FHCC1
75576**Hazelnut Component rCor a 1**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86008

NUTH
82743**Hazelnut-Food, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

90 days

CPT Code Information: 86003**HAZ**
82670**Hazelnut-Tree, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**HMUOE**
608889**Heavy Metal Occupational Exposure, with Reflex, Random, Urine**

Specimen Requirements: Patient Preparation: -Patient should not eat seafood for a 48-hour period prior to start of collection. -High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 6 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 82175; 82300; 83825; 83655; 82570;**HMUOCR**
608899**Heavy Metal/Creatinine Ratio, with Reflex, Random, Urine**

Specimen Requirements: Patient Preparation: -Patient should not eat seafood for a 48-hour period prior to start of collection. -High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued

insert Specimen Volume: 6 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 82175; 82300; 83825; 83655; 82570;

HMDB 39183

Heavy Metals Screen with Demographics, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Royal blue-top (EDTA) plastic trace element blood collection tube Specimen Volume: Full tube Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original collection tube. Additional Information: If ordering the trace element blood collection tube from BD, order catalog #368381.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82175; 82300; 83655; 83825;

HMU24 48538

Heavy Metals Screen, with Reflex, 24 Hour, Urine

Specimen Requirements: Patient Preparation: 1. High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. 2. Patient should not eat seafood for a 48-hour period prior to start of, or during, collection. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic aliquot container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 82175; 82300; 83825; 83655;

HMHA 45479

Heavy Metals, Hair

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Specimen Volume: 0.2 g
Collection Instructions: Prepare and transport specimen per the instructions in kit or see Collecting Hair and Nails for Metals Testing in Special Instructions.

Specimen Minimum Volume: 0.05 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Hair	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 82175-Arsenic; 83655-Lead; 83825-Mercury;

HMNA 31070

Heavy Metals, Nails

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Specimen Volume: 0.2 g
Collection Instructions: 1. Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing in Special Instructions. 2. Clippings should be taken from all 10 fingernails or toenails.

Specimen Minimum Volume: 0.05 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Nail	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 82175-Arsenic; 83655-Lead; 83825-Mercury;

HPYL 70466

Helicobacter pylori (H pylori) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HPSAF 800272

Helicobacter pylori Antigen, Feces

Specimen Requirements: Collection Container/Tube: Stool container Submission Container/Tube: Plastic container Specimen Minimum Volume: 5 g Collection Instructions: Mix stool well.

Specimen Minimum Volume: 5 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)		
	Refrigerated		

CPT Code Information: 87338

UBT 81590

Helicobacter pylori Breath Test

Specimen Requirements: Patient Preparation: 1. Patient should be fasting for 1 hour. 2. Patients should not have taken bismuth/Tritec, antibiotics, proton-pump inhibitors (eg, Prilosec, Prevacid, Aciphex, Protonix, and Nexium) or Pepto-Bismol for 2 weeks prior to testing. If these instructions are not followed, test results may be inaccurate. 3. Histamine 2-receptor antagonists (H[2]RAs) such as Pepcid, Tagamet, Axid, or Zantac should be discontinued for 24 to 48 hours before the BreathTek UBT test is administered. If these instructions are not followed, test results may be inaccurate. 4. Carafate (sucralfate) does not interfere with the test. Use of antacids does not affect the accuracy of this assay. Supplies: H. Pylori Breath Kit (T375: fees apply) Collection Instructions: 1. Do not collect if patient is younger than 3 years of age. 2. Follow instructions included with kit.

Specimen Minimum Volume: Bag of "breath" must be full

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Breath	Ambient	7 days	BREATH TEST BAG

CPT Code Information: 83013

HELIS 62769

Helicobacter pylori Culture with Antimicrobial Susceptibilities, Varies

Specimen Requirements: Preferred: Specimen Type: Gastric biopsy Container/Tube: Sterile container Specimen Volume: Entire collection Collection Instructions: Acquire biopsied tissue; moisten with sterile saline. Acceptable: Specimen Type: Gastric brushings or gastric aspirate Container/Tube: Sterile container Specimen Volume: Entire collection

Specimen Minimum Volume: 0.5 mL or 0.5 x 0.2 x 0.2-cm sized piece of tissue

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated	48 hours	

CPT Code Information: 87081-Helicobacter pylori culture; 87077-Bacteria identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87176-Tissue processing (if appropriate); 87181-Susceptibility (if appropriate); 87186-Sensitivity, MIC (if appropriate); 87150-H pylori + Clarithro Resistance PCR (if appropriate);

HPCR1 607597

Helicobacter pylori with Clarithromycin Resistance Prediction, Molecular Detection, PCR (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87150

HPFRP 607594

Helicobacter pylori with Clarithromycin Resistance Prediction, Molecular Detection, PCR, Feces

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction (PCR) requires the specimen to be processed in an environment in which contamination of the specimen by Helicobacter pylori DNA is unlikely. Patient Preparation: Proton pump inhibitors, histamine H2receptor antagonists and other antacids, as well as antibiotics and bismuth compounds, should be discontinued at least 2 weeks prior to testing. Supplies: C and S Vial (T058) Specimen Type: Preserved feces Submission Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of nonnutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: 5 mL Collection Instructions: 1. Collect fresh fecal specimen and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798 x 2

HPCRP 607596

Helicobacter pylori with Clarithromycin Resistance Prediction,

Molecular Detection, PCR, Varies

Specimen Requirements: Supplies: Infectious Container, Large (T146) Container/Tube: Agar slant or other appropriate media Specimen Volume: Isolate Collection Instructions: 1. Perform isolation of *Helicobacter pylori* in culture. 2. *H pylori* isolate must be submitted in pure culture. Do not submit mixed cultures.

Specimen Minimum Volume: NA

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 87150

HELM 82749

Helminthosporium halodes, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FHSSE 57532

Helminthosporium sativum/Drechslera IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

HOLDC 35848

Hematologic Disorders, Chromosome Hold, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1 to 2 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. 3. Other anticoagulants are not recommended and are harmful to the viability of the cells. Acceptable: Specimen Type: Blood Container/Tube: Green top (sodium heparin) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells.

Specimen Minimum Volume: Blood: 2 mL Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: See individual reflex tests

EXHR 65114

Hematologic Disorders, DNA and RNA Extract and Hold, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 4 mL Bone Marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	5 days	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information:

EXHD 64779

Hematologic Disorders, DNA Extract and Hold, Varies

Specimen Requirements: Specimen must arrive within 168 hours of draw. Draw and package specimen as close to shipping time as possible. Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood, Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	PURPLE OR PINK TOP/EDTA
	Refrigerated	7 days	PURPLE OR PINK TOP/EDTA

CPT Code Information:**HOLDF**
35847**Hematologic Disorders, Fluorescence In Situ Hybridization (FISH) Hold, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1 to 2 mL Collection Instructions: 1. It is preferable to send the first aspirate from the bone marrow collection. 2. Invert several times to mix bone marrow. Acceptable: Specimen Type: Whole blood Container/Tube: Green top (sodium heparin) Specimen Volume: 6 mL Collection Instructions: Invert several times to mix blood.

Specimen Minimum Volume: Blood: 2 mL Bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Standard		

CPT Code Information: See individual reflex tests

HLLFH
34854**Hematologic Disorders, Leukemia/Lymphoma; Flow Hold, Varies**

Specimen Requirements: Due to specimen stability, spinal fluid is not appropriate for this test. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 10 mL Slides: Include 5- to 10-unstained blood smears, if possible. Collection Instructions: 1. Send specimen in original tube. Do not aliquot. 2. Label specimen as blood. Specimen Stability Information: Ambient/Refrigerated <96 hours Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 1 to 5 mL Slides: Include 5- to 10-unstained bone marrow aspirate smears, if possible. Collection Instructions: 1. Submission of bilateral specimens is not required. 2. Label specimen as bone marrow. Specimen Stability Information: Ambient/Refrigerated <96 hours Specimen Type: Fluid Sources: Serous effusions, pleural, pericardial, or abdominal (peritoneal fluid) Container/Tube: Body fluid container Specimen Volume: 20 mL Collection Instructions: 1. If possible, fluids should be anticoagulated with heparin (1 U/mL of fluid). 2. The volume of fluid necessary to phenotype the lymphocytes or blasts in serous effusions depends upon the cell count in the specimen. Usually 20 mL of pleural or peritoneal fluid is sufficient. Smaller volumes can be used if there is a high cell count. 3. Label specimen with fluid type. Specimen Stability Information: Refrigerated/Ambient <72 hours Specimen Type: Tissue Supplies: Hank's Solution (T132) Container/Tube: Sterile container with 15 mL of tissue culture medium (eg. Hank's balanced salt solution, RPMI, or equivalent) Specimen Volume: 5 mm(3) or larger biopsy Collection Instructions: 1. Send intact specimen (do not mince). 2.

Specimen cannot be fixed. Specimen Stability Information: Ambient/Refrigerated <96 hours

Specimen Minimum Volume: Blood: 3 mL Bone Marrow: 1 mL Fluid: 5 mL Tissue: 1 mm(3) or larger biopsy

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each); 88187-Flow Cytometry Interpretation, 2 to 8 Markers (if appropriate); 88188-Flow Cytometry Interpretation, 9 to 15 Markers (if appropriate); 88189-Flow Cytometry Interpretation, 16 or More Markers (if appropriate);

P53CA 62402

Hematologic Neoplasms, TP53 Somatic Mutation, DNA Sequencing Exons 4-9, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood (preferred) Container/Tube: Lavender top (EDTA) or yellow top (ACD solution B) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability Information: Ambient/Refrigerate <10 days Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA), yellow top (ACD solution B), or green top (heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient/Refrigerate <10 days Specimen Type: Tissue Container/Tube: Plastic container Specimen Volume: 100 mg Collection Instructions: Stabilize fresh tissue in tissue culture medium or freeze immediately after collection. Specimen Stability Information: Refrigerate 24 hours/ Frozen

Specimen Minimum Volume: Blood, bone marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	10 days	

CPT Code Information: 81352-TP53 (tumor protein 53) (eg, tumor samples), full gene sequence or targeted sequence analysis of >5 exons

HPCUT 71743

Hematopathology Consultation, Client Embed

Specimen Requirements: Information on collecting, packaging, and shipping specimens, is available in Special Instructions: -Bone Marrow Core Biopsy, Clot, and Aspirate Collection Guideline Â -Assistance with Bone Marrow Collection Â Submit the following specimens: Specimen Type: Bone marrow aspirate slides Container/Tube: Transport in plastic slide holders Preferred: Fresh prep slides made at the time of sample collection Acceptable: Slides made from anticoagulated sample Collection Instructions: 1. Prepare slides of bone marrow aspirate immediately after collection or prepare slides from bone marrow aspirate in EDTA within 2 hours of collection. 2. If bone marrow units are sparse or absent or aspirate is a dry tap, make biopsy touch prep slides. 3. Make 2 good direct smears and 3 good unit preps, per unilateral collection. 4. Air dry slides. 5. Send 5 slides unfixed/unstained. 6. Place Parafilm around the slide carriers holding unstained slides to prevent exposure to formalin fumes during transport and place slides in a separate bag apart from any formalin-fixed clot or core biopsy specimens during transport. If using slide carriers, make sure they have not been used to carry fixed slides previously. Specimen Type: Bone marrow aspirate in anticoagulant for possible ancillary testing Container/Tube:

Lavender top (EDTA), green top (heparin), and yellow top (ACD) Specimen Volume: 3 mL in EDTA, 3 mL in heparin, and 4 mL in ACD Collection Instructions: 1. Aspirate per standard bone marrow collection procedure. 2. Send specimens in original tubes. Do not transfer to other tubes or containers. Specimen Type: Bone marrow core biopsy Container/Tube: Fixed biopsy core embedded in paraffin block Collection Instructions: Process and embed core in paraffin. Specimen Type: Bone marrow aspirate clot Container/Tube: Bone marrow clot embedded in paraffin block Collection Instructions: Process and embed clot in paraffin Specimen Type: Peripheral blood slides and CBC Container/Tube: Transport in plastic slide holders. Preferred: 2 Fresh prep fingerstick slide; include CBC values Acceptable: 2 Slides made from whole blood in EDTA, made within 8 hours of collection Collection Instructions: 1. Prepare 2 good quality smear of even thickness from fingerstick. 2. Alternatively, prepare good quality smear from EDTA whole blood within 8 hours of collection. 3. Submit unstained and unfixed slides. 4. Place Parafilm around the slide carriers holding unstained slides to prevent exposure to formalin fumes during transport and place slides in a separate bag apart from any formalin-fixed clot or core biopsy specimens during transport. If using slide carriers, make sure they have not been used to carry fixed slides previously.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient		

CPT Code Information: 88321 (if appropriate); 88323 (if appropriate); 88325 (if appropriate);

HPWET 70343

Hematopathology Consultation, MCL Embed

Specimen Requirements: Multiple specimens are required to perform testing. Submit each of the following (additional information below): 1. Unprocessed bone marrow core biopsy and/or clot 2. Three bone marrow biopsy touch prep slides 3. Bone marrow aspirate -Fresh, unfixed, unstained slides: -Two direct prep -Three unit prep -Liquid (order of collection): -Lavender top (EDTA): 3 mL -Yellow top (ACD): 4 mL -Green top (sodium heparin): 3 mL 4. Two unstained peripheral blood smears (fingerstick preferred) Information on collecting, packaging, and shipping specimens, is available in Special Instructions: -Bone Marrow Core Biopsy, Clot, and Aspirate Collection Guideline -Assistance with Bone Marrow Collection Supplies: Bone Marrow Collection Kit (T793) Specimen Type: Bone marrow aspirate slides Container/Tube: Transport in plastic slide holders Preferred: Fresh prep slides made at the time of sample collection Acceptable: Slides made from anticoagulated sample Collection Instructions: 1. Prepare slides of bone marrow aspirate immediately after collection or prepare slides from bone marrow aspirate in EDTA within 2 hours of collection. 2. If bone marrow units are sparse or absent or aspirate is a dry tap, make biopsy touch prep slides. 3. Make 2 good direct smears and 3 good unit preps, per unilateral collection. 4. Air dry slides. 5. Send 5 slides unfixed/unstained. 6. Place Parafilm around the slide carriers holding unstained slides to prevent exposure to formalin fumes during transport and place slides in a separate bag apart from any formalin-fixed clot or core biopsy specimens during transport. If using slide carriers, make sure they have not been used to carry fixed slides previously. Specimen Type: Bone marrow aspirate in anticoagulant for possible ancillary testing Container/Tube: Lavender top (EDTA), green top (heparin), and yellow top (ACD) Specimen Volume: 3 mL in EDTA, 3 mL in heparin, and 4 mL in ACD Collection Instructions: 1. Aspirate per standard bone marrow collection procedure. 2. Send specimens in original tubes. Do not transfer to other tubes or containers. Specimen Type: Bone marrow clot Container/Tube: Bone marrow clot in 10% formalin Collection Instructions: 1. Place 0.5 mL bone marrow aspirate in clot tube. 2. After clot has formed, place clot in 10% formalin. 3. Place Parafilm around the container to prevent exposure Specimen Type: Bone marrow core biopsy Container/Tube: Fixed biopsy core in 10% formalin solution for transport Collection Instructions: 1. If bone marrow units are sparse or absent or aspirate is a dry tap, make biopsy touch prep slides. 2. Place biopsy core in 10% formalin immediately after collection. 3. Fix in 10% formalin for 1 to 2 hours. 4. Place Parafilm around the 10% Formalin container to prevent exposure. Specimen Type: Peripheral blood Slides: 2 Container/Tube: Transport in plastic slide holders. Preferred: 2 fresh prep fingerstick slides Acceptable: 2 slides made from whole blood in EDTA, made within 8 hours of collection Collection Instructions: 1. Prepare 2 good quality smears of even thickness

from fingerstick. 2. Alternatively, prepare good quality smear from EDTA whole blood within 8 hours of collection. 3. Submit unstained and unfixed slides. 4. Place Parafilm around the slide carriers holding unstained slides to prevent exposure to formalin fumes during transport and place slides in a separate bag apart from any formalin-fixed clot or core biopsy specimens during transport. If using slide carriers, make sure they have not been used to carry fixed slides previously.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient		

CPT Code Information: 85007 (if appropriate); 85060 (if appropriate); 85097 (if appropriate); 88305 (if appropriate); 88311 (if appropriate);

HFE 35455

Hemochromatosis HFE Gene Analysis, Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 2.5 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81256-HFE (hemochromatosis) (eg, hereditary hemochromatosis) gene analysis, common variants (eg, C282Y, H63D)

HEMB 70454

Hemoglobin (Hb) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HBA1C

Hemoglobin A1c, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	
	Ambient	24 hours	

CPT Code Information: 83036

HBEL1 608083

Hemoglobin Electrophoresis Evaluation, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: ACD (solution B), green top (sodium heparin) Specimen Volume: 10 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL (this volume will limit reflex testing possibilities) 3 mL if multiplex ligation-dependent probe amplification is desired

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	7 days	

CPT Code Information: 83020-Quantitation by electrophoresis; 83021-Quantitation by HPLC; 82664-Electrophoresis, not elsewhere specified (if appropriate); 83068 (if appropriate); 83789 (if appropriate); 88184 (if appropriate); 83020-26 (if appropriate); ;

HBELI 608088

Hemoglobin Electrophoresis Interpretation

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	7 days	

CPT Code Information: NA - Not billable

HBEL0 608091

Hemoglobin Electrophoresis Summary Interpretation

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated		

CPT Code Information: 83020-26

HPFH

8270

Hemoglobin F Distribution, Blood

Specimen Requirements: Only orderable as a reflex. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -HBEL1 / Hemoglobin Electrophoresis Evaluation, Blood -MEV1 / Methemoglobinemia Evaluation, Blood -REVE1 / Erythrocytosis Evaluation, Blood -THEV1 / Thalassemia and Hemoglobinopathy Evaluation, Blood

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	14 days	

CPT Code Information: 88184

UNHB

9095

Hemoglobin Stability, Blood

Specimen Requirements: Only orderable as part of a profile or as a reflex. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -HBEL1 / Hemoglobin Electrophoresis Evaluation, Blood -THEV1 / Thalassemia and Hemoglobinopathy Evaluation, Blood -REVE1 / Erythrocytosis Evaluation, Whole Blood -MEV1 / Methemoglobinemia Evaluation, Blood Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	7 days	

CPT Code Information: 83068

HGBCE

65039

Hemoglobin Variant, A2 and F Quantitation, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or green top (heparin) Specimen Volume: 4 mL Collection Instructions: 1. Submit fresh specimen. 2. Send specimen in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	10 days	

CPT Code Information: 83020

HGB

801417

Hemoglobin, Blood

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	48 hours	
	Ambient	24 hours	

CPT Code Information: 85018**HGBQ**
614163**Hemoglobin, Qualitative, Random, Urine**

Specimen Requirements: Container/Tube: Plastic urine container Specimen Volume: 20 mL
Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 4 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated	72 hours	

CPT Code Information: 81003**THEVI**
608425**Hemoglobinopathy Interpretation****Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	7 days	

CPT Code Information: 83020-26**HAEV1**
607494**Hemolytic Anemia Evaluation, Blood**

Specimen Requirements: The following specimens are required for testing: 2 whole blood EDTA specimens 2 Whole blood ACD specimens 1 EDTA control specimen 2 Well-made peripheral blood smears (Wright stained or fixed in absolute methanol) Patient: Specimen Type: Blood Container/Tube: Lavender top (EDTA) and yellow top (ACD) Specimen Volume: EDTA: Two 4-mL vials ACD: Two 6-mL vials Collection Instructions: 1. Immediately refrigerate specimens after collection. 2. Send specimens in original tubes. Do not aliquot. 3. Rubber band patient specimen and control vial together. Specimen Type: Slides Container/Tube: Blood smears Specimen Volume: 2 Peripheral blood smears 1. Prepare 2 peripheral blood smears from 1 of the EDTA tubes collected from the patient 2. Either stain the smear with Wright stain or fix the smear with absolute methanol prior to shipping. Normal Shipping Control: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: 1. Collect a control specimen from a normal (healthy), unrelated, nonsmoking person at the same time as the patient. 2. Label clearly on outermost label normal control. 3. Immediately refrigerate specimen after collection. 4. Send specimen in original tube. Do not aliquot. 5. Rubber band patient specimen and control vial together.

Specimen Minimum Volume: EDTA Blood: 3 mL ACD Blood: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Control	Refrigerated	72 hours	PURPLE OR PINK TOP/EDTA
Whole Blood ACD-B	Refrigerated	72 hours	
Whole Blood EDTA	Refrigerated	72 hours	
Whole Blood Slide	Refrigerated		CARTRIDGE

CPT Code Information: 83020-26-Hemolytic Anemia Interpretation; 82657-Hexokinase, B; 82955-G6PD Enzyme Activity, B; 83020-Hemoglobin electrophoresis; 83021-High-Performance Liquid Chromatography (HPLC); 83068-Hemoglobin Stability; 84087-Glucose phosphate isomerase, B; 84220-Pyruvate Kinase Enzyme Activity, B; 82657-Adenylate Kinase, B; 82657-Phosphofructokinase, B; 82657-Phosphoglycerate Kinase, B; 82657-Trisphosphate Isomerase, B; 85060-Morphology review; 85557-Osmotic fragility; 88184-Band 3 Fluorescence Staining, RBC; 83915-Pyrimidine 5â€™™ Nucleotidase; 82978-Glutathione, B; 83789 (if appropriate); 82664 (if appropriate); 88184 (if appropriate);

HAEVI

608427

Hemolytic Anemia Interpretation**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	72 hours	

CPT Code Information: 83020-26

HAEVO

608090

Hemolytic Anemia Summary Interpretation**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated		

F8INP

66206

Hemophilia A F8 Gene, Intron 1 and 22 Inversion Mutation Analysis, Prenatal

Specimen Requirements: Results will be reported and also telephoned or faxed, if requested. Submit only 1 of the following specimens: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 5-10 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. 2. Discard the first 2 mL of amniotic fluid. If the culture will be performed in conjunction with chromosome analysis and alpha-fetoprotein, a total of approximately 25 mL to 30 mL will be needed for the combined studies. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated Additional Information: 1. Place the tubes in a Styrofoam container (T329). 2. Fill remaining space with packing material. 3. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 4. Bloody specimens are undesirable. 5. If the specimen does not grow in culture, you will be notified within 7 days of receipt. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport

media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer the chorionic villi specimen to a Petri dish containing transport medium (T095). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Stability Information: Refrigerated (preferred) <24 hours/Ambient Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks approximately 90% confluent Collection Instructions: Submit confluent cultured cells from another laboratory Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated Additional Information: There will be no culture charge.

Specimen Minimum Volume: Amniotic fluid: 10 mL Chorionic Villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81403

F8INV 66205

Hemophilia A F8 Gene, Intron 1 and 22 Inversion Mutation Analysis, Whole Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or blue top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	
	Frozen	7 days	
	Refrigerated	7 days	

CPT Code Information: 81403

F81P 88806

Hemophilia A F8 Gene, Intron 1 Inversion Known Mutation Analysis, Prenatal, Varies

Specimen Requirements: Advise Express Mail or equivalent if not on courier service Results will be reported and also telephoned or faxed, if requested. Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Prenatal specimens can be sent Monday through Thursday and must be received by 5 p.m. CST on Friday in order to be processed appropriately. All prenatal specimens must be accompanied by a maternal blood specimen. Order MATCC / Maternal Cell Contamination, Molecular Analysis on the maternal specimen. Submit only 1 of the following specimens: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 5-10 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. 2. Discard the first 2 mL of amniotic fluid. If the culture will be performed in conjunction with chromosome analysis and alpha-fetoprotein, a total of approximately 25 to 30 mL will be needed

for the combined studies. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated Additional Information: 1. Place the tubes in a Styrofoam container (T329). 2. Fill remaining space with packing material. 3. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 4. Bloody specimens are undesirable. 5. If the specimen does not grow in culture, you will be notified within 7 days of receipt. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer the chorionic villi specimen to a Petri dish containing transport medium (T095). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Stability Information: Refrigerated (preferred) <24 hours/Ambient Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks approximately 90% confluent Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated Additional Information: There will be no culture charge.

Specimen Minimum Volume: Amniotic fluid: 10 mL Chorionic villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81403

F81B 60555

Hemophilia A F8 Gene, Intron 1 Inversion Known Mutation, Whole Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or blue top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	
	Frozen	7 days	
	Refrigerated	7 days	

CPT Code Information: 81403

F822B 60554

Hemophilia A F8 Gene, Intron 22 Inversion Known Mutation, Whole Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or blue top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	
	Frozen	7 days	
	Refrigerated	7 days	

CPT Code Information: 81403**F822P**
89454**Hemophilia A F8 Gene, Intron 22 Inversion Mutation Analysis, Prenatal, Varies**

Specimen Requirements: Results will be reported and also telephoned or faxed, if requested. Submit only 1 of the following specimens: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 5-10 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. 2. Discard the first 2 mL of amniotic fluid. If the culture will be performed in conjunction with chromosome analysis and alpha-fetoprotein, a total of approximately 25 to 30 mL will be needed for the combined studies. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated Additional Information: 1. Place the tubes in a Styrofoam container (T329). 2. Fill remaining space with packing material. 3. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 4. Bloody specimens are undesirable. 5. If the specimen does not grow in culture, you will be notified within 7 days of receipt. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer the chorionic villi specimen to a Petri dish containing transport medium (T095). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Stability Information: Refrigerated (preferred) <24 hours/Ambient Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 flasks approximately 90% confluent Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated Additional Information: There will be no culture charge.

Specimen Minimum Volume: Amniotic fluid: 10 mL Chorionic villi: 5 mg**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81403**F8NGS**
65440**Hemophilia A, F8 Gene, Next-Generation Sequencing, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood or cord blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or light-blue top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 7 days/Refrigerated 7 days/Frozen 14 days Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Specimen Type: Amniotic fluid Supplies: Refrigerate/Ambient Shipping Box, 5 lb (T329) Container/Tube: Amniotic fluid container Specimen Volume: 10-20 mL Collection Instructions: 1. Optimal timing for specimen collection is

during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. 2. Discard the first 2 mL of amniotic fluid. 3. Place the tubes in a Styrofoam container. 4. Fill remaining space with packing material. 5. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 6. Bloody specimens are undesirable. 7. If the specimen does not grow in culture, you will be notified within 7 days of receipt. Additional Information: A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid Specimen Stability Information: Refrigerated (preferred) <24 hours/Ambient <24 hours Specimen Type: Chorionic villi Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer the chorionic villi specimen to a Petri dish containing transport medium. 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Genetic Testing Specimen Stability Information: Refrigerated (preferred) <24 hours/Ambient <24 hours Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks approximately 90% confluent Collection Instructions: Submit confluent cultured cells from another laboratory Additional Information: There will be no culture charge. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours

Specimen Minimum Volume: Blood: 1 mL Amniotic fluid: 10 mL Chorionic villi: 20 mg Confluent cultured cells: 2 full flasks

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81407

F9KMP 64577

Hemophilia B, F9 Gene Known Mutation Analysis, Prenatal

Specimen Requirements: Results will be reported and also telephoned or faxed, if requested. A. For the purposes of maternal cell contamination studies (MCC), submit the following specimen type from the mother in addition to 1 of the 3 accepted fetal specimen types: Specimen Type: Peripheral blood Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) or light blue top (sodium citrate) Specimen Volume: 6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated B. For the purposes of prenatal testing of the fetus, submit only 1 of the following specimens: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 5-10 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. 2. Discard the first 2 mL of amniotic fluid. If the culture will be performed in conjunction with chromosome analysis and alpha-fetoprotein, a total of approximately 25 mL to 30 mL will be needed for the combined studies. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer the chorionic villi specimen to a Petri dish containing transport medium (T095). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Stability Information: Refrigerated (preferred) <24 hours/Ambient Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks approximately 90% confluent Collection Instructions: Submit confluent cultured cells from another laboratory Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated Additional Information: 1. Place the tubes in a Styrofoam container (T329). 2. Fill remaining space with packing material. 3. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 4. Bloody specimens are undesirable. 5. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 6. There will be no culture charge.

Specimen Minimum Volume: Amniotic fluid: 10 mL Chorionic Villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81403

FIXKM
84320

Hemophilia B, F9 Gene Known Mutation, Whole Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or blue top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	
	Frozen	7 days	
	Refrigerated	7 days	

CPT Code Information: 81403-Known familial variant not otherwise specified, for gene listed in Tier 1 or Tier 2, DNA sequence analysis, each variant exon

NGSF9
606365

Hemophilia B, F9 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Results will be reported and also telephoned or faxed, if requested. Submit only 1 of the following specimens: Specimen Type: Peripheral blood or cord blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or light-blue top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 7 days/Refrigerated 7 days/Frozen 14 days Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Specimen Type: Amniotic fluid Supplies: Refrigerate/Ambient Mailer, 5 lb (T329) Container/Tube: Amniotic fluid container Specimen Volume: 10-20 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. 2. Discard the first 2 mL of amniotic fluid. 3. Place the tubes in a Styrofoam container (T329). 4. Fill remaining space with packing material. 5. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 6. Bloody specimens are undesirable. 7. If the specimen does not grow in culture, you will be notified within 7 days of receipt. Additional Information: A separate culture charge will be assessed under CULAF / Amniotic Fluid Culture for Genetic Testing Specimen Stability Information: Refrigerated (preferred) <24 hours/Ambient 24 hours Specimen Type: Chorionic villi Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer the chorionic villi specimen to a Petri dish containing transport medium. 3. Using a stereomicroscope and sterile forceps assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Genetic Testing Specimen Stability Information: Refrigerated (preferred) <24 hours/Ambient <24 hours Specimen Type: Confluent cultured cells Container/Tube:

T-25 flask Specimen Volume: 2 Flasks approximately 90% confluent Collection Instructions: Submit confluent cultured cells from another laboratory Additional Information: There will be no culture charge. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours

Specimen Minimum Volume: Blood: 1 mL Amniotic fluid: 10 mL Chorionic villi: 20 mg Confluent cultured cells: 2 full flasks

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81238

F11NG 65164

Hemophilia C, F11 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or green top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Provide indication of volume and concentration of the DNA. Specimen Stability: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 100 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Frozen	14 days	
	Refrigerated	7 days	

CPT Code Information: 81479

HQ 607706

HemoQuant, Feces

Specimen Requirements: Patient Preparation: Patient should refrain from ingesting red meat and aspirin-containing products (eg, Excedrin, Aspirin) for 3 days prior to specimen collection. Collection Container/Tube: Spoon-like sampler from kit (T134) Submission Container/Tube: Screw-capped tube Specimen Volume: 1 g Collection Instructions: Collect random specimen from a single defecation.

Specimen Minimum Volume: 1 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen		

CPT Code Information: 84126

UHSD1
610410

Hemosiderin, Random, Urine

Specimen Requirements: Container/Tube: Plastic urine container Specimen Volume: 13 mL
Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 12 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	
	Ambient	2 hours	

CPT Code Information: 83070

FWWE
57956

Hemp Western Water (*Acnida tamariscina*) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.
Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

HEPTP
40938

Heparin Anti-Xa, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL
Collection Instructions: 1. Centrifuge, aliquot plasma, and centrifuge plasma again. 2. Aliquot plasma into plastic vial leaving 0.25 mL in the bottom of centrifuged vial. Additional Information: Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen (preferred)	14 days	
	Ambient	2 hours	

CPT Code Information: 85520

FHEP2 **75683**

Heparin Cofactor II

Specimen Requirements: Patient Preparation: Do not draw from an arm with a heparin lock or heparinized catheter. Specimen Type: Citrated plasma Collection Container/Tube: Light-blue top (citrate) Specimen Volume: 2 mL Collection Instructions: Draw blood in a light blue-top (Sodium citrate) tube(s). Spin down and send 2 mL citrated plasma frozen in a plastic vial. Note: Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 1 mL (Note: This volume does not allow for repeat testing.)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	180 days	

CPT Code Information: 85130

HITIG **86533**

Heparin-PF4 IgG Antibody, Serum

Specimen Requirements: Patient Preparation: Fasting is preferred but not required Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen (preferred)	14 days	
	Refrigerated	48 hours	

CPT Code Information: 86022

HAIGG **48051**

Hepatitis A IgG Antibody, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	8 days	
	Ambient	4 days	

CPT Code Information: 86708

HAIGM

48064

Hepatitis A IgM Antibody, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Ambient	72 hours	

CPT Code Information: 86709

FHASQ

75120

Hepatitis A Qualitative PCR HAV SuperQual

Specimen Requirements: Submit only 1 of the following: Plasma Draw blood in a yellow-top (ACD) or purple-top (EDTA) tube(s). Spin down and send 1 mL ACD or EDTA plasma frozen in a plastic vial. Serum Draw blood in a plain red-top tube(s). Serum gel tube(s) is acceptable. Spin down and send 1 mL serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen		

CPT Code Information: 87798

HAV

800147

Hepatitis A Total Antibodies, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 24 hours.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	28 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 86708

HEPBC 70451

Hepatitis B Core (HBc) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HBIM 9015

Hepatitis B Core Antibody, IgM, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions. 2. Aliquot serum into plastic tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 86705

HBC 8347

Hepatitis B Core Total Antibodies, Serum

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 24 hours of collection.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	7 days	

Ambient

24 hours

CPT Code Information: 86704**CORAB**
32111**Hepatitis B Core Total Antibodies, with Reflex to Hepatitis B Core Antibody IgM, Serum**

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 24 hours.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 86704; 86705 (if appropriate);

HEAB
80973**Hepatitis B e Antibody, Serum**

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 24 hours.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 86707

HEAG
8311**Hepatitis B e Antigen and Hepatitis B e Antibody, Serum**

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot

serum into plastic vial within 24 hours.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 86707; 87350;

EAG 80510

Hepatitis B e Antigen, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 24 hours.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 87350

HBABY 63137

Hepatitis B Perinatal Exposure Follow-up Panel, Serum

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions. 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 86706; 86704; 87340; 87341 (if appropriate);

HEPBS
70453**Hepatitis B Surface (HBs) Antigen Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HBABT
87893**Hepatitis B Surface Antibody Monitor, Post-Transplant, Serum**

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions. 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 86317

HBAB
8254**Hepatitis B Surface Antibody, Qualitative/Quantitative, Serum**

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 86706

HBNTP 35936

Hepatitis B Surface Antigen Confirmation, Prenatal, Serum

Specimen Requirements: Only orderable as a reflex. For more information see HBAGP / Hepatitis B Surface Antigen Prenatal, Serum. Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions. 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 87341

HBGCD 83626

Hepatitis B Surface Antigen for Cadaveric or Hemolyzed Specimens, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 87340; 87341 (if appropriate);

HBAGP 86185

Hepatitis B Surface Antigen Prenatal, Serum

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	

Refrigerated	7 days
Ambient	24 hours

CPT Code Information: 87340; 87341 (if appropriate);

HBAG 9013

Hepatitis B Surface Antigen, Serum

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Transfer serum into aliquot tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 87340; 87341 (if appropriate);

HBVQN 65555

Hepatitis B Virus (HBV) DNA Detection and Quantification by Real-Time PCR, Serum

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	84 days	
	Refrigerated	6 days	

CPT Code Information: 87517

FHBG 57618

Hepatitis B Virus Genotyping

Specimen Requirements: Draw blood in lavender (EDTA) tube(s). Spin down and send 2 mL plasma frozen in a plastic vial. Required: 1. Viral Load 2. Viral Load Date Note: Red-top serum and serum gel tube(s) are acceptable. Note: This test may be unsuccessful if the HBV Viral load is less than log 3.0 or 1,000 IU/mL of plasma.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	42 days	
	Refrigerated	7 days	
	Ambient	72 hours	

CPT Code Information: 87912**HBVPE**
607910**Hepatitis B Virus Past Exposure Panel, Serum**

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 86706; 86704; 87340; 87341 (if appropriate);**FH1N5**
75187**Hepatitis C Viral RNA Genotype 1 NS5a Drug Resistance**

Specimen Requirements: Please submit one of the following: Plasma: Specimen Type: Plasma (Preferred) Container/Tube: EDTA (lavender-top) tube(s). Specimen volume: 2 mL Collection Instructions: Draw blood in an EDTA (lavender-top) tube(s). (Plasma gel tube is acceptable.) Spin down and send 2 mL plasma refrigerated in a plastic vial. Serum: Specimen Type: Serum Container/Tube: Red-top tube, serum gel is acceptable. Specimen volume: 2 mL Collection Instructions: Draw blood in a plain red-top tube(s). (Serum gel tube is acceptable.) Spin down and send 2 mL serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	42 days	
	Ambient	72 hours	

CPT Code Information: 87902

FH3N5

75188

Hepatitis C Viral RNA Genotype 3 NS5a Drug Resistance

Specimen Requirements: Submit one of the following: Plasma: Draw blood in a (lavender-top) EDTA tube(s). (Plasma gel tube is acceptable.) Spin down and send 2 mL plasma refrigerated in a plastic vial. Serum: Draw blood in a plain red-top tube(s). (Serum gel tube is acceptable.) Spin down and send 2 mL serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	42 days	
	Ambient	72 hours	

CPT Code Information: 87902

HCVSP

609748

Hepatitis C Virus (HCV) Antibody Screen Prenatal, Serum

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	5 days	

CPT Code Information: 86803; G0472 (if appropriate); 87522 (if appropriate);

HCSRN

113122

Hepatitis C Virus (HCV) Antibody Screen with Reflex to HCV RNA, PCR, Asymptomatic, Serum

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	5 days	

CPT Code Information: 86803 and G0472; 87522 (if appropriate);

HCVDX
113121

Hepatitis C Virus (HCV) Antibody with Reflex to HCV RNA, PCR, Symptomatic, Serum

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	5 days	

CPT Code Information: 86803 ; 87522-(if appropriate);

HCVQN
97291

Hepatitis C Virus (HCV) RNA Detection and Quantification by Real-Time Reverse Transcription-PCR (RT-PCR), Serum

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Serum gel Submission Container/Tube: Polypropylene vial (T465) Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions. 2. Pour off serum into aliquot tube.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	84 days	
	Refrigerated	6 days	

CPT Code Information: 87522

HCVRP
609749

Hepatitis C Virus (HCV) RNA Detection and Quantification, Real-Time Reverse Transcription-PCR, Prenatal, Serum

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum SST	Frozen (preferred)	84 days
	Refrigerated	6 days

CPT Code Information: 87522

HCVQG 603602

Hepatitis C Virus (HCV) RNA Quantification with Reflex to HCV Genotype, Serum

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Serum gel Submission Container/Tube: Polypropylene vial (T465) Specimen Volume: 3.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions. 2. Pour off serum into aliquot tube.

Specimen Minimum Volume: 1.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	42 days	
	Refrigerated	72 hours	

CPT Code Information: 87522

HCVL 63063

Hepatitis C Virus Antibody Confirmation, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.4 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	7 days	

CPT Code Information: 86804

HCCDD 58127

Hepatitis C Virus Antibody in Cadaveric or Hemolyzed Specimens, Symptomatic, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	28 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 86803; 86804 (if appropriate);**HCCAD**
87858**Hepatitis C Virus Antibody Screen for Cadaveric or Hemolyzed Specimens, Asymptomatic, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	28 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 86803; G0472; 86804 (if appropriate);**HCVG**
81618**Hepatitis C Virus Genotype, Serum**

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Transfer serum into aliquot tube. Additional Information: 1. Specimens should contain a recommended minimum HCV viral load of 500 IU/mL. 2. Serum specimens previously submitted to other laboratories for non-microbiology tests are NOT acceptable for add-on test requests, due to possible sample-to-sample carryover from automation used for those tests.

Specimen Minimum Volume: 1.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	42 days	
	Refrigerated	72 hours	

CPT Code Information: 87902

AHDV 9209

Hepatitis D Virus Total Antibodies, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	30 days	

CPT Code Information: 86692

HEVG 86211

Hepatitis E Virus IgG Antibody, Serum

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)		
	Refrigerated	24 hours	

CPT Code Information: 86790

HEVML 61903

Hepatitis E Virus IgM Antibody Confirmation, Serum

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)		
	Refrigerated	7 days	

CPT Code Information: 86790

HEVM 86212

Hepatitis E Virus IgM Antibody Screen with Reflex to Confirmation, Serum

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)		
	Refrigerated	24 hours	

CPT Code Information: 86790

HCCGS 606585

Hepatocellular Carcinoma Risk Panel with GALAD Score, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Refrigerated	5 days	

CPT Code Information: 82107; 83951;

HEPAT 70456

Hepatocyte Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HNF1B
70461**Hepatocyte Nuclear Factor 1Beta Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HSMWB
65695**Hepatosplenomegaly Panel, Blood**

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin, lithium heparin), yellow top (ACD B) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	72 hours	
	Ambient	48 hours	

CPT Code Information: 82542

HSMBS
601519**Hepatosplenomegaly Panel, Blood Spot**

Specimen Requirements: Supplies: -Card-Blood Spot Collection (Filter Paper) (T493) -Card-Postmortem Screening (Filter Paper) (T525) Container/Tube: Preferred: Blood Spot Collection card Acceptable: Ahlstrom 226 filter paper, Munktel filter paper, Postmortem Screening Card, or collected with EDTA, sodium heparin, lithium heparin, or ACD B-containing devices Specimen Volume: 2 blood spots Collection Instructions: 1. Let blood dry completely on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 2. At least 1 spot should be complete (ie, unpunched). 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	10 days	FILTER PAPER
	Frozen	59 days	FILTER PAPER

CPT Code Information: 82542**HSMP**

65694

Hepatosplenomegaly Panel, Plasma**Specimen Requirements:** Collection Container/Tube: Preferred: Lavender top (EDTA)

Acceptable: Green top (sodium heparin, lithium heparin), yellow top (ACD B) Submission

Container/Tube: Plastic vial Specimen Volume: 0.3 mL Collection Instructions: 1. Centrifuge at 4°C, if possible 2. Aliquot plasma into plastic vial, taking care not to disturb or transfer the buffy coat layer. 3. Send frozen

Specimen Minimum Volume: 0.25 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	65 days	

CPT Code Information: 82542**FHER**

91518

HER-2/neu, Quantitative, ELISA**Specimen Requirements:** Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable.

Spin down and send 1 mL serum in a screw-capped vial, shipped frozen.

Specimen Minimum Volume: 0.2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Frozen		

CPT Code Information: 83950**H2BR**

65879

HER2 Amplification Associated with Breast Cancer, FISH, Tissue**Specimen Requirements:** Note: In accordance to CAP guidelines, place specimens for HER2 (ERBB2) testing in fixative within one hour of biopsy or resection (cold ischemia time). Specimens should remain in 10% neutral buffered formalin for a minimum of six hours to a maximum of 72 hours (formalin fixation time). Do not use decalcification solutions with strong acids.(2) Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.**Specimen Minimum Volume:** Two consecutive, unstained, 5-micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88377; ;

H2GE 65880

HER2 Amplification Associated with Gastroesophageal Cancer, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5-micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88377

H2UR 65882

HER2 Amplification Associated with Urothelial Carcinoma, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5-micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88377

H2MT 65881

HER2 Amplification, Miscellaneous Tumor, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue

Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5-micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88377

HER2I 70457

HER2 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HERDN 71498

HER2, Breast, DCIS, Quantitative Immunohistochemistry, Manual No Reflex

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Preferred: A paraffin-embedded tissue block containing breast cancer tissue that has been fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total of 6 to 72 hours and shipped at ambient temperature Acceptable: 2 unstained sections, containing breast carcinoma, on charged slides cut at 4 microns less than 1 month ago and shipped at ambient temperature. Tissue on the slides should have been fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total of 6 to 72 hours. Submission Container/Tube: Pathology Packaging Kit (T554) Collection Instructions: Submit paraffin-embedded tissue block from ductal carcinoma in situ or solid/intracystic papillary carcinoma breast carcinoma tissue. Additional Information: Paraffin blocks will be returned with final report.

Specimen Minimum Volume: Entire block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88360

HERDM 70915

HER2, Breast, DCIS, Quantitative Immunohistochemistry, Manual with HER2 FISH Reflex

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Preferred: A paraffin-embedded tissue block containing breast cancer tissue that has been fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total of 6 to 72 hours and shipped at ambient temperature Acceptable: 5 Unstained sections containing breast carcinoma on charged slides cut at 4 microns less than 1 month ago and shipped at ambient temperature. Tissue on the slides should have been fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total of 6 to 72 hours. Collection Instructions: 1. Submit paraffin-embedded ductal carcinoma in situ or solid intracystic papillary carcinoma breast carcinoma tissue. 2. Paraffin blocks will be returned with final report.

Specimen Minimum Volume: Entire specimen

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88360

HERBA 70912

HER2, Breast, Quantitative Immunohistochemistry, Automated with HER2 FISH Reflex

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Preferred: A paraffin-embedded tissue block containing breast cancer tissue that has been fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total of 6 to 72 hours and shipped at ambient temperature Acceptable: 5 unstained sections containing breast carcinoma on charged slides cut at 4 microns <1 month ago and shipped at ambient temperature. Tissue on the slides should have been fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total of 6 to 72 hours. Submission Container/Tube: Pathology Packaging Kit (T554) Collection Instructions: Submit paraffin-embedded invasive or metastatic breast carcinoma tissue. Additional Information: 1. When ordering this test, the following questions, as stated on the order form or presented electronically, must be answered: a. "Was specimen fixed in 10% neutral buffered formalin within 1 hour from surgical collection time? Yes, No, or Unknown." b. "Has specimen been fixed in 10% neutral buffered formalin for 6 to 72 hours? Yes, No, or Unknown." c. "Tissue was decalcified? Yes, No or Unknown." d. "Tumor type? Primary invasive breast carcinoma or metastatic breast carcinoma." e. "Tumor classification? Invasive breast carcinoma, metastatic breast carcinoma, or micro-invasive breast carcinoma." 2. According to the American Society of Clinical Oncology (ASCO)/College of American Pathologists (CAP) guidelines, HER2 protein immunohistochemical test results are only valid for nondecalcified, paraffin-embedded specimens fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total time of 6 to 72 hours. Under- or overfixation may affect these results. 3. HER2 immunohistochemistry testing on intracystic papillary carcinoma and solid papillary carcinoma, without clearly stating invasive carcinoma, is not appropriate and will be canceled without processing. 4. Paraffin blocks will be returned with final report.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88361

HERBN 70913

HER2, Breast, Quantitative Immunohistochemistry, Automated, No Reflex

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Preferred: A paraffin-embedded tissue block containing breast cancer tissue that has been fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total of 6 to 72 hours and shipped at ambient temperature Acceptable: 2 unstained sections, containing breast carcinoma, on charged slides cut at 4 microns less than 1 month ago and shipped at ambient temperature. Tissue on the slides should have been fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total of 6 to 72 hours. Submission Container/Tube: Pathology Packaging Kit (T554) Collection Instructions: Submit paraffin-embedded invasive or metastatic breast carcinoma tissue. Additional Information: 1. When ordering this test, the following questions, as stated on the order form or presented electronically, must be answered: a. "Was specimen fixed in 10% NB formalin w/in 1 hour? Yes, No, or Unknown" b. "Was specimen fixed in 10% NB formalin 6-72 hours? Yes, No, or Unknown" c. "Tissue was decalcified? Yes, No, or Unknown." d. "Tumor type? Primary invasive breast carcinoma or metastatic breast carcinoma." e. "Tumor classification? Invasive breast carcinoma, metastatic breast carcinoma, or micro-invasive breast carcinoma." 2. According to the American Society of Clinical Oncology (ASCO)/College of American Pathologists (CAP) guidelines, HER2 protein immunohistochemical test results are only valid for nondecalcified, paraffin-embedded specimens fixed in 10% neutral buffered formalin within 1 hour from surgical collection time and for a total time of 6 to 72 hours. Under- or overfixation may affect these results. 3. HER2 immunohistochemistry testing on intracystic papillary carcinoma and solid papillary carcinoma, without clearly stating invasive carcinoma, is not appropriate and will be canceled without processing. 4. Paraffin blocks will be returned with final report.

Specimen Minimum Volume: Entire block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88361

HERGM 70911

HER2, Gastric/Esophageal, Semi-Quantitative Immunohistochemistry, Manual

Specimen Requirements: Only formalin-fixed, paraffin-embedded (FFPE) gastric or esophageal adenocarcinoma specimens will be accepted. Fixation in 10% neutral-buffered formalin is preferred. The performance and quality of immunohistochemical stains in 10% neutral-buffered FFPE tissue depends on proper fixation. It is recommended (not required) for surgical specimens to be fixed between 18 and 24 hours and biopsy specimens between 6 and 8 hours. If being ordered for prognostic purposes: Specimen Type: Gastric or esophageal adenocarcinoma Supplies: Pathology Packaging Kit (T554) Preferred: Paraffin-embedded tissue block containing invasive gastric or esophageal adenocarcinoma tissue

Additional Information: Paraffin blocks will be returned with final report. Acceptable: Slides Specimen Volume: 5 Collection Instructions: 5 Unstained sections, containing gastric or esophageal adenocarcinoma, on charged slides cut at 4 microns less than 1 month ago.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88360

HERGN 70914

HER2, Gastric/Esophageal, Semi-Quantitative Immunohistochemistry, Manual, No Reflex

Specimen Requirements: Only formalin-fixed, paraffin-embedded (FFPE) gastric or esophageal adenocarcinoma specimens will be accepted. Fixation in 10% neutral-buffered formalin is preferred. The performance and quality of immunohistochemical stains in 10% neutral-buffered FFPE tissue depends on proper fixation. It is recommended (not required) for surgical specimens to be fixed between 18 and 24 hours and biopsy specimens between 6 and 8 hours. If being ordered for prognostic purposes: Specimen Type: Gastric or esophageal adenocarcinoma Supplies: Pathology Packaging Kit (T554) Preferred: Paraffin-embedded tissue block containing invasive gastric or esophageal adenocarcinoma tissue Additional Information: Paraffin blocks will be returned with final report. Acceptable: Slides Specimen Volume: 5 Collection Instructions: 5 Unstained sections, containing gastric or esophageal adenocarcinoma, on charged slides cut at 4 microns less than 1 month ago.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88360

COLAB 35382

Hereditary Colon Cancer CGH Array

Specimen Requirements: Only orderable as a reflex. For further information see: AXINZ / AXIN2 Gene, Full Gene Analysis BMPRZ / BMPR1A Gene, Full Gene Analysis MLH3Z / MLH3 Gene, Full Gene Analysis PTENZ / PTEN Gene, Full Gene Analysis SMADZ / SMAD4 Gene, Full Gene Analysis STKZ / STK11 Gene, Full Gene Analysis TP53Z / TP53 Gene, Full Gene Analysis CDH1Z / CDH1 Gene, Full Gene Analysis M1M2Z / MLH1/MSH2 Genes, Full Gene Analysis MLH1Z / MLH1 Gene, Full Gene Analysis MSH2Z / MSH2 Gene, Full Gene Analysis MSH6Z / MSH6 Gene, Full Gene Analysis APCZ / APC Gene, Full Gene Analysis For information regarding hereditary colon cancer, see FMTT / Familial Mutation, Targeted Testing.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies			

CPT Code Information: 81228-Cytogenomic constitutional (genome-wide) microarray analysis;

interrogation of genomic regions for copy number variants (eg, bacterial artificial chromosome or oligo-based comparative genomic hybridization microarray analysis)

HCRC 35450

Hereditary Colon Cancer Multi-Gene Panel, Varies

Specimen Requirements: Prior Authorization is available for this test. Submit the required form with the specimen. Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81435; 81436; 81228;

HEMP 61337

Hereditary Erythrocytosis Mutations, Whole Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	30 days	
	Ambient	14 days	

CPT Code Information: 81479-Unlisted molecular pathology procedure

NGHHA 64939

Hereditary Hemolytic Anemia Comprehensive Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood (preferred) Container/Tube: Preferred: Lavender top (EDTA) or Yellow top (ACD) Acceptable: Green top (heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability: Refrigerated < or =30 days Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Indicate volume and concentration of the DNA. 2. Label specimen as extracted DNA and source of specimen. Specimen Stability: Frozen/Refrigerated/Ambient < or =30 days

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 100 mcL at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443

HHTGP 65747

Hereditary Hemorrhagic Telangiectasia Gene Panel, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (Preferred)/Refrigerated Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479; 81406 x 2;

HPPAN 35640

Hereditary Pancreatitis Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81222; 81223; 81404 x2; 81405;

HSAN1
604922**Hereditary Sensory and Autonomic Neuropathy, Type I, Serum**

Specimen Requirements: Patient Preparation: Fasting 8 hours Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Refrigerated	24 hours	

CPT Code Information: 82542

LHSVZ
800315**Herpes Simplex Virus (HSV) and Varicella-Zoster Virus (VZV), Molecular Detection, PCR, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Swab Supplies: Culturette (BBL Culture Swab) (T092) M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Sources: Genital, dermal, eye, or throat Container/Tube: Multimicrobe media (M4-RT) Specimen Volume: Swab Collection Instructions: Place swab back into multimicrobe media (M4-RT, M4, or M5). Additional Information: Source information should include the main anatomical source of collection. Supplies: Aliquot Tube, 5 mL (T465) Specimen Type: Fluid Sources: Pleural, peritoneal, ascites, pericardial, amniotic, or ocular Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Respiratory Sources: Bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate Container/Tube: Sterile container Specimen Volume: 1.5 mL Specimen Type: Tissue Supplies: -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Sources: Brain, colon, kidney, liver, lung, etc Container/Tube: Sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT, M4, or M5) Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue in multimicrobe media (M4-RT) or a sterile container with 1 to 2 mL sterile saline.

Specimen Minimum Volume: Body Fluid or Ocular Fluid: 0.3 mL; Respiratory: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87529 x2 HSV-1 and HSV-2; 87798-VZV;

HSV G
84429**Herpes Simplex Virus (HSV) Type 1- and Type 2-Specific Antibodies, IgG, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86695-Herpes simplex, type 1; 86696-Herpes simplex, type 2;

VHSV

62352

Herpes Simplex Virus (HSV), Culture From Neonates, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Swab Supplies: -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Sources: Ocular, Rectal, Skin, Dermal, Mouth, Nasopharynx, Conjunctiva, Eye, Anus Container/Tube: Multimicrobe media (M4-RT) (T605) or other viral transport media (M4 or M5) Specimen Volume: Swab Collection Instructions: Place swab back into multimicrobe media (M4-RT, M4, or M5) Additional Information: Swab with a wood handle has been shown to be toxic to some viruses and is not acceptable for culture. Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Type: Stool Container/Tube: Sterile container Specimen Volume: 5 to 10 g

Specimen Minimum Volume: Stool: 5 g Urine: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated	7 days	

CPT Code Information: 87254 x 2

LHSV

80267

Herpes Simplex Virus (HSV), Molecular Detection, PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87529 x 2

HSVC

63434

Herpes Simplex Virus (HSV), Molecular Detection, PCR, Spinal Fluid

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Aliquot tube (12- x 75-mm screw cap vial: T465) Specimen Volume: 0.2 mL Collection Instructions: Do not centrifuge or heat-inactivate. Additional Information: 1. The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by herpes simplex virus DNA is not likely. 2. Specimens that are received with less than the minimum

volume required for all testing requested will be canceled.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87529 x 2

LHSV **800143**

Herpes Simplex Virus (HSV), Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Fluid Sources: Pleural, peritoneal, ascites, pericardial, amniotic, or ocular Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Supplies: BBL CultureSwab (T092) M4-RT (T605) Specimen Type: Swab Sources: Genital, dermal, ocular, nasal, throat, or oral Container/Tube: Multimicrobe media (M4-RT) (T605) Specimen Volume: Entire collection Collection Instructions: Place swab back into multimicrobe media (M4-RT [T605], M4, or M5) Additional Information: Source information should include main anatomical site of collection. Specimen Type: Respiratory Sources: Bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate Container/Tube: Sterile container Specimen Volume: 1.5 mL Supplies: M4-RT (T605) Specimen Type: Tissue Sources: Brain, colon, kidney, liver, lung, etc. Container/Tube: Sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT [T605], M4, or M5) Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue. Additional Information: Source information should include main anatomical site of collection. Specimen Type: Urine (<1 month old infant) Container/Tube: Sterile container Specimen Volume: 0.5 mL

Specimen Minimum Volume: Body or Ocular Fluid: 0.3 mL Respiratory Specimen: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87529 x 2

HERPB **601898**

Herpes Simplex Virus 1 and 2, Qualitative PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	7 days	

CPT Code Information: 87529 x 2

HERPV 82001

Herpes Simplex Virus 1 and 2, Qualitative PCR, Varies

Specimen Requirements: It is recommended that HERPV be collected separately from other PCR tests. Submit only 1 of the following specimens: Specimen Type: Fluid Sources: Pleural, peritoneal, ascites, pericardial, amniotic, or ocular Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Respiratory Sources: Bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Type: Swab Sources: Genital, cervical, rectal, dermal, ocular, nasal, throat, or oral Supplies: -Culturette (BBL Culture Swab) (T092) -M4 media, M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Specimen Volume: Entire collection Collection Instructions: Place swab into multimicrobe media (M4-RT [T605], M4, or M5 media). Specimen Type: Tissue Sources: Brain, colon, kidney, liver, lung, etc. Supplies: -M4-RT (T605) or M4 media -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Container/Tube: Sterile container containing 1-2 mL of sterile saline or multi-microbe medium (M4-RT [T605], M4 media, or M5 media) Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue. Specimen Type: Urine (<1 month old infant) Container/Tube: Sterile container Specimen Volume: 0.5 mL

Specimen Minimum Volume: Fluids, Respiratory, and Urine: 0.3 mL Swabs and Tissue: Entire collection

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated	7 days	

CPT Code Information: 87529 x 2

HRPSV 70467

Herpes Simplex Virus, I and II (HSV I and II) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FHHV6 91311

Herpes Virus 6 DNA, Qualitative Real-Time PCR

Specimen Requirements: Draw blood in lavender-top (EDTA) tube(s) or yellow-top (ACD) tube(s) and send 1 mL of whole blood refrigerated. (DO NOT FREEZE)

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	7 days	
	Ambient	48 hours	

CPT Code Information: 87532

FHV6D **57484**

Herpesvirus 6 (HHV-6) DNA, Quantitative Real-Time PCR

Specimen Requirements: Submit only one of the following: Whole Blood: Collect 1 mL (lavender-top) EDTA or (yellow-top) ACD whole blood. Ship refrigerate. Serum: Draw blood in a plain, red-top tube(s). (Serum gel tube is acceptable.) Separate immediately and submit 1 mL serum refrigerate in a plastic vial. Plasma: Draw blood in a (lavender-top) EDTA or (yellow-top) ACD tube(s). (Plasma gel tube is acceptable.) Separate immediately and submit 1 mL plasma refrigerate in a plastic vial. CSF: Collect 1 mL of spinal fluid (CSF) is sterile leak proof container. Ship refrigerate in a plastic vial. Bronchoalveolar Lavage: Collect 1 mL in sterile leak proof container. Ship refrigerate in a plastic vial. Bone Marrow: Collect 1 mL bone marrow in a (lavender-top) EDTA or (yellow-top) ACD tube. Ship refrigerate.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Ambient	48 hours	

CPT Code Information: 87533

FHV7D **57372**

Herpesvirus 7 (HHV-7) DNA, Quantitative Real-Time PCR

Specimen Requirements: Submit only 1 of the following specimens: Whole Blood Draw blood in a lavender-top (EDTA) tube(s) or yellow-top (ACD) tube(s) and submit 1 mL whole blood. Ship refrigerated (DO NOT FREEZE). Serum Draw blood in a plain, red-top tube(s). (Serum gel tube is acceptable.) Allow blood to clot at room temperature and separate serum from cells within 2 hours of collection. Submit 1 mL serum in a plastic vial. Ship refrigerated. Plasma Draw blood in an EDTA or ACD tube(s). (Plasma gel tube is acceptable.) Separate plasma from cells within 2 hours of collection and submit 1 mL plasma in a plastic vial. Ship refrigerated.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Ambient	48 hours	

CPT Code Information: 87799

FH7GM **57487**

Herpesvirus 7 IgG and IgM Antibody Panel, IFA

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL serum in a screw-capped vial, shipped refrigerate.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 86790 x 2

FH8RP 57675

Herpesvirus 8 (HHV-8) DNA, Quantitative Real-Time PCR

Specimen Requirements: Submit only 1 of the following specimens: Whole Blood Draw blood in a lavender (EDTA) or yellow (ACD) tube(s) and submit 0.7 mL whole blood refrigerated (DO NOT FREEZE) Serum Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.7 mL serum refrigerated in a plastic vial. Plasma Draw blood in an EDTA or ACD tube(s), plasma gel tube(s) is acceptable. Spin down and send 0.7 mL plasma refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Ambient	48 hours	

CPT Code Information: 87799

HERR 82823

Herring, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FHEXA 91442

Hexagonal Phospholipid Neutralization

Specimen Requirements: Draw blood in a light blue-top (Sodium citrate) tube(s). Spin down and send 1 mL citrated plasma frozen in a plastic vial. Note: Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen		

CPT Code Information: 85598

HKC 608420

Hexokinase Enzyme Activity, Blood

Specimen Requirements: Only available as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 82657

HK1 607461

Hexokinase Enzyme Activity, Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 82657

NAGW 8775

Hexosaminidase A and Total Hexosaminidase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 83080 x 2

NAGS 8774

Hexosaminidase A and Total Hexosaminidase, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	7 days	

CPT Code Information: 83080 x 2

NAGR 82943

Hexosaminidase A and Total, Leukocytes/Molecular Reflex, Whole Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 83080 x 2; 81255-HEXA (hexosaminidase A, alpha polypeptide) (eg, Tay-Sachs disease) gene analysis, common variants (eg, 1278insTATC, 1421+1G>C, G269S) (if appropriate);

MUGS 80350

Hexosaminidase A, Serum

Specimen Requirements: Patient Preparation: Patient should be fasting for 4 hours. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Frozen (preferred)	365 days
	Refrigerated	5 days

CPT Code Information: 83080

FSHAG Hickory Shagbark (Carya ovata) IgE

57950

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

HMGA High Mobility Group A2 (HMGA2) Immunostain, Technical Component Only

70460

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HPLC High-Performance Liquid Chromatography (HPLC) Hemoglobin Variant, Blood

65615

Specimen Requirements: Only orderable as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -HBEL1 / Hemoglobin Electrophoresis Evaluation, Blood -MEV1 / Methemoglobinemia Evaluation, Blood -REVE1 / Erythrocytosis Evaluation, Whole Blood -THEV1 / Thalassemia and Hemoglobinopathy Evaluation, Blood

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	10 days	

CPT Code Information: 83021

HIPA 9756

Hippuric Acid, Urine

Specimen Requirements: Send 3 mL from a random urine collection. Send specimen refrigerated in a plastic urine container.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	30 days	
	Frozen	30 days	
	Ambient	5 days	

CPT Code Information: 82570 ; 83921;

FHSPL 57533

Histamine Plasma

Specimen Requirements: Specimen Type: Plasma Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: Draw 3 mL blood in a lavender-top (EDTA) tube(s). Cool immediately on ice. Centrifuge at 1500 rpm for 10 minutes at 4°C. The centrifugation should be performed within 20 minutes of collection. Carefully remove 1 mL of EDTA plasma from the upper part of the tube. Freeze and send frozen in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	28 days	

CPT Code Information: 83088

FH24U 57821

Histamine, 24-Hour Urine

Specimen Requirements: Patient Preparation: Avoid taking allergy causing drugs, antihistamines, oral corticosteroids, and substances which block H2 receptors for at least 24 hours prior to specimen collection. Avoid direct sunlight during the collection. Specimen Type: Urine Submission Container/Tube: Plastic, 10-mL tube (T068) Specimen Volume: 4 mL Collection Instructions: Submit only 1 of the following: -Collect 24-hour urine with 10 mL 6N HCL. (Preferred) -Collect 24-hour urine without preservative. 1. Collect urine for 24 hours, either with 10 mL 6N HCL preservative (preferred), or with no preservative. 2. Avoid direct sunlight during the 24-hour collection. 3. Send specimen refrigerated in the plastic, 10-mL urine tube (T068) 4. Collection volume and duration are required

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	48 hours	

CPT Code Information: 83088**FHSTW**

57368

Histamine, Whole Blood

Specimen Requirements: Collect blood in a green top tube (sodium or lithium heparin). Submit 1 mL well-mixed blood in a plastic screw cap tube frozen. NOTE: 1. Critical frozen. Separate samples must be submitted when multiple tests are ordered. 2. Unacceptable: non-frozen samples

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
WB Heparin	Frozen	180 days	

CPT Code Information: 83088**HG34W**

604697

Histone 3.3 G34W (H3F3A G34W) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**HK27M**

604989

Histone H3 K27M Mutant (H3 K27M) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HK36M 604699

Histone H3 K36M Mutant (H3F3 K36M) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HISME 72127

Histone H3 Trimethyl K27 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SHSTO 26692

Histoplasma Antibody, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	14 days
	Frozen	14 days

CPT Code Information: 86698 x 3

CHIST Histoplasma Antibody, Spinal Fluid

8230

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86698 x 3

UHIST Histoplasma Antigen, Random, Urine

63014

Specimen Requirements: Supplies: Aliquot tube, 5-mL (T465) Container/Tube: Plastic, 5-mL aliquot tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Do not centrifuge to remove particulate matter.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 87385-x 2 (if appropriate)

HBRP Histoplasma capsulatum/Blastomyces species, Molecular Detection, PCR, Varies

60213

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by Histoplasma or Blastomyces species DNA is not likely. Submit only 1 of the following specimens: Specimen Type: Body fluid Sources: Body, CSF, bone marrow Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Type: Respiratory Sources: BAL, bronchial washing, sputum Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Type: Tissue or bone Container/Tube: Sterile container Specimen Volume: 5-10 mm Collection Instructions: Collect a fresh tissue or bone specimen. Acceptable: Specimen Type: NALC/NaOH-digested respiratory specimens Sources: Lavage fluid, bronchial washing, gastric washing, respiratory fluid, sputum, or tracheal secretion Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: 1. Submit digested specimen treated with NALC/NaOH. 2. Clearly indicate on container and order form that specimen is a digested specimen.

Specimen Minimum Volume: Body Fluid or Respiratory Specimen: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	7 days	

CPT Code Information: 87798 x 2

HICBL 113132

Histoplasma/Blastomyces Panel, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1.5 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86698 x 3-Histoplasma Antibody, CSF; 86612-Blastomyces Antibody, CSF;

HIVSP 48393

HIV Antigen and Antibody Prenatal Routine Screen, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Transfer plasma into a plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Refrigerated (preferred)	6 days	
	Frozen	30 days	

CPT Code Information: 87389; G0475;

HV1CD 83628

HIV-1 and HIV-2 Antibodies for Cadaveric or Hemolyzed Specimens, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 86703; 86701; 86702;

HVDSP 601759

HIV-1 and HIV-2 Antibody Confirmation and Differentiation Prenatal, Plasma

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen (preferred)	30 days	
	Refrigerated	6 days	

CPT Code Information: 86701; 86702;

HVDIP 601758

HIV-1 and HIV-2 Antibody Confirmation and Differentiation, Plasma

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot plasma into plastic vial.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen (preferred)	30 days	
	Refrigerated	6 days	

CPT Code Information: 86701; 86702;

HV1CM 60357

HIV-1 and HIV-2 Antibody Screen for Hemolyzed Specimens, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 86703; G0432; 86701 (if appropriate); 86702 (if appropriate);

HIVDX 48392

HIV-1 and HIV-2 Antigen and Antibody Diagnostic Evaluation, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot plasma into a plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Refrigerated (preferred)	6 days	
	Frozen	30 days	

CPT Code Information: 87389

HVCOP 48341

HIV-1 and HIV-2 Antigen and Antibody Routine Screen, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 4 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot plasma into a plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Refrigerated (preferred)	6 days	
	Frozen	30 days	

CPT Code Information: 87389; G0475;

HIVP **64693**

HIV-1 DNA and RNA Qualitative Detection by PCR, Plasma

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge blood collection tube and aliquot plasma into plastic vial per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). Additional Information: This test can be used for detection and diagnosis of HIV-1 infections, including in children younger than 2 years of age when serologic tests are not useful (due to presence of maternal HIV antibodies).

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	35 days	
	Refrigerated	5 days	

CPT Code Information: 87535

HIVPR **37216**

HIV-1 Genotypic Drug Resistance to Protease and Reverse Transcriptase Inhibitors, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 2.2 mL Collection Instructions: Centrifuge and transfer plasma into plastic vial per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes) Additional Information: Specimens submitted for HIV-1 genotyping should contain > or = 500 copies/mL of HIV-1 RNA.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	35 days	ALICUOT TUBE
	Refrigerated	5 days	ALICUOT TUBE

CPT Code Information: 87901

HIVI **63247**

HIV-1 Genotypic Integrase Inhibitor Drug Resistance, Plasma

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Polypropylene vial Specimen Volume: 2.2 mL Collection Instructions: Centrifuge and aliquot plasma per collection tube manufacturer's instructions for use (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). Additional Information: To ensure a minimum HIV-1 RNA amount (at least 500 copies/mL), the preferred blood volume must be submitted. Testing may be canceled is the specimen supplied is inadequate.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	35 days	
	Refrigerated	5 days	

CPT Code Information: 87906

HIVQN 113581

HIV-1 RNA Detection and Quantification, Plasma

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube and aliquot plasma into plastic vial per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Freeze aliquoted plasma for shipment.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	84 days	
	Refrigerated	6 days	

CPT Code Information: 87536

HIVDQ 802084

HIV-1 RNA Detection and Quantification, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Collection Instructions: 1. Spin down and remove plasma from cells within 6 hours of draw. 2. Freeze plasma specimen immediately. Additional Information: This test can be used for detection and diagnosis of HIV-1 infections, including in children less than 18 months of age when serologic tests are not useful (due to presence of maternal HIV antibodies).

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	35 days	
	Refrigerated	5 days	
	Ambient	24 hours	

CPT Code Information: 87536

HIQNP 65567

HIV-1 RNA Detection and Quantification, Prenatal, Plasma

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Centrifuge blood collection tube and aliquot plasma into plastic vial per collection tube manufacturer's instructions(eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Freeze aliquoted plasma for shipment.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	84 days	
	Refrigerated	6 days	

CPT Code Information: 87536

HIRGT 65713

HIV-1 RNA Quantification with Reflex to HIV-1 Genotypic Drug Resistance to Protease and Reverse Transcriptase Inhibitors, Plasma

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 3.6 mL Collection Instructions: 1. Centrifuge blood collection tube and aliquot plasma into plastic vial per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Freeze aliquoted plasma for shipment.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	35 days	
	Refrigerated	5 days	

CPT Code Information: 87536-HIV-1 Quantification; 87901-HIV-1 genotypic drug resistance (if appropriate);

HIVQG 601739

HIV-1 RNA Quantification with Reflex to HIV-1 Genotypic Drug Resistance, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Spin down and remove plasma from cells within 6 hours of draw. 2. Freeze plasma specimen immediately.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	35 days	
	Refrigerated	5 days	

CPT Code Information: 87536-HIV-1, quantification; 87901-HIV-1 genotypic drug resistance (if appropriate);

HIV2L

61785

HIV-2 Antibody Confirmation, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	14 days	
	Ambient	48 hours	

CPT Code Information: 86689

FHV2Q

91490

HIV-2 DNA/RNA Qualitative Real-Time PCR

Specimen Requirements: Specimen Type: Whole Blood Container/Tube: EDTA Tube Specimen Volume: 3mL Collection Instructions: Collect 1 mL (lavender-top) EDTA whole blood. Ship refrigerate.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 87538

FHLAA

91498

HLA A High Resolution

Specimen Requirements: Draw blood in a lavender-top (EDTA) tube. Send 14 mL of EDTA whole blood at ambient temperature.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	14 days	

CPT Code Information: 81380

FHLAB

91499

HLA B High Resolution

Specimen Requirements: Draw blood in a lavender-top (EDTA) tube. Send 14 mL of EDTA whole blood at ambient temperature.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	14 days	

CPT Code Information: 81380

FHLAC

91500

HLA C High Resolution

Specimen Requirements: Draw blood in a lavender-top (EDTA) tube(s). Send 14 mL EDTA whole blood ambient.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	14 days	

CPT Code Information: 81380

HL57R

610054

HLA-B*57:01 Genotype, Pharmacogenomics, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Supplies: Saliva Swab Collection Kit (T786) Patient Preparation: Patient should not eat, drink smoke, or chew gum 30 minutes prior to collection. Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81381

HL58R 610055

HLA-B*5801 Genotype, Allopurinol Hypersensitivity, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Supplies: Saliva Swab Collection Kit (T786) Patient Preparation: Patient should not eat, drink smoke, or chew gum 30 minutes prior to collection. Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81381

LY27B 9648

HLA-B27, Blood

Specimen Requirements: Specimen must arrive within 96 hours of draw. Container/Tube: Lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	4 days	

CPT Code Information: 86812

HMB45 70459

HMB45 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HMBSZ HMBS Gene, Full Gene Analysis, Varies

35457

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 3

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81406-Unlisted molecular pathology procedure; ; Fibroblast Culture for Genetic Test; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

HCMM

89047

Homocysteine (Total), Methylmalonic Acid, and Methylcitric Acid, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Card-Blood Spot Collection (Filter Paper) from heel or finger stick Acceptable: Local newborn screening card, Whatman Protein Saver 903 paper Specimen Volume: 2 Blood spots Collection Instructions: 1. Do not use device or capillary tube containing EDTA or ACD to collect specimen. Sodium heparin is acceptable, but must be spotted on card the same day as collected. 2. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on filter paper at ambient temperature in a horizontal position for 3 or more hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special

Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)		FILTER PAPER
	Frozen		FILTER PAPER
	Refrigerated		FILTER PAPER

CPT Code Information: 83090; 83918;

HCYSP 80379

Homocysteine, Total, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately place specimen on wet ice. 2. Centrifuge and aliquot plasma into plastic vial within 4 hours of collection. 3. If blood cannot be placed on wet ice immediately, centrifuge and aliquot plasma into plastic vial within 1 hour of collection. 4. A refrigerated centrifuge is not required if the above time restrictions are met.

Specimen Minimum Volume: 0.10 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	28 days	
	Frozen	309 days	
	Ambient	28 days	

CPT Code Information: 83090

HCYSS 35836

Homocysteine, Total, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel tube Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 4 hours of collection.

Specimen Minimum Volume: 0.10 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	309 days	
	Ambient	28 days	

CPT Code Information: 83090

HVA
9253

Homovanillic Acid, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Administration of L-dopa may falsely increase homovanillic acid results; it should be discontinued 24 hours prior to and during collection of specimen. Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a 24-hour urine specimen. 2. Add 25 mL of 50% acetic acid as preservative at start of collection. If specimen is refrigerated during collection, preservative may be added up to 12 hours after collection. Use 15 mL of 50% acetic acid for children less than 5 years old. This preservative is intended to achieve a pH of between approximately 1 and 5. If necessary, adjust urine pH to 1 to 5 with 50% acetic or hydrochloric acid. Additional Information: 1. The sensitivity of this test is greater on a 24-hour specimen than on a random specimen. 2. See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	180 days	

CPT Code Information: 83150

HVAR
60275

Homovanillic Acid, Random, Urine

Specimen Requirements: Patient Preparation: Administration of L-dopa may falsely increase homovanillic acid results; it should be discontinued 24 hours prior to and during collection of specimen. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Adjust the urine pH to a level between 1 and 5 by adding 50% acetic acid dropwise and checking the pH.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	180 days	

CPT Code Information: 83150

HBV
82551

Honeybee Venom, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

HOP 82370

Hop Fruit, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

HBEA 82484

Hornbeam, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

HORS 82874

Horse Dander, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

HFSF 82608

Horsefly/Stablefly, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FHORS 57934

Horseradish (*Armoracia rusticana*/A.lapathifolia)IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

DF 82905

House Dust Mites/Dermatophagoides farinae, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For one allergen: 0.3 mL For more than one allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

90 days

CPT Code Information: 86003**DP**
82904**House Dust Mites/Dermatophagoides pteronyssinus, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**HD1**
81877**House Dust Panel, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.7 mL**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**HDG**
82906**House Dust/Greer Lab, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

HDHS
82903

House Dust/H-S Lab, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FHTL
91491

HTLV I/II DNA, Qualitative Real-Time PCR

Specimen Requirements: Collection Container/Tube: Preferred: Lavender-top (EDTA) Acceptable: Yellow top (ACD, solution A) Specimen Volume: 1 mL Collection Instructions: Draw blood in a lavender-top (EDTA) tube(s), or yellow-top (ACD solution A) tube(s). Send 1 mL EDTA or ACD whole blood refrigerate.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	48 hours	

CPT Code Information: 87798 x 2

FHAM
57856

Human Anti-mouse Antibody (HAMA)

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	90 days	

CPT Code Information: 83520

HCG 70455

Human Chorionic Gonadotropin (hCG) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

THCG 80678

Human Chorionic Gonadotropin (hCG), Quantitative, Pregnancy, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	72 hours	
	Frozen	365 days	

CPT Code Information: 84702

HE4 62137

Human Epididymis Protein 4, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	84 days	

Refrigerated

7 days

CPT Code Information: 86305**HRPV8**
70458**Human Herpes Virus, Type 8 (HHV-8) Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FH6AB
58047**Human Herpesvirus 6 (HHV-6A and HHV-6B) by Quantitative PCR**

Specimen Requirements: Submit only one of the following: CSF: Collect 1 mL spinal fluid (CSF) in sterile plastic container and ship frozen. Serum: Draw blood in serum gel tube(s). Spin down and send 1 mL of serum frozen in a plastic vial. Plasma: Draw blood in lavender (EDTA), pink (K2EDTA) tube(s), or (yellow ACD) tube(s). Spin down and send 1 mL of plasma frozen in a plastic vial. Note: 1. Source required. 2. Separate orders required for each specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen (preferred)	90 days	
	Refrigerated	5 days	

CPT Code Information: 87533

HHV6
87532**Human Herpesvirus-6, Molecular Detection, PCR, Plasma**

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Preferred: Aliquot Tube, 5 mL (T465) Acceptable: Screw-capped, sterile container Specimen Volume: 1 mL Collection Instructions: Spin down promptly.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Plasma EDTA	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 87532

HHV6V 89888

Human Herpesvirus-6, Molecular Detection, PCR, Spinal Fluid

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Preferred: Aliquot Tube, 5 mL (T465) Acceptable: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87532

1DIS 609354

Human Leukocyte Antigens (HLA) A-B-C Disease Association Typing Low Resolution, Blood

Specimen Requirements: Container/Tube: Yellow top (ACD solution B) Specimen Volume: 6 mL Collection Instructions: Send in original tube. Do not transfer blood to other containers. Additional Information: Specimen acceptability is based on extracted DNA concentration and not sample age.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81372 (if all loci-A, B, C performed); 81373 (if appropriate for each loci if less than 3 performed);

2DIS 609356

Human Leukocyte Antigens (HLA)-DR-DQ Disease Association Typing Low Resolution, Blood

Specimen Requirements: Container/Tube: Yellow top (ACD solution B) Specimen Volume: 6 mL Collection Instructions: Send in original tube. Do not transfer blood to other containers. Additional Information: Specimen acceptability is based on extracted DNA concentration and not sample age.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81375 + 81376 (as appropriate); ;

HPVP
62995

Human Papillomavirus (HPV) DNA Detection with Genotyping, High Risk Types by PCR with Papanicolaou Smear Reflex, ThinPrep, Varies

Specimen Requirements: Original ThinPrep/PreservCyt collection vial is required for testing.

Only 1 aliquot may be removed from PreservCyt sample vial prior to performing the ThinPrep Pap Test, regardless of the volume of the aliquot (maximum aliquot volume=3 mL). For optimal interpretation, Pap smears should be collected near the middle of the menstrual cycle. Avoid douching, lubricant use, and sexual intercourse for 24 hours prior to specimen collection. Specimen source is required. Submit only 1 of the following specimens: Broom Collection Device: Specimen Type: Cervical (endocervical or ectocervical) Supplies: Thin Prep Media with Broom Kit (T056) Container/Tube: ThinPrep/PreservCyt vial Specimen Volume: 20 mL of solution in ThinPrep/PreservCyt vial Collection Instructions: 1. Obtain adequate sampling from cervix using a broom-like collection device. If desired, use lukewarm water to warm and lubricate the speculum. Insert the central bristles of the broom into the endocervical canal deep enough to allow the shorter bristles to fully contact the ectocervix. Push gently and rotate the broom in a clockwise direction 5 times. 2. Rinse the broom as quickly as possible into the PreservCyt solution vial by pushing broom into bottom of vial 10 times, forcing the bristles apart. 3. As a final step, swirl broom vigorously to further release material. Discard the collection device. 4. Tighten cap on vial so that the torque line on the cap passes the torque line on the vial. 5. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 6. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 7. Place labels on the vial and on the bag. Endocervical Brush/Spatula Collection Device: Specimen Type: Ectocervix and endocervix Supplies: Thin Prep Media with Spatula and Brush Kit (T434) Container/Tube: ThinPrep/PreservCyt vial Specimen Volume: 20 mL of solution in ThinPrep/PreservCyt vial Collection Instructions: 1. Obtain an adequate sampling from the ectocervix using a plastic spatula. If desired, use lukewarm water to warm and lubricate the speculum. Select contoured end of plastic spatula and rotate it 360 degrees around the entire exocervix while maintaining tight contact with exocervical surface. 2. Rinse spatula as quickly as possible into the PreservCyt solution vial by swirling spatula vigorously in vial 10 times. Discard the spatula. 3. Next, obtain an adequate specimen from endocervix using an endocervical brush device. Insert the brush into the cervix until only the bottommost fibers are exposed. Slowly rotate 1/4 or 1/2 turn in one direction. Do not over-rotate. 4. Rinse the brush as quickly as possible in the PreservCyt solution by rotating the device in the solution 10 times while pushing against the PreservCyt vial wall. 5. Swirl brush vigorously as final step to further release material. Discard the brush. 6. Tighten the cap so that the torque line on the cap passes the torque line on the vial. 7. Specimen vial must be labeled with a minimum of 2 unique identifiers (patient's name and medical record number or date of birth). 8. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 9. Place labels on the vial.

Specimen Minimum Volume: 17 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	42 days	
	Refrigerated	42 days	

CPT Code Information: 87624; G0476 (if appropriate); 88142 (if appropriate);

SHPV 62599

Human Papillomavirus (HPV) DNA Detection with Genotyping, High-Risk Types by PCR, SurePath, Varies

Specimen Requirements: Supplies: HPV SurePath Transport Tube 13 mL (T710) Specimen Type: Cervical (endocervical or ectocervical) or vaginal Specimen Volume: 1.5 mL Collection Instructions: 1. Aliquot a minimum of 1 mL SurePath specimen into SurePath HPV aliquot tube. 2. Bag specimens individually as they have a tendency to leak during transport. 3. Place labels on the vial and on the bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	14 days	
	Refrigerated	14 days	

CPT Code Information: 87624; G0476 (if appropriate);

HPV 62598

Human Papillomavirus (HPV) DNA Detection with Genotyping, High-Risk Types by PCR, ThinPrep, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Cervical (endocervical or ectocervical) Container/Tube: ThinPrep/PreservCyt solution vial Specimen Volume: 3 mL of solution in ThinPrep/PreservCyt vial Collection Instructions: 1. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 2. Place labels on the vial and on the bag. Specimen Type: Vaginal Container/Tube: ThinPrep/PreservCyt solution vial Specimen Volume: 3 mL of solution in ThinPrep/PreservCyt vial Collection Instructions: 1. Bag ThinPrep specimens individually as they have a tendency to leak during transport. 2. Place labels on the vial and on the bag. Additional Information: This assay is validated but not FDA-approved for vaginal source specimens.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	42 days	
	Refrigerated	42 days	

CPT Code Information: 87624; G0476 (if appropriate);

HPVE6 71405

Human Papillomavirus (HPV) High-Risk E6/E7, RNA In Situ Hybridization

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Formalin-fixed, paraffin-embedded tissue block Specimen Volume: Entire block Specimen Type: Slides Slides: 5 unstained glass, positively charged slides with 5 (+ or - 1)-microns formalin-fixed, paraffin-embedded tissue

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88365-Primary; 88364-If additional ISH;

HPVHL 70464

Human Papillomavirus (HPV) High/Low Risk, DNA In Situ Hybridization

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Formalin-fixed, paraffin-embedded tissue block Specimen Volume: Entire block Specimen Type: Slides Slides: 6 unstained glass, positively charged slides with 5 (+ or - 1)-microns formalin-fixed, paraffin-embedded tissue

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88365-Primary; 88364-If additional ISH;

HPVLR 70465

Human Papillomavirus (HPV) Low Risk, DNA In Situ Hybridization

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Formalin-fixed, paraffin-embedded tissue block Specimen Volume: Entire block Specimen Type: Slides Slides: 5 unstained glass, positively charged slides with 5 (+ or - 1)-microns formalin-fixed, paraffin-embedded tissue

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88365-Primary; 88364-If additional ISH;

HPVHR 70463

Human Papillomavirus (HPV), High-Risk, DNA In Situ Hybridization

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Formalin-fixed, paraffin-embedded tissue block Specimen Volume: Entire block Specimen Type: Slides Slides: 5 unstained glass, positively charged slides with 5 (+ or - 1)-microns formalin-fixed, paraffin-embedded tissue

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88365-Primary; 88364-If additional ISH;

FHPL 91178

Human Placental Lactogen (HPL)

Specimen Requirements: Draw blood in a red top tube(s). Separate and send 1 mL of serum frozen in plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	90 days	

CPT Code Information: 83632

HPL 70462

Human Placental Lactogen Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HTLLC 604935

Human T-Cell Lymphotropic Virus Types 1 and 2 (HTLV-1/-2) Antibody Confirmation, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)		
	Refrigerated		

CPT Code Information: 86689

HTLVC
604934

Human T-Cell Lymphotropic Virus Types 1 and 2 (HTLV-1/-2) Antibody Screen with Confirmation, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	30 days	
	Refrigerated	14 days	

CPT Code Information: 86790 ; 86689 (if appropriate) ;

HTLVL
83277

Human T-Cell Lymphotropic Virus Types I and II (HTLV-I/-II) Antibody Confirmation, Serum

Specimen Requirements: Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)		
	Refrigerated	7 days	

CPT Code Information: 86689

HTLVI
9539

Human T-Cell Lymphotropic Virus Types I and II Antibody Screen with Confirmation, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge within 2 hours of collection for BD Vacutainer tubes). 2. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	28 days	
	Refrigerated	7 days	

CPT Code Information: 86790; 86689 (if appropriate);

MPS2Z

35463

Hunter Syndrome, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood Spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81405-IDS (iduronate 2-sulfatase) (eg, mucopolysaccharidosis, type II), full gene sequence; 88233-Tissue culture, skin, or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

HAD

35452

Huntington Disease, Molecular Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		

Refrigerated

CPT Code Information: 81271-HTT (huntingtin) (eg, Huntington disease) gene analysis; evaluation to detect abnormal (eg, expanded) alleles

MPS1Z 35465

Hurler Syndrome, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood spots: 5, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81406 IDUA (iduronidase, alpha-L-) (eg, mucopolysaccharidosis type I), full gene sequence; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

FHMTB 58081

Hydrocodone and metabolites

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	

Frozen	180 days
Ambient	72 hours

CPT Code Information: 80361

HYDCU Hydrocodone with Metabolite Confirmation, Random, Urine

62614

Specimen Requirements: Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 20 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. No STATS are accepted for this procedure. 3. For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody testing, order OPATX / Opiates Confirmation, Chain of Custody, Urine 4. Additional drug panels and specific requests are available. Call 800-533-1710 or 507-266-5700. 5. If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADULT / Adulterants Survey, Urine. For additional information, please refer to ADULT / Adulterants Survey, Urine.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 80361; G0480 (if appropriate);

HYDMU Hydromorphone Confirmation, Random, Urine

62615

Specimen Requirements: Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 20 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. No STATS are accepted for this procedure. 3. For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody testing, order OPATX / Opiates Confirmation, Chain of Custody, Urine 4. Additional drug panels and specific requests are available. Call 800-533-1710 or 507-266-5700. 5. If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADULT / Adulterants Survey, Urine. For additional information, please refer to ADULT / Adulterants Survey, Urine.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 80361; G0480 (if appropriate);

HCQ
64947

Hydroxychloroquine, Serum

Specimen Requirements: Collection Container/Tube: Red top (gel tubes/SST are not acceptable)
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose. 2. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	21 days	

CPT Code Information: 80299

HGEM
62230

Hydroxyglutaric Acids, Glutaric Acid, Ethylmalonic Acid, and Methylsuccinic Acid, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493)
Container/Tube: Preferred: Card-Blood Spot Collection (Filter Paper) from heel or finger stick
Acceptable: PerkinElmer (formerly Ahlstrom 226) filter paper, Munktell filter paper, Whatman Protein Saver 903 paper, available newborn screening card, blood collected in tubes containing heparin or EDTA and dried on filter paper Specimen Volume: 2 Blood spots Collection Instructions: 1. Do not use device or capillary tube containing ACD to collect specimen. Sodium heparin or EDTA are acceptable, but must be spotted on card the same day as collected. 2. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on filter paper at room temperature in a horizontal position for 3 or more hours. 4. Do not stack wet specimens. 5. Do not expose specimen to heat or direct sunlight. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	123 days	FILTER PAPER
	Frozen	123 days	FILTER PAPER
	Refrigerated	123 days	FILTER PAPER

CPT Code Information: 83918

HGEMP
62300

Hydroxyglutaric Acids, Glutaric Acid, Ethylmalonic Acid, and

Methylsuccinic Acid, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Green top (sodium heparin)
Acceptable: Lavender top (EDTA), green top (lithium heparin) Submission Container/Tube: Plastic vial
Specimen Volume: 0.1 mL

Specimen Minimum Volume: 0.02 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Refrigerated (preferred)	90 days	
	Frozen	90 days	
	Ambient	12 days	

CPT Code Information: 83918

HGEMS 62231

Hydroxyglutaric Acids, Glutaric Acid, Ethylmalonic Acid, and Methylsuccinic Acid, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube:
Plastic vial Specimen Volume: 0.1 mL

Specimen Minimum Volume: 0.02 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	90 days	
	Frozen	90 days	
	Ambient	4 days	

CPT Code Information: 83918

FVIST 90121

Hydroxyzine (Vistaril, Atarax), Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80299

HYOX 86213

Hyperoxaluria Panel, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Immediately freeze specimen.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	90 days	
	Refrigerated	14 days	

CPT Code Information: 82542

FAVI 91509

Hypersensitivity Pneumonitis Avian Panel

Specimen Requirements: Draw blood in a Red-top tube(s). Serum-gel tube(s) is also acceptable. Spin down and send 3 mL of serum refrigerated.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	365 days	
	Frozen	365 days	
	Ambient	24 hours	

CPT Code Information: 86331x5

FHPP2 57595

Hypersensitivity Pneumonitis FEIA Panel II

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Collection instructions: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.6 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)		
	Ambient		
	Frozen		

CPT Code Information: 86001 x 8

HYPS

42374

Hypersensitivity Pneumonitis Panel, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86606; 86609 x 2;

HCMGP

63158

Hypertrophic Cardiomyopathy Multi-Gene Panel, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Additional Information: Prior Authorization is available for this test. Submit the required form with the specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81439

HYPOG

82439

Hypoglycemic Agent Screen, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 3 mL

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen (preferred)	14 days	
	Ambient	14 days	
	Refrigerated	14 days	

CPT Code Information: 80377, (G0480 if appropriate)

HIF2A

61681

Hypoxia-Inducible Factor Alpha (EPAS1/HIF2A) Gene, Exons 9

and 12 Sequencing, Whole Blood

Specimen Requirements: Only orderable as part of a profile. For more information see HEMP / Hereditary Erythrocytosis Mutations, Whole Blood.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	30 days	
	Ambient	14 days	

CPT Code Information: 81479-Unlisted molecular pathology procedure

FIBUP 57703

Ibuprofen (Motrin, Advil, Nuprin), serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 1 mL sodium heparin plasma refrigerated in plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80329; ;

ICOSI 113518

ICOS (CD278), Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25 x 75 x 1 mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

RMALM Id MALDI-TOF Mass Spec AFB (Bill Only) 60778

Specimen Requirements: **For billing purposes only

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87118

RMALA
62258

Id MALDI-TOF Mass Spec Anaerobe (Bill Only)

Specimen Requirements: **For billing purposes only

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87076

LCHB
60214

Id, Histoplasma/Blastomyces PCR (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87150 x 2

RMALD
60029

Ident by MALDI-TOF Mass Spec (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87077

LCCI
45463

Ident Rapid PCR Coccidioides (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Varies

Varies

CPT Code Information: 87150**PCRID**

64706

Identification by PCR (Bill Only)**Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87150**RTBSP**

60768

Identification Mycobacterium tuberculosis Complex Speciation, PCR (Bill Only)**Specimen Requirements:** **For billing purposes only**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87150**STAP**

45362

Identification Staphylococcus (Bill Only)**Specimen Requirements:** This test is for Billing Purposes Only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87077**STRP**

45371

Identification Streptococcus (Bill Only)**Specimen Requirements:** This test is for Billing Purposes Only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87077

LCCA
610319

Identification, Candida auris, Rapid PCR (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

COMM
45070

Identification, Commercial Kit (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87077

LCTB
610320

Identification, Mycobacterium tuberculosis Complex, Rapid PCR (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

ISNGS
609732

Identification, Next-Generation Sequencing (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87798

IDH1
70468

IDH1 Mutation (R132H) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively

charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

I2SW
61902

Iduronate-2-Sulfatase, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 82657

I2SBS
61901

Iduronate-2-Sulfatase, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood spot collection card Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, Munktel TFN, and Whatman Protein Saver 903 paper Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is fingerstick. See Dried Blood Spot Collection Tutorial for how to collect blood spots via fingerstick: <https://vimeo.com/508490782> . 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	90 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Refrigerated	90 days	FILTER PAPER

CPT Code Information: 82657

IFPCA
113304**IF Additional (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88350

IFA26
603534**IF Additional, Professional Only (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88346-26

IFTOA
603532**IF Additional, Technical Only (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88350-TC

IFPCI
113303**IF Initial (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88346

IFI26
603533**IF Initial, Professional Only (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88346-26

IFTOI
603531**IF Initial, Technical Only (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88346-TC

IGAI
70470**IgA Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

IGAS
87938**IgA Subclasses, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	7 days	

CPT Code Information: 82784; 82787 x 2;

IGDI 70471

IgD Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FIGEA 75618

IgE Receptor Antibody

Specimen Requirements: Container/Tube: Preferred: Red top tube Acceptable: Serum gel tube Specimen Volume: 1.0 mL Collection Instructions: Draw blood in a plain, red-top tube(s) or serum gel tube(s). Separate serum from cells immediately by centrifugation and aliquot in a polypropylene or similar plastic tube. Send 1 mL of serum frozen in plastic vial. Submit with specimen: 1. National Jewish Immunology Diagnostics request form. 2. Patient's date of birth is required on the National Jewish Immunology Diagnostics request form

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	365 days	
	Refrigerated	7 days	
	Ambient	48 hours	

CPT Code Information: 88184

IGGI 70473

IgG Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

IGGS

9259

IgG Subclasses, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 82784; 82787 x 4;

SFIGS

610784

IgG, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see SFIG / Cerebrospinal Fluid (CSF) IgG Index Profile, Serum and Spinal Fluid. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 82784

CASF

8271

IgG/Albumin Ratio, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 82042; 82784;

FG4FI 57851

IgG4 Food Panel I

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001 X 10

FGFP2 57904

IgG4 Food Panel II

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001 x 9; ;

FG4FP 57591

IgG4 Food Panel VIII

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001 x 6

IGG4I 70472

IgG4 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

BCLL 89008

IGH Somatic Hypermutation Analysis, B-Cell Chronic Lymphocytic Leukemia (B-CLL), Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability: Refrigerated/ Ambient Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Stability: Refrigerated/ Ambient Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL screw-top tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and indicate specimen source (blood or bone marrow). 2. The required volume of DNA is 50 mcL at a concentration of 20 ng/mcL 3. Include volume and concentration on tube. Specimen Stability: Frozen (preferred)/Refrigerated

Specimen Minimum Volume: Blood: 1 mL Bone Marrow: 1 mL Extracted DNA: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	7 days	

CPT Code Information: 81263-IGH (immunoglobulin heavy chain locus) (eg, leukemia and lymphoma, B-cell), variable region somatic mutation analysis

IGMI 70474

IgM Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

IHPCA 113298

IHC Additional (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88341

IHA26 113300

IHC Additional, Professional Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88341-26

IHTOA 113209

IHC Additional, Tech Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88341-TC

IHPCI 113297

IHC Initial (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342

IHC26 **113299**

IHC Initial, Professional Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-26

IHTOI **113208**

IHC Initial, Tech Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC

IHMPC **113301**

IHC Multiplex (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88344

IHM26 **113302**

IHC Multiplex, Professional Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88344-26**IHMTO**
113211**IHC Multiplex, Tech Only (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88344-TC**IMRGF**
35276**Imatinib Mesylate Responsive Genes, FISH, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Green top (sodium heparin) Specimen Volume: 7-10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1-2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271 x 1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

IMIPR
63508**Imipramine and Desipramine, Serum**

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose (minimum 12 hours after last dose). 2.

Centrifuge and aliquot serum into plastic vial. Serum must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 80335; G0480 (if appropriate);

IFXED **606458**

Immunofixation Heavy Chain Type Delta and Epsilon, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 86334

IMFXO **800316**

Immunofixation Only, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 86334; 86334-Immunofixation Delta and Epsilon (if appropriate);

FIFLC **75678**

Immunofixation with Free Light Chains, Quantitative, Urine

Specimen Requirements: Specimen Type: Urine Submission Container/Tube: Two 4-mL plastic

aliquot tube(s) Specimen Volume: 8 mL (Two 4-mL plastic aliquot tube(s)) Collection Instructions: 1. Collect urine for 24 hours (NO preservative). 2. Refrigerate specimen during the 24-hour collection. 3. Send specimen refrigerate in Two 4-mL plastic aliquot tube(s) 4. Collection volume and duration are required

Specimen Minimum Volume: 4 mL (2 vials 2 mL each)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	21 days	
	Frozen	180 days	

CPT Code Information: 84156; 86335; 83520 x 2;

FIMM 91507

Immunofixation, CSF

Specimen Requirements: Collect 3 mL of spinal fluid (CSF), in a sterile screw cap container. Ship frozen.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	30 days	
	Refrigerated	5 days	

CPT Code Information: 86335

IMFX 800306

Immunofixation, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see MPSS / Monoclonal Protein Study, Serum. Patient Preparation: Fasting preferred but not required Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 86334

FHLCA 75550

Immunoglobulin A (IgA) Heavy and Light Chain (HLC) Pairs, Kappa and Lambda with Ratio

Specimen Requirements: Specimen Type: Serum Container/Tube: Â Red top or SST Specimen Volume: 0.75 mL Collection Instructions: Draw blood in a plain red-top tube, serum gel tube(s) is also acceptable. Separate serum immediately after coagulation (30 minutes) to prevent hemolysis. Send 0.75 mL of serum refrigerated in a plastic vial. NOTE: Patient should be fasting for eight hours to avoid lipemic sample interference.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 83883 x 2

IGA 8157

Immunoglobulin A (IgA), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82784

IGD 9272

Immunoglobulin D (IgD), Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	21 days	

CPT Code Information: 82784

IGE
8159**Immunoglobulin E (IgE), Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: For total IgE: 0.3 mL For total IgE and more than 1 allergen: 0.05 mL x number of allergen-specific IgEs + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785

FLCP
800280**Immunoglobulin Free Light Chains, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 83883 x 2

FLCS
608250**Immunoglobulin Free Light Chains, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 83520 x 2

FHLCG
75551**Immunoglobulin G (IgG) Heavy and Light Chain (HLC) Pairs,**

Kappa and Lambda with Ratio

Specimen Requirements: Specimen Type: Serum Container/Tube: Red top or SST Specimen Volume: 0.75 mL Collection Instructions: Draw blood in a plain red-top tube, serum gel tube(s) is also acceptable. Separate serum immediately after coagulation (30 minutes) to prevent hemolysis. Send 0.75 mL of serum refrigerated in a plastic vial. NOTE: Patient should be fasting for eight hours to avoid lipemic sample interference.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 83883 x 2

SUBIF 70620

Immunoglobulin G (IgG) Subtypes Immunofluorescence, Tissue

Specimen Requirements: Preferred: Frozen tissue Supplies: Renal Biopsy Kit (T231) Specimen Type: Kidney tissue Container/Tube: Renal Biopsy Kit, Zeus/Michel's, Frozen Specimen Volume: Entire specimen Collection Instructions: Collect specimens according to the instructions in Renal Biopsy Procedure for Handling Tissue for Light Microscopy (LM), Immunofluorescent Histology (IF), and Electron Microscopy (EM) in Special Instructions. Additional Information: If standard immunoglobulin and complement immunofluorescence has already been performed, submit the residual frozen tissue (must contain glomeruli) on dry ice. Acceptable: Frozen tissue Slides: 4 frozen tissue unstained positively-charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Frozen (preferred)		
	Ambient		
	Refrigerated		

CPT Code Information: 88346-primary IF; 88350-if additional IF;

IGG 8160

Immunoglobulin G (IgG), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	

Frozen

28 days

CPT Code Information: 82784**BCGR**
83123**Immunoglobulin Gene Rearrangement, Blood**

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 81261-IGH (Immunoglobulin heavy chain locus) (eg, leukemias and lymphomas B-cell), gene rearrangement analysis to detect abnormal clonal populations; amplified methodology (eg, polymerase chain reaction); 81264-IGK (Immunoglobulin kappa light chain locus) (eg, leukemia and lymphoma, B-Cell) gene rearrangement analysis, evaluation to detect abnormal clonal populations;

BCGBM
31141**Immunoglobulin Gene Rearrangement, PCR, Bone Marrow**

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 81261-IGH (Immunoglobulin heavy chain locus) (eg, leukemias and lymphomas, B-cell), gene rearrangement analysis to detect abnormal clonal population(s); amplified methodology (eg, polymerase chain reaction); 81264-IGK (Immunoglobulin kappa light chain locus) (eg, leukemia and lymphoma, B-cell), gene rearrangement analysis, evaluation to detect abnormal clonal population(s);

BCGRV
31142**Immunoglobulin Gene Rearrangement, PCR, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: At least 5 mL Collection Instructions: 1. If the volume is large, pellet cells prior to sending. 2. Send less volume at ambient temperature or as a frozen cell pellet. Specimen Stability Information: Body fluid: Ambient/Refrigerated/Frozen Cell pellet: Frozen Specimen Type: Paraffin-embedded bone marrow aspirate clot Container/Tube: Paraffin block

Specimen Stability Information: Ambient Specimen Type: Frozen tissue Container/Tube: Plastic container Specimen Volume: 100 mg Collection Instructions: Freeze tissue within 1 hour of collection. Specimen Stability Information: Frozen Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Specimen Stability Information: Ambient Specimen Type: Tissue Slides: Unstained slides Specimen Volume: 10 Slides Specimen Stability Information: Ambient Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 5 to 10 mL Specimen Stability Information: Ambient/Refrigerated Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen 2. Indicate volume and concentration of DNA on label Specimen Stability Information: Refrigerated/Ambient

Specimen Minimum Volume: Body and spinal fluid: 1 mL Tissue: 50 mg Extracted DNA: 50 microliters (mcL) at 20 ng/mcL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81261-IGH (Immunoglobulin heavy chain locus) (eg, leukemias and lymphomas B-cell), gene rearrangement analysis to detect abnormal clonal populations; amplified methodology (eg, polymerase chain reaction); 81264-IGK (Immunoglobulin kappa light chain locus) (eg, leukemia and lymphoma, B-cell) gene rearrangement analysis, evaluation to detect abnormal clonal populations;

KCSFP
607839

Immunoglobulin Kappa Free Light Chain, Spinal Fluid

Specimen Requirements: Only orderable as part of a profile. For more information see MSP3 / Multiple Sclerosis (MS) Profile, Serum and Spinal Fluid. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Label specimen as spinal fluid.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	28 days	
	Refrigerated	72 hours	
	Ambient	24 hours	

CPT Code Information: 83883

KCSF
65572

Immunoglobulin Kappa Free Light Chain, Spinal Fluid

Specimen Requirements: Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Label specimen as spinal fluid.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	28 days	

Refrigerated	72 hours
Ambient	24 hours

CPT Code Information: 83883

FHLC 75455

Immunoglobulin M (IgM) Heavy and Light Chain (HLC) Pairs, Kappa and Lambda with Ratio

Specimen Requirements: Specimen Type: Serum Container/Tube: SST or Red top Specimen Volume: 0.75 mL Collection Instructions: Draw blood in a plain red-top tube, serum gel tube(s) is also acceptable. Separate serum immediately after coagulation (30 minutes) to prevent hemolysis. Send 0.75 mL of serum refrigerated in a plastic vial. NOTE: Patient should be fasting for eight hours to avoid lipemic sample interference.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	7 days	

CPT Code Information: 83883 x 2

IGM 8158

Immunoglobulin M (IgM), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82784

IGGS4 84250

Immunoglobulin Subclass IgG4, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 82787

TLCU 87934

Immunoglobulin Total Light Chains, Urine

Specimen Requirements: If serum is being submitted on the same patient for FLCP / Immunoglobulin Free Light Chains, Serum; order that test under a different order. Submit only 1 of the following specimens: Specimen Type: Random urine Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 1 mL Collection Instructions: Collect a random urine specimen. Specimen Type: 24-Hour urine Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 1 mL Collection Instructions: Collect urine for 24 hours. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	20 days	
	Ambient	72 hours	

CPT Code Information: 83883 x 2

IMMG 8156

Immunoglobulins (IgG, IgA, and IgM), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82784 x 3

FIMMC 57370

Immunoglobulins, CSF Quantitative

Specimen Requirements: Specimen Type: Spinal Fluid Source: CSF Container/Tube: Sterile

container Specimen Volume: 1 mL Collection Instructions: Submit 1 mL of spinal fluid (CSF), centrifuge and separate to remove cellular material. Send refrigerate in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	30 days	
	Frozen	180 days	

CPT Code Information: 82784-Immunoglobulin IgA; 82784-Immunoglobulin IgG; 82784-Immunoglobulin IgM;

MONOS 9081

Infectious Mononucleosis, Rapid Test, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86308

IBDGP 65667

Inflammatory Bowel Disease Primary Immunodeficiency (PID) Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor or a recent (ie, <6 weeks from time of sample collection) heterologous blood transfusion will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Blood spot Supplies: Card-Blood Spot Collection Filter Paper (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Whatman FTA Classic paper, Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 2 to 5 blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient <1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Peripheral blood mononuclear cells (PBMCs) Container/Tube: Cell pellet Collection Instructions: Send as a suspension in freezing medium or cell pellet frozen on dry ice. Specimen Stability Information: Frozen Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Additional Information: Indicate the

tests to be performed on the fibroblast culture cells. A separate culture charge will be assessed under FIBR / Fibroblast Culture. Tissue. An additional 3 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Additional Information: A separate culture charge will be assessed under FIBR / Fibroblast Culture, Tissue. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mL 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443

IBDP2 610004

Inflammatory Bowel Disease Serology Panel, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86255; 86671 x 2;

IMTF 35277

Inflammatory Myofibroblastic Tumors (IMT), 2p23 (ALK) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		

Refrigerated

CPT Code Information: 88271x2, 88291 Æ, Æ DNA probe, each (first probe set), Interpretation and report; 88271x2 Æ, Æ DNA probe, each; each additional probe set (if appropriate); 88271x1 Æ, Æ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 Æ, Æ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 Æ, Æ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 Æ, Æ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 Æ, Æ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 Æ, Æ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

INFXR 63437

Infliximab Quantitation with Reflex to Antibodies to Infliximab, Serum

Specimen Requirements: Patient Preparation: 1. Draw blood immediately before next scheduled dose (trough specimen). 2. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Red top (serum ger/SST are not acceptable) Specimen Volume: 1 mL Collection Instructions: Centrifuge within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen (preferred)	28 days	
	Refrigerated	28 days	

CPT Code Information: 80230; 82397-(if appropriate);

IFLDT 610342

Influenza A and B, PCR, Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen (preferred)	14 days	
	Refrigerated	72 hours	

CPT Code Information: 87502

FLUNP 62669

Influenza Virus Type A and Type B, and Respiratory Syncytial Virus (RSV), Molecular Detection, PCR, Nasopharyngeal Swab

Specimen Requirements: Specimen Type: Nasopharyngeal swab Container/Tube: Sterile container with viral transport media Collection Instructions: 1. Collect specimen by swabbing back and forth over mucosa surface to maximize recovery of cells. 2. Swab must be placed in viral transport media (for example, M4-RT, M4, or M4 media).

Specimen Minimum Volume: Nasopharyngeal swab submitted in minimum volume of 0.3 mL

of viral transport media (eg, M4-RT)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87631

FLUMS
62668

Influenza Virus Type A and Type B, and Respiratory Syncytial Virus (RSV), Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Nasal or nasopharyngeal aspirate Container/Tube: Sterile container Specimen Volume: 0.5 mL Specimen Type: Throat, nasal, or nasal mid-turbinate swab Supplies: Culturette (BBL Culture Swab) (T092) Container/Tube: Sterile container with viral transport media Collection Instructions: 1. Collect specimen by swabbing back and forth over mucosa surface to maximize recovery of cells. 2. Swab must be placed in viral transport media (for example, M4-RT, M4, or M5 media); BBL Culture Swab container includes a stabilizing media. Acceptable: Specimen Type: Nasopharyngeal washing Container/Tube: Sterile container Specimen Volume: 0.5 mL Specimen Type: Bronchial washing or bronchoalveolar lavage fluid Container/Tube: Sterile container Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87631

INHAB
86336

Inhibin A and B, Tumor Marker, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 83520-Inhibin B; 86336-Inhibin A;

INHA
81049

Inhibin A, Tumor Marker, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.6 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 86336

INHB 88722

Inhibin B, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.4 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 83520

INHIB 70476

Inhibin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

INHU 82789

Insulin (Human), IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**INAB****8666****Insulin Antibodies, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.5 mL

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86337**INSUL****70478****Insulin Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**INSFT****62990****Insulin, Free and Total, Serum**

Specimen Requirements: Patient Preparation: 1. Fasting (8 hours) 2. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Avoid hemolysis 2. Label specimens with corresponding draw times. 3. Serum-gel tubes should be centrifuged within 2 hours of collection. 4. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection. 5. Send frozen to laboratory Additional Information: If multiple specimens are drawn, send separate order for each

specimen.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	180 days	
	Refrigerated	7 days	

CPT Code Information: 83527-Free Insulin; 83525-Total Insulin;

INS
8664

Insulin, Serum

Specimen Requirements: Patient Preparation: 1. Patient should be fasting. 2. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Avoid hemolysis 2. Label specimens with corresponding collection times. 3. Centrifuge and aliquot serum into plastic vial within 2 hours of collection. Additional Information: If multiple specimens are drawn, send separate order for each specimen.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	180 days	
	Refrigerated	7 days	

CPT Code Information: 83525

IGFGP
36365

Insulin-Like Growth Factor 1 and Insulin-Like Growth Factor-Binding Protein 3 Growth Panel, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: 2 Plastic vials Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge promptly. 2. Aliquot into 2 plastic vials in equal portions.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	14 days	

CPT Code Information: 83520-IGFBP3; 84305-IGFMS;

FIGF2
80758

Insulin-like Growth Factor 2 (IGF-2)

Specimen Requirements: Draw blood in a plain, red-top tube(s). Separate within 1 hour of collection, freeze immediately. Send 0.5 mL serum frozen. Note: 1. Serum gel tube is okay, but must pour off into a plastic screw cap vial and freeze. 2. Minimum volume does not permit for repeat analysis

Specimen Minimum Volume: 0.1 mL NOTE: Minimum volume does not allow for repeat analysis.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	200 days	

CPT Code Information: 83519

IGFMS 62750

Insulin-Like Growth Factor-1, Mass Spectrometry, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	28 days	
	Ambient	72 hours	
	Refrigerated	72 hours	

CPT Code Information: 84305

IGFB3 83300

Insulin-Like Growth Factor-Binding Protein 3, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.8 mL Collection Instructions: Centrifuge promptly.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	14 days	
	Ambient	72 hours	
	Refrigerated	72 hours	

CPT Code Information: 83520

FGBP1 75670

Insulin-like Growth Factor-binding Protein-1 (IGFBP-1)

Specimen Requirements: Collection container/tube: 5 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down within one hour and send 0.5 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.1 mL Note: This volume does not permit repeat analysis.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)		
	Refrigerated	48 hours	

CPT Code Information: 83520

INSM1 602573

Insulinoma-Associated Protein 1 (INSM1), Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained, positively charged glass slide (25 x 75 x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

IFG23 607216

Intact Fibroblast Growth Factor 23, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 83520

INI1 70477

Integrase Interactor 1 (INI1/BAF47) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

IEHCG
606587

Interference Evaluation Heterophile, Beta-Human Chorionic Gonadotropin, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	365 days	
	Ambient	24 hours	

CPT Code Information: 84702 x 2

FIFNY
57586

Interferon-gamma (IFN-γ) Serum

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	365 days	

CPT Code Information: 83520

FINTA
91708

Interleukin 1-Alpha

Specimen Requirements: Patient preparation: Patient should NOT be on any Corticosteroids,

anti-inflammatory medications or pain killers, if possible, for at least 48 hours prior to collection of specimen. Serum Specimen Type: Serum Container/Tube: Red top or SST Specimen Volume: 3 mL Collection Instructions: Draw blood in a plain, red-top tube(s), serum-gel tube(s) is acceptable. Separate immediately and send 3 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	30 days	

CPT Code Information: 83520

FINTB 91719

Interleukin 1-Beta

Specimen Requirements: Patient Preparation: Patient should NOT be on any Corticosteroids, anti-inflammatory medications or pain killers, if possible, for at least 48 hours prior to collection of specimen. Serum Specimen Type: Serum Container/Tube: Red top or SST Specimen Volume: 3 mL Collection Instructions: Draw blood in a plain, red-top tube(s), serum-gel tube(s) is acceptable. Separate immediately and send 3 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	90 days	

CPT Code Information: 83520; ;

FIL2M 57826

Interleukin 2

Specimen Requirements: Serum Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial. Separate specimens must be submitted when multiple tests are ordered. Note: Cytokine levels may demonstrate diurnal variation. For longitudinal comparison, it is recommended that cytokine levels be determined at the same time of day.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen	365 days	

CPT Code Information: 83520

FIL2S 57825

Interleukin 2 Receptor, Soluble

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Specimen Volume: 1 mL Serum: Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable.

Spin down within 2 hours of collection and freeze immediately. Send 1 mL of serum frozen in a plastic vial. Separate specimens must be submitted when multiple test are ordered. Note: Cytokine levels may demonstrate diurnal variation. For longitudinal comparison, it is recommended that cytokine levels be determined at the same time of day.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen	365 days	

CPT Code Information: 83520

IL28Q 610056

Interleukin 28B (IL28B) Variant (rs12979860), Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81283

IL5P 36519

Interleukin 5, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge at 1,500 x g for 10 minutes and aliquot plasma. 3. Freeze specimen within 30 minutes.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	21 days	
	Refrigerated	24 hours	

CPT Code Information: 83520

IL6
63020

Interleukin 6, Plasma

Specimen Requirements: Collection Container/Tube: Lavender-top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge at 1500 x g for 10 minutes and aliquot plasma into plastic vial. 3. Freeze specimen within 30 minutes.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	21 days	
	Refrigerated	24 hours	

CPT Code Information: 83520

FIL1S
57534

Interleukin-10 (IL-10) Serum

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	14 days	

CPT Code Information: 83520

FIL4S
57585

Interleukin-4 (IL-4) Serum

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	365 days	

CPT Code Information: 83520

FIL8S
57563

Interleukin-8 (IL-8) Serum

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	28 days	

CPT Code Information: 83520

IFBA 9335

Intrinsic Factor Blocking Antibody, Serum

Specimen Requirements: Patient Preparation: For patients receiving vitamin B12 injections wait a minimum of 2 weeks after last injection before obtaining specimen. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86340

UIOD 9549

Iodine, 24 Hour, Urine

Specimen Requirements: Patient Preparation: 1. High concentrations of gadolinium and iodine are known to interfere with most metals tests. If gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. 2. If this test is used in conjunction with the (131)I uptake test, then specimen collection should begin immediately after the dose of (131)I is given (ie, the patient should void and discard urine just prior to the (131)I dose, and all subsequent urine should be collected for the next 24 hours). The last void should be included in the collection. Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	146 days	
	Ambient	146 days	
	Frozen	146 days	

CPT Code Information: 83789

IOD 81574

Iodine, Serum

Specimen Requirements: Patient Preparation: 1. Disinfectants (such as Betadine) that contain iodine should not be used during venipuncture. 2. High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free B-D Tube (No Additive), 6 mL (T184) -Metal Free Specimen Vial (T173) Collection Container/Tube: Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, polypropylene vial Specimen Volume: 1 mL Collection Instructions: 1. Allow specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into Mayo metal-free, polypropylene vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: If ordering the trace element blood collection tube from Becton Dickinson (BD), order catalog #368380.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Ambient	21 days	
	Frozen	21 days	

CPT Code Information: 83789

ICRU 60440

Iodine/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	30 days	
	Ambient	30 days	
	Frozen	30 days	

CPT Code Information: 83789 ; 82570;

HEXP 61713

Iohexol, Plasma

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Green top (heparin) Submission Container/Tube: Plastic, 5-mL tube (T465) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Heparin	Refrigerated (preferred)	7 days	
	Frozen	35 days	

CPT Code Information: 82542

HEXU 61712

Iohexol, Timed Collection, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, 5-mL tube (T465) Specimen Volume: 5 mL Collection Instructions: Collect a timed urine specimen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	35 days	

CPT Code Information: 82542

FIPEC 91134

Ipecac Use Markers

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80323

FEC 34624

Iron and Total Iron-Binding Capacity, Serum

Specimen Requirements: Patient Preparation: 1. Fasting (12 hours) 2. Iron-containing

supplements should be avoided for 24 hours prior to draw. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: 1. Draw blood before 12 noon (preferred). 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	180 days	

CPT Code Information: 83540-Iron; 83550-Iron-binding capacity;

FET 8350

Iron, Liver Tissue

Specimen Requirements: Supplies: Metal Free Specimen Vial (T173) Container/Tube: Preferred: Mayo metal-free specimen vial (blue label) Acceptable: Paraffin block, if not more than 1 or 2 cuts have been made to it for slides Specimen Volume: 2 mg Collection Instructions: 1. Two mg of liver tissue is required. This is typically a piece of tissue from a 22-gauge needle biopsy at least 2 cm long. If an 18-gauge needle is used, the tissue must be at least 1 cm in length. 2. Any specimen vial other than a Mayo metal-free vial used should be plastic, leached with 10% nitric acid for 2 days, rinsed with redistilled water, and dried in clean air. Additional Information: Paraffin blocks will be returned 3 days after analysis.

Specimen Minimum Volume: 2 cm (22-gauge needle) 1 cm (18-gauge needle) 2 mm x 2 mm (punch) 0.3 mg by dry weight

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Liver Tissue	Refrigerated (preferred)		
	Ambient		
	Frozen		

CPT Code Information: 83540

FIVCZ 75575

Isavuconazole (CRESEMBA) LC-MS/MS

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum Frozen in a sterile, screw top tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	14 days	
	Ambient	5 days	
	Refrigerated	5 days	

CPT Code Information: 80299

ISPCA 113306

ISH Additional (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88364

ISA26 113308

ISH Additional, Professional Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88364-26

ISTOA 113217

ISH Additional, Tech Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88364-TC

ISPCI 113305

ISH Initial (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		

Refrigerated

CPT Code Information: 88365

ISH26
113307

ISH Initial, Professional Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88365-26

ISTOI
113216

ISH Initial, Tech Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88365-TC

ISLET
70479

Islet 1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

IA2
89588

Islet Antigen 2 (IA-2) Antibody, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.5 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86341

ATR 113383

Isoagglutinin Titer, Anti-A, Serum

Specimen Requirements: Container/Tube: Red top Submission Container/Tube: Serum Aliquot tube Specimen Volume: 2.5 mL Pediatric Volume: 2 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Ambient (preferred)	4 days	
	Frozen	10 days	
	Refrigerated	10 days	

CPT Code Information: 86886

BTR 113384

Isoagglutinin Titer, Anti-B, Serum

Specimen Requirements: Container/Tube: Red top Submission Container/Tube: Serum Aliquot tube Specimen Volume: 2.5 mL Pediatric: 2 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Ambient (preferred)	4 days	
	Frozen	10 days	
	Refrigerated	10 days	

CPT Code Information: 86886

IDH12 92361

Isocitrate Dehydrogenase 1 and 2 (IDH1/IDH2) Mutation Analysis, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area: tissue 36 mm(2). -These amounts are cumulative over up to 10 unstained slides and must have adequate percent

tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. In this document, the sizes are given as 4mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3mm x 1mm x 10 slides: approximate/equivalent to 36mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and cover slipped with a preferred total minimum of 5000 total nucleated cells, minimum of 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: IDH1:: 81120; 88381; ; IDH2:: 81121;

IHDI 82773

Isocyanate HDI, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

IMDI 82774

Isocyanate MDI, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

90 days

CPT Code Information: 86003**ITDT**
82775**Isocyanate TDI, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**FISON**
91349**Isoniazid (INH)****Specimen Requirements:** Specimen Type: Serum Container/Tube: Red-top Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80299**ISPG**
82768**Ispaghula, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

ITCON 81247

Itraconazole, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.18 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	29 days	
	Ambient	29 days	
	Frozen	29 days	

CPT Code Information: 80189

JCHAI 7048

J-Chain Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

JMACK 82819

Jack Mackerel, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

JAK2F
64980

JAK2 (9p24.1) Rearrangement for Hematologic Disorders, FISH

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Green top (sodium heparin) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1-2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271 x 1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); ; 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

JAK2P
606821

JAK2 (9p24.1) Rearrangement, Hematologic Disorders, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5- micron- thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271 x 1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274-w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

JAKXB
89189**JAK2 Exon 12 and Other Non-V617F Mutation Detection, Blood**

Specimen Requirements: Container/Tube: Preferred: EDTA (lavender top) Acceptable: ACD (yellow top) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	5 days	PURPLE OR PINK TOP/EDTA
	Ambient	5 days	PURPLE OR PINK TOP/EDTA

CPT Code Information: 0027U-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder), exon 12 sequence and exon 13 sequence, if performed

JAKXM
60025**JAK2 Exon 12 and Other Non-V617F Mutation Detection, Bone Marrow**

Specimen Requirements: Container/Tube: Preferred: EDTA (lavender top) Acceptable: ACD (yellow top) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Refrigerated (preferred)	5 days	PURPLE OR PINK TOP/EDTA
	Ambient	5 days	PURPLE OR PINK TOP/EDTA

CPT Code Information: 0027U-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder), exon 12 sequence and exon 13 sequence, if performed

JAKXR
44178**JAK2 Exon 12-15 Sequencing, Polycythemia Vera Reflex, Varies**

Specimen Requirements: Only orderable as a reflex. For more information, see PVJAK / Polycythemia Vera, JAK2 V617F with Reflex to JAK2 Exon 12-15, Sequencing for Erythrocytosis, Varies.

Specimen Minimum Volume: Blood: 4 mL Bone marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Varies	Refrigerated (preferred)	5 days
	Ambient	5 days

CPT Code Information: 0027U-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder), exon 12 sequence and exon 13 sequence, if performed

JAK2B 88715

JAK2 V617F Mutation Detection, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)	7 days	PURPLE OR PINK TOP/EDTA
	Refrigerated	7 days	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81270-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder) gene analysis, p.Val617Phe (V617F) variant

JAK2M 31155

JAK2 V617F Mutation Detection, Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)	7 days	PURPLE OR PINK TOP/EDTA
	Refrigerated	7 days	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81270-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder) gene analysis, p.Val617Phe (V617F) variant

JAK2V 31156

JAK2 V617F Mutation Detection, Varies

Specimen Requirements: Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube with indication of volume and concentration of the DNA Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood or bone marrow and indicate volume and concentration of the DNA. Specimen Stability Information: Refrigerated/Ambient

Specimen Minimum Volume: Extracted DNA from blood or bone marrow: 50 microliter at 20 ng/microliter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81270-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder) gene analysis, p.Val617Phe (V617F) variant

FJPE
57921

Jalapeno/Chipotle (Capsicum annuum) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

JCEDR
82865

Japanese Cedar, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FJCV
91827

JC Polyoma Virus DNA, Quantitative Real-Time PCR, Plasma

Specimen Requirements: Specimen Type: Plasma (Preferred) Container/Tube: Lavender-top (EDTA) tube or Yellow-top (ACD-A) tube(s). Specimen volume: 0.7 mL Collection Instructions: Draw blood in a Lavender-top (EDTA) tube or yellow-top (ACD-A) tube(s). Spin down and transfer 0.7 mL EDTA or ACD-A plasma to a screw-cap plastic vial. Submit frozen.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	30 days	
	Refrigerated	7 days	
	Ambient	48 hours	

CPT Code Information: 87799

JCV 70475

JC Virus Detection by In Situ Hybridization

Specimen Requirements: Specimen Type: Formalin-fixed, paraffin-embedded tissue block
Supplies: Pathology Packaging Kit (T554) Specimen Volume: Entire block Specimen Type: Slides Slides:
4 Unstained glass, positively charged slides with 5 (+ or - 1)-microns formalin-fixed, paraffin-embedded
tissue

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88365-Primary; 88364-If additional ISH;

LCJC 800170

JC Virus, Molecular Detection, PCR, Spinal Fluid

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Preferred: 12 x 75-mm screw cap
vial (T465) Acceptable: Sterile screw cap vial Container/Tube: Sterile vial Specimen Volume: 0.5 mL
Collection Instructions: Do not centrifuge.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

JO1 80179

Jo 1 Antibodies, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen
Volume: 0.5 mL

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86235

JOHN
82900

Johnson Grass, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

JUNE
82893

June Grass, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FWJR
57953

Juniper Western (Juniperus occidentalis) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	

Frozen	365 days
Ambient	28 days

CPT Code Information: 86003

KLISH 70615

Kappa and Lambda Light Chain mRNA, In Situ Hybridization (ISH) Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 5 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88365-TC, primary; 88364-TC, if additional ISH;

KAIHC 70482

Kappa Light Chain Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KAIPC 113330

KappaLambda IHC (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342

KCNN4
607809**KCNN4 Full Gene Sequencing, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability Information: Ambient 14 days (preferred) or Refrigerated < or =30 days Acceptable: Specimen Type: Extracted DNA from whole blood Container/Tube: 1.5- to 2-mL tube with indication of volume and concentration of DNA Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood and provide indication of volume and concentration of the DNA Specimen Stability Information: Frozen/Refrigerate/Ambient < or =30 days

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 50 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479

K11CS
610581**Kelch-Like Protein 11 Antibody, Cell Binding Assay, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255; 86256 (if appropriate);

K11CC
610580**Kelch-Like Protein 11 Antibody, Cell Binding Assay, Spinal Fluid**

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 2 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255; 86256 (if appropriate);

KRT34 **70492**

Keratin (34BE12) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KRTAE **70493**

Keratin (AE1/AE3) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KRTCA **70494**

Keratin (CAM 5.2) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KRTOS 70495

Keratin (OSCAR) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KRT19 70490

Keratin 19 (KRT19) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KRT20 70491

Keratin 20 (KRT20) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KRT5 606999

Keratin 5 (KRT5) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KRT7 70488

Keratin 7 (KRT7) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FKEMS 75730

Ketamine and Metabolite Screen, Plasma

Specimen Requirements: Specimen Type: Plasma Collection Container/Tube: Lavender-top or pink top (EDTA) Specimen Volume: 5 mL Collection Instructions: Draw blood in an EDTA (lavender top or pink top) tube(s). (Plasma gel tube is not acceptable.) Spin down and send 5 mL of plasma refrigerated in a preservative-free plastic vial.

Specimen Minimum Volume: 2.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	14 days	
	Frozen	270 days	
	Ambient	14 days	

CPT Code Information: 80307-Screen; 80357-Confirmation, if appropriate;

FKETO 90317

Ketoconazole, Serum/Plasma

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a plain, red-top tube(s). Spin down and send 1 mL of serum refrigerated in plastic vial. Plasma Draw blood in an EDTA lavender-top or pink-top tube(s). Spin down and send 1 mL of EDTA plasma in refrigerated in plastic vial.

Specimen Minimum Volume: 0.22 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	30 days	
	Ambient	30 days	
	Frozen		

CPT Code Information: 80299

KETGP 608024

Ketone Disorders Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479

SKETC 606546

Ketones, Urine

Specimen Requirements: Container/Tube: Plastic urine container Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated	72 hours	

CPT Code Information: 81003

KI67 70481

Ki-67 (MIB-1) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		

Refrigerated

CPT Code Information: 88342-Primary; 88341-If additional IHC;

KI67B
70588

Ki-67(MIB-1), Breast, Quantitative Immunohistochemistry, Automated

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Preferred: Formalin-fixed, paraffin-embedded tissue block containing invasive or metastatic breast carcinoma Acceptable: 2 Unstained sections, containing invasive or metastatic breast carcinoma, on charged slides cut at 4 microns <1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin. Submission Container/Tube: Pathology Packaging Kit (T554) Collection Instructions: Submit paraffin-embedded invasive or metastatic breast carcinoma tissue. Additional Information: Paraffin block will be returned with the final report.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88361

KIBM
71668

Ki-67(MIB-1), Breast, Semi-Quantitative Immunohistochemistry, Manual

Specimen Requirements: This is not an orderable test. Order PATHC / Pathology Consultation. The consultant will determine the need for special stains. Supplies: Pathology Packaging Kit (T554) Specimen Type: Preferred: Formalin-fixed, paraffin-embedded tissue block containing invasive or metastatic breast carcinoma Acceptable: 2 unstained sections, containing invasive or metastatic breast carcinoma, on charged slides cut at 4 microns <1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin. Submission Container/Tube: Pathology Packaging Kit (T554) Collection Instructions: Submit paraffin-embedded invasive or metastatic breast carcinoma tissue. Additional Information: Paraffin block will be returned with the final report.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88360

KINET
71503

Ki-67(MIB-1), Gastrointestinal/Pancreatic Neuroendocrine Tumors, Quantitative Immunohistochemistry, Automated

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Preferred: Formalin-fixed, paraffin-embedded tissue block containing neuroendocrine tumor of the pancreas or gastrointestinal (GI) tract including metastases. Acceptable: 2 unstained sections, containing

neuroendocrine tumor of the pancreas or GI tract including metastases, on charged slides cut at 4 microns <1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin. Submission Container/Tube: Pathology Packaging Kit (T554) Collection Instructions: Submit formalin-fixed, paraffin-embedded tissue block. Additional Information: Paraffin block will be returned with the final report.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88361

KINM
71667

Ki-67(MIB-1), Gastrointestinal/Pancreatic Neuroendocrine Tumors, Quantitative Immunohistochemistry, Manual

Specimen Requirements: This is not an orderable test. Order PATHC / Pathology Consultation. The consultant will determine the need for special stains. Supplies: Pathology Packaging Kit (T554) Specimen Type: Preferred: Formalin-fixed, paraffin-embedded tissue block containing neuroendocrine tumor of the pancreas or gastrointestinal (GI) tract including metastases. Acceptable: 2 unstained sections, containing neuroendocrine tumor of the pancreas or GI tract including metastases, on charged slides cut at 4 microns <1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin. Submission Container/Tube: Pathology Packaging Kit (T554) Collection Instructions: Submit formalin-fixed, paraffin-embedded tissue block Additional Information: Paraffin block will be returned with the final report.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88360

KI67P
72130

Ki-67(MIB-1), Pulmonary, Quantitative Immunohistochemistry, Automated

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Preferred: Formalin-fixed, paraffin-embedded tissue block containing carcinoid/atypical carcinoid tumor of the lung including metastases. Acceptable: 2 Unstained sections containing carcinoid/atypical carcinoid tumor of the lung including metastases on charged slides cut at 4 microns <1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin. Container/Tube: Pathology Packaging Kit Collection Instructions: 1. Submit formalin-fixed, paraffin-embedded tissue block. 2. Attach the green pathology address label included in the kit to the outside of the transport container. Additional Information: Paraffin block will be returned with the final report.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		

Refrigerated

CPT Code Information: 88361

KIPM
72131

Ki-67(MIB-1), Pulmonary, Quantitative Immunohistochemistry, Manual

Specimen Requirements: Only orderable as a reflex. For more information see KI67P / Ki-67 (MIB-1), Pulmonary, Quantitative Immunohistochemistry, Automated. Supplies: Pathology Packaging Kit (T554) Specimen Type: Preferred: Formalin-fixed, paraffin-embedded tissue block containing carcinoid/atypical carcinoid of the lung including metastases. Acceptable: 2 Unstained sections on charged slides cut at 4 microns <1 month ago. Tissue on the slides should have been fixed in 10% neutral buffered formalin. Container/Tube: Pathology Packaging Kit Collection Instructions: 1. Submit formalin-fixed, paraffin-embedded tissue block. 2. Attach the green pathology address label included in the kit to the outside of the transport container. Additional Information: Paraffin block will be returned with the final report.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88360

KIMEL
70483

Ki67 + Melan A Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88344-TC

KIDBN
82619

Kidney Bean (Red), IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

KIDST 605761

Kidney Stone Analysis

Specimen Requirements: Supplies: Stone Analysis Collection Kit (T550) Sources: Bladder, kidney, prostatic, renal, or urinary Specimen Volume: Entire dried calculi specimen Collection Instructions: 1. Have patient collect specimen using the Patient Collection Instructions for Kidney Stones (see Special Instructions). 2. Prepare specimen per Guiding Proper Stone Collection information (see Special Instructions). 2. Do not place stone directly in a bag. If specimen is received in a bag, either transfer stone into a screw-capped, plastic container or place bag containing stone in a screw-capped, plastic container.

Specimen Minimum Volume: Entire stone

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Stone	Ambient (preferred)		
	Frozen	365 days	
	Refrigerated	365 days	

CPT Code Information: 82365

KKBRP 65202

Kingella kingae, Molecular Detection, PCR, Blood

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by *Kingella kingae* DNA is unlikely. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL Collection Instructions: Send specimen in original tube (preferred).

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

KKRP 65201

Kingella kingae, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by *Kingella kingae* DNA is unlikely. Submit only 1 of the following specimens: Specimen Type: Synovial fluid Preferred: Lavender top (EDTA) Acceptable: Pink top (EDTA), royal blue top (EDTA), sterile vial containing

EDTA-derived aliquot, red clot tube (no anticoagulant), or sterile container Specimen Volume: 0.5 mL Collection Instructions: Send specimen in original tube (preferred). Specimen Stability Information: Refrigerated (preferred) <7 days /Frozen <7 days Specimen Type: Fresh tissue or biopsy Sources: Bone, joint, synovium, heart valve, aorta, or endocardium Container/Tube: Sterile container Specimen Volume: Entire collection or 5 mm(3)- approximately the size of a pencil eraser Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit tissue only, do not add fluid to tissue 3. Refrigerate or freeze specimen. Specimen Stability Information: Refrigerated (preferred) <7 days/ Frozen <7 days Preferred Paraffin-embedded tissue block: Preferred Paraffin-embedded tissue block: Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Bone, joint, synovium, heart valve, aorta, or endocardium Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block to be cut and returned. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Bone, joint, synovium, heart valve, aorta, or endocardium Container/Tube: Sterile container for each individual cut section (scroll). Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Fluid: 0.5 mL Fresh tissue or biopsy: 5 mm(3) Paraffin-embedded tissue block: two 10-micron sections

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87798

KITVS 607981

KIT Asp816Val Mutation Analysis, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collections Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability: Ambient (preferred) 7 days/Refrigerate 7 days Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 2 mL Collections Instructions: 1. Invert several times to mix bone marrow. 2. Send specimens in original tube. 3. Label specimen as bone marrow. Specimen Stability: Ambient (preferred) 7 days/Refrigerate 7 days Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2- mL tube Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood or bone marrow and provide indication of volume and concentration of DNA. Specimen Stability Information: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Blood, Bone Marrow: 1 mL Extracted DNA: 50 mcL at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81273

KIT 70485

KIT Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

KITE
64589

KIT Mutation Exons 8-11 and 17, Hematologic Neoplasms, Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: EDTA (lavender top) or ACD (yellow top) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred)/Refrigerate Specimen Type: Bone marrow Container/Tube: EDTA (lavender top) or ACD (yellow top) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred)/Refrigerate Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood or bone marrow with an indication of volume and concentration of the DNA. Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Specimen Volume: Entire block Additional Information: Tissue must demonstrate involvement by a hematologic neoplasm (eg, AML), not solid tumors. Specimen Stability Information: Ambient Specimen Type: Paraffin-embedded bone marrow aspirate clot Container/Tube: Paraffin block Specimen Volume: Entire block Specimen Stability Information: Ambient Specimen Type: Tissue Slides: Unstained slides Specimen Volume: 10 Slides Additional Information: Tissue must demonstrate involvement by a hematologic neoplasm (eg, AML), not solid tumors. Specimen Stability Information: Ambient

Specimen Minimum Volume: Blood, bone marrow: 1 mL Extracted DNA from blood or bone marrow: 50 microliters (mcL) at 20 ng/mcL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	7 days	

CPT Code Information: 81272-KIT (v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog) (eg, gastrointestinal stromal tumor [GIST], acute myeloid leukemia, melanoma), gene analysis, targeted sequence analysis (eg, exons 8, 11, 13, 17, 18)

KIWI
82761

Kiwi Fruit, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**KNSRP**
62195**Klebsiella pneumoniae Carbapenemase (blaKPC) and New Delhi Metallo-beta-Lactamase (blaNDM) Surveillance, PCR, Varies**

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by *Klebsiella pneumoniae* carbapenemase or New Delhi metallo-beta-lactamase DNA is not likely. Submit only 1 of the following specimens: Preferred: Specimen Type: Perianal, anal, perirectal, rectal Supplies: Culturette (BBL Culture Swab) (T092) Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Specimen Volume: Swab Specimen Stability Information: Refrigerated (preferred)/Frozen Acceptable: Specimen Type: Preserved feces Supplies: C and S Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of nonnutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S vial) Specimen Volume: Representative portion of feces Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87798 x 2**XYMF**
35307**Known 45,X, Mosaicism Reflex Analysis, FISH, Whole Blood**

Specimen Requirements: Provide a reason for referral with each specimen. The laboratory will not reject testing if this information is not provided, but appropriate testing and interpretation may be compromised or delayed. Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells.

Specimen Minimum Volume: 2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 Æâ, Æœ DNA probe, each (first probe set), Interpretation and report; 88271x2 Æâ, Æœ DNA probe, each; each additional probe set (if appropriate); 88271x1 Æâ, Æœ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 Æâ, Æœ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 Æâ, Æœ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 Æâ, Æœ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 Æâ, Æœ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 Æâ, Æœ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

KPNRP 62227

KPC (blaKPC) and NDM (blaNDM) in Gram-Negative Bacilli, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by *Klebsiella pneumoniae* (KPC) or New Dehli metallo-beta-lactamase (NDM) DNA is unlikely. Supplies: Infectious Container, Large (T146) Collection Container/Tube: Slant Specimen Volume: Isolate Collection Instructions: 1. Isolate the bacteria. 2. Bacterial organism must be in pure culture, actively growing. Do not submit mixed cultures.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87150 x2

KPND1 35207

KPC and NDM PCR (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87150 x2

KD2T 65332

Krabbe Disease Second-Tier Newborn Screen, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Collection Container/Tube: Preferred: Blood Spot Collection Card Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, Munktel filter paper, Whatman Protein Saver 903 paper, or blood collected in tubes containing heparin or EDTA and dried on filter paper. Specimen Volume: 3 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is fingerstick. See Dried Blood Spot Collection Tutorial for how to collect blood spots via fingerstick: <https://vimeo.com/508490782> . 2. Completely fill at least 3 circles on the filter paper card (approximated 100-microliters blood per circle). 3. Let blood dry on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection

instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood spot: 2

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	96 days	FILTER PAPER
	Frozen	96 days	FILTER PAPER
	Refrigerated	96 days	FILTER PAPER

CPT Code Information: 82542-Psychosine; 81401-30-kb deletion;

KRABZ 35433

Krabbe Disease, Full Gene Analysis and Large (30 kb) Deletion, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 3

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81406 GALC (galactosylceramidase) (eg, Krabbe disease), full gene sequence; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

KRASC

35469

KRAS Mutation Analysis, 7 Mutation Panel, Colorectal

Specimen Requirements: Pathology report must accompany specimen in order for testing to be performed. Preferred: Specimen Type: Tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Acceptable: Specimen Type: Tissue Container/Tube: Slides Specimen Volume: 1 stained and 5 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 5 unstained, nonbaked slides with 5 micron-thick sections of the tumor tissue.

Specimen Minimum Volume: Formalin-fixed, paraffin-embedded (FFPE) tissue block (preferred) or 1 slide stained with hematoxylin-and-eosin and 5 unstained, nonbaked slides (5-microns thick sections) of the tumor tissue.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81275-KRAS (v-Ki-ras2 Kirsten rat sarcoma viral oncogene) (eg, carcinoma) gene analysis, variants in codons 12 and 13 ; ; Additional Test; 88381-Microdissection, manual;

KRASO

35468

KRAS Mutation Analysis, 7 Mutation Panel, Other (Non-Colorectal), Varies

Specimen Requirements: Pathology report must accompany specimen in order for testing to be performed. Preferred: Specimen Type: Tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Acceptable: Specimen Type: Tissue Container/Tube: Slides Specimen Volume: 1 stained and 5 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 5 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue.

Specimen Minimum Volume: Formalin-fixed, paraffin-embedded (FFPE) tissue block (preferred) or 1 slide stained with hematoxylin and eosin and 5 unstained, nonbaked slides (5-microns thick sections) of the tumor tissue.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81275-KRAS (v-Ki-ras2 Kirsten rat sarcoma viral oncogene) (eg, carcinoma) gene analysis, variants in codons 12 and 13 ; ; Additional Test; 88381-Microdissection, manual;

LACO

62905

Lacosamide, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. For sustained-release formulations ONLY, draw blood a minimum of 12 hours after last dose. 3. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80235

LD_I
8679

Lactate Dehydrogenase (LDH) Isoenzymes, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 2 mL divided into 2 tubes each containing 1 mL

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Ambient (preferred)	7 days	
	Refrigerated	48 hours	

CPT Code Information: 83615-LD; 83625-LD isoenzymes;

LDBF
606612

Lactate Dehydrogenase (LDH), Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Pericardial -Synovial -Cerebral spinal fluid Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Ambient (preferred)	7 days	
	Refrigerated	48 hours	

CPT Code Information: 83615

LD
8344

Lactate Dehydrogenase (LDH), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Ambient (preferred)	7 days	
	Frozen	30 days	
	Refrigerated	48 hours	

CPT Code Information: 83615

LACS1
601685

Lactate, Plasma

Specimen Requirements: Container/Tube: Grey top (potassium oxalate/sodium fluoride) Specimen Volume: 0.5 mL Collection Instructions: 1. Collection must be at least 1 mL in a 2-mL draw tube or at least 2 mL in a 4-mL draw tube. 2. Spin down and separate plasma from cells.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma NaFl-KOx	Refrigerated (preferred)	14 days	
	Ambient	8 hours	

CPT Code Information: 83605

LASF1
601821

Lactic Acid, Spinal Fluid

Specimen Requirements: Specimen Type: Spinal fluid Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Centrifuge to remove any cellular material.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	60 days	
	Refrigerated	24 hours	
	Ambient	3 hours	

CPT Code Information: 83605

FLACF 57827

Lactoferrin, Fecal by ELISA

Specimen Requirements: Preferred Specimen Type: Unpreserved stool Supplies: Sterile stool container Container/Tube: Sterile stool container Specimen Volume: 5 g Specimen Stability Information: Refrigerated Collection Instructions: 5 grams fresh, unpreserved stool or stool preserved in Cary-Blair transport media (Agar Swab is not acceptable), shipped refrigerate in a plastic leak-proof container.

Specimen Minimum Volume: 1 gm

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 83630

FLACS 57816

Lactoferrin, Quantitative, Stool

Specimen Requirements: Collect 1 gm undiluted feces in clean, dry, sterile leak proof container, ship frozen. Note: 1. Do not add fixative or preservative 2. From collection time to the time stool is frozen must not exceed 48 hours either refrigerate or ambient.

Specimen Minimum Volume: 0.3 gram

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen	60 days	

CPT Code Information: 83631

LACTO 70625

Lactotransferrin IHC, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FLBAE 57572

Ladybeetle Multicolored Asian (Harmonia axyridis) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

LAMQ

82682

Lamb's Quarter, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

LAMB

82699

Lamb, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

LAIHC

70499

Lambda Light Chain Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LBC

60450

Lamellar Body Count, Amniotic Fluid

Specimen Requirements: Container/Tube: Amniotic fluid container or plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Do not centrifuge 2. Amniotic specimens must be free of blood and meconium contamination.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Amniotic Fld	Refrigerated (preferred)	28 days	
	Ambient	7 days	

CPT Code Information: 83664

LAMO

80999

Lamotrigine, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. For sustained-release formulations ONLY, draw blood a minimum of 12 hours after last dose. 3. Centrifuge within 2 hours of collection. 4. Aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80175

LANGR

70496

Langerin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LANG

82349

Langust (Lobster), IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

LATI

70632

LAT Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LATX

82787

Latex, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

90 days

CPT Code Information: 86003**FLDL**
75160**LDL Cholesterol, Direct****Specimen Requirements:** Draw blood in a serum gel tube(s), plain red-top tube is also acceptable. Spin down and send 1 mL of serum refrigerate.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	5 days	
	Frozen	30 days	

CPT Code Information: 83721**PBOU**
608894**Lead Occupational Exposure, Random, Urine****Specimen Requirements:** Only orderable as part of profile. For more information see: -PBUOE / Lead Occupational Exposure, Random, Urine -HMUOE / Heavy Metal Occupational Exposure, with Reflex, Random, Urine**Specimen Minimum Volume:** 1.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

PBUOE
608898**Lead Occupational Exposure, Random, Urine****Specimen Requirements:** Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic vial or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.**Specimen Minimum Volume:** 1.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	

Frozen	28 days
Ambient	14 days

CPT Code Information: 83655; 82570;

PBZP 42390

Lead Profile Occupational Exposure, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free B-D Tube (EDTA), 6 mL (T183) -Metal Free (Lead only) EDTA Tube, 3 mL (T615) -Microtainer (EDTA) Tube, 0.5 mL (T174) -If ordering the EDTA trace element Vacutainer tube from BD, order catalog #368381 Container/Tube: Preferred: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube Acceptable: Tan-top (lead only) BD Vacutainer Plus with EDTA blood collection tube or BD Microtainer with EDTA or royal blue-top Monoject trace element blood collection tube Specimen Volume: 2 mL Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated	28 days	

CPT Code Information: 83655-Lead; 84202-Protoporphyrin, RBC; Quantitative;

PBU 8600

Lead, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83655

PBDC 113400

Lead, Capillary, with Demographics, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Microtainer (EDTA) Tube, 0.5 mL (T174) Collection Container/Tube: BD Microtainer with EDTA Specimen Volume: 0.4 mL Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83655

PBHA 8495

Lead, Hair

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Specimen Volume: 0.2 g Collection Instructions: Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing in Special Instructions.

Specimen Minimum Volume: 0.05 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Hair	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 83655

PBNA 89857

Lead, Nails

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Specimen Volume: 0.2 g Collection Instructions: 1. Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing in Special Instructions. 2. Clippings should be taken from all 10 fingernails or toenails.

Specimen Minimum Volume: 0.05 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Nail	Ambient (preferred)		
	Frozen		

Refrigerated

CPT Code Information: 83655

PBDV
113401

Lead, Venous, with Demographics, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free B-D Tube (EDTA), 6 mL (T183) -Metal Free (Lead only) EDTA Tube, 3mL (T615) -If ordering the trace element blood collection tube from Becton Dickinson (BD), order catalog #368381 Container/Tube: Preferred: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube Acceptable: Tan-top (lead only) BD Vacutainer Plus with EDTA blood collection tube Specimen Volume: 2 mL Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83655

PBU CR
608908

Lead/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 83655; 82570;

PBRC

48548

Lead/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of a profile. See PBRCR / Lead/Creatinine Ratio, Random, Urine or HMCUR / Heavy Metal/Creatinine Ratio, with Reflex, Urine.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

PBCU

608904

Lead/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: PBUCL / Lead/Creatinine Ratio, Random, Urine HMUCR / Heavy Metal/Creatinine Ratio, with Reflex, Random, Urine

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

LEFLU

60292

Leflunomide Metabolite (Teriflunomide), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood no sooner than 12 hours (trough value) after last dose. 2. Centrifuge within 2 hours of collection and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Ambient (preferred)	28 days	
	Frozen	28 days	
	Refrigerated	28 days	

CPT Code Information: 80193

LAGU

81268

Legionella Antigen, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 0.5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Excessively bloody or very turbid specimens containing protein, cells, or particulates will be canceled. They can inhibit the function of the test. 4. Centrifuging to remove particulates is not approved. 5. Specimens with any dyes or unnatural color are not acceptable and will be canceled.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	14 days	
	Ambient	24 hours	

CPT Code Information: 87899

LEGI 8204

Legionella Culture, Varies

Specimen Requirements: Specimen Type: Bronchial washing, bronchoalveolar lavage, bronchus fluid, chest fluid, chest tube drainage, empyema, endotracheal specimen, fresh lung tissue, heart valves, induced sputum, lingula (lung), lung biopsy, pericardial fluid or tissue, pleura, pleural fluid, protected catheter brush, sputum, thoracentesis fluid, tracheal secretion, transbronchial biopsy, or transtracheal aspirate Container/Tube: Sterile container Specimen Volume: Entire specimen

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated	48 hours

CPT Code Information: 87081-Legionella culture; 87077-Ident by MALDI-TOF mass spec (if appropriate); 87153-Aerobe ident by sequencing (if appropriate); 87176-Tissue processing (if appropriate);

SLEG 8122

Legionella pneumophila (Legionnaires Disease), Antibody, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86713

LEGRP 89564

Legionella species, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by Legionella DNA is unlikely. Specimen Type: Respiratory Sources: Sputum, tracheal secretions/aspirates, transtracheal aspirate, bronchial washing/aspirate, bronchoalveolar lavage, lung fluid or pleural fluid Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Type: Fresh tissue or biopsy Sources: Lung Container/Tube: Sterile container Specimen Volume: Entire collection

Specimen Minimum Volume: Fluid: 0.5 mL Tissue: 5 mm(3)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87801

LEIS 86219

Leishmaniasis (Visceral) Antibody, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.2 mL

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86717

FLEMG 57643

Lemon IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

LEM
82678

Lemon, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FLENG
57685

Lentil IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

LEN
82885

Lentil, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

LEPD
82849**Lepidoglyphus destructor, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FLEP
91339**Leptin**

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial. Note: EDTA (lavender-top) plasma is an acceptable alternate.

Specimen Minimum Volume: 0.5 mL NOTE: Minimum volume does not allow for repeat analysis.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	200 days	
	Ambient	48 hours	
	Refrigerated	48 hours	

CPT Code Information: 83520

LEPDT
65183**Leptospira, IgM, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.3 mL Collection Instructions: Serum should be collected according to standard practices. Acute and convalescent specimens obtained to determine seroconversion should be collected 2 or more weeks apart.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: 86720

FLETG

57639

Lettuce IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

LETT

82805

Lettuce, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

LLTOF

34488

Leukemia and Lymphoma Phenotyping, Technical Only, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 10 mL Slides: Include 5 to 10 unstained blood smears, if possible. Collection Instructions: 1. Send specimen in original tube. Do not aliquot. 2. Label specimen as blood. Specimen Stability Information: Ambient <96 hours/Refrigerated < or =96 hours Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 1-5 mL Slides: Include 5 to 10 unstained bone marrow aspirate smears, if possible. Collection Instructions: 1. Submission of bilateral specimens is not required. 2. Label specimen as bone marrow. Specimen Stability Information: Ambient <96 hours/Refrigerated < or =96 hours Specimen Type: Fluid Sources: Serous effusions, pleural, pericardial, or abdominal (peritoneal fluid) Container/Tube: Body fluid container Specimen Volume: 20 mL Collection Instructions: 1. If possible, fluids other than spinal fluid should be anticoagulated with heparin (1 U/mL of fluid). 2. The volume of fluid necessary to phenotype the lymphocytes or blasts in serous effusions depends upon the cell count in the specimen. Usually 20 mL of pleural or peritoneal fluid is sufficient. Smaller volumes can be used if there is a high cell count.

3. Label specimen with fluid type. Specimen Stability Information: Refrigerated <72 hours/Ambient < or =72 hours Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1-1.5 mL Collection Instructions: 1. An original cytopsin preparation (preferably unstained) must be included with the spinal fluid specimen so correlative morphologic evaluation can occur. 2. The volume of fluid necessary to phenotype the lymphocytes or blasts in spinal fluid depends upon the cell count in the specimen. A cell count should be determined and submitted with the specimen. Usually 1 to 1.5 mL of spinal fluid is sufficient. Smaller volumes can be used if there is a high cell count. If cell count is <10 cells/mcL, a larger volume of spinal fluid may be required. When cell counts drop below 5 cells/mcL, the immunophenotypic analysis may not be successful. 3. Label specimen as spinal fluid. Specimen Stability Information: Refrigerated <48 hours/Ambient < or =48 hours Specimen Type: Tissue Supplies: Hank's Solution (T132) Container/Tube: Sterile container with 15 mL of tissue culture medium (eg, Hank's balanced salt solution, RPMI, or equivalent) Specimen Volume: 5 mm(3) or larger biopsy Specimen Stability Information: Ambient <96 hours/Refrigerated < or =96 hours Collection Instructions: 1. Send intact specimen (do not mince). 2. Specimen cannot be fixed.

Specimen Minimum Volume: Blood: 3 mL Bone Marrow, Spinal Fluid: 1 mL Fluid from Serous Effusions: 5 mL Tissue: 1 mm(3) or larger biopsy

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each); Additional CPTs may be added if consultative help is needed with the case, or algorithm dictates Mayo consultant involvement.; 88187-Flow cytometry interpretation, 2 to 8 markers (if appropriate); 88188-Flow cytometry interpretation, 9 to 15 markers (if appropriate); 88189-Flow cytometry interpretation, 16 or more markers (if appropriate);

LLPT
19499

Leukemia/Lymphoma Immunophenotyping, Flow Cytometry, Tissue

Specimen Requirements: Supplies: Hank's Solution (T132) Container/Tube: Sterile container with 15 mL of tissue culture medium (eg, Hank's balanced salt solution, RPMI, or equivalent) Specimen Volume: 5 mm(3) or larger biopsy Collection Instructions: 1. Collect fine-needle aspirate. 2. Send intact specimen (do not mince). 3. Specimen cannot be fixed.

Specimen Minimum Volume: 1 mm(3)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker x 1; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each) ; 88187-Flow Cytometry Interpretation, 2 to 8 Markers (if appropriate); 88188-Flow Cytometry Interpretation, 9 to 15 Markers (if appropriate); 88189-Flow Cytometry Interpretation, 16 or More Markers (if appropriate);

LCMS
3287

Leukemia/Lymphoma Immunophenotyping, Flow Cytometry,

Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 6 mL Slides: Include 5 to 10 unstained blood smears, if possible. Collection Instructions: 1. Send specimen in original tube. Do not aliquot. 2. Label specimen as blood. Specimen Stability Information: Ambient <96 hours/Refrigerated < or =96 hours Specimen Type: Bone marrow Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Green top (sodium heparin) or lavender top (EDTA) Specimen Volume: 1 to 5 mL Slides: Include 5 to 10 unstained bone marrow aspirate smears, if possible. Collection Instructions: 1. Submission of bilateral specimens is not required. 2. Label specimen as bone marrow. Specimen Stability Information: Ambient <96 hours/Refrigerated < or =96 hours Specimen Type: Fluid Sources: Serous effusions, pleural fluid, pericardial fluid, abdominal (peritoneal) fluid Container/Tube: Body fluid container Specimen Volume: 20 mL Collection Instructions: 1. If possible, fluids other than spinal fluid should be anticoagulated with heparin (1 U/mL of fluid). 2. The volume of fluid necessary to phenotype the lymphocytes or blasts in serous effusions depends upon the cell count in the specimen. Usually 20 mL of pleural or peritoneal fluid is sufficient. Smaller volumes can be used if there is a high cell count. 3. Label specimen with fluid type. Specimen Stability Information: Refrigerated <72 hours/Ambient < or =72 hours Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 to 1.5 mL Collection Instructions: 1. An original cytospin preparation (preferably unstained) must be included with the spinal fluid specimen so correlative morphologic evaluation can occur. 2. The volume of fluid necessary to phenotype the lymphocytes or blasts in spinal fluid depends upon the cell count in the specimen. A cell count should be determined and submitted with the specimen. Usually 1 to 1.5 mL of spinal fluid is sufficient. Smaller volumes can be used if there is a high cell count. If cell count is <10 cells/mcL, a larger volume of spinal fluid may be required. When cell counts drop below 5 cells/mcL, the immunophenotypic analysis may not be successful. 3. Label specimen as spinal fluid. Specimen Stability Information: Refrigerated <48 hours/Ambient < or =48 hours

Specimen Minimum Volume: Blood: 3 mL Bone Marrow, Spinal Fluid: 1 mL Fluid from Serous Effusions: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker x 1; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each) ; 88187-Flow Cytometry Interpretation, 2 to 8 Markers (if appropriate); 88188-Flow Cytometry Interpretation, 9 to 15 Markers (if appropriate); 88189-Flow Cytometry Interpretation, 16 or More Markers (if appropriate);

LAD1 81155

Leukocyte Adhesion Deficiency Type 1, CD11a/CD18 and CD11b/CD18 Complex Immunophenotyping, Blood

Specimen Requirements: For serial monitoring, we recommend that specimen draws be performed at the same time of day. Container/Tube: Lavender top (EDTA) Specimen Volume: 5 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86356 x 3

LECT2 70497

Leukocyte Cell-Derived Chemotaxin 2 (LECT2), Immunostains Without Interpretation

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LTE4 62530

Leukotriene E4, Urine

Specimen Requirements: Submit only 1 of the following specimens: Patient Preparation: Patients taking 5-lipoxygenase inhibitor Zileuton/Zyflo may have decreased concentrations of leukotriene E4 (LTE4) if dosage has not been discontinued for 48 hours. If possible, discontinue for 48 hours before testing. Preferred: 24-hour urine collection Supplies: Plastic, 5-mL tube (T465) Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen during collection, aliquot 4 mL of urine into plastic tube, and send specimen refrigerated. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections. Acceptable: Random collection Supplies: Plastic, 5-mL tube (T465) Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. Refrigerate specimen after collection and send specimen refrigerated or frozen; do not add any preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	24 hours	

CPT Code Information: 82542

FLEVA 75401

Levamisole, Urine

Specimen Requirements: Collection Container: Plastic, preservative-free urine container Specimen Volume: 1 mL Collection Instructions: Collect 1 mL random urine without preservative. Send specimen refrigerated in a preservative- free plastic urine container.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	30 days	
	Ambient	30 days	
	Frozen	30 days	

CPT Code Information: 80375

LEV1P 113309

Level 1 Gross only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88300

LEV2P 113310

Level 2 Gross and microscopic (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88302

LEV3P 113311

Level 3 Gross and microscopic (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88304

LEV4P 113312

Level 4 Gross and microscopic (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88305**LV4RP**
113313**Level 4 Gross and Microscopic, RB (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88305**LEV5P**
113314**Level 5 Gross and microscopic (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88307**LEV6P**
113315**Level 6 Gross and microscopic (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88309**LEVE**
83140**Levetiracetam, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. For sustained-release formulations ONLY, draw blood a minimum of 12 hours after last dose. 3. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80177

LID
8382

Lidocaine, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80176

LMO2
70501

LIM Domain Only 2 (LMO2) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LIME

82360

Lime, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

ALBLI

603181

Limited Bleeding Diathesis Profile Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see ALBLD / Bleeding Diathesis Profile, Limited, Plasma.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-26 Special Coagulation Interpretation

FLALA

57193

Limulus Amebocyte Lysate (Endotoxin)

Specimen Requirements: 5 mL aqueous solution used in patient management. Send solution frozen in non-pyrogenic, plastic container. Note: 1. Submit name of aqueous solution, and the diluent if applicable. 2. Body fluids are not acceptable. 3. Glass vials are not acceptable.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen	30 days	

CPT Code Information: 87999

LIND

82862

Linden, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**LINS****86311****Linseed, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**LPSBF****606615****Lipase, Body Fluid**

Specimen Requirements: Specimen Type: Body fluid Preferred Sources: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Pericardial Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	24 hours	

CPT Code Information: 83690**FLIPR****90347****Lipase, Random Urine**

Specimen Requirements: Container/Tube: Plastic urine container Specimen Volume: 2 mL Collection Instructions: Collect random urine without preservative. Ship 2 mL urine in a sterile screw capped plastic container ship ambient.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Ambient (preferred)	5 days	
	Frozen	21 days	
	Refrigerated	5 days	

CPT Code Information: 83690

LPS 8328

Lipase, Serum

Specimen Requirements: Patient Preparation: Patients should be fasting before the specimen is collected. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tube must be centrifuged within 2 hours of collection. 2. Red-top tube must be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 83690

BFLA1 607894

Lipid Analysis, Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Sources: Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) Pleural fluid (pleural, chest, thoracentesis) Drain fluid (drainage, JP drain) Pericardial Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container, no additive Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Frozen (preferred)	30 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 82664-Electrophoretic technique, not elsewhere specified (Chylomicrons and lipoproteins); 84311-Spectrophotometry, analyte not specified (Cholesterol); 84478-Triglycerides;

LPSC 8053

Lipid Panel, Fasting, Serum

Specimen Requirements: Patient Preparation: 1. Fasting overnight (12 hours) 2. Patient must not consume any alcohol for 24 hours before the specimen is drawn. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tube must be centrifuged within 2 hours of draw time. 2. Red-top tube must be centrifuged and aliquoted within 2 hours of draw time.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 80061-Lipid panel (if all 3 performed); 82465-Cholesterol, total (if all 3 are not performed); 84478-Triglycerides (if all 3 are not performed); 83718-Cholesterol, HDL (if all 3 are not performed) ;

LPNF1 113635

Lipid Panel, Non-Fasting, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tube must be centrifuged within 2 hours of draw time. 2. Red-top tube must be centrifuged and aliquoted within 2 hours of draw time.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 80061-Lipid panel (if all 3 performed); 82465-Cholesterol, total (if all 3 are not performed); 84478-Triglycerides (if all 3 are not performed); 83718-Cholesterol, HDL (if all 3 are not performed);

LRBA 608113

Lipopolysaccharide-Responsive Beige-Like Anchor Protein (LRBA) Deficiency, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86356 x 2

LPAWS
89005

Lipoprotein (a) Cholesterol, Serum

Specimen Requirements: Patient Preparation: 1. Fasting: 8 hours. 2. Patient must abstain from alcohol for 24 hours before collection. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	60 days	

CPT Code Information: 83700

LIPA
81558

Lipoprotein (a), Serum

Specimen Requirements: Patient Preparation: Fasting-overnight (12-14 hours) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial. Send refrigerated.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 83695

LMPP
83673

Lipoprotein Metabolism Profile, Serum

Specimen Requirements: Patient Preparation: 1. Fasting-overnight (12-14 hours) 2. Patient must not consume any alcohol for 24 hours before the specimen is drawn. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 5 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	60 days	

CPT Code Information: 80061-Lipid panel (includes: HDL [CPT Code 83718], total cholesterol [CPT Code 82465], and triglycerides [CPT Code 84478]); 82172-Apolipoprotein B; 83700-Lp(a) cholesterol electrophoresis;

FLISD 75638

Lisdexamfetamine as Metabolite, Urine

Specimen Requirements: Specimen Type: Urine Container/Tube: Plastic preservative-free urine container Specimen Volume: 1 mL Collection Instructions: Collect 1 mL random urine specimen without preservative. Send specimen refrigerated in a plastic urine container.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	180 days	
	Frozen	180 days	
	Ambient	7 days	

CPT Code Information: 80324

LITH 37046

Lithium, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood 8 to 12 hours after last dose (trough specimen). 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection. Additional Information: Peak serum concentrations do not correlate with symptoms.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80178

LFABP 70429

Liver Fatty Acid-Binding Protein (L-FABP) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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TECHONLY	Ambient (preferred)
	Refrigerated

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LIVPR 113633

Liver Profile, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber vial (T192) Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated	7 days	

CPT Code Information: 80076; 82247; 82248; 84450; 84460; 84075; 82040; 84155;

LKM 80387

Liver/Kidney Microsome Type 1 Antibodies, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86376

LOB 82744

Lobster, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FLBE

57946

Locust Black (*Robinia pseudoacacia*) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

LQTGP

63162

Long QT Syndrome Multi-Gene Panel, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send specimen in original tube. Additional Information: Prior Authorization is available for this test. Submit the required form with the specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81403; 81404; 81406 x 2; 81407; 81479;

LORAZ

80459

Lorazepam (Ativan), Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma: Specimen Type: Plasma Container/Tube: Green Top Specimen Volume: 2 mL Collection Instructions: Draw blood in a green-top sodium heparin tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL of plasma refrigerated in a plastic vial. Serum: Specimen Type: Serum Container/Tube: Red Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	

Frozen	180 days
Ambient	72 hours

CPT Code Information: 80346; G0480 (if appropriate);

NRHDL 29552

Low-Density Lipoprotein (LDL) a-High Density Cholesterol, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see LDLD / Low-Density Lipoprotein (LDL) Cholesterol (Beta-Quantification), Serum.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)		
	Frozen		

LDLD 89652

Low-Density Lipoprotein (LDL) Cholesterol (Beta-Quantification), Serum

Specimen Requirements: Patient Preparation: Patient must not consume any alcohol for 24 hours before the specimen is drawn. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 3 mL Additional Information: Indicate patient's age and sex.

Specimen Minimum Volume: <2 years: 1 mL; > or =2 years: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	10 days	
	Frozen	60 days	

CPT Code Information: 83701-Lipoprotein, blood; high resolution fractionation and quantitation of lipoproteins including lipoprotein subclasses when performed (eg, electrophoresis, ultracentrifugation)

FUSF 35304

Low-Grade Fibromyxoid Sarcoma (LGFMS), 16p11.2 (FUS or TLS) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 Æâ, -â€œ DNA probe, each (first probe set), Interpretation and report; 88271x2 Æâ, -â€œ DNA probe, each; each additional probe set (if appropriate); 88271x1 Æâ, -â€œ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 Æâ, -â€œ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 Æâ, -â€œ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 Æâ, -â€œ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 Æâ, -â€œ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 Æâ, -â€œ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

LOX 80462

Loxapine (Loxitaner) and 8-Hydroxyloxapine

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80342; ;

FLSDA 75680

LSD Trace Analysis, Urine

Specimen Requirements: Specimen Type: Urine Container/Tube: Plastic preservative-free urine container Specimen Volume: 1 mL Collection Instructions: Collect 1 mL random urine without preservative. Send specimen refrigerated in a plastic, preservative-free urine container.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: 80323

LUNGR Lung Cancer Rearrangement Testing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 180 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. In this document, the sizes are given as 4mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3mm x 1mm x 10 slides: approximate/equivalent to 36mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and cover slipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81405-RET; 81479-(ROS1, ALK, NTKR1);

LCAF 35282

Lung Cancer, ALK (2p23) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Slides: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Three consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 - DNA probe, each (first probe set), Interpretation and report; 88271x2 - DNA probe, each; each additional probe set (if appropriate); 88271x1 - DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 - DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 - DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 - Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 - Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275 - Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

appropriate);

EGFR

35406

Lung Cancer, EGFR with ALK Reflex, Tumor

Specimen Requirements: Pathology report must accompany specimen in order for testing to be performed. Preferred: Specimen Type: Tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Acceptable: Specimen Type: Tissue Container/Tube: Slides Specimen Volume: 12 unstained, positively charged, unbaked slides or 2 hematoxylin and eosin-stained slides (will not be returned) and 10 unstained, positively charged, unbaked slides Collection Instructions: Submit 12 unstained, positively charged, unbaked slides cut at 5-microns or 2 hematoxylin and eosin-stained slides and 10 unstained, positively charged, unbaked slides with 5-micron thick sections of the tumor tissue.

Specimen Minimum Volume: Formalin-fixed, paraffin-embedded tissue block (preferred) or 2 slides stained with hematoxylin-and-eosin and 10 unstained, positively charged, unbaked slides with 5-micron thick sections of the tumor tissue.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: EGFR Gene, Mutation Analysis, Tumor; 81235-EGFR (epidermal growth factor receptor) (eg, non-small cell lung cancer) gene analysis, common variants (eg, exon 19 deletions, L858R, T790M, G719S, L861Q); ; Additional Tests:; Slide Review; 88381-Microdissection, manual; ; Reflexed Tests (if appropriate);; Lung Cancer, ALK (2p23), FISH, Ts; 88271 x 2-DNA Probe (if appropriate); 88274-Interphase in situ hybridization (if appropriate); 88291-Interpretation and report (if appropriate);

RET

35846

Lung Cancer, RET (10q11) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Slides: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 ~â€œ DNA probe, each (first probe set), Interpretation and report; 88271x2 ~â€œ DNA probe, each; each additional probe set (if appropriate); 88271x1 ~â€œ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 ~â€œ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 ~â€œ DNA probe, each; coverage for sets containing 5 probes (if appropriate);

appropriate); 88274 w/modifier 52 $\tilde{\mathcal{A}}\hat{\mathcal{A}}, -\hat{\mathcal{A}}\mathcal{E}$ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 $\tilde{\mathcal{A}}\hat{\mathcal{A}}, -\hat{\mathcal{A}}\mathcal{E}$ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 $\tilde{\mathcal{A}}\hat{\mathcal{A}}, -\hat{\mathcal{A}}\mathcal{E}$ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

ROS1F 35845

Lung Cancer, ROS1 (6q22) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Slides: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 $\tilde{\mathcal{A}}\hat{\mathcal{A}}, -\hat{\mathcal{A}}\mathcal{E}$ DNA probe, each (first probe set), Interpretation and report; 88271x2 $\tilde{\mathcal{A}}\hat{\mathcal{A}}, -\hat{\mathcal{A}}\mathcal{E}$ DNA probe, each; each additional probe set (if appropriate); 88271x1 $\tilde{\mathcal{A}}\hat{\mathcal{A}}, -\hat{\mathcal{A}}\mathcal{E}$ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 $\tilde{\mathcal{A}}\hat{\mathcal{A}}, -\hat{\mathcal{A}}\mathcal{E}$ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 $\tilde{\mathcal{A}}\hat{\mathcal{A}}, -\hat{\mathcal{A}}\mathcal{E}$ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 $\tilde{\mathcal{A}}\hat{\mathcal{A}}, -\hat{\mathcal{A}}\mathcal{E}$ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 $\tilde{\mathcal{A}}\hat{\mathcal{A}}, -\hat{\mathcal{A}}\mathcal{E}$ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 $\tilde{\mathcal{A}}\hat{\mathcal{A}}, -\hat{\mathcal{A}}\mathcal{E}$ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

LNGPR 65142

Lung Cancer-Targeted Gene Panel with Rearrangement, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. In this document, the sizes are given as 4mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3mm x 1mm x 10 slides: approximate/equivalent to 36mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and cover slipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81445-Targeted genomic sequence analysis panel, solid organ neoplasm; Slide Review; 88381-Microdissection, manual;

LUNGP

65144

Lung Cancer-Targeted Gene Panel, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 180 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. In this document, the sizes are given as 4mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3mm x 1mm x 10 slides: approximate/equivalent to 36mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and cover slipped with a preferred total of 5000 nucleated cells, or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81445-Targeted genomic sequence analysis panel, solid organ neoplasm; Slide Review; 88381-Microdissection, manual;

LUPN

82613

Lupin, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FLUPV 91714

Lupus Anticoagulant Evaluation with Reflex

Specimen Requirements: Collection Container/Tube: Light-blue top (3.2% sodium citrate)
Submission Container/Tube: Plastic vial Specimen Volume: 3 mL platelet-poor plasma, in plastic vial
Collection Instructions: Draw blood into a 3.2% sodium citrate (light blue-top) tube. Centrifuge light blue-top tube 15 minutes at approx. 1500 g within 60 minutes of collection. Using a plastic pipette, remove plasma, taking care to avoid the WBC/platelet buffy layer and place into a plastic vial. Centrifuge a second time and transfer platelet-poor plasma into a new plastic vial. Plasma must be free of platelets (<10,000/mcl). Freeze immediately and ship on dry ice.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	90 days	

CPT Code Information: 85613/ Russell viper venom time (includes venom); diluted; 85730/ Thromboplastin time, partial (PTT); plasma; 85598/ Platelet neutralization (Hexagonal Phase Confirm) Åçâ, -â€œ (if appropriate); 85597/ Platelet neutralization (dRVVT Confirm) Åçâ, -â€œ (if appropriate); 85613/dRVVT 1:1 Dilution (if appropriate); 85670/Thrombin Clotting Time (if appropriate); ;

ALUPO 603465

Lupus Anticoagulant Profile Interpretation

Specimen Requirements: Only orderable as a reflex. For more information see ALUPP / Lupus Anticoagulant Profile, Plasma. Patient Preparation: Patient should not be receiving warfarin or heparin. If the patient is currently on warfarin or heparin, this should be noted, treatment with heparin causes false-positive results of in vitro coagulation testing for lupus anticoagulant. Coumadin treatment may impair ability to detect the more subtle varieties of lupus-like anticoagulants.

Specimen Minimum Volume: Only orderable as a reflex. For more information see ALUPP / Lupus Anticoagulant Profile, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-26 Special Coagulation Interpretation

ALUPI 603464

Lupus Anticoagulant Profile Technical Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see ALUPP / Lupus Anticoagulant Profile, Plasma. Patient Preparation: Patient should not be receiving warfarin or heparin. If the patient is currently on warfarin or heparin, this should be noted.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390**ALUPP**
603463**Lupus Anticoagulant Profile, Plasma**

Specimen Requirements: Patient Preparation: 1. Patient should not be receiving anticoagulant treatment (eg, warfarin, heparin). Treatment with heparin causes false-positive results of in vitro coagulation testing for lupus anticoagulant. Coumadin (warfarin) treatment may impair ability to detect the more subtle varieties of lupus-like anticoagulants. 2. Patient should also not be receiving fibrinolytic agents (streptokinase, urokinase, tissue plasminogen activator: tPA). 3. If patient has been recently transfused, it is best to perform this study pretransfusion, if possible. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (citrate) Submission Container/Tube: Plastic vials Specimen Volume: 4 mL in 4 plastic vials each containing 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma (1-2 mL per aliquot) into 4 separate plastic vials, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85610; 85730; 85613; 85390; 85130 (if appropriate); 85130 (if appropriate); 85210 (if appropriate); 85220 (if appropriate); 85230 (if appropriate); 85240 (if appropriate); 85245 (if appropriate); 85246 (if appropriate); 85247 (if appropriate); 85250 (if appropriate); 85260 (if appropriate); 85270 (if appropriate); 85280 (if appropriate); 85335 (if appropriate); 85335 (if appropriate); 85335 (if appropriate); 85366 (if appropriate); 85379 (if appropriate); 85384 (if appropriate); 85385 (if appropriate); 85390-26 (if appropriate); 85397 (if appropriate); 85597 (if appropriate); 85598 (if appropriate); 85611 (if appropriate); 85613 (if appropriate); 85613 (if appropriate); 85635 (if appropriate); 85670 (if appropriate); 85732 (if appropriate);

LUTHI
70498**Luteinizing Hormone (LH) Beta Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LHPED 62999

Luteinizing Hormone (LH), Pediatrics, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.25 mL Collection Instructions: 1. Red-top tubes should be centrifuged and the serum transferred to an aliquot vial within 2 hours of collection. 2. Serum gel tubes should be centrifuged within 2 hours of collection.

Specimen Minimum Volume: 0.13 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 83002

LH 602752

Luteinizing Hormone (LH), Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	24 hours	

CPT Code Information: 83002

LNBAB 63502

Lyme Central Nervous System Infection IgG with Antibody Index Reflex, Serum and Spinal Fluid

Specimen Requirements: Both spinal fluid (CSF) and serum are required for this test. CSF and serum must be collected within 24 hours (maximum) of each other. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1.2 mL Collection Instructions: 1. A spinal fluid (CSF) sample of 1.2 mL needs to be collected within 24 hours of the serum specimen, preferably at the same

time. 2. Label vial as spinal fluid or CSF. 3. CSF aliquot should be from the second, third, or fourth CSF vial collected during the lumbar puncture. - Do not submit CSF from the first vial due to the possibility of blood contamination, which will cause specimen rejection. 4. Band specimens together. Specimen Type: Serum Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1.2 mL Collection Instructions: 1. A serum sample of 1.2 mL needs to be collected within 24 hours of the spinal fluid specimen, preferably at the same time. 2. Label as serum. 3. Band specimens together.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	11 days	
	Frozen	35 days	
Serum	Refrigerated (preferred)	11 days	
	Frozen	35 days	

CPT Code Information: 86618-Lyme spinal fluid; 86618 x 2-Lyme, Serum and spinal fluid if applicable for Antibody Index; 82040-Albumin, serum if applicable for Antibody Index; 82042-Albumin, spinal fluid if applicable for Antibody Index; 82784 x 2-IgG, serum and spinal fluid if applicable for Antibody Index;

LNBAI
63249

Lyme Central Nervous System Infection IgG, Antibody Index, Spinal Fluid

Specimen Requirements: Only orderable as part of a profile. For more information see LNBAB / Lyme Central Nervous System Infection IgG with Antibody Index Reflex, Serum and Spinal Fluid.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	11 days	
	Frozen	35 days	

CPT Code Information: 86618 x 2; 82040; 82042; 82784 x 2;

LYWB
9535

Lyme Disease Antibody, Immunoblot, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.75 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	

CPT Code Information: 86617 x 2

ELYME 65417

Lyme Disease European Antibody Screen, Serum

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Pediatric: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	10 days	
	Frozen	30 days	

CPT Code Information: 86618; 86617 x 2 - Lyme Disease European Immunoblot, S (if appropriate);

ELYMI 65418

Lyme Disease European Immunoblot, Serum

Specimen Requirements: Only orderable as a reflex. For more information see ELYME / Lyme Disease European Antibody Screen, Serum. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Pediatric: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	10 days	
	Frozen	14 days	

CPT Code Information: 86617 x 2

LYME 9129

Lyme Disease Serology, Serum

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	10 days	
	Frozen	30 days	

CPT Code Information: 86618; 86617 x 2-Lyme disease confirmation (if appropriate);

PBORB
87973

Lyme Disease, Molecular Detection, PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87476; 87798 x 2; 87999 (if appropriate for government payers);

PBORR
80574

Lyme Disease, Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Label specimen as spinal fluid. Specimen Type: Synovial fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Label specimen as synovial fluid. Specimen Type: Tissue (fresh only) Sources: Skin or synovial biopsy Container/Tube: Sterile container with normal saline Specimen Volume: Approximately 4 mm(3) Collection Instructions: 1. Submit only fresh tissue. 2. Skin biopsies: a. Wash biopsy site with an antiseptic soap. Thoroughly rinse area with sterile water. Do not use alcohol or iodine preparations. A local anesthetic may be used. b. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis. 3. Label specimen with source of tissue.

Specimen Minimum Volume: Spinal Fluid, Synovial Fluid: 0.3 mL Tissue: NA

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87476; 87798 x 2; 87999 (if appropriate for government payers);

LPA3P
62205

Lymphocyte Proliferation to Anti-CD3/Anti-CD28 and Anti-CD3/Interleukin-2 (IL-2) by Flow Cytometry, Blood

Specimen Requirements: For serial monitoring, we recommend that specimen draws be performed at the same time of day. Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Container/Tube: Green top (sodium heparin) Specimen Volume: <3 months: 1 mL 3 months-5 years: 3 mL 6-18 years: 5 mL >18 years: 20 mL Collection Instructions: Send specimen in original tube. Do not aliquot. Blood Volume Recommendations Based on Absolute Lymphocyte Count (ALC) ALC Blood Volume for Minimum aCD28 Only Blood Volume for Minimum of aCD3, aCD28, and IL-2 Blood Volume for Full Assay <0.5 >15 cc >28 cc >50 cc 0.5-1.0 15 cc 28 cc 50 cc 1.1-1.5 6.5 cc 12 cc 24 cc 1.6-2.0 4.5 cc 8.5 cc 16 cc 2.1-3.0 3.5 cc 6.5 cc 12 cc 3.1-4.0 2.5 cc 4.5 cc 8 cc 4.1-5.0 1.8 cc 3.5 cc 6 cc >5.0 1.5 cc 2.5 cc 5 cc

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86353 x 1-Anti-CD3 + anti-CD28 stimulation; 86353 x 1-Anti-CD3 + IL2 stimulation; 86353 x 1-Anti-CD3 stimulation (as indicated);

LPAGF 60592

Lymphocyte Proliferation to Antigens, Blood

Specimen Requirements: Supplies: Ambient Shipping Box-Critical Specimens Only (T668)
Container/Tube: Green top (sodium heparin) Specimen Volume: <3 months: 1 mL 3-24 months: 3 mL 25 months-18 years: 5 mL >18 years: 20 mL Collection Instructions: Send specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, the recommendation is to collect the specimen at the same time of day. For more information see Cautions. Blood Volume Recommendations Based on Absolute Lymphocyte Count (ALC) Antigen only ALC x 10(9)/L Blood volume for minimum Candida albicans (CA) and tetanus toxoid (TT) Only Blood volume for full assay <0.5 >18.5 mL >40 mL 0.5-1.0 18.5 mL 40 mL 1.1-1.5 8.5 mL 20 mL 1.6-2.0 6.0 mL 12 mL 2.1-3.0 4.5 mL 10 mL 3.1-4.0 3.0 mL 6 mL 4.1-5.0 2.5 mL 5 mL >5.0 2.0 mL 4 mL Mitogen and antigen ALC x 10(9)/L Blood volume for minimum of each assay Blood volume for full assay <0.5 >28 mL >60 mL 0.5-1.0 28 mL 60 mL 1.1-1.5 12 mL 30 mL 1.6-2.0 8.5 mL 20 mL 2.1-3.0 6.5 mL 15 mL 3.1-4.0 4.5 mL 10 mL 4.1-5.0 3.5 mL 8 mL >5.0 2.5 mL 6 mL

Specimen Minimum Volume: <6 years: 1 mL 6-18 years: 2 mL >18 years: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86353; 86353 (if appropriate);

LPMGF 60591

Lymphocyte Proliferation to Mitogens, Blood

Specimen Requirements: Supplies: Ambient Shipping Box-Critical Specimens Only (T668)
Container/Tube: Green top (sodium heparin) Specimen Volume: <3 months: 1 mL 3 months-5 years: 2 mL 6-18 years: 3 mL >18 years: 10 mL Collection Instructions: Send specimen in original tube. Do not aliquot. Additional Information: For serial monitoring, the recommendation is to collect the specimen at the same time of day. Blood Volume Recommendations Based on Absolute Lymphocyte Count (ALC) Mitogen only ALC x 10(9)/L Blood volume for minimum phytohemagglutinin (PHA) only Blood volume for minimum PHA and pokeweed mitogen (PWM) Blood volume for full assay <0.5 >6.5 mL >8.5 mL >22 mL 0.5-1.0 6.5 mL 8.5 mL 22 mL 1.1-1.5 3.0 mL 4.0 mL 10 mL 1.6-2.0 2.0 mL 2.5 mL 7 mL 2.1-3.0 1.5 mL 2.0 mL 6 mL 3.1-4.0 1.0 mL 1.5 mL 4 mL 4.1-5.0 0.8 mL 1.0 mL 3 mL >5.0 0.5 mL 0.8 mL 2 mL Mitogen and antigen ALC x 10(9)/L Blood volume for minimum of each assay Blood volume for full assay <0.5 >28 mL >60 mL 0.5-1.0 28 mL 60 mL 1.1-1.5 12 mL 30 mL 1.6-2.0 8.5 mL 20 mL 2.1-3.0 6.5 mL 15 mL 3.1-4.0 4.5 mL 10 mL 4.1-5.0 3.5 mL 8 mL >5.0 2.5 mL 6 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	48 hours	GREEN TOP/HEP

CPT Code Information: 86353; 86353 (if appropriate);

LEF1
71356

Lymphoid Enhancer-Binding Factor 1(LEF1) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LPLFX
61114

Lymphoplasmacytic Lymphoma/Waldenstrom Macroglobulinemia (LPL/WM), MYD88 L265P with Reflex to CXCR4, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD solution B) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow 2. Send specimen in original tube 3. Label specimen as bone marrow Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Specimen Stability: Ambient Specimen Type: Paraffin-embedded bone marrow aspirate clot Container/Tube: Paraffin block Specimen Stability: Ambient Specimen Type: Tissue Slides: Unstained slides Specimen Volume: 10 slides Additional Information: Tissue must demonstrate involvement by a hematologic neoplasm (eg, acute myelocytic leukemia), not solid tumors. Specimen Stability Information: Ambient Acceptable: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD solution B) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood 2. Send specimen in original tube 3. Label specimen as blood Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube with indication of volume and concentration of the DNA Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA and list the specimen source. Include indication of volume and concentration of the DNA. Specimen Stability Information: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Blood, Bone marrow: 1 mL Extracted DNA: 20 mcL with a concentration of at least 10 nanograms per mcL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	10 days	

CPT Code Information: 81305

LYNCH
64333

Lynch Syndrome Panel, Varies

Specimen Requirements: Prior Authorization is available for this assay; see Special Instructions. Submit the required form with the specimen. Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81292; 81295; 81298; 81317; 81319; 81403; 81228;

LPCBS 61766

Lysophosphatidylcholines, LC MS/MS, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, Munktell and Whatman Protein Saver 903 Paper Specimen Volume: 2 blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is fingerstick. See Dried Blood Spot Collection Tutorial for how to collect blood spots via fingerstick: <https://vimeo.com/508490782> . 2. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood spot: 1

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	56 days	FILTER PAPER
	Frozen	56 days	FILTER PAPER
	Ambient	7 days	FILTER PAPER

CPT Code Information: 82542

LALB 62954

Lysosomal Acid Lipase, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or green top (sodium heparin) Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	7 days	
	Ambient	7 days	

CPT Code Information: 82657

LALBS 62955

Lysosomal Acid Lipase, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Collection Container/Tube: Preferred: Blood spot collection card Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, Munktel TFN, and Whatman Protein Saver 903 Paper Specimen Volume: 2 blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is fingerstick. See Dried Blood Spot Collection Tutorial for how to collect blood spots via fingerstick: <https://vimeo.com/508490782> . 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Ambient	7 days	FILTER PAPER

CPT Code Information: 82657

LDALD 64907

Lysosomal and Peroxisomal Disorders Newborn Screen, Blood Spot

Specimen Requirements: Patient must be older than 24 hours and less than 1 week of age. Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Card-Blood Spot Collection (Filter Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, Munktel filter paper, Whatman Protein Saver 903 Paper, or blood collected in tubes containing ACD, EDTA, or heparin and then spotted and dried on filter paper Specimen Volume: 2 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is fingerstick. See Dried Blood Spot Collection Tutorial for how to collect blood spots via fingerstick: <https://vimeo.com/508490782> . 2. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special

Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood spot: 1

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	56 days	FILTER PAPER
	Frozen	56 days	FILTER PAPER
	Ambient	7 days	FILTER PAPER

CPT Code Information: 83789

PLSD 89678

Lysosomal and Peroxisomal Storage Disorders Screen, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493)
Container/Tube: Preferred: Card-Blood Spot Collection (Filter Paper) Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, Munktell filter paper, Whatman Protein Saver 903 paper, or blood collected in tubes containing ACD, EDTA, or heparin and dried on acceptable filter paper
Specimen Volume: 2 blood spots
Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is fingerstick. See Dried Blood Spot Collection Tutorial for how to collect blood spots via fingerstick: <https://vimeo.com/508490782>. 2. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry.
Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	56 days	FILTER PAPER
	Frozen	56 days	FILTER PAPER
	Ambient	7 days	FILTER PAPER

CPT Code Information: 83789

LSDGP 608011

Lysosomal Storage Disease Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant.
Specimen Type: Whole blood
Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant
Specimen Volume: 3 mL
Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.
Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443

G158
605191

Lysosomal Storage Disease Panel (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 81443

LSDS
606771

Lysosomal Storage Disorders Screen, Random, Urine

Specimen Requirements: Patient Preparation: Do not administer low-molecular weight heparin prior to collection. Baby wipes or wipes containing soaps and lotions should not be used prior to collection because these may interfere with results. Supplies: Urine Tubes, 10 mL (T068)
Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Pediatric Volume: 3 mL
Collection Instructions: Collect a first-morning, random urine specimen.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	15 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 83789; 83864; 84377; 82570;

LSD6W
606171

Lysosomal Storage Disorders, Six-Enzyme Panel, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) or lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	
	Ambient	6 days	

CPT Code Information: 82657; 82963; 83789 (if appropriate for government payers); 82542 (if appropriate);

LYZZ 35471

Lysozyme (LYZ) Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81479-Unlisted molecular pathology procedure

MURA 607462

Lysozyme (Muramidase), Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Centrifuge and aliquot plasma into a plastic vial within 2 hours of collection. 2. Freeze immediately after transferring.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	21 days	

CPT Code Information: 85549

LYSOZ 70503

Lysozyme Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LYSO

82398

Lysozyme, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86008

MALD

609780

M-Protein Isotype, Matrix-Assisted Laser Desorption-Ionization Time-of-Flight Mass Spectrometry, Serum

Specimen Requirements: Patient Preparation: Fasting 12 hours preferred but not required Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	14 days	
	Ambient	7 days	

CPT Code Information: 0077U; 86334 (if appropriate);

MACNT

65405

Macadamia Nut, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MACE

82492

Mace, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MACK

82342

Mackerel, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FMACR

57817

Macroamylase

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 82150; ;

MCRPL

34643

Macroprolactin, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair,

skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top
Specimen Volume: 1 mL Collection Instructions: Spin down and separate serum from clot.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	
	Ambient	24 hours	

CPT Code Information: 84146 x 2

MAGU 610768

Magnesium, 24 Hour, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic urine container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	72 hours	

CPT Code Information: 83735

MG_F 606756

Magnesium, Feces

Specimen Requirements: Patient Preparation: No barium, laxatives, or enemas may be used for 96 hours prior to start of, or during, collection. Supplies: Stool containers - 24, 48, 72 Hour Kit (T291) Container/Tube: Stool container Specimen Volume: 10 g Collection Instructions: Collect a very liquid stool specimen.

Specimen Minimum Volume: 5 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	14 days	
	Refrigerated	7 days	
	Ambient	48 hours	

CPT Code Information: 83735

MGP
603812

Magnesium, Plasma

Specimen Requirements: Preferred: Light-green top (lithium heparin plasma gel) Acceptable: Green top (lithium heparin) Specimen Volume: 0.5 mL Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Gel tubes should be centrifuged within 2 hours of collection 3. Green-top tubes should be centrifuged and the plasma transferred to an aliquot vial within 2 hours of collection. Additional Information: If other metal tests are also desired when drawing for a plasma magnesium level; the specimen must be drawn in a plain, royal blue-top Vacutainer plastic trace element blood collection tube (T184).

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Li Heparin	Ambient	8 hours	

CPT Code Information: 83735

MAGR
614026

Magnesium, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see SSATR / Supersaturation Profile, Random, Urine. Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube (T465) or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	72 hours	

CPT Code Information: 83735

MGS
8448

Magnesium, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection. Additional Information: If other metal tests are also desired when drawing for a serum magnesium level; the specimen must be drawn in a plain, royal blue-top Vacutainer plastic trace element blood collection tube (T184).

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	365 days	

CPT Code Information: 83735

MAGRU Magnesium/Creatinine Ratio, Random, Urine

613998

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	72 hours	

CPT Code Information: 83735; 82570;

FMME Mahi Mahi IgE

57924

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

MOBRD Mail Out Research, Blood

28339

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies			

MALI
601988**MAL Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

LMALP
37115**Malaria PCR with Parasitemia Reflex, Varies**

Specimen Requirements: Both blood and slides are required. Specimen Type: Blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Do not transfer blood to other containers. Send specimen in original tube. Specimen Type: Blood films Container/Tube: Clean, grease-free slides in plastic slide container Specimen Volume: 2 thin blood films and 2 thick blood films Collection Instructions: 1. Blood films should be made from fresh blood using fingerstick or drops of blood from needle following venipuncture. However, EDTA anticoagulated blood is also acceptable. 2. Prepare thin blood films as follows: a. Prepare a thin film with a "feathered edge" that is no more than a single cell thick. b. Allow the film to thoroughly air dry and then fix by briefly immersing in either absolute or 95% methyl alcohol. c. Allow to air dry after fixation. 3. Prepare thick blood films as follows: a. Place a large drop of blood (approximately the size of a dime and preferably from a fingerstick) on a slide. b. Using a corner of a second slide, spread the drop in a circular motion while applying firm pressure to literally scratch the blood onto the carrier slide. This technique allows the blood to dry quickly and adhere well to the slide. Use approximately 20 circular sweeps with the second slide. The drop of blood should be about the size of a quarter when finished. c. Do not fix. Air dry thoroughly (approximately 45 minutes) before placing in transport container.

Specimen Minimum Volume: Blood: 1 mL Slides: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Ambient	7 days	

CPT Code Information: 87798; 87207 (if applicable);

LCMAL
87860**Malaria, Molecular Detection, PCR, Varies**

Specimen Requirements: Both blood and slides are required. Specimen Type: Blood Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Do not transfer blood to other containers. Send specimen in original tube. Specimen Type: Blood films Container/Tube: Clean, grease-free slides in plastic slide container Specimen Volume: 2 thin blood films and 2 thick blood films Collection Instructions: 1. Ideally, blood films should be made directly from uncoagulated blood acquired via fingerstick. However, EDTA anticoagulated blood is also acceptable. 2. Prepare thin blood films as follows: a. Prepare a thin film with a "feathered edge"

that is no more than a single cell thick. b. Allow the film to thoroughly air dry and then fix by briefly immersing in either absolute or 95% methyl alcohol. c. Allow to air dry after fixation. 3. Prepare thick blood films as follows: a. Place a large drop of blood (approximately the size of a dime and preferably from a fingerstick) on a slide. b. Using a corner of a second slide, spread the drop in a circular motion while applying firm pressure to literally scratch the blood onto the carrier slide. This technique allows the blood to dry quickly and adhere well to the slide. Use approximately 20 circular sweeps with the second slide. The drop of blood should be about the size of a quarter when finished. c. Do not fix. Air dry thoroughly (approximately 45 minutes) before placing in transport container.

Specimen Minimum Volume: Blood: 1 mL Slides: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Ambient	7 days	

CPT Code Information: 87798

PARCT 62259

Malaria/Babesia Percent Parasitemia Reflex, Varies

Specimen Requirements: Only orderable as a reflex. For more information see LMALP / Malaria PCR with Parasitemia Reflex. Slides submitted for LMALP / Malaria PCR with Parasitemia Reflex, Blood are used for percent parasitemia. May be added on to positive LCMAL / Malaria, Molecular Detection, PCR only by physician request.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Ambient	7 days	

CPT Code Information: 87207

MAAN 82396

Maleic Anhydride, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MCMF
113355**Malignant Cells Cyto/Heme (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88108

MALT
82834**Malt, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MAMLF
58105**MAML2 (11q21) Rearrangement, Mucoepidermoid Carcinoma (MEC), FISH, Tissue**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Container/Tube: Formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Collection Instructions: Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Specimen Volume: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5-micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 \hat{A} \hat{A} DNA probe, each (first probe set), Interpretation and report; 88271x2 \hat{A} \hat{A} DNA probe, each; each additional probe set (if appropriate); 88271x1 \hat{A} \hat{A} DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 \hat{A} \hat{A} DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 \hat{A} \hat{A} DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 \hat{A} \hat{A} Interphase in situ hybridization, <25 cells, each probe set (if

appropriate); 88274 $\tilde{\text{A}}\text{ç}\hat{\text{a}}, \neg\hat{\text{a}}\text{€}\text{œ}$ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 $\tilde{\text{A}}\text{ç}\hat{\text{a}}, \neg\hat{\text{a}}\text{€}\text{œ}$ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

MGB 70507

Mammaglobin (MGB) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MAND 82352

Mandarin, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MNU 8080

Manganese, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 83785

MNB 89120

Manganese, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Royal blue-top (EDTA) Vacutainer plastic trace element blood collection tube Specimen Volume: 0.8 mL Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original tube. Additional Information: If ordering the trace element blood collection tube from BD, order catalog #368381 (Plastic K2EDTA 10.8 mg, royal blue-top).

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83785

FMNRB 57196

Manganese, Red Blood Cell

Specimen Requirements: Collect whole blood in a metal-free EDTA (royal blue top) tube. Spin down and separate plasma and red blood cells immediately. Ship 3 mL plasma and 3 mL RBC in metal free tubes; refrigerate. NOTE: Both plasma and RBCs are required for testing.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Metal Free EDTA Plasma	Refrigerated (preferred)	5 days	METAL FREE
	Ambient	72 hours	METAL FREE
RBCS	Refrigerated (preferred)	5 days	METAL FREE
	Ambient	72 hours	METAL FREE

CPT Code Information: 83785

MNS

8413

Manganese, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium, iodine, and barium are known to interfere with most metals tests. If gadolinium-, iodine, or barium-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free B-D Tube (No Additive), 6 mL (T184) -Metal Free Specimen Vial (T173) Collection Container/Tube: Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, polypropylene vial Specimen Volume: 1.6 mL Collection Instructions: 1. Allow the specimen to clot for 30 minutes, and then centrifuge to separate serum from the cellular fraction. Serum must be removed from cellular fraction within 4 hours of draw. Avoid hemolysis. 2. Remove the stopper. Carefully pour specimen into a Mayo metal-free, polypropylene vial, while avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Ambient	28 days	METAL FREE
	Frozen	28 days	METAL FREE

CPT Code Information: 83785

MNCRU

60027

Manganese/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 83785 Manganese Concentration; 82570 Creatinine Concentration;

MANGO

82811

Mango, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen

Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FMBL 57587

Mannan Binding Lectin (MBL)

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	365 days	
	Ambient	28 days	
	Refrigerated	28 days	

CPT Code Information: 86160

FMANO 75444

Mannose Binding Lectin

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: Draw blood in serum gel tube (s). Plain red-top tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial. Note: Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	365 days	

CPT Code Information: 83520

FMPRE 57535

Maple Red (Acer rubrum) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003**MSUDP**
608031**Maple Syrup Urine Disease Gene Panel, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81405; 81406 x3; 81479;**MAPTZ**
35475**MAPT Gene, Sequence Analysis, 7 Exon Screening Panel, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81406-MAPT (microtubule-associated protein tau) (eg, frontotemporal dementia), full gene sequence

MARE

82141

Mare's Milk, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MFRGP

63029

Marfan Syndrome and Related Disorders Multi-Gene Panel, Varies

Specimen Requirements: Prior Authorization is available for this test. Submit the required form with the specimen. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81410

MARJ

82605

Marjoram, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

ZW144
90583

Mass Gen DNA Diag Lab

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

MSPTC
113288

Mass Spectrometry (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 82542-Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)

MATCC
35479

Maternal Cell Contamination, Molecular Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Maternal blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Prenatal Specimens: Submit only 1 of the following specimens: Specimen Type: Cord blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Additional Information: A separate culture charge will be assessed under CULAF / Culture for Genetic Testing, Amniotic Fluid. Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Cultured amniocytes Container/Tube: T-25 flask Specimen Volume: 2 full flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Genetic Testing, Tissue. Specimen Stability Information: Refrigerated Specimen Type: Cultured chorionic villi Container/Tube: T-25 flasks Specimen Volume: 2 full flasks Collection

Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Amniotic Fluid: 10 mL Blood, Cord Blood: 0.5 mL Chorionic Villus: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81265; ; Fibroblast Culture for Genetic Test; 88233-(if appropriate); 88240-(if appropriate); ; Amniotic Fluid Culture/Genetic Test; 88235-(if appropriate); 88240-(if appropriate); ; Each additional specimen; 81266;

FFMSS 75692

Maternal Serum Screening, Integrated, Specimen #1, PAPP-A, NT

Specimen Requirements: Specimen #1 collection must occur between 10 weeks, 0 days and 13 weeks, 6 days gestation. (If gestational age is based on Crown-Rump length (CRL), the specimen must be collected when the CRL is between 32.4 - 83.9 mm) Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL serum refrigerated in a plastic vial. Separate from cells ASAP or within 2 hours of collection. Note: Submit with order: Patient's date of birth, current weight, number of fetuses present, patient's race, if the patient was diabetic at the time of conception, if there is a known family history of neural tube defects, if the patient has had a previous pregnancy with a trisomy, if the patient is currently smoking, if the patient is taking valproic acid or carbamazepine (Tegretol), if this is a repeat sample, and the age of the egg donor if in vitro fertilization.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	
	Ambient	72 hours	

CPT Code Information: 84163

FMSS2 75351

Maternal Serum Screening, Integrated, Specimen #2, Alpha Fetoprotein, Hcg, Estriol, and Inhibin A

Specimen Requirements: Specimen must be drawn between 14 weeks, 0 days and 24 weeks, 6 days gestation (based on the CRL). Recommended time for maternal serum screening is 16 to 18 weeks gestation. Acceptable date ranges to draw the second samples will be provided in the Integrated-1 report. Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial. Separate from cells ASAP or within 2 hours of collection. This test requires that a previous first trimester specimen, Maternal Serum Screening, Integrated, Specimen #1, PAPP-A, NT (ARUP test ID: 3000147), has been performed.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	365 days	
	Ambient	72 hours	

CPT Code Information: 81511

FMT21 57852

MaterniT21 Plus

Specimen Requirements: **NOTE: Completed Sequenom Test Requisition form is required A Core Option must be marked on TRF under MaterniT 21 PLUS test If nothing indicated by client, mark option- Core (chr 21, 18, 13, sex) Preferred evacuated tube: (1)10 mL Streck Black/Tan top tube kit (MCL supply number T715). Absolute minimum collection for analysis: (1) 10 mL in Streck Black/Tan top tube Collection instructions: Draw 1 tube of blood, 10 mL in special Streck Black/Tan top tube kit (MCL supply number T715). Ship ambient. REQUIRED: 1. Specimen MUST be received at MCL within 72 hours of collection. 2. Specimen collected NOT less than 9 weeks of gestation 3. Sequenom collection kit (MCL Supply T715) 4. Completed Sequenom Test Requisition form 5. Maternal Height (inches) 6. Maternal Weight (pounds) 7. Gestational Age (weeks) 8. Gestational Age (days) 9. Number of fetuses 10. Increased risk due to

Specimen Minimum Volume: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Streck	Ambient	7 days	Streck Black/Tan top

CPT Code Information: 81420

MSMRT 64946

Mayo Algorithmic Approach for Stratification of Myeloma and Risk-Adapted Therapy Report, Bone Marrow

Specimen Requirements: Specimen Type: Redirected bone marrow Preferred: Yellow top (ACD) Acceptable: Lavender top (EDTA) or green top (heparin) Specimen Volume: 4 mL

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)	72 hours	
	Refrigerated	72 hours	

CPT Code Information: 88182-Flow cytometry, cell cycle or DNA analysis; 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 5-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each); 88187-Flow cytometry interpretation, 2 to 8 Markers;

MCSTP MayoComplete Solid Tumor Panel, Next-Generation

606162

Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. However, 40% tumor is preferred. -Preferred amount of tumor area: 360 mm(2) tissue on up to 15 unstained slides -Minimum amount of tumor area: 144 mm(2) tissue on up to 15 unstained slides -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. For this test, at least 6mm x 6mm areas on 15 unstained slides is preferred: this is approximately equivalent to 540 mm(2). The minimum acceptable area is 3.1mm x 3.1mm on 15 unstained slides: approximately equivalent to 144 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 15 unstained Collection Instructions: Submit 1 hematoxylin and eosin (H and E) stained slide and 15 unstained, nonbaked 5-micron thick sections Note: The total amount of required tumor can be obtained by scraping up to 15 slides from the same block. Specimen Type: Cytology slides (direct smears or ThinPrep) Slides: 2 to 6 slides Collection Instructions: Submit 2 to 6 stained and cover slipped slides with a preferred total of 10,000 nucleated cells or a minimum of at least 6,000 nucleated cells Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned. An image of the slides will be stored per regulatory requirements.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81455; 88381;

MDM2F 63049

MDM2 (12q15) Amplification, Well-Differentiated Liposarcoma/Atypical Lipomatous Tumor, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5- micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271x1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if

appropriate) ; 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

MEAD 82890

Meadow Fescue, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MFOX 82914

Meadow Foxtail, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

ROPG 34941

Measles (Rubeola) Antibodies, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86765

ROM
80979

Measles (Rubeola) Antibodies, IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86765

ROGM
62066

Measles (Rubeola) Virus Antibody, IgM and IgG (Separate Determinations), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86765-Rubeola IgM; 86765-Rubeola IgG;

MMRV
61853

Measles, Mumps, Rubella, and Varicella (MMRV) Immune Status Profile, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86735-Mumps virus antibody, IgG; 86762-Rubella antibodies, IgG; 86765-Measles (rubeola) antibodies, IgG; 86787-Varicella-Zoster antibody, IgG;

MARP1 **mecA, Molecular Detection, PCR (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87150

MARP 607707

mecA, Molecular Detection, PCR, Varies

Specimen Requirements: Supplies: Infectious Container, Large (T146) Collection Container/Tube: Agar slant or other appropriate media Specimen Volume: Organism in pure culture Collection Instructions: 1. Perform isolation of bacteria. 2. Organism must be in pure culture, actively growing. Do not submit mixed cultures.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 87150; ;

FFMTH 75544

Meconium Methadone Screen with Reflex Confirmation

Specimen Requirements: Container/Tube: Sterile collection container Specimen Volume: 3 g Collection Instructions: Collect specimen into the same sterile collection container until 3 g of meconium have been collected or until the first milk stool appears. When at least 3 g of meconium has been collected, tightly screw on the cap of the collection vial and send specimen ambient. Note: Specimens from different voids may be pooled if necessary.

Specimen Minimum Volume: 1 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Ambient (preferred)	14 days	
	Frozen	365 days	
	Refrigerated	14 days	

CPT Code Information: 80307

MECPZ 35484

MECP2 Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred:

Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL
Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81302-MECP2 (methyl CpG binding protein 2) (eg, Rett syndrome) gene analysis; full sequence analysis; 81304-MECP2 (methyl CpG binding protein 2) (eg, Rett syndrome) gene analysis; duplication/deletion variants;

MCADZ 35478

Medium-Chain Acyl-CoA Dehydrogenase (MCAD) Deficiency Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 Blood Spots on collection card (Whatman Protein Saver 903 Paper; Ahlstrom 226 filter paper; or Blood Spot Collection Card, T493) Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure; ; Fibroblast Culture for Genetic Test; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); ;

MEGR
82347**Megrim, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MELAI
82724**Melaleuca leucadendron, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MELAN
70504**Melan A (MART-1) Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FMARP
75449**Melanoma Associated Retinopathy MAR Panel by Immunoblot and IHC**

Specimen Requirements: Submit only one of the following specimens: Serum: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 5 mL serum refrigerated in a plastic vial. Plasma: Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 5 mL EDTA plasma refrigerated in a plastic vial. Complete and submit with specimen: Completed OHSU Ocular request form Clinical history Referring physician information (name & phone number) -NOTE: Without this information, testing cannot be completed.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated	7 days	

CPT Code Information: 84182 x 6

MELP 35343

Melanoma Targeted Gene Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area: tissue 36 mm(2). -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. In this document, the sizes are given as 4mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3mm x 1mm x 10 slides: approximate/equivalent to 36mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and cover slipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81445 ; 88381-Microdissection, manual;

FMELA 75386

Melatonin, Plasma

Specimen Requirements: Specimen Type: Plasma Container/Tube: Preferred: (Lavender top) EDTA Acceptable: (pink top) EDTA Specimen volume: 3 mL Collection instructions: Draw blood in EDTA (lavender top) tube(s). Spin down and send 1 mL of plasma refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	30 days	
	Frozen	365 days	
	Ambient	14 days	

CPT Code Information: 80299

FMELG

57652

Melons IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

MELN

82762

Melons, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

CSFME

67846

Meningitis/Encephalitis Pathogen Panel, PCR, Spinal Fluid

Specimen Requirements: Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Frozen specimens are not acceptable.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated	7 days	

CPT Code Information: 87483**FMEP
90090****Meperidine (Demerol) and Normeperidine, serum**

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s). Plasma gel tube is not acceptable. Spin down and send 3 mL of sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s). Serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80362**FMMM
57766****Mephedrone, MDPV and Methylone, Urine**

Specimen Requirements: Container: Preservative-free plastic urine container Specimen volume: 10 mL Collection instructions collect a random urine specimen No preservative

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80307 - single drug; 80371 - (if appropriate);**MEPHS
83778****Mephobarbital and Phenobarbital, Serum**

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum in plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80345; G0480 (if appropriate);

FMERC

91120

Mercaptopurine (6-MP, Purinethol)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80299

HGOU

608893

Mercury Occupational Exposure, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see: -HGUOE/ Mercury Occupational Exposure, Random, Urine -HMUOE / Heavy Metal Occupational Exposure, with Reflex, Random, Urine

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

HGUOE

608897

Mercury Occupational Exposure, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal

cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 83825; 82570;

HGU 8592

Mercury, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 83825

HG 8618

Mercury, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Royal blue-top (EDTA) plastic trace element blood collection tube Specimen Volume: Full tube Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original tube. Additional Information: If ordering the trace element blood collection tube from BD, order catalog #368381.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Whole blood	Refrigerated (preferred)	28 days
	Ambient	28 days
	Frozen	28 days

CPT Code Information: 83825

HGHAR 8498

Mercury, Hair

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Specimen Volume: 0.2 g Collection Instructions: Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing in Special Instructions. Additional Information: If known, indicate source of hair (axillary, head, or pubic).

Specimen Minimum Volume: 0.05 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Hair	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 83825

HGNA 89856

Mercury, Nails

Specimen Requirements: Supplies: Hair and Nails Collection Kit (T565) Specimen Volume: 0.2 g Collection Instructions: 1. Prepare and transport specimen per the instructions in the kit or see Collecting Hair and Nails for Metals Testing in Special Instructions. 2. Clippings should be taken from all 10 fingernails or toenails. Additional Information: If known, indicate source of nails (fingernails or toenails).

Specimen Minimum Volume: 0.05 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Nail	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 83825

HGRC 48546

Mercury/Creatinine Ratio, Random, Urine

Specimen Requirements: Only orderable as part of profile. See HGRRCR / Mercury/Creatinine Ratio, Random, Urine or HMCRU / Heavy Metal/Creatinine Ratio, with Reflex, Urine.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

HGCU
608903**Mercury/Creatinine Ratio, Random, Urine**

Specimen Requirements: Only orderable as part of profile. For more information see: HGUCR / Mercury/Creatinine Ratio, Random, Urine HMUCR / Heavy Metal/Creatinine Ratio, with Reflex, Random Urine.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

HGU CR
608907**Mercury/Creatinine Ratio, Random, Urine**

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect urine a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 83825; 82570;

MERKC
71538**Merkel CC (MCPyV) Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MESOR Mesoridazine (Serentil)

80460

Specimen Requirements: Submit only 1 of the following: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 1 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80342

HBME

70452

Mesothelial Cell (HBME-1) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MESOF

609714

Mesothelioma, CDKN2A FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on

positively charged slides and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 - DNA probe, each (first probe set), Interpretation and report; 88271x2 - DNA probe, each; each additional probe set (if appropriate); 88271x1 - DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 - DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 - DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 - Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 - Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275 - Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

MESQ

82776

Mesquite, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

METF

58123

MET (7q31), FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5-micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 - DNA probe, each (first probe set), Interpretation and report; 88271x2 - DNA probe, each; each additional probe set (if

appropriate); 88271x1 \hat{A} \hat{A} DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 \hat{A} \hat{A} DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 \hat{A} \hat{A} DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 \hat{A} \hat{A} Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 \hat{A} \hat{A} Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275 \hat{A} \hat{A} Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

MHBRP Metamycoplasma hominis, Molecular Detection, PCR, Blood

65129

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by Metamycoplasma hominis DNA is unlikely. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL Collection Instructions: Send specimen in original tube (preferred).

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

MHRP Metamycoplasma hominis, Molecular Detection, PCR, Varies

60756

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction (PCR) requires the specimen to be processed in an environment in which contamination of the specimen by Mycoplasma hominis DNA is not likely. Submit only 1 of the following specimens: Specimen Type: Swab Supplies: -Culturette (BBL Culture Swab) (T092) -BD E-Swab (T853) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) -M4-RT (T605) Sources: Vaginal, cervix, urethra, urogenital, chest/mediastinal; bronchus or lung (donor swab); or upper respiratory sources (only infants <3 months: nasopharynx, nose, throat) Container/Tube: Preferred: Culture swab transport system (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Acceptable: Swab in transport media: M4, M4-RT, M5, M6, universal transport media, or ESwab Specimen Volume: 1 swab Collection Instructions: Vaginal: 1. Collect specimen by swabbing back and forth over mucosa surface to maximize recovery of cells. 2. Place swab back into swab cylinder. Urethra or cervical: 1. Collect specimen by inserting swab 1 to 3 cm and rotating 360 degrees. 2. Place swab back into swab cylinder. Wound: 1. Collect specimen by swabbing back and forth over wound surface to maximize recovery of cells. 2. Place swab back into swab cylinder. Specimen Type: Fluid Supplies: -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) -M4-RT (T605) Sources: Pelvic, peritoneal, amniotic, prostatic secretions, semen, reproductive drainage or fluid, pleural/chest, chest tube, pericardial, sputum, tracheal secretions, bronchial washings, bronchoalveolar lavage, lung; or nasal washings (only infants <3 months) Container/Tube: Preferred: Sterile container Acceptable: Container with 3 mL of transport media: M4, M4-RT, M5, M6, or universal transport media Specimen Volume: 1 to 2 mL Specimen Type: Synovial fluid Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Pink top (EDTA), royal blue top (EDTA), sterile vial containing EDTA-derived aliquot, red clot tube (no anticoagulant), or sterile container Specimen Volume: 0.5 mL Collection Instructions: Send specimen in original tube. Specimen Type: Urine (first void), kidney/bladder stone, or ureter Container/Tube: Sterile container Specimen Volume: 10 mL or entire specimen Collection instructions: Urine first void: Specimen can be collected at any time during the day. The patient should not have urinated for at least 1 hour prior to specimen collection. The first voided portion is the initial 20 to 30 mL of the urine stream obtained

without cleaning the external urethra. Specimen Type: Tissue Sources: Placenta, products of conception, urogenital, respiratory, bronchus, chest/mediastinal, bone, spine, or joint Container/Tube: Sterile container Specimen Volume: 5 mm(3) Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit fresh tissue only, do not add fluid to tissue 3. Refrigerate or freeze specimen.

Specimen Minimum Volume: Fluid: 1 mL Urine, first void: 2 mL Swab: 1 swab Tissue: 5 mm(3)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

META3 65158

Metanephrines with 3-Methoxytyramine, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Submission Container/Tube: Plastic urine tube Specimen Volume: 10 mL Collection Instructions: 1. Complete 24-hour urine collections are preferred, especially for patients with episodic hypertension; ideally the collection should begin at the onset of a "spell." 2. Collect urine for 24 hours. 3. Add 10 g (pediatric: 3 g) of boric acid or 25 mL (pediatric: 15 mL) of 50% acetic acid as preservative at start of collection.

Specimen Minimum Volume: 4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82542; 83835;

META3 83006

Metanephrines, Fractionated, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Tricyclic antidepressants, labetalol, and sotalol medications may elevate levels of metanephrines producing results that cannot be interpreted. If clinically feasible, it is optimal to discontinue these medications at least 1 week before collection. For advice on assessing the risk of removing patients from these medications and alternatives, consider consultation with a specialist in endocrinology or hypertension. Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Add 10 g (pediatric: 3 g) of boric acid or 25 mL (pediatric: 15 mL) of 50% acetic acid as preservative at start of collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	

Ambient	28 days
Frozen	28 days

CPT Code Information: 83835

PMET 81609

Metanephrines, Fractionated, Free, Plasma

Specimen Requirements: Patient Preparation: Use of an Epi-pen within last 7 days may produce inaccurate results. Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Spin down within 2 hours of draw. Plasma must be separated from red blood cells within 2 hours of collection.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	14 days	
	Refrigerated	7 days	

CPT Code Information: 83835

METAR 83005

Metanephrines, Fractionated, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Patient Preparation: Tricyclic antidepressants and labetalol and sotalol (beta blockers) may elevate levels of metanephrines. If clinically feasible, these medications should be discontinued at least 1 week before collection. Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83835

M15A 63104

Metaphases, 1-14 (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88262 w/ modifier 52

ML20
63099

Metaphases, 1-19 (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88264 w/ modifier 52

M15
63694

Metaphases, 15 (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88267

M25
80211

Metaphases, 20-25 (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88264

ML15
63441

Metaphases,

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88267 w/ modifier 52

MG14
63107

Metaphases, >15 (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88267 ; 88285;

MG19
63105

Metaphases, >20 (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88262; 88285;

MG25
63100

Metaphases, >25 (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88264 ; 88285 ;

FMETN
75389

Metformin, Plasma

Specimen Requirements: Specimen Type: Plasma Container/Tube: Lavender top or pink top EDTA Specimen volume: 1 mL Collection instructions: Draw blood in an EDTA (lavender top or pink top) tube(s). (Plasma gel tube is not acceptable.) Spin down and send 1 mL of plasma refrigerated in a preservative-free plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	30 days	
	Ambient	30 days	
	Frozen		

CPT Code Information: 80299; ; ;

MDNS 36309

Methadone and Metabolites, Serum

Specimen Requirements: Container/Tube: Red top (Serum gel/SST are not acceptable)
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80358; G0480 (if appropriate);

MTDNX 62734

Methadone Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube: Chain-of-Custody Kit containing the specimen containers, seals, and documentation required. Specimen Volume: 20 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting <20 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 80358; G0480 (if appropriate);

MTDNU 83129

Methadone Confirmation, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No

preservative.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 80358; G0480 (if appropriate);

FMETH **57996**

Methaqualone Confirmation, urine

Specimen Requirements: 20 mL random urine without preservatives. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80375

MET **81032**

Methemoglobin and Sulfhemoglobin, Blood

Specimen Requirements: Specimen must arrive within 72 hours of draw. Container/Tube: Lavender top (EDTA) Specimen Volume: Full tube Additional Information: Patient's age is required.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	72 hours	

CPT Code Information: 83050-Methemoglobin; 83060-Sulfhemoglobin;

MEV0 **608089**

Methemoglobin Summary Interpretation

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated		

MEV1 607495

Methemoglobinemia Evaluation, Blood

Specimen Requirements: The following specimens are required for testing: Whole blood ACD-B specimen 2 Whole blood EDTA specimens Container/Tube: Lavender top (EDTA) and yellow top (ACD [Solution B]) Specimen Volume: EDTA: Two 4-mL tubes ACD: One 6-mL tube Collection Instructions: Send specimens in original tube. Do not aliquot.

Specimen Minimum Volume: EDTA Blood: 3 mL ACD Blood: 2.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	72 hours	
Whole Blood EDTA	Refrigerated	72 hours	

CPT Code Information: 83020-26-Hemoglobinopathy Interpretation; 83020-Hb Variant, A2 and F Quantitation; 83021-HPLC Hb Variant; 82657-Methemoglobin reductase; 83050-Methemoglobin, quantitative; 83060-Sulfhemoglobin, quantitative; 82664 (if appropriate); 83068 (if appropriate); 83789 (if appropriate); 88184 (if appropriate);

MEVI 608086

Methemoglobinemia Interpretation

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	72 hours	

CPT Code Information: 83020-26

MTXSG 62580

Methotrexate Post Glucarpidase, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Amber vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	LIGHT PROTECTED
	Frozen	14 days	LIGHT PROTECTED
	Ambient	7 days	LIGHT PROTECTED

CPT Code Information: 80204

MTHX 37047

Methotrexate, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber vial Specimen Volume: 0.5 mL Collection Instructions: 1. Methotrexate is sensitive to fluorescent light; avoid prolonged exposure of specimen to direct light. 2. Serum gel tubes should be centrifuged within 2 hours of collection. Protect from light. 3. Red-top tubes should be centrifuged and serum aliquoted into amber vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	LIGHT PROTECTED
	Frozen	28 days	LIGHT PROTECTED
	Ambient	72 hours	LIGHT PROTECTED

CPT Code Information: 80204

FMETX 91822

Methsuximide (Celontin) as DesmethyImethsuximide

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80339

MMAP 31927

Methylmalonic Acid, Quantitative, Plasma

Specimen Requirements: Container/Tube: Preferred: Green top (sodium heparin) Acceptable: EDTA Specimen Volume: 1.5 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Refrigerated (preferred)	48 days	
	Ambient	48 days	
	Frozen	48 days	

CPT Code Information: 83921

MMAS
80289

Methylmalonic Acid, Quantitative, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.5 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	48 days	
	Ambient	48 days	
	Frozen	48 days	

CPT Code Information: 83921

MMAU
80290

Methylmalonic Acid, Quantitative, Urine

Specimen Requirements: Patient Preparation: Overnight fast required Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube (T068) Specimen Volume: 4 mL Collection Instructions: Collect second-voided specimen after an overnight fast.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	28 days	
	Refrigerated	28 days	
	Ambient	21 days	

CPT Code Information: 83921

MHCZ
35473

Methylmalonic Aciduria and Homocystinuria, cbIC Type, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated

(preferred)/Ambient Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood Spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81404-MMACHC (methylmalonic aciduria [cobalamin deficiency] cblC type, with homocystinuria) (eg, methylmalonic acidemia and homocystinuria), full gene sequence; ; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MHDZ
35490

Methylmalonic Aciduria and Homocystinuria, cblD Type, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 Blood Spots on collection card (Whatman Protein Saver 903 Paper; Ahlstrom 226 filter paper; or Blood Spot Collection Card, T493) Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure; ; Fibroblast Culture for Genetic Test; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MMAGP Methylmalonic Aciduria Gene Panel, Varies

608021

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443

MPAGP Methylmalonic Aciduria-Propionic Aciduria Combined Gene Panel, Varies

608022

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443

MPHNU Methylphenidate and Metabolite, Random, Urine

608882

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STATS are not accepted for this test.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	10 days	
	Frozen	28 days	

CPT Code Information: 80360; G0480 (if appropriate); ;

RIT 80456

Methylphenidate, Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and freeze immediately. Send 2 mL of sodium heparin plasma frozen in a plastic vial on dry ice. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and freeze immediately. Send 2 mL serum frozen in a plastic vial on dry ice.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen	180 days	

CPT Code Information: 80360; ;

MTAP 605177

Methylthioadenosine Phosphorylase (MTAP) Immunostain, Tech Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MEX 9245

Mexiletine, Serum

Specimen Requirements: Patient Preparation: Samples should only be collected after patient has been receiving mexiletine for at least 3 days. Trough concentrations should be collected just before administration of the next dose. Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Samples should only be collected after patient has been receiving mexiletine for at least 3 days. 2. Draw blood immediately before next scheduled dose.

3. Centrifuge within 2 hours of draw and aliquot to remove serum from spun RBCs.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80299

MGMT 36733

MGMT Promoter Methylation, Tumor

Specimen Requirements: Preferred: Specimen Type: Tissue Container/Tube: Tissue block
Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. At least 40% tumor is required for this assay. In general, a 6 mm x 3 mm area of tissue cut at 5-micron thickness is the minimum amount of tissue needed; this could be collected over multiple slides. Acceptable: Specimen Type: Tissue sections Slides: 1 stained and 5 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 5 unstained, nonbaked 5-micron thick sections of the tumor. At least 40% tumor is required for this assay. In general, a 6 mm x 3 mm area of tissue cut at 5 micron thickness is the minimum amount of tissue needed; this could be collected over multiple slides.

Specimen Minimum Volume: 5 unstained slides at 5-microns thickness

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81287; Slide Review; 88381;

CERAM 606777

MI-Heart Ceramides, Plasma

Specimen Requirements: Patient Preparation: Patients should not be receiving Intralipid because it may cause false-elevations in measured ceramides Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge, aliquot at least 1 mL of plasma into a plastic vial, and freeze within 8 hours.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	30 days	
	Refrigerated	24 hours	
	Ambient	8 hours	

CPT Code Information: 0119U

MLCPC
113370

Microdissection, Laser Capture (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88380-Microdissection; laser capture

MPSF
82515

Micropolyspora faeni, IgG Antibodies, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86609

TMSI
609364

Microsatellite Instability, Tumor

Specimen Requirements: This assay requires at least 40% tumor nuclei for endometrial specimens and at least 20% tumor nuclei for colorectal specimens -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 72 mm(2) -Minimum amount of tumor area: 18 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: formalin-fixed paraffin-embedded (FFPE), non-decalcified Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 5 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 5 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 5 slides from the same block.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81301; 88381-Microdissection, manual;

LCMSP 63097

Microsporidia species, Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Unpreserved feces Supplies: Stool container, Small (Random), 4 oz (T288); Stool Collection Kit, Random (T635) Container/Tube: Fecal container (T288) Specimen Volume: 5 g Specimen Type: Preserved feces Supplies: ECOFIX Stool Transport Vial (Kit) (T219); Stool Collection Kit, Random (T635) Container/Tube: ECOFIX preservative Specimen Volume: 5 g Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 5 mL Collection Instructions: Mid-stream, clean-catch, suprapubic aspirates and catheterization collections are acceptable. Please submit in a clean, sterile container free from preservatives. The first portion of the voided urine (first void) is also acceptable.

Specimen Minimum Volume: Feces: 1 g Urine: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	7 days	

CPT Code Information: 87798

MTBS 81507

Microsporidia Stain, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Duodenal aspirate (small intestinal aspirate, jejunal aspirate, small bowel aspirate) Container/Tube: Sterile container Specimen Volume: 0.5 mL Additional Information: Ecofix and 10% formalin are acceptable preservatives. Specimen Stability Information: Preserved Ambient (preferred) <10 days/Refrigerated <3 days/Frozen Specimen Type: Respiratory secretions (bronchoalveolar lavage [BAL], sputum, bronchial wash, pleural fluid) Container/Tube: Sterile container Specimen Volume: 0.5 mL Specimen Stability Information: Refrigerated <3 days (preferred)/Frozen <10 days Specimen Type: Eye (vitreous fluid, corneal scraping, ocular fluid) Container/Tube: Sterile container Specimen Volume: 0.5 mL Specimen Stability: Refrigerated <3 days Specimen Type: Fresh tissue (lung, eye, bladder, rectal, intestinal, colon, skin, muscle, kidney) Container/Tube: Sterile container Specimen Volume: 3-mm biopsy in 0.1-mL sterile saline Specimen Stability: Refrigerated <3 days Specimen Type: Gallbladder aspirate/Bile aspirate Container/Tube: Sterile container Specimen Volume: 0.5 mL Specimen Stability: Refrigerated <3 days/Frozen <10 days

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87015-Concentration; 87207-Stain;

FMIDZ 90112

Midazolam (Versed), serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80346; G0480 (if appropriate);

FMCG4 57536

Milk Cow IgG4

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

MILK 82871

Milk, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

PMLK 82827

Milk, Processed, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FMINT 57885

Mint (Mentha Piperita) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FMIRT 57749

Mirtazapine (Remeron)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80335

ZW199 91796

Misc Alfred I duPont Hospital for Children

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW105
90544

Misc Arkansas Children's Hospital Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW152
91208

Misc Baylor Cytogenetics Laboratory

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW201
91798

Misc Baylor John Welsh Cardiovascular Diag Lab

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements,

contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW153
91213

Misc Center for Human Genetics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW204
91801

Misc Cincinnati Childrens Hospital Medical Center

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW213
75195

Misc Dept of Path/Clin Lab (Univ of Michigan)

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external)

or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW59 90498

Misc Esoterix Endocrinology

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW73 90512

Misc Johns Hopkins-DACI Ref Lab

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

ZW147

90586

Misc Johns Hopkins-DNA Analysis Lab

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

ZW150

91201

Misc Johns Hopkins-Molecular Microbiology

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

ZW179

91403

Misc Medical Neurogenetics, LLC

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW149

91170

Misc Monogram Biosciences, Inc.

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering
1. Test name 2. Performing lab code
3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW117

90556

Misc National Genetics Inst Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW196

91643

Misc National Jewish Health Mycobacteriology Test

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering
1. Test name 2. Performing lab code
3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW123

90562

Misc Ohio State Univ Ref Lab Test

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW146

90585

Misc Prometheus Laboratories Test

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW206

91803

Misc Seattle Children's Hospital Laboratories

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please

contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW330
75684

Misc Texas Childrens Hospital, Cancer Genomics Lab

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW169
91298

Misc Univ of PA School of Medicine

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW119
90558

Misc University of Florida Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements,

contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW305 75411

Misc Washington University Neuromuscular Clinical Lab

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW190 91598

Miscellaneous Alfred I duPont Gastroenterology

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW185 91516

Miscellaneous Ambry Genetics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

ZW242
57378

Miscellaneous ARUP Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW294
75264

Miscellaneous Asuragen Clinical Services

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW127
90566

Miscellaneous Athena Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements,

contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW53

90492

Miscellaneous Baylor Institute of Metabolic Disease

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW221

57103

Miscellaneous Baylor Medical Genetics Laboratories

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW155

91272

Miscellaneous BioAgilytix Diagnostics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1.

Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

SCT2
20521

Miscellaneous Biochemical Genetics Testing

Specimen Requirements: Only orderable as part of the miscellaneous test process.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

ZW172
91302

Miscellaneous Center for Genetic Testing at St. Francis

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW10
8921

Miscellaneous Chemistry Testing, Varies

Specimen Requirements: Varies

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

ZW139

90578

Miscellaneous Child Hosp-Philadelphia

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW140

90579

Miscellaneous Child Med Ctr Dallas

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW163

91291

Miscellaneous Children's Hospital of Philadelphia (CHOP)

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container

Varies

Varies

CPT Code Information: Varies**ZW299**
76271**Miscellaneous Childrens Hospital Los Angeles**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW246**
57992**Miscellaneous Childrens Hospital of Colorado Testing**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW166**
91294**Miscellaneous CHMC - Setchell**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW239
57180

Miscellaneous Cincinnati Children's Hospital Medical Center-Hematology/Oncology

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW279
58083

Miscellaneous Cincinnati Children's Nephrology

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW171
91301

Miscellaneous City of Hope Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW193

91601

Miscellaneous Connective Tissue Gene Tests Lab (CTGT)

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW212

91859

Miscellaneous Correlagen Diagnostics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW130

90569

Miscellaneous DIANON Systems

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient

specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW58

90497

Miscellaneous Duke University

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW116

90555

Miscellaneous EGL Genetic Diagnostics Laboratory

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW57

90496

Miscellaneous Esoterix Coagulation

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW63 90502

Miscellaneous Esoterix Genetic Laboratories, LLC - MA

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW189 91561

Miscellaneous Esoterix Genetic Laboratories, LLC - NY Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW69

90508

Miscellaneous Eurofins Viracor Clinical Diag

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW225

57161

Miscellaneous Exagen Diagnostics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW168

91296

Miscellaneous GeneDx, Inc. Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW208

91853

Miscellaneous Genetic Assays Inc.

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW182

91278

Miscellaneous Genova Diagnostics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW68

90507

Miscellaneous Greenwood Genetic Ctr

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW218

91896

Miscellaneous Harvard Medical School

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW328

75655

Miscellaneous Imanis Life Sciences, LLC

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW143

90582

Miscellaneous IMMCO Diagnostics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container

Varies

Varies

ZW70

90509

Miscellaneous IMUGEN Inc Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW71

90510

Miscellaneous Inter Science Institute

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW298

75278

Miscellaneous IntrinsicDx

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW173**
91305**Miscellaneous Joli Diagnostics, Inc.**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW300**
75311**Miscellaneous Karius Laboratory**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW175**
91323**Miscellaneous Kennedy Krieger Institute**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form

including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW74
90513

Miscellaneous Kennedy Krieger Institute-Peroxisomal Diseases Laboratory

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW241
57268

Miscellaneous Knight Diagnostic Laboratories

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW76

90515

Miscellaneous LabCorp of America

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

ZW113

90552

Miscellaneous LabCorp-RTP,NC

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

ZW266

58067

Miscellaneous Machaon Diagnostics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW207

91852

Miscellaneous MD Anderson Cancer Center

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW79

90518

Miscellaneous Med Coll of WI

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW78

90517

Miscellaneous Medical Coll of WI

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW80

90519

Miscellaneous Medtox Laboratories, Inc.

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW111

90550

Miscellaneous MiraVista Diagnostics

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW1

99991

Miscellaneous MML Referral Test 1

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

ZW2 99992

Miscellaneous MML Referral Test 2

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW3 99993

Miscellaneous MML Referral Test 3

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

ZW227 57163

Miscellaneous National B Virus Resource Laboratory

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW85

90524

Miscellaneous National Jewish Health

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW86

90525

Miscellaneous NMS Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW214

91861

Miscellaneous Ocular Immunology Laboratory OHSU

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW211 **91858**

Miscellaneous OSUWMC Polaris Core Laboratory

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW129 **75137**

Miscellaneous Pacific Rim Pathology Medical Corp

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW87 **90526**

Miscellaneous Palo Alto Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Varies

Varies

CPT Code Information: Varies**ZW224**
57157**Miscellaneous PerkinElmer Genetics, Inc.**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW194**
91602**Miscellaneous Prevention Genetics Lab**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW83**
90522**Miscellaneous Quest Diagnostics Infectious Disease, Inc.**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Varies

Varies

CPT Code Information: Varies**ZW96**
90535**Miscellaneous Quest Diagnostics Valencia**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW51**
90490**Miscellaneous Quest Testing**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW131**
90570**Miscellaneous Quest/Nichols Testing**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
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Varies

Varies

CPT Code Information: Varies**ZW91**
90530**Miscellaneous RFFIT Testing**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW124**
75456**Miscellaneous Sequenom**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**MISCF**
35267**Miscellaneous Studies Using Chromosome-Specific Probes, FISH**

Specimen Requirements: Provide a reason for referral with each specimen. The laboratory will not reject testing if this information is not provided, but appropriate testing and interpretation may be compromised or delayed. Advise Express Mail or equivalent if not on courier service. Submit only 1 of the following specimens: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20-25 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Provide gestational age at the time of amniocentesis. 2. Discard the first 2 mL of amniotic fluid. Additional Information: 1. Place the tubes in a Styrofoam container (T329). 2. Fill remaining space with packing material. 3. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 4. Bloody specimens are undesirable. 5. If the specimen does not grow in culture, you will be notified

within 7 days of receipt. 6. Results will be reported and also telephoned or faxed, if requested. Specimen Type: Blood Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1-2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer the chorionic villi to a Petri dish containing transport medium. 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Type: Lymph node Container/Tube: Sterile container with sterile Hank's balanced salt solution (T132), Ringer's solution, or normal saline. Specimen Volume: 1 cm(3) Specimen Type: Skin biopsy Container/Tube: Sterile container with sterile Hank's balanced salt solution (T132), Ringer's solution, or normal saline. Specimen Volume: 4-mm diameter Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. A local anesthetic may be used. 5. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis. Specimen Type: Tissue block or slide Preferred: Formalin-fixed, paraffin-embedded tumor tissue block and 1 hematoxylin and eosin (H and E)-stained slide. Acceptable: Four consecutive, unstained, 5-micron thick sections placed on positively charged slides and 1 H and E-stained slide. Specimen Type: Tumor Container/Tube: Sterile container with sterile Hank's balanced salt solution (T132), Ringer's solution, or normal saline. Specimen Volume: 0.5-3 cm(3) or larger

Specimen Minimum Volume: Amniotic Fluid: 5 mL/Blood: 2 mL/Bone Marrow: 1 mL/Chorionic Villi: 5 mg/Lymph Node: 0.5 cm(3)/Solid Tumor: 0.5 cm(3)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 Æâ, -â€œ DNA probe, each (first probe set), Interpretation and report; 88271x2 Æâ, -â€œ DNA probe, each; each additional probe set (if appropriate); 88271x1 Æâ, -â€œ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 Æâ, -â€œ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 Æâ, -â€œ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88273 w/modifier 52-Chromosomal in situ hybridization, less than 10 cells (if appropriate); 88273-Chromosomal in situ hybridization, 10-30 cells (if appropriate); 88274 w/modifier 52 Æâ, -â€œ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 Æâ, -â€œ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 Æâ, -â€œ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate); ;

ZW219
91897

Miscellaneous Transgenomic

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW102 90541

Miscellaneous U of TX San Ant Test

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW308 75459

Miscellaneous UCSF Clinical Laboratory, Molecular Pathology Division

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering: 1. Test Name 2. Performing Lab Code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW235 57176

Miscellaneous UCSF Medical Center

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW288**

75170

Miscellaneous UF Health Medical Lab-Shands Hospital

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW292**

75215

Miscellaneous UNC Center for AIDS Research Clinical Pharmacology & Analytical Chemistry Laboratory

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW99**

90538

Miscellaneous Univ of AL Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW210**
91857**Miscellaneous Univ of IA Molecular Otolaryngology**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW128**
90567**Miscellaneous University Hospital Clinical Lab Test**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies**ZW234**
57175**Miscellaneous University of Alabama at Birmingham**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Varies

Varies

CPT Code Information: Varies**ZW186**
91515**Miscellaneous University of Chicago Genetics Services**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

ZW187
91514**Miscellaneous University of Iowa Diagnostic Labs**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

ZW61
90500**Miscellaneous University of Minnesota Outreach Laboratory**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW238
57179

Miscellaneous University of Southern California Endocrine Laboratories

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW191
91599

Miscellaneous University of Texas Health Center at Tyler Microbiology

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW217
91864

Miscellaneous University of Utah Genome Center

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW167
91295**Miscellaneous University of Virginia Health System**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW282
58088**Miscellaneous University of Washington Medical Center (UW Virology Dept of Lab Medicine)**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW278
58078**Miscellaneous University of Washington Medical Center-Clinical Immunology Lab**

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type 4. Required consent and/or requisitions form including patient specific information, i.e. consent forms, clinical information, family history. Please contact Customer Service at 1-800-533-1710 or 6-5700 for required forms.

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW293 75252

Miscellaneous UPMC Molecular and Genomic Pathology

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW121 90560

Miscellaneous Versiti Wisconsin, Inc.

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

ZW112 90551

Miscellaneous Yale Univ Testing

Specimen Requirements: Varies This is a Miscellaneous Referral Test. For specific requirements, please refer to the referred tests list under the catalog tab on the MCL Website (external) or the Referral Catalog (CRM) (internal). If unable to find the correct test, request forms, or specimen requirements, contact Customer Service at 1-800-533-1710 or 6-5700. NOTE: Provide when ordering 1. Test name 2. Performing lab code 3. Specimen Type

Specimen Minimum Volume: Varies

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: Varies

IHC 35466

Mismatch Repair (MMR) Protein Immunohistochemistry Only, Tumor

Specimen Requirements: Tumor tissue is required. Specimen Type: Tissue block and slide
Collection Instructions: 1. Submit formalin-fixed, paraffin-embedded tissue block (preferred) or 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides (5-micron thick sections) of the tumor tissue. 2. Sections should contain tumor tissue.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: MLH-1, Immunostain; 88341 (if appropriate); ; MSH-2, Immunostain; 88341 (if appropriate); ; MSH-6, Immunostain; 88341 (if appropriate); ; PMS-2, Immunostain; 88342 (if appropriate);

MiTF 70509

MiTF Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

AMA 8176

Mitochondrial Antibodies (M2), Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516

Mitochondrial Full Genome Analysis, Next-Generation Sequencing (NGS), Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Muscle tissue biopsy Supplies: Muscle Biopsy Kit (T541) Collection Instructions: Prepare and transport specimen per instructions in Muscle Biopsy Specimen Preparation Sheet in Special Instructions. Specimen Volume: 10-80mg Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated Specimen Type: Snap frozen nerve tissue biopsy Collection Instructions: Prepare snap frozen tissue biopsy per surgical procedure Specimen Volume: 0.25-0.5 cm Specimen Stability Information: Frozen Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper or Supplemental Newborn Screening Card Specimen Volume: 2 to 5 Blood Spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Muscle tissue biopsy: 20 mg Nerve tissue biopsy: See Specimen Required. Blood Spots: 5 punches-3 mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81460-Whole Mitochondrial Genome; 81465-Whole Mitochondrial Genome Large Deletion Analysis; 88233-Tissue culture, skin, solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

Mitochondrial Nuclear Gene Panel by Next-Generation Sequencing (NGS), Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. To ensure minimum volume and concentration of DNA is met, the

preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Tissue biopsy Supplies: Muscle Biopsy Kit (T541) Collection Instructions: Prepare and transport specimen per instructions in Muscle Biopsy Specimen Preparation in Special Instructions. Specimen Volume: 10-80 mg Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 1 mL Tissue Biopsy: 200 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81440; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

FETCE 91844

Mitochondrial Respiratory Chain Enzyme Analysis (ETC) - Skin Fibroblasts

Specimen Requirements: Cultured Fibroblasts 3 T-25 flasks(s) filled to neck with culture media. Maintain sterility and forward promptly at ambient temperature. Complete and submit with specimen: 1. Baylor Mitochondrial request form.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fibroblasts	Ambient		

CPT Code Information: 84311 x 6; 82657 x 6; 88233; 88240;

FMITO 91130

Mitotane (Lysodren)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80299

MLH1I
35493

MLH-1, Immunostain (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies			

CPT Code Information: 88341

MLH1Z
35499

MLH1 Gene, Full Gene Analysis, Varies

Specimen Requirements: Prior Authorization is available for this test. Submit the required form with the specimen. Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81292; Hereditary Colon Cancer CGH Array, additional test; 81228;

BMLHH
35894

MLH1 Hypermethylation Analysis (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies			

CPT Code Information: 81288-MLH1 promoter methylation analysis

MLHPB
35500

MLH1 Hypermethylation Analysis, Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert

several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81288

ML1HM 35494

MLH1 Hypermethylation Analysis, Tumor

Specimen Requirements: Specimen Type: Tissue block or slide Collection Instructions: 1. Submit formalin-fixed, paraffin-embedded tissue block (preferred) or 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides (5-micron thick sections) of the tumor tissue. 2. Sections should contain tumor tissue.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81288; ; 88381;

BRMLH 35491

MLH1 Hypermethylation and BRAF Mutation Analysis, Tumor

Specimen Requirements: Specimen Type: Tissue block or slide Collection Instructions: 1. Submit formalin-fixed, paraffin-embedded tissue block (preferred) or 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides (5 micron-thick sections) of the tumor tissue. 2. Sections should contain both tumor and normal tissue.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: Slide Review; 88381-Microdissection, manual; ; 81210-BRAF (v-raf murine sarcoma viral oncogene homolog B1) (eg, colon cancer), gene analysis, V600E variant, if appropriate; 81288-MLH1 promoter methylation analysis, if appropriate;

MLH1 70510

MLH1 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MLYCZ 35481

MLYCD Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479 - Unlisted molecular pathology procedure; Fibroblast Culture for Genetic Test; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MOC31 70505

MOC-31 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MOLD1 81878

Mold Panel, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MINT 61696

Molecular Interpretation

Specimen Requirements:

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	30 days	
	Ambient	14 days	

CPT Code Information:

MOWB 64272

Molybdenum, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free B-D Tube (EDTA), 6 mL (T183) Collection Container/Tube: Preferred: Royal blue-top (EDTA) plastic trace element blood collection tube Specimen Volume: 0.8 mL Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83018

MOLPS

89270

Molybdenum, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free B-D Tube (No Additive), 6 mL (T184) -Metal Free Specimen Vial (T173) Collection Container/Tube: Plain, royal blue-top Vacutainer plastic trace element blood collection tube (T184) Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, polypropylene vial (T173) Specimen Volume: 1.6 mL Collection Instructions: 1. Allow specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into a Mayo metal-free, polypropylene vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	METAL FREE
	Ambient	14 days	METAL FREE
	Frozen	14 days	METAL FREE

CPT Code Information: 83018

DMOGA

609782

Monoclonal Gammopathy, Diagnostic, Serum

Specimen Requirements: Patient Preparation: Fasting (12 hour) preferred but not required Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 2 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 83520 x2; 84155; 84165; 0077U ; 86334 (if appropriate);

TMOGA

609783

Monoclonal Gammopathy, Monitoring, Serum

Specimen Requirements: Patient Preparation: Fasting (12 hour) preferred but not required Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	7 days	

CPT Code Information: 84155; 84165; 0077U (if appropriate); 86334 (if appropriate);

MPSU 8823

Monoclonal Protein Study, 24 Hour, Urine

Specimen Requirements: Supplies: -Urine Container, 60 mL (T313) -Aliquot Tube, 5 mL (T465)
Submission Container/Tube: Plastic, 60-mL urine bottle and plastic, 5-mL tube Specimen Volume: 50 mL
Collection Instructions: 1. Collect urine for 24 hours. 2. Aliquot at least 25-mL specimen in plastic, 60-mL urine bottle and at least 1-mL of specimen in plastic, 5-mL tube. 3. Label specimens appropriately (60-mL bottle for protein electrophoresis and 5-mL tube for protein, total). Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	5 days	
	Ambient	24 hours	

CPT Code Information: 84156; 84166; 86335;

MPSEX 800303

Monoclonal Protein Study, Expanded Panel, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 2 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 83883 x 2; 84155; 84165; 86334; 86334-Immunofixation Delta and Epsilon (if appropriate);

RMPSU 60069

Monoclonal Protein Study, Random, Urine

Specimen Requirements: Supplies: -Urine Container, 60 mL (T313) -Aliquot Tube, 5 mL (T465) Submission Container/Tube: Plastic, 60-mL urine bottle and plastic, 5-mL tube Specimen Volume: 50 mL Collection Instructions: 1. Collect a random urine specimen. 2. Aliquot at least 25-mL of specimen into a plastic, 60-mL urine bottle and at least 1-mL of specimen into a plastic, 5-mL tube. 3. Label specimens appropriately (60-mL bottle for protein electrophoresis and 5-mL tube for protein, total).

Specimen Minimum Volume: 25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	5 days	
	Ambient	24 hours	

CPT Code Information: 84156; 84166; 86335;

MPSS 800302

Monoclonal Protein Study, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 84155; 84165; 86334; 86334-Immunofixation Delta and Epsilon (if appropriate);

MONOF 610018

Monocyte Repartition by CD14/CD16, Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution A or B) Acceptable: Lavender top (EDTA) Specimen Volume: 3 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated	72 hours	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 7-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each); 88187-Flow Cytometry Interpretation, 2 to 8 Markers ;

MAAPC
113368**Morph Analysis, Automated (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88361

MAMPC
113369**Morph Analysis, Manual (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88360

MAIPC
602524**Morph Analysis, Manual, IS (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88360

MANPC
601983**Morph Analysis, Nerve (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88356

FMORS
75144**Morphine Confirmation, Serum**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80361

SPSM 9184

Morphology Evaluation (Special Smear), Blood

Specimen Requirements: Container/Tube: 2 slides Specimen Volume: 2 unstained, well prepared peripheral blood smears Collection Instructions: Smears made from blood obtained by either a lavender top (EDTA) tube or finger stick specimen

Specimen Minimum Volume: Smears: 2

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)		CARTRIDGE
	Refrigerated		CARTRIDGE

CPT Code Information: 85007; 85060-(if appropriate); 85027-(if appropriate); 88184-(If appropriate); 88185-(If appropriate); 88187-(if appropriate); 88188-(if appropriate); 88189-(if appropriate);

MSP 82845

Mosquito Species, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MOTH 82738

Moth, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FMONP Motor Neuropathy Panel

75067

Specimen Requirements: Specimen Type: Serum Container/Tube: Serum Separator Tube (SST)
Specimen Volume: 4mL Collection Instructions: Draw blood in a serum gel tube(s). Spin down and send 4 mL serum refrigerated in plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 82784 x 3; 83516 x 7; 84160; 84165; 86334;

CED Mountain Cedar, IgE, Serum

82668

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen
Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MOUS Mouse Epithelium, IgE, Serum

82707

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen
Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MOSP

82792

Mouse Serum Protein, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MOUP

82795

Mouse Urine Protein, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MDS2

606192

Movement Disorder, Autoimmune Evaluation, Serum

Specimen Requirements: Patient Preparation: 1. For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication or intravenous immunoglobulin (IVIg) treatment. 2. This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed, or canceled if radioactivity remains. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 4 mL

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	

Ambient

72 hours

CPT Code Information: 83519; 86255 x 18; 84182; 86341; 84182-AGNBS (if appropriate); 86255-AINCS (if appropriate); 86255-AMPCS (if appropriate); 86256-AMPIS (if appropriate); 84182-AMIBS (if appropriate); 84182-AN1BS (if appropriate); 84182-AN2BS (if appropriate); 86255-DPPCS (if appropriate); 86256-DPPTS (if appropriate); 86255-GABCS (if appropriate); 86256-GABIS (if appropriate); 86255-GRFCS (if appropriate); 86256-GRFTS (if appropriate); 86255-IG5CS (if appropriate); 86256-IG5TS (if appropriate); 86255-ITPCS (if appropriate); 86256-ITPTS (if appropriate); 86255-GL1CS (if appropriate); 86256-GL1TS (if appropriate); 86255-NFHCS (if appropriate); 86256-NIFTS (if appropriate); 86255-NFLCS (if appropriate); 86256-NMDIS (if appropriate); 84182-PC1BS (if appropriate); 84182-PCTBS (if appropriate);

MDC2

606193

Movement Disorder, Autoimmune Evaluation, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 4 mL

Specimen Minimum Volume: 3.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255 x18; 84182 x1; 86341 x1; 84182 AGNBC (if appropriate); 86255 AINCC (if appropriate); 86255 AMPCC (if appropriate); 86256 AMPIC (if appropriate); 84182 AMIBC (if appropriate); 84182 AN1BC (if appropriate); 84182 AN2BC (if appropriate); 86255 DPPCC (if appropriate); 86256 DPPTC (if appropriate); 86255 GABCC (if appropriate); 86256 GABIC (if appropriate); 86255 GRFCC (if appropriate); 86256 GRFTC (if appropriate); 86255 IG5CC (if appropriate); 86256 IG5TC (if appropriate); 86255 ITPCC (if appropriate); 86256 IPTPC (if appropriate); 86255 GL1CC (if appropriate); 86256 GL1TC (if appropriate); 86255 NFHCC (if appropriate); 86256 NIFTC (if appropriate); 86255 NFLCC (if appropriate); 86256 NMDIC (if appropriate); 84182 PC1BC (if appropriate); 84182 PCTBC (if appropriate);

MPLR

36682

MPL Exon 10 Mutation Detection, Reflex, Varies

Specimen Requirements: Only orderable as a reflex. For more information see MPNR / Myeloproliferative Neoplasm (MPN), JAK2 V617F with reflex to CALR and MPL.

Specimen Minimum Volume: Blood and Bone marrow: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	7 days	

CPT Code Information: 81339-MPL (myeloproliferative leukemia virus oncogene, thrombopoietin receptor, TPOR) (eg, myeloproliferative disorder), exon 10 sequence

MPLVS 602599

MPL Exon 10 Mutation Detection, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collections Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 2 mL Collections Instructions: 1. Invert several times to mix bone marrow. 2. Send specimens in original tube. 3. Label specimen as bone marrow. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2- mL tube Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood or bone marrow and provide indication of volume and concentration of DNA. Specimen Stability Information: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Blood, Bone Marrow: 1 mL Extracted DNA: 50 mcL at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	7 days	

CPT Code Information: 81339-MPL (myeloproliferative leukemia virus oncogene, thrombopoietin receptor, TPOR) (eg, myeloproliferative disorder), exon 10 sequence

MPNML 44179

MPL Exon 10 Sequencing, Reflex, Varies

Specimen Requirements: Only orderable as a reflex. For more information see MPNCM / Myeloproliferative Neoplasm, CALR with Reflex to MPL, Varies. Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Lavender top (EDTA) or yellow top (ACD solution B) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred) 7 days/Refrigerate 7 days Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) or yellow top (ACD solution B) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred) 7 days/Refrigerate 7 days Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood or bone marrow and provide indication of volume and concentration of the DNA. Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood/bone marrow: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81339-MPL (myeloproliferative leukemia virus oncogene, thrombopoietin receptor, TPOR) (eg, myeloproliferative disorder), exon 10 sequence

MSH2I 35508

MSH-2, Immunostain (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies			

CPT Code Information: 88341**MSH6I**
35511**MSH-6, Immunostain (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies			

CPT Code Information: 88341**MSH2Z**
35510**MSH2 Gene, Full Gene Analysis, Varies****Specimen Requirements:** Prior Authorization is available for this test. Submit the required form with the specimen. Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.**Specimen Minimum Volume:** 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81295; Hereditary Colon Cancer CGH Array, additional test; 81228;**MSH2**
70512**MSH2 Immunostain, Technical Component Only****Specimen Requirements:** Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		

Refrigerated

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MSH6Z 35513

MSH6 Gene, Full Gene Analysis, Varies

Specimen Requirements: Prior Authorization is available in Special Instructions for this test. Submit the required form with the specimen. Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81298; ; Hereditary Colon Cancer CGH Array, additional test; 81228;

MSH6 70513

MSH6 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CSMRT 607626

mSMART Plasma Cell Proliferative Disorder, Pre-Analysis Cell Sorting, Bone Marrow

Specimen Requirements: Only orderable as a reflex. See MSMRT / Mayo Algorithmic Approach for Stratification of Myeloma and Risk-Adapted Therapy Report, Bone Marrow Specimen Type: Redirected bone marrow Preferred: Yellow top (ACD) Acceptable: Lavender top (EDTA) or green top (heparin) Specimen Volume: 4 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 88184-Flow Cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 5-Flow Cytometry, additional cell surface, cytoplasmic or nuclear marker (each);

MPCDS 606090

mSMART, Plasma Cell Proliferative Disorder, FISH, Bone Marrow

Specimen Requirements: Only orderable as part of a profile. For more information see MSMRT / Mayo Algorithmic Approach for Stratification of Myeloma and Risk-Adapted Therapy Report, Bone Marrow.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271x1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 - Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

MTBVP 60270

Mtb PZA Confirmation, pncA Sequencing (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87153

MUCN2 605116

Mucin 2, Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MUCN4 601740

Mucin 4, Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MUCN5 605118

Mucin 5AC, Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MUCN6 605120

Mucin 6, Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MPSQU

606299

Mucopolysaccharides Quantitative, Random, Urine

Specimen Requirements: Patient Preparation: Do not administer low-molecular weight heparin prior to collection Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, 5-mL urine tube Specimen Volume: 2 mL Pediatric Volume: 1 mL Collection Instructions: Collect a random urine specimen (early morning preferred).

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	90 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 83864; 82570;

MPSER

604905

Mucopolysaccharides Quantitative, Serum

Specimen Requirements: Patient Preparation: Do not administer low-molecular weight heparin prior to collection. Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Pediatric: 0.2 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	90 days	
	Frozen	90 days	
	Ambient	14 days	

CPT Code Information: 83864

SFPAN

62576

Mucopolysaccharidosis III, Multi-Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen

Stability Information: Refrigerated (preferred)/Ambient Acceptable: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Specimen Type: Blood spot Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper Specimen Volume: 5 blood spots Collection Instructions: 1. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 2. Do not expose specimen to heat or direct sunlight. 3. Do not stack wet specimens. 4. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 3

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MP3AZ
35502

Mucopolysaccharidosis IIIA, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood Spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure code; 88233-Tissue

culture, skin, or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MP3BZ 35504

Mucopolysaccharidosis IIIB, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper or Blood Spot Collection Card Specimen Volume: 2 to 5 blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure; 88233-Tissue culture, skin, or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MP3CZ 35678

Mucopolysaccharidosis IIIC, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient

temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 3

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure code; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MP3DZ
35728

Mucopolysaccharidosis IIID, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 3

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure code; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MPS6Z

35507

Mucopolysaccharidosis VI, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure code; 88233-Tissue culture, skin, or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MPSWB

113435

Mucopolysaccharidosis, Blood

Specimen Requirements: Patient Preparation: Do not administer low-molecular weight heparin prior to collection Collection Container: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 83864

MPSBS

65095

Mucopolysaccharidosis, Blood Spot

Specimen Requirements: Patient Preparation: Do not administer low-molecular-weight heparin

prior to collection Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Collection Container: Preferred: Card-Blood Spot Collection (Filter Paper) Acceptable: Whatman Protein Saver 903 paper, PerkinElmer 226 (formerly Ahlstrom 226) filter paper, Munktell filter paper, local newborn screening card, postmortem screening card, or blood collected in tubes containing ACD or EDTA and dried on filter paper Specimen Volume: 2 Dried blood spots Collection Instructions 1. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 2. Let blood dry on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	100 days	FILTER PAPER
	Frozen	100 days	FILTER PAPER
	Refrigerated	100 days	FILTER PAPER

CPT Code Information: 83864

MUC

82675

Mucor, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MUG

82683

Mugwort, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

90 days

CPT Code Information: 86003**MULB**
82864**Mulberry, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**NGSMM**
65090**Multiple Myeloma Gene Panel, Next-Generation Sequencing, Bone Marrow**

Specimen Requirements: Specimen Type: Bone marrow aspirate Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. 4. Fresh specimen is required for this test, as testing is performed on sorted cells.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient	4 days	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81455-Targeted genomic sequence analysis panel, solid organ or hematolymphoid neoplasm, DNA and RNA analysis when performed, 51 or greater genes (eg, ALK, BRAF, CDKN2A, CEBPA, DNMT3A, EGFR, ERBB2, EZH2, RLT3, IDH1, IDH2, JAK2, KIT, KRAS, MLL, NPM1, NRAS, MET, NOTCH1, PDGRA, PDGFRB, PGR, PIK3CA, PTEN, RET), interrogation for sequence variants and copy number variants or rearrangements, if performed.

MRDMM
65218**Multiple Myeloma Minimal Residual Disease by Flow, Bone Marrow**

Specimen Requirements: Specimen Type: Redirected bone marrow Container/Tube: Preferred: Yellow top (ACD) Acceptable: Lavender top (EDTA) Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)	72 hours	
	Refrigerated	72 hours	

CPT Code Information: 88184-Flow Cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 9-Flow Cytometry; additional cell surface, cytoplasmic or nuclear marker; 88188-Flow Cytometry Interpretation, 9 to 15 Markers;

CSNMM Multiple Myeloma Pre-Analysis Cell Sorting, Bone Marrow

607549

Specimen Requirements: Only orderable as a reflex. For more information see NGSMM / NGSMM Multiple Myeloma Gene Panel, Next-Generation Sequencing, Bone Marrow.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient	4 days	

CPT Code Information: 88184-Flow Cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 5-Flow Cytometry, additional cell surface, cytoplasmic or nuclear marker (each);

MSP3 Multiple Sclerosis (MS) Profile, Serum and Spinal Fluid

607837

Specimen Requirements: Both serum and spinal fluid are required. Spinal fluid must be obtained within 1 week of serum collection. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Label specimen as spinal fluid. Specimen Type: Serum Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge and aliquot serum within 2 hours of collection. 2. Label specimen as serum.

Specimen Minimum Volume: Serum, Spinal fluid: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	14 days	
	Refrigerated	72 hours	
	Ambient	24 hours	
Serum	Frozen (preferred)	14 days	
	Ambient	14 days	
	Refrigerated	14 days	

CPT Code Information: 83883; 83916 x2 (if appropriate);

SUMFZ Multiple Sulfatase Deficiency, Full Gene Analysis, Varies

35559

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an

allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure code; ; Additional tests;; Fibroblast Culture for Genetic Testing; 88233-Tissue culture, skin, or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

MUM1B 603217

MUM-1/IRF4 Immunostain, Bone Marrow, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick; B5 fixed, decalcified, paraffin-embedded bone marrow tissue Acceptable: B5 fixed, decalcified, paraffin-embedded bone marrow tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MUM1 70514

MUM-1/IRF4 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CMUMP 81435

Mumps Virus Antibodies, IgG and IgM, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86735 x 2

MPPG 34947

Mumps Virus Antibody, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86735

MMPGM 61854

Mumps Virus Antibody, IgM and IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.9 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86735-Mumps, IgG; 86735-Mumps, IgM;

MMPM 80977

Mumps Virus Antibody, IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86735

FMTAG 57260

Murine Typhus Antibodies, IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL serum in a screw-capped vial, shipped frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	5 days	

CPT Code Information: 86757

MBX 70594

Muscle Pathology Consultation

Specimen Requirements: Biopsies from different sites require separate orders and separate specimen vials. Preferred: Frozen muscle biopsy tissue Supplies: Muscle Biopsy Kit (T541) Specimen Type: Muscle biopsy tissue (frozen) and/or slides Collection Instructions: 1. Prepare and transport specimen per instructions in Muscle Biopsy Specimen Preparation in Special Instructions. 2. Patient history and requests should be clearly labeled with correct patient identifiers and pathology accession/case number. 3. All specimens must be labeled with specimen type. Additional Information: Contact the Mayo Clinic Muscle Laboratory for special problems to maximize benefit of the muscle biopsy. Acceptable: Stained muscle biopsy slides 1. Submit all stains performed on the case. 2. All specimens must be labeled with specimen type.

Specimen Minimum Volume: 1.5 cm biopsy

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen (preferred)		
	Ambient		

CPT Code Information: 88342-(if appropriate); 88341-(if appropriate); 88346-(if appropriate); 88350-(if appropriate); 88305-(if appropriate); 88313-(if appropriate); 88319-(if appropriate); 88314-(if appropriate); 88321-(if appropriate); 88323-(if appropriate); 88323-26-(if appropriate); 88325-(if appropriate);

MUSK 64277

Muscle-Specific Kinase (MuSK) Autoantibody, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.5 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 83519

FMUSG 57659

Mushroom IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

MUSH 82626

Mushroom, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FMTFG 57679

Mustard Food IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

MSTD 82801

Mustard, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MYHZ 65603

MUTYH Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional

Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81406

MUXF3 609437

MUXF3 (Cross-reactive Carbohydrate Determinant), IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	
	Ambient	7 days	

CPT Code Information: 86008

FBMO 75510

MVista Blastomyces Quantitative Antigen, Fluid

Specimen Requirements: Submit only one of the following: Specimen Type: CSF or Bronchoalveolar Fluid Container/Tube: Sterile leak-proof container Specimen Volume: 2 mL Collection Instructions: CSF: Collect 2 mL of spinal fluid (CSF) in sterile leak-proof container. Send refrigerated in a plastic screw cap vial. Bronchoalveolar Lavage: Collect 2 mL in sterile leak-proof container. Send refrigerated in a plastic screw cap vial. NOTE: Â 1. Specimen type is required. Â 2. Separate order required for each specimen. Â 3. Sputolysin, sodium hydroxide, and potassium hydroxide treatment degrade the analyte detected in the assay.

Specimen Minimum Volume: CSF: 0.8 mL; BAL: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen		

CPT Code Information: 87449

FBMS
75509

MVista Blastomyces Quantitative Antigen, Serum

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain red-top tube(s). (Serum gel tube is acceptable.) Spin down and send 2 mL serum refrigerated in a plastic screw cap vial. Note: Sputolysin, sodium hydroxide, and potassium hydroxide treatment degrade the analyte detected in the assay.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen		

CPT Code Information: 87449

FMVCO
57122

MVista Coccidioides Antigen EIA

Specimen Requirements: 2 mL urine shipped refrigerate Note: Sputolysin and Sodium Hydroxide are interfering substances.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Ambient	48 hours	
	Frozen		

CPT Code Information: 87449

FHST
91957

MVista Histoplasma Ag Quantitative EIA

Specimen Requirements: Submit only 1 of the following specimens: Bronchial Washing Collect 2 mL of Bronchial Washing in leak proofed container. Ship refrigerate. Required: 1. Label specimen appropriately (Bronchial Washing) Body Fluid Collect 2 mL of Body Fluid in leak proofed container. Ship refrigerate. Required: 1. Label specimen appropriately (Type of Body Fluid) Note: MiraVista will test most body fluids with the following disclaimer: The reference range and other method performance specifications have not been established for this test in this type of Body Fluid. The test results should be integrated into the clinical context for interpretation. Note: A Minimum volume does not allow for repeats.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen		

CPT Code Information: 87385

FHIST 90018

MVista Histoplasma Ag Quantitative, Serum

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain red-top tube(s). (Serum gel tube is acceptable.) Spin down and send 2 mL serum refrigerate in a plastic vial

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen		

CPT Code Information: 87385

FHSAG 90017

MVista Histoplasma Ag Quantitative, Spinal Fluid

Specimen Requirements: Specimen Type: Spinal Fluid Sources: CSF Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: Collect 2 mL of spinal fluid (CSF). Ship refrigerated. 2 mL of spinal fluid. Send specimen in a plastic, screw-capped vial refrigerated.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen		

CPT Code Information: 87385

MGMR 608980

Myasthenia Gravis Evaluation with Muscle-Specific Kinase (MuSK) Reflex, Serum

Specimen Requirements: Patient Preparation: 1. Patient should have no general anesthetic or muscle-relaxant drugs in the preceding 24 hours. 2. For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication. 3. This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically,

because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed, or canceled if radioactivity remains. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 3 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 83519; 86255 (if appropriate); 83519 (if appropriate);

MGLE 608979

Myasthenia Gravis/Lambert-Eaton Myasthenic Syndrome Evaluation, Serum

Specimen Requirements: Patient Preparation: 1. Patient should have no general anesthetic or muscle-relaxant drugs in the preceding 24 hours. 2. For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication. 3. This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed, or canceled if radioactivity remains. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 3 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 83519 x2; 86255 (if appropriate); 83519 (if appropriate);

SGTF 35860

MYB (6q23) Rearrangement FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive unstained 5 micron-thick sections placed on positive-charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 Æ, Æ DNA probe, each (first probe set), Interpretation and report; 88271x2 Æ, Æ DNA probe, each; each additional probe set (if appropriate); 88271x1 Æ, Æ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 Æ, Æ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 Æ, Æ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 Æ, Æ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 Æ, Æ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 Æ, Æ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

MYC
70515**MYC Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CTB
8205**Mycobacteria and Nocardia Culture, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Type: Bone marrow Container/Tube: SPS/Isolator System or green top (lithium heparin) Specimen Volume: Entire collection Specimen Type: Gastric washing Container/Tube: Sterile container Specimen Volume: 10 mL Collection Instructions: Neutralize specimen within 4 hours of collection with 100 mg of sodium carbonate per 5 to 10 mL of gastric wash. Specimen Type: Respiratory Sources: Bronchoalveolar lavage fluid, bronchial washing, sputum Container/Tube: Sterile container Specimen Volume: 3 mL Collection Instructions: 1. Collect 3 respiratory specimens for acid-fast smears and culture in patients with clinical and chest X-ray findings compatible with tuberculosis. 2. These 3 specimens should be collected at 8- to 24-hour intervals (24 hours when possible) and should include at least 1 first-morning specimen. Specimen Type: Stool Supplies: Stool Collection Kit, Random (T635) Container/Tube: Sterile container Specimen Volume: 5 to 10 g Specimen Type: Tissue Container/Tube: Sterile container Specimen Volume: 5 to 10 mm Collection Instructions: Collect a fresh tissue specimen. Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 20 to 50 mL Collection Instructions: Collect a random urine specimen. Fresh tissue or body fluid is the preferred specimen type instead of a swab specimen. Specimen Type: Swab Sources: Wound, tissue, or body fluid Container/Tube: Culture transport swab (noncharcoal) culturette Specimen Volume: Adequate specimen Collection Instructions: 1. Before collecting specimen, wipe away any excessive amount of secretion and discharge, if appropriate. 2. Obtain secretions or fluid from source with sterile swab. 3. If smear and culture are

requested or both a bacterial culture and mycobacterial culture are requested, collect a second swab to maximize test sensitivity.

Specimen Minimum Volume: Body Fluid: 1.5 mL Respiratory Specimen: 3 mL Fresh Tissue: pea-sized piece

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Refrigerated (preferred)	7 days
	Ambient	7 days

CPT Code Information: 87116-Mycobacterial Culture; 87015-Mycobacteria Culture, Concentration (if appropriate); 87118-Id MALDI-TOF Mass Spec AFB (if appropriate); 87150-Mycobacteria Probe Ident, Solid (if appropriate); 87150-Mycobacteria Probe Ident, Broth(if appropriate); 87150-Id, Mtb Speciation, PCR (if appropriate); 87153-Mycobacteria Identification by Sequencing (if appropriate); 87176-Tissue Processing (if appropriate); 87150- Id, MTB complex Rapid PCR (if appropriate);

ISMY
45265

Mycobacteria Ident by Sequencing (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87153

TBPB
45433

Mycobacteria Probe Ident Broth (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87150

TBMP
45424

Mycobacteria Probe Ident Solid (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87150

CTBBL 82443

Mycobacterial Culture, Blood

Specimen Requirements: Container/Tube: Preferred: Green top (sodium or lithium heparin)
Acceptable: SPS/Isolator System Specimen Volume: 8 to 10 mL per culture Collection Instructions: 1. Send specimen in original tube. 2. Isolator System/SPS tubes are acceptable, but not preferred. 3. Draw blood in an Isolator/SPS tube and send 8 mL of whole blood in the original Isolator tube. 4. Note: when sending SPS tube, it must be clearly labeled SPS. If label is obscured, sample may be cancelled, as ACD (yellow top) is not an acceptable tube type.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time
Whole blood	Ambient (preferred)	72 hours
	Refrigerated	72 hours

CPT Code Information: 87116-Mycobacterial Culture; 87118-Id MALDI-TOF Mass Spec AFB (if appropriate); 87150-Id, Mtb Speciation, PCR (if appropriate); 87150-Mycobacteria Probe Ident, Broth(if appropriate); 87150-Mycobacteria Probe Ident, Solid(if appropriate); 87153-Mtb PZA Confirmation, pcnA sequence (if appropriate); 87153-Mycobacteria Identification by Sequencing (if appropriate); 87150- Id, MTB complex Rapid PCR (if appropriate);

TBSP 607364

Mycobacterium tuberculosis Complex Species Identification, PCR, Varies

Specimen Requirements: Supplies: Infectious Container, Large (T146) Specimen Type: Mycobacterium tuberculosis complex isolate growing in pure culture Container/Tube: Growth on solid slant media eg, Middlebrook 7H10, 7H11 and Lowenstein Jensen.; growth in broth medium eg, Mycobacteria Growth Indicator Tube, 7H9 broth BACT/ALERT MP or VersaTREK. Turnaround time for results may be delayed, if subculture to Middlebrook agar medium is needed to ensure purity. Specimen Volume: Isolate with visible growth on solid media; if broth is sent, > or =3 mL of broth culture Collection Instructions: 1. Organism must be in pure culture, actively growing. Do not submit mixed cultures. 2. Place specimen in a large infectious container and label as an etiologic agent/infectious substance.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87150

TBNGS 603422

Mycobacterium tuberculosis Complex, Molecular Detection of Drug Resistance Markers, Whole Genome Sequencing, Varies

Specimen Requirements: Supplies: Infectious Container, Large (T146) Specimen Type: Mycobacterium tuberculosis complex isolate growing in pure culture. Isolates older than 5 weeks or not in a pure culture may require subculture for fresh, isolated growth so the turnaround time for results

may be delayed. Container/Tube: Middlebrook (7H10 or 7H11) medium slant; growth in broth medium (eg, Mycobacteria Growth Indicator Tube [7H9] broth) or on a Lowenstein-Jensen medium slant can be sent but turnaround time for results may be delayed because subculture to Middlebrook agar medium may be required. Organisms received in mixture may result in additional charges for isolation and identification. Specimen Volume: Isolate with visible growth on solid media; if broth is sent, 3 mL or more of broth culture required. Collection Instructions: 1. Organism must be in pure culture, actively growing. Do not submit mixed cultures. 2. Place specimen in a large infectious container and label as an etiologic agent/infectious substance.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81479

MTBT 62203

Mycobacterium tuberculosis Complex, Molecular Detection, PCR, Paraffin, Tissue

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by Mycobacterium tuberculosis DNA is unlikely. Preferred Paraffin-embedded tissue block: Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Body tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block to be cut and returned. Acceptable Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Body tissue Container/Tube: Sterile container for each individual cut section (scroll). Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission.

Specimen Minimum Volume: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue, Paraffin	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87556-Mycobacterium tuberculosis, complex, molecular detection, PCR, Paraffin

MTBXP 603536

Mycobacterium tuberculosis complex, Molecular Detection, PCR, Sputum

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by Mycobacterium tuberculosis DNA is unlikely. Specimen Type: Sputum (undigested) Container/Tube: Sterile container Specimen Volume: 3 mL Specimen Stability Information: Refrigerated (preferred) 7 days/Ambient 72 hours Additional Information: 1. If a single specimen is being shared between mycobacteria culture, acid-fast smear, and/or M tuberculosis PCR, a minimum volume of 3 mL for respiratory specimen is required. Specimen volumes less than indicated may decrease sensitivity of testing. 2. If insufficient volume is

submitted, test or tests will be canceled. Specimen Type: N-acetyl-L-cysteine/sodium hydroxide (NALC/NaOH)-digested sputum Container/Tube: Sterile container Specimen Volume: 3 mL Collection Instructions: 1. Submit digested specimen treated with NALC/NaOH. 2. Clearly indicate on container and order form that specimen is a digested specimen. Specimen Stability Information: Refrigerated 7 days Additional Information: 1. If a single specimen is being shared between mycobacteria culture, acid-fast smear, and/or M tuberculosis PCR, a minimum volume of 3 mL for respiratory specimen is required. Specimen volumes less than indicated may decrease sensitivity of testing. 2. If insufficient volume is submitted, test or tests will be canceled.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Sputum	Varies		

CPT Code Information: 87556, 87798

MTBRP 88807

Mycobacterium tuberculosis Complex, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by Mycobacterium tuberculosis DNA is unlikely. If a single specimen is being shared between mycobacteria culture, acid-fast smear, and/or M tuberculosis PCR, a minimum volume of 2 mL for body fluid, 3 mL for respiratory specimen, or a pea-sized piece of tissue should be obtained. Specimen volumes less than indicated may decrease sensitivity of testing. If insufficient volume is submitted, test or tests will be canceled. Preferred Specimens: Body fluid, cerebrospinal fluid (CSF), ocular fluid, respiratory (eg, bronchoalveolar lavage [BAL], bronchial washing, sputum), feces, fresh tissue, bone, bone marrow, or urine Acceptable Specimens: If no fresh specimen is available, digested respiratory specimens treated with N-acetyl-L-cysteine/sodium hydroxide (NALC/NaOH) are acceptable (eg, BAL, bronchial washing, respiratory fluid, sputum, or tracheal secretion), as are NALC/NaOH-treated gastric washings. Submit only 1 of the following specimens: Specimen Type: Body fluid Sources: Body, bone marrow aspirate, ocular, or CSF Container/Tube: Sterile container Specimen Volume: 1 mL Additional Information: Only fresh, non-NALC/NaOH-digested body fluid is acceptable. Specimen Type: Gastric washing Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: Neutralize specimen within 4 hours of collection with 20 mg of sodium carbonate per 2 mL of gastric washing. Specimen Type: Respiratory Sources: BAL, bronchial washing, or sputum Container/Tube: Sterile container Specimen Volume: 1 mL if only PCR ordered or 3 mL if PCR ordered with smear and culture Specimen Type: Feces Container/Tube: Sterile container Specimen Volume: 5-10 g Additional Information: Only fresh, non-NALC/NaOH-digested fecal specimens are acceptable. Specimen Type: Tissue Sources: Fresh tissue, bone, or bone marrow biopsy Container/Tube: Sterile container Specimen Volume: 5-10 mm Collection Instructions: Keep moist with sterile water or sterile saline Additional Information: Only fresh, non-NALC/NaOH-digested tissue is acceptable. Specimen Type: Urine Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Collect a random urine specimen. Acceptable Specimen Type: NALC/NaOH-digested respiratory specimens Sources: Lavage fluid, bronchial washing, gastric washing, respiratory fluid, sputum, or tracheal secretion Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions: 1. Submit digested specimen treated with NALC/NaOH. 2. Clearly indicate on container and order form that specimen is a digested specimen.

Specimen Minimum Volume: Body fluid: 0.5 mL Respiratory specimen-nondigested: 0.5 mL Fresh tissue or bone: 5 mm NALC-NaOH-digested specimen: 1 mL Gastric washing: 1 mL Stool: 5 g Urine: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87556-Mycobacterium tuberculosis, complex, molecular detection, PCR; 87015-Mycobacteria culture, concentration (if appropriate);

MTBPZ 56099

Mycobacterium tuberculosis Complex, Pyrazinamide Resistance by pncA DNA Sequencing, Varies

Specimen Requirements: Specimen Type: Organism Supplies: Infectious Container, Large (T146) Container/Tube: Middlebrook 7H10 agar slant Specimen Volume: Isolate Collection Instructions: Organism must be in pure culture, actively growing.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87153-Mtb PZA Confirmation, pncA Sequence

MPA 81563

Mycophenolic Acid, Serum

Specimen Requirements: Patient Preparation: Collect specimen just prior to next dose (ie, trough) Container/Tube: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	21 days	

CPT Code Information: 80180

MHPRP 65134

Mycoplasma hominis, Molecular Detection, PCR, Plasma

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by Mycoplasma hominis DNA is unlikely. Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Submission Container/Tube: Screw-capped, sterile container Specimen Volume: 1 mL Collection Instructions: Centrifuge and separate plasma within 24 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798**MYCO**
48394**Mycoplasma pneumoniae Antibodies, IgG and IgM, Serum****Specimen Requirements:** Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86738 x 2-Mycoplasma pneumoniae by EIA; 86738-Mycoplasma pneumoniae by indirect IFA (if appropriate);**MYCOG**
48317**Mycoplasma pneumoniae Antibodies, IgG, Serum****Specimen Requirements:** Only orderable as part of a profile. For more information see MYCO / Mycoplasma pneumoniae Antibodies, IgG and IgM, Serum. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86738**MYCOM**
48318**Mycoplasma pneumoniae Antibodies, IgM, Serum****Specimen Requirements:** Only orderable as part of a profile. For more information see MYCO / Mycoplasma pneumoniae Antibodies, IgG and IgM, Serum. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86738

MYCON Mycoplasma pneumoniae Antibody Interpretation

48319

Specimen Requirements: Only orderable as part of a profile. For more information see MYCO / Mycoplasma pneumoniae Antibodies, IgG and IgM, Serum.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

MGRP Mycoplasma genitalium, Molecular Detection, PCR, Varies

60755

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction (PCR) requires the specimen to be processed in an environment in which contamination of the specimen by Mycoplasma genitalium DNA is not likely. Submit only 1 of the following specimens: Specimen Type: Swab Supplies: -Culturette (BBL Culture Swab) (T092) -BD Eswab (T853) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) -M4-RT (T605) Sources: Cervix, urethra, urogenital, vaginal Container/Tube: Preferred: Culture swab transport system (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Acceptable: Swab in transport media: M4, M4-RT, M5, M6, universal transport medium, or Eswab Specimen Volume: One swab Collection Instructions: 1. Vaginal: Collect specimen by swabbing back and forth over mucosa surface to maximize recovery of cells. 2. Urethra or cervical: Collect specimen by inserting swab 1 to 3 cm and rotating 360 degrees. 3. Place swab back into swab cylinder. Specimen Type: Fluid Supplies: -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) -M4-RT (T605) Sources: Amniotic, pelvic, peritoneal, prostatic secretion, reproductive drainage, semen Container/Tube: Preferred: Sterile container Acceptable: Container with 3 mL of transport media: M4, M4-RT, M5, M6 or universal transport media Specimen Volume: 1-2 mL Specimen Type: Urine-first void, kidney/bladder stone, ureter Container/Tube: Sterile container Specimen Volume: 10 mL or entire specimen Collection instructions: Urine first void: Specimen can be collected at any time during the day. The patient should not have urinated for at least 1 hour prior to specimen collection. The first voided portion is the initial 20-30 mL of the urine stream obtained without cleaning the external urethra. Specimen Type: Tissue Sources: Placenta, products of conception, genitourinary Container/Tube: Sterile container Specimen Volume: 5 mm(3) Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit fresh tissue only, do not add fluid to tissue 3. Refrigerate or freeze specimen.

Specimen Minimum Volume: Fluid: 1 mL Urine, first void: 2 mL Swab: 1 swab Tissue: 5 mm(3)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

MPRP
62394**Mycoplasma pneumoniae, Molecular Detection, PCR, Varies**

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by *Mycoplasma pneumoniae* DNA is unlikely. Submit only 1 of the following specimens: Specimen Type: Respiratory Supplies: -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) -M4-RT (T605) Sources: Bronchial washing, bronchoalveolar lavage, tracheal secretions, sputum Container/Tube: Preferred: Sterile container Acceptable: Specimen in M4, M4-RT, M5, M6, or universal transport medium Specimen Volume: 1 mL Specimen Type: Swab Supplies: -Cultrette (BBL Culture Swab) (T092) -BD Eswab (T853) -Steriflock NP Swab (T861) -Nasopharyngeal Swab (Rayon Mini-Tip Swab) (T515) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) -M4-RT (T605) Sources: Throat, nasal, or nasopharyngeal Container/Tube: Preferred: Culture swab transport system (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Acceptable: Culture transport swab (Stuart's media) or place swab in M4, M4-RT, M5, M6, universal transport media, or ESwab Specimen Volume: Swab Collection Instructions: 1. Collect specimen by swabbing back and forth over mucosa surface to maximize recovery of cells. 2. Place swab back into swab cylinder. Specimen Type: Fluid Sources: Pleural, pericardial, cerebrospinal Container/Tube: Sterile vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: Respiratory, Fluid: 0.5 mL Swab: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CXCFX
601509**MYD88 Reflex to CXCR4 Mutation Detection, Varies**

Specimen Requirements: Only orderable as a reflex. For more information, see LPLFX / Reflexive Testing of MYD88 and CXCR4 Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: EDTA (lavender top) or ACD solution B (yellow top) Specimen Volume: 3 mL Specimen Stability: Ambient (preferred)/Refrigerated Collection Instructions: 1. Invert several times to mix blood 2. Send specimen in original tube 3. Label specimen as blood Specimen Type: Bone marrow Container/Tube: EDTA (lavender top) or ACD solution B (yellow top) Specimen Volume: 2 mL Specimen Stability: Ambient (preferred)/Refrigerated Collection Instructions: 1. Invert several times to mix bone marrow 2. Send specimen in original tube 3. Label specimen as bone marrow Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube with indication of volume and concentration of the DNA Specimen Volume: Entire specimen Specimen Stability: Frozen (preferred)/Refrigerated/Ambient Collection Instructions: Label specimen as extracted DNA and list specimen source. Include indication of volume and concentration of the DNA. Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Specimen Stability: Ambient Specimen Type: Paraffin-embedded bone marrow aspirate clot Container/Tube: Paraffin block Specimen Stability: Ambient

Specimen Minimum Volume: Blood, Bone Marrow: 1 mL Extracted DNA: 20 mcL with a concentration of at least 10 nanograms per mcL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	10 days	

CPT Code Information: 81479-Unlisted molecular pathology procedure

MYD88 62927

MYD88, L265P, Somatic Gene Mutation, DNA Allele-Specific PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA), yellow top (ACD solution B), or green top (heparin) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as bone marrow. Specimen Stability: Ambient (preferred)/Refrigerated Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Specimen Stability: Ambient Specimen Type: Paraffin-embedded bone marrow aspirate clot Container/Tube: Paraffin block Specimen Stability: Ambient Acceptable: Specimen Type: Peripheral blood Container/Tube: Lavender top (EDTA), yellow top (ACD solution B), or green top (heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as blood. Specimen Stability: Ambient (preferred)/Refrigerated Specimen Type: Frozen tissue Container/Tube: Plastic container Specimen Volume: 100 mg Collection Instructions: Freeze tissue within 1 hour of collection. Specimen Stability: Frozen Specimen Type: Unstained slides Container/Tube: Unstained tissue slides Specimen Volume: 10 slides Specimen Stability: Ambient Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Indicate volume and concentration of the DNA on the label. Specimen Stability: Frozen (preferred)/Refrigerated Specimen Type: Methanol-acetic acid (MAA) fixed pellets Container/Tube: Plastic container Specimen Stability: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Blood, Bone marrow: 1 mL Extracted DNA: 50 mcL at 20 ng/mcL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	10 days	

CPT Code Information: 81305

FMGA 57249

Myelin Assoc. Glycoprotein (MAG) Antibody w/Reflex to MAG-SGPG & MAG, EIA

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	24 hours	

CPT Code Information: 84181 – Western blot with interpretation and report; 83520 x 2 – Not otherwise specified (if appropriate) ;

MOGFS 65563

Myelin Oligodendrocyte Glycoprotein (MOG-IgG1) Fluorescence-Activated Cell Sorting (FACS) Assay, Serum

Specimen Requirements: Patient Preparation: For optimal antibody detection, we recommend drawing the specimen before initiation of immunosuppressant medication. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 2 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255; 86256 (if appropriate);

MYEFL 63414

Myelodysplastic Syndrome by Flow Cytometry, Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD) Acceptable: Heparin, EDTA Specimen Volume: 2-5 mL Slides: Include 5 to 10 unstained bone marrow aspirate smears, if possible. Collection Instructions: 1. Submission of bilateral specimens is not required. 2. Label specimen as bone marrow.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient		

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker x 1; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each) x18; 88189-Flow Cytometry Interpretation, 16 or More Markers (if appropriate);

MSTF 35844

Myeloid Sarcoma, FISH, Tissue

Specimen Requirements: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: For each probe set ordered, 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: For each probe set ordered, 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides. Include 1 hematoxylin and eosin (H and E)-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88291; 88271 x 2 (if appropriate); 88271 x 2 (if appropriate); 88271 (if appropriate); 88271 x 2 (if appropriate); 88271 x 3 (if appropriate); 88274 w/modifier 52 (if appropriate); 88274 (if appropriate); 88275 (if appropriate);

MFCF

35287

Myeloma, FISH, Fixed Cells

Specimen Requirements: Container/Tube: Sterile container Specimen Volume: 1 fixed cell pellet Collection Instructions: Place specimen in a sterile container with a 3:1 methanol:glacial acetic acid (or similar) fixative.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fixed Cell Pellet Bone Marrow	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

MYPO

70511

Myeloperoxidase (MPO) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MPO

80389

Myeloperoxidase Antibodies, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516

MPNCM 65115 Myeloproliferative Neoplasm, CALR with Reflex to MPL, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Lavender top (EDTA) or yellow top (ACD-B) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred)/Refrigerate Specimen Type: Bone marrow aspirate Container/Tube: Lavender top (EDTA) or yellow top (ACD-B) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix specimen. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred)/Refrigerate Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5 to 2 mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Indicate volume and concentration of DNA 2. Label specimen as extracted DNA from blood or bone marrow. Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood or Bone marrow: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	7 days	

CPT Code Information: 81219-CALR (calreticulin) (eg, myeloproliferative disorders), gene analysis, common variants in exon 9; 81403-MPL (myeloproliferative leukemia virus oncogene, thrombopoietin receptor, TPOR) (eg, myeloproliferative disorder), exon 10 sequence (if appropriate);

MPNR 63031 Myeloproliferative Neoplasm, JAK2 V617F with Reflex to CALR and MPL, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Lavender top (EDTA) or yellow top (ACD solution B) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability Information: Ambient (preferred)/Refrigerate Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) or yellow top (ACD solution B) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Stability Information: Ambient (preferred)/Refrigerate Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA from blood or bone marrow and provide indication of volume and concentration of the DNA. Specimen Stability Information: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood and Bone marrow: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	7 days	

CPT Code Information: 81270-JAK2 (Janus kinase 2) (eg, myeloproliferative disorder) gene analysis, p.Val617Phe (V617F) variant 81219-CALR (calreticulin) (eg, myeloproliferative disorders), gene analysis, common variants in exon 9 (if appropriate) 81339 - MPL (MPL proto-oncogene, thrombopoietin receptor) (eg, myeloproliferative disorder) gene analysis; sequence analysis, exon 10 (if appropriate)

FMYP 75371

Myocarditis/Pericarditis Panel

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 3 mL Collection instructions: Draw blood in a plain red top tube(s), serum gel tube is acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 86658 x 11; 86710 x 2; 86331 x 2; 86632;

MYOD1 70518

Myogenic Differentiation Antigen 1 (MYOD1) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MYOGE 70516

Myogenin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MYOGL 70517

Myoglobin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MYGLU 606733

Myoglobin, Random, Urine

Specimen Requirements: Supplies: Urine Myoglobin Transport Tube (T691) Container/Tube: Plastic, 10-mL urine myoglobin transport tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a preservative-free, random urine specimen. 2. If specimen is at ambient temperature, aliquot the urine to a urine myoglobin transport tube (T691) within 1 hour of collection. Refrigerate specimen. 3. If specimen is refrigerate, aliquot the urine to a urine myoglobin transport tube (T691) within 2 hours of collection. Additional Information: Urinary myoglobin is highly unstable unless alkalinized with sodium carbonate preservative. Even with alkalinization, myoglobin deterioration is variable and specimen dependent (approximate averages of 10% at 1 day, 20% at 3 days, and 30% at 7 days).

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated	7 days	MYOGLOBIN TRANSPORT TUBE

CPT Code Information: 83874

MYGLS 606735

Myoglobin, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 83874

FMMPP **75594**

MyoMarker 3 Plus Profile

Specimen Requirements: Collection Container/Tube: 10 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 4 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 83516 x 8; 86235 x 7; 83520 x 2; ;

FMYO3 **75595**

MyoMarker 3 Profile

Specimen Requirements: Collection Container/Tube: 10 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 4 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 83516 x 9; 86235 x 7;

DDITF **35265**

Myxoid/Round Cell Liposarcoma, 12q13 (DDIT3 or CHOP) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\text{--}\hat{\text{a}}\text{€}\text{œ}$ DNA probe, each (first probe set), Interpretation and report; 88271x2 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\text{--}\hat{\text{a}}\text{€}\text{œ}$ DNA probe, each; each additional probe set (if appropriate); 88271x1 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\text{--}\hat{\text{a}}\text{€}\text{œ}$ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\text{--}\hat{\text{a}}\text{€}\text{œ}$ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\text{--}\hat{\text{a}}\text{€}\text{œ}$ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\text{--}\hat{\text{a}}\text{€}\text{œ}$ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\text{--}\hat{\text{a}}\text{€}\text{œ}$ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 $\tilde{\text{A}}\text{ç}\hat{\text{a}},\text{--}\hat{\text{a}}\text{€}\text{œ}$ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate); ;

G6SW 62409

N-Acetylgalactosamine-6-Sulfatase, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	7 days	YELLOW TOP/ACD
	Ambient	7 days	YELLOW TOP/ACD

CPT Code Information: 82657

NAT2 83389

N-Acetyltransferase 2 Gene (NAT2), Full Gene Sequence, Whole Blood

Specimen Requirements: Multiple whole blood EDTA genotype tests can be performed on a single specimen after a single extraction. See Multiple Whole Blood EDTA Genotype Tests in Special Instructions for a list of tests that can be ordered together. Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81479-Unlisted molecular pathology procedure

NMH24 N-Methylhistamine, 24 Hour, Urine

605135

Specimen Requirements: Patient Preparation: Patient must not be taking monoamine oxidase inhibitors (MAOIs) or aminoguanidine as these medications increase N-methylhistamine (NMH) levels. Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. No preservative. 3. Aliquot into plastic tube and send at refrigerate temperature. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 82542

NMH1D N-Methylhistamine, 24 Hour, Urine

605159

Specimen Requirements: Only orderable as part of a profile. For more information see NMH24 / N-Methylhistamine, 24 Hour, Urine Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. No preservative. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82542

NMHR1 N-Methylhistamine, Random, Urine

605015

Specimen Requirements: Only orderable as part of a profile. For more information see: NMHR / N-Methylhistamine, Random, Urine Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No

preservative.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 82542

NMHR
604981

N-Methylhistamine, Random, Urine

Specimen Requirements: Patient Preparation: Patient must not be taking monoamine oxidase inhibitors (MAOIs) or aminoguanidine as these medications increase N-methylhistamine (NMH) levels. Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic vial, 5-mL Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen within a few hours of symptom onset. 2. No preservative.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 82542; 82570;

SNTX
65558

N-terminal Telo peptide, Serum

Specimen Requirements: Patient Preparation: Fasting is preferred due to diurnal variation of markers and food effects Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: A morning collection from fasting patients is preferred. If not possible, collect the baseline and subsequent specimens under the same circumstances (eg, at same time of day).

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	28 days	
	Refrigerated	24 hours	

CPT Code Information: 82523

FINA

NAbFeron (IFNB-1) Neutralizing Antibody Test

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 2 mL of serum refrigerate in a plastic vial. Note: Sample needs to be collected either before treatment with interferon or more than 24 hours following the most recent dose. Patient should not be on steroid therapy for at least two weeks prior to testing.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 86382

FNAD 80761

Nadolol, Serum/Plasma

Specimen Requirements: Submit only 1 of the following specimens. Serum Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 1 mL of serum refrigerated in a plastic vial. Plasma Draw blood in a lavender-top (EDTA) or Pink top tube(s). (Plasma gel tube is not acceptable.) Spin down and send 1 mL of EDTA plasma refrigerated in a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	30 days	
	Ambient	30 days	
	Frozen	30 days	

CPT Code Information: 80299

FNALO 91784

Naloxone - Total (Conjugated/Unconjugated), Screen, Urine

Specimen Requirements: Collect 1 mL random urine. Send specimen refrigerated in a plastic (preservative-free) urine container.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	30 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 80307; 80362 if appropriate;

NAPSN
70519**Napsin A Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

NARC
82026**Narcolepsy-Associated Antigen, HLA-DQB1 Typing, Blood**

Specimen Requirements: Container/Tube: Yellow top (ACD solution B) Specimen Volume: 6 mL Collection Instructions: Do not transfer blood to other containers. Additional Information: Specimen acceptability is based on extracted DNA concentration and not sample age.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 81376-HLA Class II typing, low resolution (eg, antigen equivalents); one locus (eg, HLA-DRB1/3/4/5, -DQB1, -DQA1, -DPB1, or -DPA1), each

QNKS
60616**Natural Killer (NK)/Natural Killer T (NKT) Cell Subsets, Quantitative, Blood**

Specimen Requirements: For serial monitoring, specimen collection is recommended to be performed at the same time of day. Container/Tube: Green top (sodium heparin) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	30 hours	GREEN TOP/HEP

CPT Code Information: 86356 x3; 86359; 86357;

NERPC
113316**Necropsy, regional (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88036

NESPC
113317**Necropsy, single organ (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88037

NMS1
603542**Necrotizing Myopathy Evaluation, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 3 mL Collection Instructions: Centrifuge within 2 hours of collection and aliquot 2 mL into a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255; 82397; 86256 (if appropriate); 84182 (if appropriate);

FNECT
57941**Nectarine (Prunus spp) IgE**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FNEFA 91135

Nefazodone (Serzone)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80338

NEGCT 70410

Negative Control, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

MGRNA 61646

Neisseria gonorrhoeae, Miscellaneous Sites, Nucleic Acid Amplification, Varies

Specimen Requirements: Swab specimens must be collected using an Aptima Collection Unisex Swab (T583) or Aptima Collection Multitest Swab (T584). These swabs are contained in the Aptima Collection Kit. Submit only 1 of the following specimens: Supplies: Swab, Aptima Male/Female Collection (T583) Swab, Aptima Multitest Swab Specimen Collection Kit (T584) Specimen Type: Ocular (corneal/conjunctiva) Container/Tube: Aptima Collection Multitest Swab or Aptima Swab Collection System Specimen Volume: Swab Collection Instructions: 1. Swab site using Aptima Collection Multitest Swab or Aptima Collection Unisex Swab. Note: The white swab provided within the collection kit is a cleaning swab and should not be used for collection. Discard the white cleaning

swab. 2. Place collection swab in transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 3. Cap tube securely and label tube with patient's entire name and collection date and time. 4. Transport swab container and store (refrigerated is preferred) within 60 days of collection. Supplies: Aptima Thin Prep Transport Tube (T652) Specimen Type: Peritoneal fluid (pelvic wash, cul-de-sac fluid) Container/Tube: Aptima Specimen Transfer Tube Specimen Volume: 1 mL Collection Instructions: 1. Transfer 1 mL of specimen into the Aptima Specimen Transfer Tube within 24 hours of collection. 2. Cap tube securely and label tube with patient's entire name and collection date and time. 3. Transport Aptima Specimen Transfer Tube (refrigerated is preferred) within 30 days of collection.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		APTIMA VIAL
	Ambient		APTIMA VIAL
	Frozen		APTIMA VIAL

CPT Code Information: 87591

GCRNA 61552

Neisseria gonorrhoeae, Nucleic Acid Amplification, Varies

Specimen Requirements: Submit only 1 of the following specimens: Swab specimen must be collected using an Aptima Collection Unisex Swab (T583), or Aptima Collection Multitest Swab (T584). These swabs are contained in the Aptima Collection Kit. Supplies: Swab, Aptima Male/Female Collection (T583) Specimen Type: Endocervix Container/Tube: Aptima Collection Unisex Swab Specimen Volume: Swab Collection Instructions: 1. Use cleaning swab (white shaft) to remove excess mucus from endocervix and discard. 2. Insert second swab (blue shaft) 1 to 1.5 cm into endocervical canal, and rotate swab gently for 30 seconds. Avoid touching vaginal wall when removing swab. 3. Place second swab into transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 4. Cap tube securely, and label tube with patient's entire name, and date and time of collection. 5. Transport and store swab container at 2 to 30°C (refrigerate is preferred temperature) within 60 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Supplies: Swab, Aptima Multitest Swab Specimen Collection Kit (T584) Specimen Type: Vaginal Container/Tube: Aptima Collection Multitest Swab Specimen Volume: Swab Collection Instructions: 1. Insert swab (pink shaft) about 5 cm past introitus and rotate gently for 30 seconds. 2. Place swab into transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 3. Cap tube securely, and label tube with patient's entire name, and date and time of collection. 4. Transport and store swab container at 2 to 30°C (refrigerate is preferred temperature) within 60 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Supplies: Swab, Aptima Male/Female Collection (T583) Specimen Type: Urethra (Males Only) Container/Tube: Aptima Collection Unisex Swab Specimen Volume: Swab Collection Instructions: 1. Patient should not have urinated for at least 1 hour prior to collection. 2. With a rotating movement, insert swab (blue shaft) 2 to 4 cm into urethra. 3. Once inserted, rotate swab gently at least 1 full rotation using sufficient pressure to ensure swab comes into contact with all urethral surfaces. Allow swab to remain inserted for 2 to 3 seconds. 4. Place swab in transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 5. Cap tube securely, and label tube with patient's entire name, and date and time of collection. 6. Transport and store swab container at 2 to 30°C (refrigerate is preferred temperature) within 60 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Supplies: Aptima Urine Transport Tube (T582) Specimen Type: Urine (Males and Females) Container/Tube: Aptima Urine Specimen Transport Tube Specimen Volume: 15-20 mL Collection Instructions: 1. Patient should not have urinated for at least 1 hour prior to specimen collection. 2. Patient should collect first portion of random voided urine (first part of stream) into a sterile, plastic, preservative-free container. 3. Transfer 2 mL of urine into the urine specimen transport tube using the disposable pipette provided within 24 hours of collection. The correct volume of urine has been added

when the fluid level is between the black fill lines on the urine transport tube. Place the labels on the transport tube so the black fill lines are still visible for volume confirmation at Mayo Clinic Laboratories.

4. Transport and store urine specimen transport container at 2 to 30°C (refrigerate is preferred temperature) within 30 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Supplies: Aptima Thin Prep Transport Tube (T652) Specimen Type: ThinPrep Specimen (Endocervix) Container/Tube: ThinPrep (also called PreservCyt) Collection Kit Specimen Volume: 1 mL Collection Instructions: 1. Aliquot ThinPrep specimen for Chlamydia and/or Neisseria testing before processing for Pap smear. For each specimen, use a new pair of clean gloves. 2. Vortex ThinPrep/PreservCyt vial 3 to 10 seconds. Within 1 minute of vortexing: a. Transfer 1 mL of specimen into the Aptima Specimen Transfer Tube using a disposable transfer pipette or a pipette tip containing a filter (aerosol barrier or hydrophobic plug). b. Process only 1 ThinPrep and transfer tube set at a time. c. Recap Aptima Specimen Transfer Tube tightly and gently invert 3 times to mix. 3. Label Aptima transfer tube with appropriate label. 4. Use remainder of ThinPrep specimen for Pap testing. 5. Transport and store specimen transfer container at 2 to 30°C (refrigerate is preferred temperature) within 60 days of collection. If longer storage is needed, freeze at -20 to -70°C for 12 months. Supplies: Swab, Aptima Male/Female Collection (T583) Swab, Aptima Multitest Swab Specimen Collection Kit (T584) Specimen Type: Oral/throat or rectal/anal Container/Tube: Aptima Collection Multitest Swab or Aptima Swab Collection System Specimen Volume: Swab Collection Instructions: 1. Swab site using Aptima Collection Multitest Swab or Aptima Collection Unisex Swab. Note: The white swab provided within the collection kit is a cleaning swab and should not be used for collection. Discard the white cleaning swab. 2. Place collection swab in transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 3. Cap tube securely and label tube with patient's entire name and collection date and time. 4. Transport swab container and store (refrigerated is preferred) within 60 days of collection.

Specimen Minimum Volume: Endocervix in PreservCyt: 1mL Urine: 2 mL Swabs (Endocervical, Urethral, Vaginal, Oral/throat, Anal/Rectal): Entire collection

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		APTIMA VIAL
	Ambient		APTIMA VIAL
	Frozen		APTIMA VIAL

CPT Code Information: 87591

FNMMEN 91669

Neisseria Meningitidis IgG Vaccine Response

Specimen Requirements: Draw blood in a plain, red-top tube(s). Spin down and send 0.5 mL serum refrigerated. Note: Serum gel tube is acceptable, but must pour off into a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	5 days	

CPT Code Information: 86317/x4

NBILI 82133

Neonatal Bilirubin, Serum

Specimen Requirements: Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Preferred: 2 Serum gel Microtainers Acceptable: 2 Red top Microtainers Submission Container/Tube: Amber vial (T192) Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel Microtainers should be centrifuged within 2 hours of collection. 2. Red-top Microtainers should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	24 hours	LIGHT PROTECTED
	Frozen	30 days	LIGHT PROTECTED
	Ambient	6 hours	LIGHT PROTECTED

CPT Code Information: 82247-Bilirubin, total; 82248-Bilirubin, direct;

FNEOS 75451

Neopterin

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.8 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.8 mL serum light protected in a screw-capped vial (Supply T192 amber vial), shipped frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	180 days	LIGHT PROTECTED
	Refrigerated	72 hours	LIGHT PROTECTED

CPT Code Information: 83520

NETT 82734

Nettle, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

NEUN 70631

Neu-N Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

NELL1 610585

Neural Epidermal Growth Factor-Like 1 Protein Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

NONCP 603047

Neuro-Oncology Expanded Gene Panel with Rearrangement, Tumor

Specimen Requirements: This assay requires at least 30% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 360 mm(2) -Minimum amount of tumor area: tissue 144 mm(2) -If ordered in conjunction with CMAPT / Chromosomal Microarray, Tumor, Formalin-Fixed Paraffin-Embedded, the preferred amount of tissue is 430 mm(2), the minimum amount is 180 mm(2). -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. For this test, 6mm x 6mm x 10 slides is preferred: approximate/equivalent to 360 mm(2) with the minimum acceptable of 4mm x 4mm x 10 slides: approximate/equivalent to 144mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 15 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 15 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 15 slides from the same block. Additional information: If the amount of tissue available is close to the minimum required, the ordering provider may be asked to prioritize between the DNA and RNA components of the assay.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81455; 88381;

NF2F 70520

Neurofilament (2F11) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

NFSMI 71354

Neurofilament (SMI31) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PNEFS 84300

Neuroimmunology Antibody Follow-up, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: 13- x 75-mm plastic screw-top vial. Specimen Volume: 4 mL Collection Instructions: Centrifuge within 2 hours. Aliquot and ship in 13- x 75-mm plastic screw-top vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 83519-GANG (if appropriate); 86255-ACMFS (if appropriate); 84182-AGNBS (if appropriate); 86255-AINCS (if appropriate); 86255-AMPSC (if appropriate); 86256-AMPIS (if appropriate); 86255-AMPHS (if appropriate); 84182-AMIBS (if appropriate); 84182-AN1BS (if appropriate); 84182-AN2BS (if appropriate); 86255-AGN1S (if appropriate); 86255-ANN1S (if appropriate); 86255-ANN2S (if appropriate); 86255-ANN3S (if appropriate); 86255-CS2CS (if appropriate); 86255-CRMS (if appropriate); 86255-DPPCS (if appropriate); 86256-DPPTS (if appropriate); 86255-DPPIS (if appropriate); 86255-GABCS (if appropriate); 86256-GABIS (if appropriate); 86255-GFACS (if appropriate); 86256-GFATS (if appropriate); 86255-GFAIS (if appropriate); 86255-GRFCS (if appropriate); 86256-GRFTS (if appropriate); 86255-GRFIS (if appropriate); 83520-IGATS (if appropriate); 83516-IGG_A (if appropriate); 83520-IGDTS (if appropriate); 83516-IGG_D (if appropriate); 83520-IGMTS (if appropriate); 86255-IG5CS (if appropriate); 86256-IG5TS (if appropriate); 86255-IG5IS (if appropriate); 83520-IMATS (if appropriate); 83516-IGM_A (if appropriate); 83520-IMDTS (if appropriate); 83516-IGM_D (if appropriate); 83520-IMMTS (if appropriate); 83516-IGM_M (if appropriate); 86255-ITPCS (if appropriate); 86255-ITPTS (if appropriate); 86255-ITPIS (if appropriate); 86255-LG1CS (if appropriate); 86255-GL1CS (if appropriate); 86256-GL1TS (if appropriate); 86255-GL1IS (if appropriate); 83519-VGKC (if appropriate); 86255-NFHC (if appropriate); 86255-NIFCS (if appropriate); 86255-NIFIS (if appropriate); 86255-NFLCS (if appropriate); 86255-NMDCS (if appropriate); 86256-NMDIS (if appropriate); 83519-CCN (if appropriate); 83519-CCPQ (if appropriate); 84182-PC1BS (if appropriate); 84182-PCTBS (if appropriate); 86255-PCABP (if appropriate); 86255-PCAB2 (if appropriate); 86255-PCATR (if appropriate); 86255-SRPIS (if appropriate); 86256-SRPTS (if appropriate); 84182-SRPBS (if appropriate);

PNEFC

84299

Neuroimmunology Antibody Follow-up, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 84182-Paraneoplastic autoantibody Western blot confirmation (if appropriate); 84182-Amphiphysin Western blot confirmation (if appropriate); 86255-Amphiphysin (if appropriate); 86255-ANNA-1 (if appropriate); 86255-ANNA-2 (if appropriate); 86255-ANNA-3 (if appropriate); 86255-CRMP-5-IgG (if appropriate); 86255-PCA-1 (if appropriate); 86255-PCA-2 (if appropriate); 86255-PCA-Tr (if appropriate); 86255-AGNA-1 (if appropriate); 86256-AMPIC (if appropriate); 86256-GABIC (if appropriate); 86256-NMDIC (if appropriate); 86255-DPPIC (if appropriate); 86256-DPPTC (if appropriate); 86255-GL1IC (if appropriate); 86256-GL1TC (if appropriate); 86255-AMPCC (if appropriate); 86255-GABCC (if appropriate); 86255-NMDCC (if appropriate); 83519-VGKCC (if appropriate); 86255-LG1CC (if appropriate); 86255-CS2CC (if appropriate);

appropriate); 86255-DPPCC (if appropriate); 86255-GL1CC (if appropriate);

NMPAN 65434

Neuromuscular Genetic Panels by Next-Generation Sequencing (NGS), Varies

Specimen Requirements: Specimen Type: Whole blood Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81325 (if appropriate); 81403 (if appropriate); 81404 (if appropriate); 81405 (if appropriate); 81406 (if appropriate); 81407 (if appropriate); 81408 (if appropriate); 81443 (if appropriate); 81479 (if appropriate);

NMOFS 38324

Neuromyelitis Optica (NMO)/Aquaporin-4-IgG Fluorescence-Activated Cell Sorting (FACS) Assay, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 3 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255; 86256-NMO/AQP4-IgG FACS titer (if appropriate);

NMOFC 38325

Neuromyelitis Optica (NMO)/Aquaporin-4-IgG Fluorescence-Activated Cell Sorting (FACS) Assay, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial Specimen Volume: 3 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255; 86256-NMO/AQP4-IgG FACS titer (if appropriate);

NSESF 81796

Neuron-Specific Enolase (NSE), Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	15 days	
	Ambient	72 hours	

CPT Code Information: 83520

NSEI 70630

Neuron-Specific Enolase Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

NSE 80913

Neuron-Specific Enolase, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic screw-top aliquot tube Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	

Ambient

7 days

CPT Code Information: 83520**NCLGP**
608014**Neuronal Ceroid Lipofuscinosis (Batten Disease) Gene Panel, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443**G159**
605192**Neuronal Ceroid Lipofuscinosis (Batten Disease) Panel (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**CPT Code Information:** 81443**FNEUR**
90156**Neurotensin**

Specimen Requirements: Patient preparation: Patient should be fasting 10-12 hours prior to collection. Patient should not be on any antacid medication or medications that affect gastroentero-intestinal function, if possible, for at least 48 hours prior to collection. Specimen Type: Plasma Container/Tube: Z tube Specimen Volume: 3 mL Collection Instructions: Draw 10 mL of blood in special Z-tube (MCL T701). Separate plasma from cells immediately after draw and send 3 mL of plasma frozen in plastic vial.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	30 days	

CPT Code Information: 83519**FNEU**
91688**Neurotransmitter Metabolites (5HIAA, HVA, 3OMD) (CSF)**

Specimen Requirements: Medical Neurogenetics collection kit (MCL Supply T657) required. Each collection kit contains 5 microcentrifuge tubes. **COLLECTION PROTOCOL:** 1) CSF should be collected from the first drop into the tubes in the numbered order. Fill each tube to the marked line with the required volumes Tube 1: 0.5 mL Tube 2: 1.0 mL Tube 3: 1.0 mL (contains antioxidants necessary to protect the sample integrity) Tube 4: 1.0 mL Tube 5: 1.0 mL - If sample's not blood contaminated, the tubes should be placed on dry ice at bedside - If sample's are blood contaminated, the tubes should immediately be centrifuged (prior to freezing) and the clear CSF transferred to new similarly labeled tubes, then frozen - Store samples at -80 until they can be shipped 2) Complete Medical Neurogenetics, LLC request form. Include test required, sample date and date of birth. 3) Label tubes with patient name and ID number, leaving the tube number viewable. 4) Place samples inside a specimen transport bag and the Medical Neurogenetics, LLC request form inside the pouch of the transport bag. 5) Ship samples frozen on dry ice.

Specimen Minimum Volume: 4.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen		CSF KIT

CPT Code Information: 82542; 83497; 83150;

FNTSM 91940

Neurotransmitter Profile 3

Specimen Requirements: Medical Neurogenetics collection kit (MCL Supply T657) required. Each collection kit contains 5 microcentrifuge tubes. **COLLECTION PROTOCOL:** 1) CSF should be collected from the first drop into the tubes in the numbered order. Fill each tube to the marked line with the required volumes. Tube 1: 0.5 mL Tube 2: 1.0 mL Tube 3: 1.0 mL (contains antioxidants necessary to protect the same integrity) Tube 4: 1.0 mL Tube 5: 1.0 mL -If samples not blood contaminated, the tubes should be placed on dry ice at bedside. -If samples are blood contaminated, the tubes should immediately be centrifuged (prior to freezing) and the clear CSF transferred to new similarly labeled tubes, then frozen. -Store samples at -80 until they can be shipped. 2) Complete Medical Neurogenetics, LLC request form, marking the following three tests: Neurotransmitter Metabolites, Tetrahydrobiopterin and 5-Methyltetrahydrofolate. Also include sample date and date of birth. 3) Label tubes with patient name and ID number, leaving the tube number viewable. 4) Place samples inside the specimen transport bag and the Medical Neurogenetics, LLC request form inside the pouch of the transport bag. 5) Ship samples frozen on dry ice.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen		CSF KIT

CPT Code Information: 82542 â€“ 5-Methyltetrahydrofolate; Â 82542 â€“ Tetrahydrobiopterin/Neopterin; Â 82542, 83497, 83150 â€“ Neurotransmitter Metabolites/Amines; Â ;

NADF 35312

Newborn Aneuploidy Detection, FISH

Specimen Requirements: Provide a reason for referral with each specimen. The laboratory will not reject testing if this information is not provided, but appropriate testing and interpretation may be compromised or delayed. Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. 3. Advise Express Mail or equivalent if not on courier service. 4. Cord blood is acceptable.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 ã DNA probe, each (first probe set), Interpretation and report; 88271x2 ã DNA probe, each; each additional probe set (if appropriate); 88271x1 ã DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 ã DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 ã DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 ã Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 ã Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 ã Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

NGAMT 65661

Next-Generation Sequencing Acute Myeloid Leukemia, Therapeutic Gene Mutation Panel (FLT3, IDH1, IDH2, TP53), Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Bone marrow aspirate (preferred) Container/Tube: Preferred: EDTA (lavender top) or ACD (yellow top) Acceptable: Heparin (green top) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Peripheral blood Container/Tube: Preferred: EDTA (lavender top) or ACD (yellow top) Acceptable: Heparin (green top) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube with indication of volume and concentration of the DNA Specimen Volume: 100 uL at 20 ng/uL concentration Collection Instructions: Label specimen as extracted DNA and source of specimen Specimen Stability: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood, Bone Marrow: 1 mL Extracted DNA: 100 mcL at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	14 days	

CPT Code Information: 81120; 81121; 81245; 81246; 81352;

NGAML 65089

Next-Generation Sequencing, Acute Myeloid Leukemia, 11-Gene Panel, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Bone marrow aspirate (preferred) Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (heparin), but not preferred Specimen Volume: 2 mL Collection Instructions: 1.

Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Green top (heparin), but not preferred Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5-2 mL tube with indication of volume and concentration of the DNA Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA and source of specimen Specimen Stability: Frozen (preferred) /Refrigerated/Ambient

Specimen Minimum Volume: Blood, Bone Marrow: 1 mL Extracted DNA: 100 mcL at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	14 days	

CPT Code Information: 81450

NGSFX
65718

Next-Generation Sequencing, Reflex from Acute Myeloid Leukemia 4- or 11-Gene Panels, Varies

Specimen Requirements: Only orderable as a reflex. Reflex testing is available upon request within 6 months of original NGAMT / Next-Generation Sequencing Acute Myeloid Leukemia, Therapeutic Gene Mutation Panel (FLT3, IDH1, IDH2, TP53) or NGAML / Next-Generation Sequencing, Acute Myeloid Leukemia, 11-Gene Panel sample submission. No additional specimen is required. This is a bioinformatics review of additional gene regions not analyzed in the previously ordered NGAMT / Next-Generation Sequencing Acute Myeloid Leukemia, Therapeutic Gene Mutation Panel (FLT3, IDH1, IDH2, TP53) or NGAML / Next-Generation Sequencing, Acute Myeloid Leukemia, 11-Gene Panel. Call 800-533-1710 for assistance with ordering.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	14 days	

CPT Code Information: 81450

NIU
8626

Nickel, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Plastic, 10-mL urine tube (T068) Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 0.9 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83885

NIS 8622

Nickel, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free B-D Tube (No Additive), 6 mL (T184) Metal Free Specimen Vial (T173) Collection Container/Tube: Royal blue-top (metal-free, no additive)) Submission Container/Tube: 7-mL Mayo metal-free, screw-capped, vial Specimen Volume: 2 mL Collection Instructions: 1. Allow the specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into a Mayo metal-free, screw-capped vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: If ordering the trace element blood collection tube from BD, order catalog #368380.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	METAL FREE
	Ambient	7 days	METAL FREE
	Frozen	7 days	METAL FREE

CPT Code Information: 83885

NICRU 60442

Nickel/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	

Frozen

28 days

CPT Code Information: 83885 Nickel Concentration; 82570 Creatinine Concentration;

NICOU

82510

Nicotine and Metabolites, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, 5 mL, aliquot tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Ambient (preferred)	28 days	
	Frozen	365 days	
	Refrigerated	28 days	

CPT Code Information: 80323; G0480 (if appropriate);

NICOS

82509

Nicotine and Metabolites, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 0.8 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80323; G0480 (if appropriate);

NCSRY

46918

Nicotine Survey, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 0.8 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

NPABZ
35521**Niemann-Pick Disease, Types A and B, Full Gene Analysis, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood Spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches-3 mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479-Unlisted molecular pathology procedure; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

NIEM
9313**Niemann-Pick Type C Detection, Fibroblasts**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient

Transport Temperature:

Specimen Type	Temperature	Time	Special Container

Tissue Varies

CPT Code Information: 82658-Niemann-Pick type C detection; 88233-Fibroblast culture; 88240-Cryopreservation for biochemical studies;

NPCZ 35518

Niemann-Pick Type C Disease, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81404-NPC2 (Niemann-Pick disease, type C2 [epididymal secretory protein E1]) (eg, Niemann-Pick disease type C2), full gene sequence; 81406-NPC1 (Niemann-Pick disease, type C1) (eg, Niemann-Pick disease), full gene sequence; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

NITU 607705

Nitrogen, Total, 24 Hour, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. No preservative. Refrigerated is the preferred preservation method. Specimen Stability Information: Frozen -3 years Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen		

CPT Code Information: 84999

NITF 607704

Nitrogen, Total, Feces

Specimen Requirements: Patient Preparation: Laxatives and enemas should not be used during collection as barium and boric acid interfere with test procedure. Supplies: Stool Containers - 24, 48, 72 Hour Kit (T291) Container/Tube: Stool container; complies with shipping requirements, do not use other containers. Specimen Volume: Entire collection (24, 48, 72, or 96 hour) Collection Instructions: 1. All containers must be sent together. 2. Entire collection must contain at least 5 g of feces. 3. The number of containers sent should be indicated on the labels (ie, 1 of 4) Specimen Stability Information: Frozen 3 years Additional Information: Patient can store sample at refrigerate temperature during collection period.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)		
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 84999

NKX3 606692

NKX3.1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SSF1 87294

Nocardia Stain, Varies

Specimen Requirements: Container/Tube: Sterile container Specimen Volume: Entire collection Collection Instructions: Collect a raw specimen.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Ambient	7 days	

CPT Code Information: 87206; 87176-Tissue processing (if appropriate);

NDSPC
113339**Non-Gynecologic Direct Smear (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88104

NTPPC
113337**Non-Gynecologic ThinPrep (Bill Only)**

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88112

NSIP
31769**Non-Seasonal Inhalant Allergen Profile, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003 x 10

NSFIB
604200**Nonalcoholic Steatohepatitis (NASH)-FibroTest, Serum and Plasma**

Specimen Requirements: Both serum and plasma are required for this test. Patient Preparation: Fasting for 12 hours or more is required Specimen Type: Serum Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Amber vial Specimen Volume: 4 mL Collection Instructions: 1. Centrifuge and aliquot serum into an amber vial within 2 hours of collection. 2. Centrifuged serum must be light protected within 4 hours of collection. It is acceptable to draw the blood and then protect it from light after

centrifugation as long as it's within 4 hours of collection. 3. Label specimen as serum. Specimen Type: Plasma Collection Container/Tube: Grey top (potassium oxalate/sodium fluoride) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge and aliquot plasma into plastic vial. 2. Label specimen as plasma.

Specimen Minimum Volume: Serum: 2 mL Plasma: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma NaFl-KOx	Refrigerated (preferred)	7 days	
	Frozen	14 days	
	Ambient	7 days	
Serum	Refrigerated (preferred)	7 days	LIGHT PROTECTED
	Frozen	14 days	LIGHT PROTECTED
	Ambient	24 hours	LIGHT PROTECTED

CPT Code Information: 0003M

NSRGP 63161

Noonan Syndrome and Related Disorders Multi-Gene Panel, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Additional Information: Prior Authorization is available for this assay; see Special Instructions. Submit the required form with the specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 81479-CBL; 81404-HRAS; 81311-NRAS; 81405 x 2-KRAS, SHOC2; 81406 x 6-BRAF, MAP2K1, MAP2K2, PTPN11, RAF1, SOS1;

G110 63685

Normal Transferrin CDG Panel (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 81443; ;

LNORO 65170

Norovirus PCR, Molecular Detection, Feces

Specimen Requirements: Supplies: C and S Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair, Para-Pak Culture and Sensitivity Media) Specimen Volume: Representative portion of diarrheal fecal sample, 1 gram or 5 mL Collection Instructions: 1. Collect fresh feces and place in preservative within 1 hour of collection. 2.

Visibly formed feces are not consistent with Norovirus gastrointestinal disease and should not be submitted for testing.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Ambient	7 days	

CPT Code Information: 87798 x 2

NEREG
31767

Northeast Regional Allergen Profile, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003 x 10

NOTRP
37119

Nortriptyline, Serum

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose (minimum 12 hours after last dose). 2. Centrifuge and aliquot serum into plastic vial. Serum must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 80335; G0480 (if appropriate);

FCCEV
57461

NOTCH3 (CADASIL) Sequencing Test

Specimen Requirements: Specimen Type: Whole Blood Container/Tube: Lavender-top (EDTA) Specimen Volume: 8 mL Collection Instructions: Draw 8 mL whole blood in a lavender-top (EDTA) tube(s) and ship ambient. Note: Collection date is required.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	10 days	
	Refrigerated	10 days	

CPT Code Information: 81406

NR4A3 64940

NR4A3 (9q22.33) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Specimen Type: Slides Specimen Volume: Four Consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-NA probe, each; each additional probe set (if appropriate); 88271 x 1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

PBNP 84291

NT-Pro B-Type Natriuretic Peptide, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	365 days	
	Refrigerated	7 days	

CPT Code Information: 83880

NTRK

606377

NTRK Gene Fusion Panel, Tumor

Specimen Requirements: This assay requires at least 10% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area: tissue 36 mm(2). -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. In this document, the sizes are given as 4mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3mm x 1mm x 10 slides: approximate/equivalent to 36mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81194

NTXPR

61656

NTX-Telopeptide, Urine

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Plastic, 13-mL urine tube Specimen Volume: 4 mL Collection Instructions: 1. Collect second morning void. 2. No preservative.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	28 days	
	Refrigerated	14 days	
	Ambient	72 hours	

CPT Code Information: 82570; 82523;

NMRLP

603839

Nuclear Magnetic Resonance Lipoprotein Profile, Serum

Specimen Requirements: Patient Preparation: 1. Fasting overnight (12-14 hours) is required. On night before examination, evening meal should be eaten before 6 p.m. and should contain no fatty foods.

2. Patient must not consume any alcohol for 24 hours before the specimen is collected. Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Allow isopropyl alcohol (from phlebotomy site prep) to dry thoroughly before venipuncture. 2. Centrifuge and aliquot serum.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	14 days	
	Ambient	8 hours	

CPT Code Information: 83704

NPM1Q 604418

Nucleophosmin (NPM1) Mutation Analysis, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: Lavender top (EDTA) or yellow top (ACD-B) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Lavender top (EDTA) or yellow top (ACD-B) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 4 mL Bone marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	5 days	
	Ambient	72 hours	

CPT Code Information: 81310-NPM1 (nucleophosmin) (eg, acute myeloid leukemia) gene analysis; exon 12 variants

NUT 70521

NUT Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

NUT1F

63431

NUTM1 (15q14) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Specimen Type: Slides Specimen Volume: 4 Consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: 2 consecutive, unstained, 5 micron- thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271 x 1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); ; 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274-w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

NMEG

82497

Nutmeg, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

NUTSP

31771

Nuts Allergen Profile, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003 x 5

FNGPG Nuts and Grains Panel IgG

57930

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001 x 17

FOAKE Oak Live (*Quercus virginiana*) IgE

57999

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FROE Oak Red (*Quercus rubra*) IgE

57907

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

OAK 82673

Oak, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FOATG 57576

Oat IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

OATS 82688

Oat, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

OCT2 70522

OCT-2 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

OCT4 70523

OCT3/4 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

OCTO 82820

Octopus, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)		14 days
	Frozen		90 days

CPT Code Information: 86003

FLNZ 91129

Olanzapine (Zyprexa)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium

heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80342

OLIG2 71357

OLIG2 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

OLIGS 2783

Oligoclonal Banding, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see: -OLIG / Oligoclonal Banding, Serum and Spinal Fluid -MSP3 / Multiple Sclerosis (MS) Profile, Serum and Spinal Fluid Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 83916

OLIG 8017

Oligoclonal Banding, Serum and Spinal Fluid

Specimen Requirements: Both serum and spinal fluid are required. Spinal fluid must be obtained within 1 week of serum collection. Specimen Type: Serum Container/Tube: Preferred: Serum

gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge and aliquot serum within 2 hours of collection. 2. Label specimen as serum. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: Label specimen as spinal fluid.

Specimen Minimum Volume: Serum, Spinal Fluid: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	
Serum	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 83916 x 2

OLIGC 3484

Oligoclonal Banding, Spinal Fluid

Specimen Requirements: Only orderable as part of a profile. For more information, see: -OLIG / Oligoclonal Banding, Serum and Spinal Fluid -MSP3 / Multiple Sclerosis (MS) Profile, Serum and Spinal Fluid Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: Label specimen as spinal fluid.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 83916

OLIGU 64889

Oligosaccharide Screen, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 8 mL Pediatric Volume: 2 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Immediately freeze specimen.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	365 days	
	Refrigerated	15 days	

Ambient

7 days

CPT Code Information: 84377**FOLBG**
57671**Olive Black IgG**

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001**OLIV**
82733**Olive Tree, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**OLIVF**
86306**Olive-Food, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

NGSHM
63367

OncoHeme Next-Generation Sequencing for Myeloid Neoplasms, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Bone marrow aspirate (preferred) Container/Tube: Preferred: EDTA (lavender top) or ACD (yellow top) Acceptable: Heparin (green top), but not preferred Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Peripheral blood Container/Tube: Preferred: EDTA (lavender top) or ACD (yellow top) Acceptable: Heparin (green top), but not preferred Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability: Ambient (preferred)/Refrigerate Specimen Type: Extracted DNA from blood or bone marrow Container/Tube: 1.5- to 2-mL tube with indication of volume and concentration of the DNA Specimen Volume: Entire specimen Collection Instructions: Label specimen as extracted DNA and source of specimen Specimen Stability: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood, Bone Marrow: 1 mL Extracted DNA: 100 mcL at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies	14 days	

CPT Code Information: 81450

FONG
57636

Onion IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

ONIN
82806

Onion, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

OPTMX 62736

Opiate Confirmation, Chain of Custody, Meconium

Specimen Requirements: Supplies: Chain of Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required. Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen. Additional Information: 1. Specimen that arrives with a broken seal does not meet the chain of custody requirements. 2. The laboratory recommends sending chain-of-custody specimens by overnight shipment.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	28 days	
	Refrigerated	28 days	
	Ambient	14 days	

CPT Code Information: 80361; 80365; G0480 (if appropriate);

OPATM 84326

Opiate Confirmation, Meconium

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288) Container/Tube: Stool container Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	28 days	
	Refrigerated	28 days	
	Ambient	14 days	

CPT Code Information: 80361; 80365; G0480 (if appropriate);

OPATX 62735

Opiates Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Specimen Type: Urine Container/Tube: Chain-of-Custody Kit (T282) containing the specimen containers, seals, and documentation required. Specimen Volume: 20 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information 1.

If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADLTX / Adulterants Survey, Chain of Custody, Urine. For additional information, please refer to ADLTX / Adulterants Survey, Chain of Custody, Urine. 2. Submitting <20 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 80361; 80365; G0480 (if appropriate);

OPATU 8473

Opiates Confirmation, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 80361; 80365; 80362; G0480 (if appropriate);

FOPIA 75030

Opiates, Serum or Plasma, Quantitative

Specimen Requirements: Submit only one of the following: Plasma Draw blood in a gray top potassium oxalate/sodium fluoride, green (sodium heparin), lavender (EDTA) or pink (K2EDTA) tube(s). Spin down and send 1 mL of plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s). Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Ambient	7 days	
	Frozen		

CPT Code Information: 80361, 80365

FORNG
57632**Orange IgG**

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

ORNG
82740**Orange, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

ORCH
82907**Orchard Grass, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FORGG

57661

Oregano IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

OREG

82496

Oregano, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

ORXNA

604230

Orexin-A/Hypocretin-1, Spinal Fluid

Specimen Requirements: Patient Preparation: Patient should not have recently received radioisotopes, either therapeutically or diagnostically, due to potential assay interference. Collection Container/Tube: Sterile vial Submission Container/Tube: CSF in plain vial with no additives Specimen Volume: 1.5 mL Pediatric Volume: 0.5 mL minimum volume Collection Instructions: 1. Obtain aliquot from second collection vial (preferred, not required). 2. Hemolyzed specimens will give false-positive results. Specimens should be centrifuged to remove any red cells prior to shipping.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen	120 days	

CPT Code Information: 83519

OAU

Organic Acids Screen, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Pediatric: If insufficient collection volume, submit as much specimen as possible in a single container; the laboratory will determine if volume is sufficient for testing. Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	416 days	
	Refrigerated	14 days	

CPT Code Information: 83919

OAUS 610707

Organic Acids Screen, Urine Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Collection Container: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 paper, PerkinElmer 226 (formerly Ahlstrom 226) filter paper, Munktell filter paper Specimen Volume: 1 filter paper card soaked with urine, typically requires 2 -3 mL of urine. Collection Instructions 1. Soak a filter paper card with urine, approximately 22 cm(2) in area (typically requires 2 to 3 mL of urine; exact measurement is not important as urine volume will be normalized to creatinine). Note: Filter paper sample may be collected by dipping the card into a collection cup of urine. Avoid dilute urine if possible. 2. Let urine dry on filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	28 days	FILTER PAPER
	Ambient	14 days	FILTER PAPER
	Refrigerated	14 days	FILTER PAPER

CPT Code Information: 83919

IDENT 9221

Organism Referred for Identification, Aerobic Bacteria

Specimen Requirements: Supplies: Infectious Container, Large (T146) Specimen Type: Pure culture of organism from source cultured Container/Tube: Agar slant or other appropriate media Specimen Volume: Entire specimen Collection Instructions: 1. Perform isolation of infecting bacteria. 2. Bacterial organism must be submitted in pure culture, actively growing. Do not submit mixed cultures.

Specimen Minimum Volume: NA

Transport Temperature:

Specimen Type	Temperature	Time
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Varies	Ambient (preferred)
	Refrigerated

CPT Code Information: 87077-Organism Referred for Identification, Aerobic Bacteria; 87077-Identification Commercial Kit (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87147 x 3-Serologic Agglut Method 1 Ident (if appropriate); 87147-Serologic Agglut Method 2 Ident (if appropriate); 87147 x 4-Serologic Agglut Method 3 Ident (if appropriate); 87147 x 2-6 - Serologic Agglut Method 4 Ident (if appropriate); 87077-Identification Staphylococcus (if appropriate); 87077-Identification Streptococcus (if appropriate); 87798-Identification by PCR (if appropriate);

ANIDE 8114

Organism Referred for Identification, Anaerobic Bacteria

Specimen Requirements: Supplies: Anaerobic Transport Tube (T588) Thioglycollate broth or any other suitable anaerobic transport system Infectious Container, Large (T146) Specimen Type: Pure culture of organism from a source not normally colonized by anaerobes Acceptable Sources: Abscesses, percutaneous transtracheal aspirates, sterile body fluids, suprapubic aspirations, or wounds Container/Tube: Preferred: Anaerobic transport tube (T588) Acceptable: Thioglycollate broth or any other suitable anaerobic transport system Collection Instructions: 1. Perform isolation of infecting bacteria. 2. Bacterial organism must be submitted in pure culture, actively growing. Do not submit mixed cultures.

Specimen Minimum Volume: NA

Transport Temperature:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

CPT Code Information: 87076-Organism ref for ID, anaerobic bact; 87076-Id MALDI-TOF mass spec anaerobe (if appropriate); 87076-Anaerobe Ident (if appropriate); 87153-Anaerobe ident by sequencing (if appropriate); 87077-Identification commercial kit (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate); 87077-Bacteria identification (if appropriate); 87077-Additional identification procedure (if appropriate); 87077-Identification Staphylococcus (if appropriate); 87077-Identification Streptococcus (if appropriate); 87147 x 3-Serologic agglut method 1 ident (if appropriate); 87147-Serologic agglut method 2 ident (if appropriate); 87147 x 4-Serologic agglut method 3 ident (if appropriate); 87147 x 2-6 - Serologic Agglut Method 4 Ident (if appropriate); 87153-Aerobe ident by sequencing (if appropriate); 87798-Identification by PCR (if appropriate);

FOGPM 75384

Organophosphate Pesticide Metabolites, Urine

Specimen Requirements: Container/Tube: Plastic, preservative-free urine container Specimen Volume: 2 mL Collection Instructions: 1. Collect 2 mL random urine specimen without preservative. 2. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 0.95 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	30 days	

Frozen	180 days
Ambient	5 days

CPT Code Information: 82570; 84430; 81002, if appropriate;

OROT 8905

Orotic Acid, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random or timed urine specimen. 2. No preservative.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen	30 days	

CPT Code Information: 83921

FORRT 57968

Orris Root (Iris florentina) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

OPTU 614360

Orthostatic Protein, Timed Collection, Urine

Specimen Requirements: Specimens should be collected before fluorescein is given or not collected until at least 24 hour later. Supplies: 2 Aliquot Tube, 5 mL (T465) Daytime Collection Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a 16-hour (daytime) urine specimen. 2. No preservative. 3. Invert well before taking 4-mL aliquot. 4. Do not over fill aliquot tube 4 mL at most. 5. Collect specimen per instructions in Orthostatic Protein Measurement 24-Hour Urine: Collection Site Instructions (T546) in Special Instructions. Nighttime (Supine) Collection Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect an 8-hour (nighttime) urine specimen. 2. No preservative. 3. Invert well before taking 4-mL aliquot at most.

Specimen Minimum Volume: 1 mL from 16-hour (daytime) urine collection/1 mL from 8-hour (nighttime) urine collection

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	24 hours	

CPT Code Information: 84156 x 2**OSMOF**
606758**Osmolality, Feces**

Specimen Requirements: Patient Preparation: No barium, laxatives, or enemas may be used for 96 hours prior to start of, or during, collection. Supplies: Stool containers - 24, 48, 72 Hour Kit (T291) Container/Tube: Stool container Specimen Volume: 10 g Collection Instructions: Collect a very liquid stool specimen.

Specimen Minimum Volume: 5 g**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	14 days	
	Refrigerated	7 days	
	Ambient	48 hours	

CPT Code Information: 84999**UOSMU**
606520**Osmolality, Random, Urine**

Specimen Requirements: Supplies: Urine tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 83935**UOSMS**
614057**Osmolality, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 2 mL

Specimen Minimum Volume: 0.25 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	7 days	
	Ambient	24 hours	

CPT Code Information: 83930

UOSMM 614053

Osmolality, Urine

Specimen Requirements: Only orderable as a reflex. For more information see UAR / Urinalysis with Microscopic. Container/Tube: Plastic urine container Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 83935

FRAG 9064

Osmotic Fragility, Erythrocytes

Specimen Requirements: Both a whole blood EDTA specimen and a control specimen are required as temperature extremes can increase the fragility of the specimen and cause false-positive results. Patient: Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: 1. Immediately refrigerate specimen after collection. Refrigerate at 0 to 4°C. Do not freeze. Freezing causes sample lysis, and tests will not be performed on hemolyzed specimens. 2. Send specimen in original tube. Do not aliquot. 3. Rubber band patient specimen and control vial together. Control must accompany the patient sample at all times to ensure the reliability of testing results. 4. Be sure specimen and control are stored and transported together at refrigerated temperature, carefully following proper handling and shipping instructions. Normal Shipping Control: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: 1. Draw a control specimen from a normal (healthy), unrelated, nonsmoking person at the same time as the patient. 2. Handwrite "normal control" clearly on the outermost label. 3. Immediately refrigerate specimen after collection. Refrigerate at 0 to 4°C. Do not freeze. Freezing causes sample lysis, and tests will not be performed on hemolyzed specimens. 4. Send specimen in original tube. Do not aliquot. 5. Rubber band patient specimen and control vial together. Control must accompany the patient sample at all times to ensure the reliability of testing results.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Control	Refrigerated	72 hours	PURPLE OR PINK TOP/EDTA
Whole Blood EDTA	Refrigerated	72 hours	

CPT Code Information: 85557

OSG_F
610305

Osmotic Gap, Feces

Specimen Requirements: Patient Preparation: No barium, laxatives, or enemas may be used for 96 hours prior to start of, or during, collection. Supplies: Stool containers - 24, 48, 72 Hour Kit (T291) Collection Container/Tube: Stool container Specimen Volume: 10 g Collection Instructions: Collect a very liquid fecal specimen.

Specimen Minimum Volume: 5 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	14 days	
	Refrigerated	7 days	
	Ambient	48 hours	

CPT Code Information: 84302-Sodium; 84999-Potassium;

OSCAL
80579

Osteocalcin, Serum

Specimen Requirements: Patient Preparation: 1. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. 2. Patient should be fasting for 12 hours. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	14 days	
	Refrigerated	72 hours	

CPT Code Information: 83937

OAP
9216

Ova and Parasite, Concentrate and Permanent Smear, Microscopy, Feces

Specimen Requirements: Patient Preparation: Specimen collection should be delayed for 7 to 10 days after administration of barium, bismuth, kaolin, magnesia, castor oil or mineral oil, and 2 to 3 weeks after antibiotics have been given since these may interfere with identification of protozoa. Specimen Type: Stool, duodenal aspirate, colonic washing Supplies: ECOFIX Stool Transport Vial (Kit) (T219) Preferred: ECOFIX preservative (T219) Acceptable: 10% Buffered Formalin Stool Transport plus Polyvinyl Acetate (PVA) Stool Transport Specimen Volume: Portion of stool; or entire collection of intestinal specimen Collection Instructions: 1. Place specimen into preservative within 30 minutes of

passage or collection. 2. Follow instructions on the container as follows: a. Mix the contents of the tube with the spoon, twist the cap tightly closed, and shake vigorously until the contents are well mixed. Refer to the fill line on the Ecofix vial for stool specimens. b. Do not fill above the line indicated on the container. c. Duodenal aspirates, small bowel aspirates, or colonic washings should be placed in Ecofix in a ratio of 1:1 Additional Information: Stool placed in 10% buffered formalin can be accepted if accompanied by a PVA-preserved specimen; 10% buffered formalin-preserved specimens submitted without an accompanying PVA-preserved specimen will be canceled.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Ambient (preferred)	21 days	
	Refrigerated	21 days	

CPT Code Information: 87177-Concentration (any type), for infectious agents; 87209-Smear, primary source with interpretation; complex special stain (eg, trichrome, iron hematoxylin) for ova and parasites;

OAPNS 39855

Ova and Parasite, Microscopy, Varies

Specimen Requirements: Specimen Type: Bile Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Type: Bone marrow Container/Tube: Lavender top EDTA and/or slides Specimen Volume: 4 mL Collection Instructions: 1. Bone marrow and/or slides will be accepted for this test. 2. If submitting slides with EDTA tube, label and bag specimens together. Submit to lab refrigerate as 1 collection. Specimen Type: Spinal fluid Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Type: Fluid, abscess, drainage material Sources: Abdominal, ascites, brain, cyst, liver, lymphatic, peritoneal, splenic Container/Tube: Sterile container Specimen Volume: 15 mL Collection Instructions: 1. Place half of collection into preservative (Ecofix or PVA and Formalin) in a ratio of 1:1. 2. Place other half of collection in a sterile container. 3. Label both specimens, bag together, and submit to lab refrigerate as 1 collection. Specimen Type: Respiratory specimens including bronchial washing, bronchoalveolar lavage, sputum Container/Tube: Sterile container Specimen Volume: Entire collection Specimen Type: Tissue Sources: Bladder, brain, colon, intestine, liver, lymph node, lung, muscle, rectal, spleen Container/Tube: Sterile container Specimen Volume: 5-10 mm Collection Instructions: Place specimen in 1 to 2 drops of sterile saline to keep tissue moist.

Specimen Minimum Volume: Respiratory specimens, spinal fluid, abscess, or drainage material: 0.5 mL Tissue: 3 mm

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated	5 days	

CPT Code Information: 87015-Concentration (any type), for infectious agents (if applicable); 87209-Smear, primary source with interpretation; complex special stain (eg, trichrome, iron hematoxylin) for ova and parasites (If applicable); 87210-Wet mount for infectious agents (if applicable); 87207-Smear, primary source, with interpretation; special stain for inclusion bodies or intracellular parasites (if applicable);

OVAL 82826

Ovalbumin, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen

Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86008

FOVAS 57836

Ovarian Antibody Screen with Reflex to Titer, IFA

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 86255; 86256 (if appropriate);

OVMU 82825

Ovomucoid, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86008

OXI 82679

Ox-Eye Daisy, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x

number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

OXVM1
41976

OXA-48 and VIM, PCR (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87150 x 2

OVS RP
65042

OXA-48-like (blaOXA-48-like) and VIM (blaVIM) Surveillance, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by oxacillin-hydrolyzing beta-lactamase (OXA-48-like) or Verona integron-encoded metallo-beta-lactamase (VIM) DNA is unlikely. Submit only 1 of the following specimens: Supplies: -Culturette (BBL Culture Swab) (T092) -C and S Vial (T058) Preferred: Specimen Type: Perianal, perirectal, rectal, anal Collection Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Acceptable: Supplies: Cary-Blair or Para-Pak C and S Vial (T058) Specimen Type: Preserved feces Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of feces Collection Instructions: Collect fresh fecal specimen and submit 1 gram or 5 mL in container with transport medium.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798 x 2

OXVRP
65043

Oxacillin-Hydrolyzing Beta-Lactamase (blaOXA-48-like) and Verona integron-encoded metallo-beta-lactamase (blaVIM) in Gram-Negative Bacilli, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by oxacillin-hydrolyzing beta-lactamase (OXA-48-like) or Verona integron-encoded metallo-beta-lactamase (VIM) DNA is unlikely. Supplies: Infectious Container, Large (T146) Collection Container/Tube: Slant Specimen Volume: Isolate Collection Instructions: 1. Perform isolation of infecting bacteria. 2. Bacterial organism must be submitted in pure culture, actively growing. Do not submit mixed cultures.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87150 x 2

DOXA1 606473

Oxalate Analysis, Hemodialysate

Specimen Requirements: Specimen Type: Dialysate fluid Patient Preparation: Patient should avoid taking vitamin C supplements for 24 hours prior to dialysis Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 5 mL Collection Instructions: Adjust the pH of the specimen to 2.5 to 3.0 with 6M Hydrochloric Acid Additional Information: Nonacidified frozen hemodialysate delivered to the laboratory within 3 days from collection will be accepted and the following comment will be added to the result: In nonacidified hemodialysate stored frozen, oxalate values may increase spontaneously.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Dialysate Fluid	Frozen	14 days	

CPT Code Information: 83945

OXU 606737

Oxalate, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Avoid taking large doses (>2 g orally/24 hours) of vitamin C during specimen collection. Supplies: -Diazolidinyl Urea (Germall) 5.0 mL (T822) -Aliquot Tube, 5 mL (T465) Container/Tube: Plastic tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Add 5 mL of diazolidinyl urea (Germall) as a preservative at start of collection or refrigerate specimen during and after collection. 2. Collect urine for 24 hours. 3. Specimen pH should be between 4.5 and 8 and will stay in this range if kept refrigerated. Specimens with pH >8 may indicate bacterial contamination, and testing will be cancelled. Do not attempt to adjust pH as it will adversely affect results. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 83945

POXA1 606472

Oxalate, Plasma

Specimen Requirements: Any client who has never collected a specimen for this test should call 800-533-1710 or 507-266-5700 and ask for the Clinical Specialty Laboratory for more detailed instructions. Patient Preparation: 1. Fasting (12 hours) 2. Patient should avoid taking vitamin C supplements for 24 hours prior to collection. Specimen Type: Acidified plasma Collection Container/Tube: Green top (sodium heparin) Submission Container/Tube: Plastic vial Specimen Volume: 5 mL Collection Instructions: 1. Place specimen on wet ice immediately. 2. Centrifuge for 10 minutes at 3,500 rpm at 4°C within 1 hour of collection. 3. Aliquot plasma into a plastic vial. 4. Adjust the pH of the plasma specimen to a pH of 2.3-2.7 with approximately 10 mcL concentrated (12M) hydrochloric acid (or 20 mcL of 6M HCl) per 1 mL plasma. Additional Information: Nonacidified specimens can be accepted if the heparinized plasma is properly frozen. However, a disclaimer will be added in nonacidified plasma: Sample was received nonacidified and frozen. In nonacidified samples oxalate values may increase spontaneously.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Heparin	Frozen	30 days	

CPT Code Information: 83945

ROXUR 606747

Oxalate, Random, Urine

Specimen Requirements: Patient Preparation: Avoid taking large doses (>2 g orally/24 hours) of vitamin C prior to specimen collection. Supplies: Urine Tubes, 10 mL tube (T068) Container/Tube: 10-mL plastic tube or a clean, plastic container with no metal cap Specimen Volume: 7 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Specimen pH should be between 4.5 and 8 and will stay in this range if kept refrigerated. Specimens with pH above 8 may indicate bacterial contamination, and testing will be cancelled. Do not attempt to adjust pH as it will adversely affect results.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 83945; 82570;

OXCO1 606748

Oxalate, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see ROXUR / Oxalate, Random, Urine. Patient Preparation: Avoid taking large doses (>2 g orally/24 hours) of vitamin C prior to specimen collection. Supplies: Urine Tubes, 10 mL tube (T068) Container/Tube:

10-mL plastic tube or a clean, plastic container with no metal cap Specimen Volume: 7 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Specimen pH should be between 4.5 and 8 and will stay in this range if kept refrigerated. Specimens with pH above 8 may indicate bacterial contamination, and testing will be cancelled. Do not attempt to adjust pH as it will adversely affect results.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 83945

RAT11 606751

Oxalate/Creatinine Ratio, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see ROXUR / Oxalate, Random, Urine.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

FOXAZ 90108

Oxazepam (Serax), Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80346; G0480 (if appropriate);

OMHC 81030

Oxcarbazepine Metabolite, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST is not acceptable)

Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose. 2. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80183

FOXFU
75390

Oxycodone - Free (Unconjugated), Serum

Specimen Requirements: Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 2 mL of serum refrigerate in a preservative-free plastic vial.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	30 days	
	Ambient	30 days	
	Frozen	30 days	

CPT Code Information: 80365

OXYSX
61727

Oxycodone Screen, Chain of Custody, Random, Urine

Specimen Requirements: Container/Tube: Chain-of-Custody Kit (T282) containing the specimen containers, seals, and documentation required. Specimen Volume: 20 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80307

OXYSU 62623

Oxycodone Screen, Random, Urine

Specimen Requirements: Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 20 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody testing, order OXYSX / Oxycodone Screen, Chain of Custody, Urine. 2. If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADULT / Adulterants Survey, Urine. For additional information, please refer to ADULT / Adulterants Survey, Urine.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80307

OXYCX 61728

Oxycodone with Metabolite Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Container/Tube: Chain-of-Custody Kit (T282) containing the specimen containers, seals, and documentation required. Specimen Volume: 20 mL Collection Instructions: Collect specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 80365; G0480 (if appropriate);

OXYCU 62616

Oxycodone with Metabolite Confirmation, Random, Urine

Specimen Requirements: Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 20 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. No STATS are acceptable for this procedure. 3. For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody testing, order OXYCX / Oxycodone with Metabolite Confirmation, Chain of Custody, Urine. 4. Additional drug panels and specific requests are available. Call 800-533-1710 or 507-266-5700. 5. If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADULT / Adulterant Survey, Urine. For additional information, please refer to ADULT / Adulterant Survey, Urine.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 80365; G0480 (if appropriate);

OXYMU 62622

Oxymorphone Confirmation, Random, Urine

Specimen Requirements: Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. Submit 20 mL in 1 plastic bottle. 3. No preservative. Additional Information: 1. No specimen substitutions. 2. No STATS are accepted for this procedure. 3. For situations where chain of custody is required, a Chain-of-Custody Kit (T282) is available. For chain-of-custody testing, order OXYCX / Oxycodone with Metabolite Confirmation, Chain of Custody, Urine 4. Additional drug panels and specific requests are available. Call 800-533-1710 or 507-266-5700. 5. If urine creatinine is required or adulteration of the sample is suspected, the following test should be requested, ADULT / Adulterants Survey, Urine. For additional information, please refer to ADULT / Adulterants Survey, Urine.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 80365; G0480 (if appropriate);

OXYWB 113429

Oxysterols, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin, lithium heparin) or yellow top (ACD B) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	72 hours	
	Ambient	48 hours	

CPT Code Information: 82542

OXYBS 63147

Oxysterols, Blood Spot

Specimen Requirements: Supplies: -Card-Blood Spot Collection (Filter Paper) (T493) -Card-Postmortem Screening (Filter Paper) (T525) Container/Tube: Preferred: Blood Spot Collection (Filter Paper) Acceptable: Ahlstrom 226 filter paper, Munktel filter paper, Postmortem Screening Card or collected with EDTA, sodium heparin, lithium heparin, or ACD B-containing devices Specimen Volume: 2 Blood spots Collection Instructions: 1. Let blood dry completely on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 2. At least 1 spot should be complete, (ie, unpunched). 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	10 days	FILTER PAPER
	Frozen	59 days	FILTER PAPER
	Ambient	10 days	FILTER PAPER

CPT Code Information: 82542

OXNP 62988

Oxysterols, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium heparin or lithium heparin), yellow top (ACD B) Submission Container/Tube: Plastic vial Specimen Volume: 0.3 mL Collection Instructions: 1. Centrifuge at 4°C. 2. Aliquot plasma into plastic vial, taking care not to disturb the buffy coat layer. 3. Send frozen.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	65 days	

CPT Code Information: 82542

OYST 82883

Oyster, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

P16 70524

p16 (INK4a/CDKN2A) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

P40NA 70526

p40 + Napsin A Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88344-TC

P40 70527

p40 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

P53 70528

p53 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

P57I 70529

p57 (KIP2/CDKN1C) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

P62 70629

p62 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

P63 70530

p63 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable:

Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SQUI
82821

Pacific Squid, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

PN10X
62911

Pain Clinic Survey 10, Chain of Custody, Random, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see PANOX / Pain Clinic Survey 10, Chain of Custody, Urine.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 80307

PANOX
62737

Pain Clinic Survey 10, Chain of Custody, Random, Urine

Specimen Requirements: Container/Tube: Chain-of-Custody Kit (T282) containing the specimen containers, seals, and documentation required. Specimen Volume: 30 mL Collection Instructions: Collect a random specimen in the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain-of-custody testing. Additional Information: Submitting less than 30 mL will compromise our ability to perform all necessary testing.

Specimen Minimum Volume: 20 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	14 days	

CPT Code Information: 80307**FPALI****75392****Paliperidone, Serum**

Specimen Requirements: Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 1 mL of serum refrigerate in a preservative-free plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen		

CPT Code Information: 80342**FPANP****75732****Pancreastatin, Plasma**

Specimen Requirements: Patient Preparation: 1. Patient should not be on any medications that may influence Insulin levels, if possible, for at least 48 hours prior to collection. 2. Patient should be fasting 10 hours prior to collection. Patient may drink plain water, no other liquid is acceptable. Specimen Type: Plasma Container/Tube: Z tube (MCL T701) Specimen Volume: 3 mL Collection Instructions: Draw 10 mL of blood in special Z-tube, pre-chilled (MCL T701). Separate plasma from cells immediately after draw and freeze immediately after separation. Send 3 mL of plasma frozen in a plastic vial. Â

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	60 days	

CPT Code Information: 83519**ELASF****609492****Pancreatic Elastase, Feces**

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz (T288) Container/Tube: Stool container Specimen Volume: 5 g Collection Instructions: 1. Collect a fresh random fecal specimen, no preservatives. 2. If specimen is sent refrigerate, send immediately after collection. 3. If specimen cannot be sent immediately, freeze and send frozen (preferred). Additional Information: Â 1. Separate specimens must be submitted when multiple tests are ordered. If only a single specimen is collected, it must be split prior to transport. 2. Testing cannot be added on to a previously collected

specimen.

Specimen Minimum Volume: 1 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	28 days	
	Ambient	72 hours	
	Refrigerated	72 hours	

CPT Code Information: 83520

HPP 8014

Pancreatic Polypeptide, Plasma

Specimen Requirements: Patient Preparation: Fasting (8 hours) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Place specimen on wet ice and keep cold at all times following collection. 2. Centrifuge (refrigerated centrifuge is not required) and aliquot plasma into plastic vial. Freeze immediately.

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	90 days	

CPT Code Information: 83519

PAPY 82356

Papaya, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

PAPR 82810

Paprika, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x

number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

PFIB
601950

Parafibromin, Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope (T693) Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PNPAB
61881

Paraneoplastic Pemphigus Antibody (IgG), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	14 days	

CPT Code Information: 86255

PVLE
607409

Paraneoplastic Vision Loss Evaluation, Serum

Specimen Requirements: Patient Preparation: 1. For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication. 2. This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed, or canceled if radioactivity remains. Container/Tube:

Preferred: Red top Acceptable: Serum gel Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255 x1; 84182 x1; 84182 (if appropriate);

PAVAL 83380

Paraneoplastic, Autoantibody Evaluation, Serum

Specimen Requirements: Patient Preparation: 1. For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication or intravenous immunoglobulin (IVIg) treatment. 2. This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed, or canceled if radioactivity remains. 3. Patient should have no general anesthetic or muscle-relaxant drugs in the previous 24 hours. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 83519 x 3; 86255 x 9; 83519-ARBI (if appropriate); 86255 ACMFS (if appropriate); 84182-AGNBS (if appropriate); 86255-AMPCS (if appropriate); 86256-AMPIS (if appropriate); 84182-AMIBS (if appropriate); 84182-AN1BS (if appropriate); 84182-AN2BS (if appropriate); 86255-CS2CS (if appropriate); 84182-CRMWS (if appropriate); 86255-DPPCS (if appropriate); 86256-DPPTS (if appropriate); 86255-DPPIS (if appropriate); 86255-GABCS (if appropriate); 86256-GABIS (if appropriate); 86341-GD65S (if appropriate); 86255-LG1CS (if appropriate); 86255-GL1CS (if appropriate); 86256-GL1TS (if appropriate); 86255-GL1IS (if appropriate); 86255-NMDCS (if appropriate); 86256-NMDIS (if appropriate); 84182-PC1BS (if appropriate); 84182-PCTBS (if appropriate);

PAC1 37430

Paraneoplastic, Autoantibody Evaluation, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 4 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255 x 9; 84182-AGNBC (if appropriate); 86255-AMPCC (if appropriate); 86256-AMPIC (if appropriate); 84182-AMIBC (if appropriate); 84182-AN1BC (if appropriate); 84182-AN2BC (if appropriate); 86255-CS2CC (if appropriate); 84182-CRMWC (if appropriate); 86255-DPPCC (if appropriate); 86256-DPPTC (if appropriate); 86255-DPPIC (if appropriate); 86255-GABCC (if appropriate); 86256-GABIC (if appropriate); 86341-GD65C (if appropriate); 86255-LG1CC (if appropriate); 86255-GL1CC (if appropriate); 86256-GL1TC (if appropriate); 86255-GL1IC (if appropriate); 86255-NMDCC (if appropriate); 86256-NMDIC (if appropriate); 84182-PC1BC (if appropriate); 84182-PCTBC (if appropriate); 83519-VGKCC (if appropriate);

PARID 9202

Parasite Identification, Varies

Specimen Requirements: Specimen Type: Parasitic worms, insects, or mites Container/Tube: Sterile container (10% formalin or 70% alcohol may be added if appropriate specimen type) Specimen Volume: Entire specimen Collection Instructions: 1. For scabies, submit skin scrapings on glass microscope slide. Cover with a clean slide and use a rubber band to hold the 2 slides together. Place the slides in a clean, dry container for transport. 2. Submit whole worms and worm segments in 70% alcohol or formalin. 3. Submit arthropods (ticks, lice, nits, bed bugs, etc) in a clean, dry container.

Specimen Minimum Volume: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87168-Arthropod (if appropriate); 87169-Parasite (if appropriate);

PTH 70544

Parathyroid Hormone (PTH) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PTHFN
61526

Parathyroid Hormone, Fine-Needle Aspiration Biopsy (FNAB)-Needle Wash

Specimen Requirements: Patient Preparation: For 12 hours before this procedure do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 1 to 1.5 mL Collection Instructions: 1. Needle wash specimens for analysis should be collected in conjunction with cytology specimens. 2. Have saline available prior to start of procedure. Saline is the only acceptable solution for needle washings. 3. After each fine-needle aspiration biopsy (FNAB) has been collected and the material in the needle has been expelled onto a slide for cytologic analysis, attach the used FNAB needle to an empty syringe. 4. Withdraw between 0.10 mL and 0.25 mL of saline up through the needle until the saline starts to fill the hub of the needle or end of the syringe. 5. Expel this fluid back through the needle into a separate plastic aliquot tube. This is the needle washing used for analysis. 6. Repeat steps 2 through 4 for each needle pass of the same biopsied site and empty into the same tube, accumulating a total of 0.5 mL to 1.5 mL of fluid to send to the laboratory. (If more than 1 site is biopsied, see Additional Information) 7. Inspect specimen for visible blood or tissue contamination: -a. If bloody, centrifuge specimen and transfer supernatant to a new plastic aliquot tube (5-mL standard tube) to send to laboratory. The supernatant, not the cellular material, is used for analysis. -b. If specimen is clear, centrifugation is not necessary. 8. Freeze within 2 to 4 hours of collection. Additional Information: 1. If more than 1 site is biopsied, each washing material should be submitted on a separate tube and under a different order number. 2. A minimum of 0.5 mL is required for testing; however, the total collection volume should not exceed 1.5 mL. Sample volumes outside these parameters may be rejected. 3. Do not send saline control. This test has been validated to rule-out saline matrix effect.

Specimen Minimum Volume: 1 to 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fine Needle Wash	Frozen (preferred)	30 days	
	Refrigerated	4 hours	

CPT Code Information: 83970

PTH2
28379

Parathyroid Hormone, Serum

Specimen Requirements: Patient Preparation: 1. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. 2. Patient should be fasting for 12 hours Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	180 days	
	Refrigerated	72 hours	
	Ambient	8 hours	

CPT Code Information: 83970

PTHRP
81774

Parathyroid Hormone-Related Peptide, Plasma

Specimen Requirements: Collection Container/Tube: Ice-cooled, lavender top (EDTA)
Submission Container/Tube: Plastic vial Specimen Volume: 0.7 mL Collection Instructions: 1. Centrifuge specimen in a refrigerated centrifuge or in chilled centrifuge cups. 2. Aliquot plasma into plastic vial and freeze.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	30 days	

CPT Code Information: 82397

PPAP
52964

Parental Sample Prep for Prenatal Microarray Testing, Blood

Specimen Requirements: This test requires 2 blood specimens: 1 sodium heparin and 1 EDTA.
Specimen Type: Whole blood Container/Tube: Green top (sodium heparin) and lavender top (EDTA)
Specimen Volume: EDTA: 3 mL Sodium heparin: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimens in original tubes.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)		
	Refrigerated		

CPT Code Information: This test ID contains no charge and serves as a way to correlate proband parental specimens. If additional testing is warranted, the appropriate tests will be added.

PCAB
83728

Parietal Cell Antibodies, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.45 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516

PJUD
82877

Parietaria judaica, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

POFF
82549

Parietaria officinalis, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

PARO
83731

Paroxetine, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood before next scheduled dose. 2. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80299

PLINK
62139

Paroxysmal Nocturnal Hemoglobinuria, PI-Linked Antigen, Blood

Specimen Requirements: Specimen must arrive within 72 hours of draw. Container/Tube: Preferred: Yellow top (ACD) Acceptable: Lavender top (EDTA) Specimen Volume: 2.6 mL Collection Instructions: Send specimen in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	72 hours	
	Refrigerated	72 hours	

CPT Code Information: 88184-Flow cytometry, RBC x 1; 88184-Flow cytometry, WBC x 1; 88185-Flow cytometry, additional marker (each), RBC x 1; 88185-Flow cytometry, additional marker (each), WBC x 6; 88188-Flow Cytometry Interpretation, 9-15 Markers x 1;

FPRTF
57967

Parrot Australian (Budgerigar) Feathers IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FPARG
57686

Parsley IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

PSLY
82765

Parsley, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

PPPC
113354

Particle Preparation (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88305

PARVS
48395

Parvovirus B19 Antibodies, IgG and IgM, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86747 x 2

PARVG
48320

Parvovirus B19 Antibodies, IgG, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see PARVS / Parvovirus B19 Antibodies, IgG and IgM, Serum. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86747

PARVM Parvovirus B19 Antibody, IgM, Serum

48321

Specimen Requirements: Only orderable as part of a profile. For more information see PARVS / Parvovirus B19 Antibodies, IgG and IgM, Serum. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86747

PARVN Parvovirus B19 Antibody, Technical Interpretation

48322

Specimen Requirements: Only orderable as part of a profile. For more information see PARVS / Parvovirus B19 Antibodies, IgG and IgM, Serum.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

PARVP Parvovirus B19, Molecular Detection, PCR, Plasma

86337

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Aliquot Tube, 5 mL (T465) Specimen Volume: 0.5 mL Collection Instructions: Spin down and submit plasma in aliquot tube.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

PARVO Parvovirus B19, Molecular Detection, PCR, Varies

83151

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type:

Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 0.5 mL Collection Instructions: 1. Do not centrifuge. 2. Label specimen as amniotic fluid. Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: 1. Do not centrifuge. 2. Label specimen as spinal fluid. Specimen Type: Synovial fluid Container/Tube: Sterile vial or lavender top (EDTA) Specimen Volume: 0.5 mL Collection Instructions: Label specimen as synovial fluid. Alternate: Specimen Type: Bone marrow Container/Tube: Sterile container or lavender top (EDTA) Specimen Volume: 0.5 mL Collection Instructions: Label specimen as bone marrow.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

PARVI 70532

Parvovirus Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PFRUT 82355

Passion Fruit, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

PATHC 70317

Pathology Consultation

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Paraffin-embedded tissue block and slides Note: Submit hematoxylin and eosin (H and E) and all special stains performed on the case. Include unstained slides and/or a formalin-fixed, paraffin-embedded tissue block if it is anticipated that additional stains or ancillary testing may be necessary. Unstained slides for immunohistochemistry should be charged, if possible, as not all immunohistochemical stains can be performed on uncharged slides. Additional Information: If any imaging studies have been performed (ie, electron microscopy [EM], computed tomography [CT], magnetic resonance imaging [MRI], X-rays, etc.), include either on a CD (preferred) or as prints and send with the specimen. For Hematopathology cases include: 1. Recent peripheral blood smear with complete blood cell count (CBC) report 2. Bone marrow biopsy/clot (block and stained slides) 3. Bone marrow aspirate (stained and unstained slides) 4. All pending and final reports for ancillary testing on above specimens

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
MMLDRY	Ambient		

CPT Code Information: 88321 (if appropriate); 88323 (if appropriate); 88325 (if appropriate);

PAX5
70533

PAX-5 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PAX2
607795

PAX2 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PAX8
70534

PAX8 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen

Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FPPCA 75211

PCA3 (Prostate Cancer Antigen 3)

Specimen Requirements: Urine Collect specimen using PROGENSA Urine Specimen Transport Tube (T695) as follows: Perform an attentive digital rectal exam (DRE) immediately prior to specimen collection (specimen should be collected within approximately 1 hour of DRE). Patient should collect the first 20-30 mL voided urine following the DRE. Process specimen within 4 hours of collection (if specimen cannot be processed within 15 minutes, store refrigerated or on ice and process within 4 hours) Invert specimen cup 5 times to re-suspend cells Add 2.5 mL of urine to each of the two GEN-PROBE PROGENSA PSA3 Urine Specimen Transport Tubes. (Do NOT puncture the foil seal on the cape of the transport tube; the specimen must fall between the two black fill lines on the transport tube. Tightly re-cap each urine transport tube and gently invert 5 times to mix; do not shake or vortex. Send both GEN_PROBE PROGENSA transport tubes frozen.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	90 days	PROGENSA VIAL
	Refrigerated	5 days	PROGENSA VIAL
	Ambient	24 hours	PROGENSA VIAL

CPT Code Information: 81313

PDGFB 58102

PDGFB (22q13), Dermatofibrosarcoma Protuberans/Giant Cell Fibroblastoma, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Collection Instructions: Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used Acceptable: Slides Specimen Volume: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: Two consecutive, unstained, 5-micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		

CPT Code Information: 88271x2, 88291 Æâ, -âœ DNA probe, each (first probe set), Interpretation and report; 88271x2 Æâ, -âœ DNA probe, each; each additional probe set (if appropriate); 88271x1 Æâ, -âœ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 Æâ, -âœ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 Æâ, -âœ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 Æâ, -âœ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 Æâ, -âœ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 Æâ, -âœ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

FBEP 57935

Pea Black-Eyed/Cow Pea (*Vigna sinensis*) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FPGNG 57654

Pea Green IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

FPEAC 57666

Peach IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001**PECH****82816****Peach, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**FPNTG****57537****Peanut IgG**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001**FPNG4****57571****Peanut IgG4**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

PEANT 64756

Peanut, IgE with Reflex to Peanut Components, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 2 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	
	Ambient	7 days	

CPT Code Information: 86003

PEAN 82888

Peanut, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	
	Ambient	7 days	

CPT Code Information: 86003

FPEAR 57683

Pear IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

PEAR 82807

Pear, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FPCFG 57688

Pecan Food IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

PCANH 62600

Pecan Hickory, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

PEC 82880

Pecan-Food, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

PAS38 83346

Pediatric Allergy Screen 3 to 8 Years, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.8 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.6 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003 x 6

PAS3 83345

Pediatric Allergy Screen

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.7 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.5 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

90 days

CPT Code Information: 86003 x 5**PAS8**
83347**Pediatric Allergy Screen >8 Years, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.7 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.5 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003 x 5**PCDES**
605129**Pediatric Autoimmune Central Nervous System Disorders Evaluation, Serum****Specimen Requirements:** Patient Preparation: 1. For optimal antibody detection, specimen collection is recommended prior to initiation of immunosuppressant medication or intravenous immunoglobulin treatment. 2. This test should not be requested in patients who have recently received radioisotopes, therapeutically or diagnostically, because of potential assay interference. The specific waiting period before specimen collection will depend on the isotope administered, the dose given, and the clearance rate in the individual patient. Specimens will be screened for radioactivity prior to analysis. Radioactive specimens received in the laboratory will be held 1 week and assayed if sufficiently decayed, or canceled if radioactivity remains. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 4 mL**Specimen Minimum Volume:** 2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86341; 86255 x11;**PCDEC**
605130**Pediatric Autoimmune Central Nervous System Disorders Evaluation, Spinal Fluid****Specimen Requirements:** Container/Tube: Sterile vial Specimen Volume: 4 mL**Specimen Minimum Volume:** 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86255 x10; 86341;**PBPO****82660****Penicillin G, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**PENIV****82656****Penicillin V, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**PENL****82913****Penicillium chrysogenum, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**PENTS****8239****Pentobarbital, Serum**

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum in plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.7 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80345; G0480 (if appropriate);**FPBPG****57657****Pepper Bell/Paprika IgG**

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001**FPBLG****57645****Pepper Black IgG**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

FPCYE **57538**

Pepper Cayenne (Capsicum frutescens) IgE

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FPCHI **57664**

Pepper Chili IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

FPEPA **57838**

Pepsin A Assay

Specimen Requirements: Specimen Type: Tracheal or Bronch Fluid Sources: Tracheal or Bronch Fluid Container/Tube: Standard Transport Tube Specimen Volume: 1 mL Collection Instructions: 1 mL Tracheal or Bronch Fluid shipped frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Frozen	30 days	

CPT Code Information: 83986, 84157, 83516

FPEPS 91638

Pepsinogen I

Specimen Requirements: Patient preparation: Patient should be fasting 10-12 hours prior to collection of specimen. Antacids or other medications affecting stomach acidity or gastrointestinal motility should be discontinued, if possible, for at least 48 hours prior to collection. Specimen Type: Serum Container/Tube: Red top or SST Specimen Volume: 3 mL Collection Instructions: Draw blood in a plain, red-top tube(s), serum-gel tube(s) is acceptable. Separate immediately and send 3 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	14 days	

CPT Code Information: 83520

FPERP 75385

Perampanel, Serum

Specimen Requirements: Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 1 mL of serum refrigerate in a preservative-free plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	30 days	
	Ambient	30 days	
	Frozen		

CPT Code Information: 80339

FOPE 57938

Perch Ocean

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	28 days

CPT Code Information: 86003

FPERC **91631**

Percocet, Urine

Specimen Requirements: Collect 20 mL random urine without preservatives. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	365 days	
	Ambient	72 hours	

CPT Code Information: 80307; 80365

PBPC **113353**

Peripheral Blood (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

SMPB **37406**

Peripheral Blood Smear Review

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood Slide	Refrigerated		CARTRIDGE

CPT Code Information: 85060

PBTC **113257**

Peripheral Blood, TC (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 85007

PNBX 70598

Peripheral Nerve Pathology Consultation

Specimen Requirements: Supplies: Nerve Biopsy Specimen Prep Instruction (T580) Specimen Type: Nerve biopsy tissue, slides, or block Collection Instructions: Prepare and transport specimen per instructions in Nerve Biopsy Specimen Preparation Instruction (T580) in Special Instructions. A Nerve Biopsy Kit (call 507-284-8065 to order) containing fixatives and buffer is available for an additional fee.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Frozen		

CPT Code Information: 88305-(if appropriate); 88313-(if appropriate); 88321-(if appropriate); 88323-(if appropriate); 88323-26-(if appropriate); 88325-(if appropriate); 88362-(if appropriate); 88348-(if appropriate); 88342-(if appropriate); 88341-(if appropriate);

NPPAN 113372

Peripheral Neuropathy Genetic Panels, Next-Generation Sequencing (NGS), Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81448 (if appropriate); 81405 (if appropriate); 81408 (if appropriate); 81407 (if appropriate); 81406 (if appropriate); 81479 (if appropriate); 81325 (if appropriate); 81403 (if appropriate); 81404 (if appropriate);

PINTP 71114

Peripheral Smear Interpretation, Whole Blood

Specimen Requirements: Only orderable as a reflex. For more information see SPSM / Morphology Evaluation (Special Smear), Blood. Container/Tube: Slides Specimen Volume: 5 Unstained, well-made peripheral blood smears (fingerstick blood) Collection Instructions: If peripheral blood smears (fingerstick blood) is not available, a smear from EDTA blood will be accepted. Additional Information: Include complete blood count results (if available) and reason for referral.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 85060

ACASM 83632

Pernicious Anemia Cascade, Serum

Specimen Requirements: Patient Preparation: 1. This test should not be ordered on patients who have received a vitamin B12 injection within the last 2 weeks. 2. Patient should be fasting for 8 hours. 3. If medically feasible, proton pump inhibitor (omeprazole, lansoprazole, dexlansoprazole, esomeprazole, pantoprazole, and rabeprazole) therapy should be discontinued 1 week before measurement of serum gastrin levels. 4. Drugs that interfere with gastrointestinal motility (eg, opioids) should be discontinued for at least 2 weeks before serum gastrin testing. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 4 mL Collection Instructions: 1. Divide specimen into 3 plastic vials, 1 containing 1 mL (label as PAGAS), 1 containing 1.5 mL (label as PAMMA), and 1 containing 1.5 mL (label as B12PA). 2. Band specimens together.

Specimen Minimum Volume: 2.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	24 hours	

CPT Code Information: 82607-Vitamin B12 assay; 82941-Gastrin (if appropriate); 83921-MMA (if appropriate); 86340-IFBA (if appropriate) ;

PDGP 608013

Peroxisomal Disorder Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443

G160
605193

Peroxisomal Disorder Panel (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 81443

PNZN
9789

Perphenazine, (Trilafon), Serum

Specimen Requirements: Submit only 1 of the following specimens Plasma Draw blood in a green-top (sodium heparin) tube(s). Plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in amber vial (T192) to protect from light. Serum Draw blood in a plain, red-top tube(s). Serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in amber vial (T192) to protect from light.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	LIGHT PROTECTED
	Frozen	180 days	LIGHT PROTECTED
	Ambient	72 hours	LIGHT PROTECTED

CPT Code Information: 80342

PERS
82353

Persimmon, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

_PMS2
65791

PGL_PMS2C (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)		
	Refrigerated		

UPH24
606521**pH, 24 Hour, Urine**

Specimen Requirements: Supplies: Diazolidinyl Urea (Germall), 5.0 mL (T822) Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours 2. Add 5 mL of diazolidinyl urea as preservative at start of collection or refrigerate specimen during and after collection. 3. Specimen pH should be between 4.5 and 8 and will stay in this range if kept refrigerated. Specimens with pH >8 indicate bacterial contamination, and testing will be cancelled. Do not attempt to adjust pH as it will adversely affect results. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 83986**UPHB**
606522**pH, Body Fluid**

Specimen Requirements: Supplies: Metal Free Specimen Vial (T173) Container/Tube: Metal-free container Specimen Volume: 5 mL

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Body Fluid	Refrigerated (preferred)	7 days	
	Frozen	7 days	
	Ambient	24 hours	

CPT Code Information: 83986**FPHFL**
57309**pH, Fecal**

Specimen Requirements: 5 g of liquid, random stool. Ship frozen. Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 1 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	14 days	
	Refrigerated	14 days	

CPT Code Information: 83986**PHU**
606510**pH, Random, Urine****Specimen Requirements:** Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collections Instructions: Collect a random urine specimen.**Specimen Minimum Volume:** 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 83986**FPHAS**
57580**Phadiatop (Allergy Screen)****Specimen Requirements:** Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86005**PHAGP**
65665**Phagocytic Primary Immunodeficiency (PID) Gene Panel, Varies****Specimen Requirements:** Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Blood spot Supplies: Card-Blood Spot Collection Filter Paper (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Whatman FTA Classic paper, Ahlstrom 226 filter paper, or Blood Spot Collection Card

(T493) Specimen Volume: 2 to 5 blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient <1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Peripheral blood mononuclear cells (PBMCs) Container/Tube: Cell pellet Collection Instructions: Send as a suspension in freezing medium or cell pellet frozen on dry ice. Specimen Stability Information: Frozen Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Additional Information: Indicate the tests to be performed on the fibroblast culture cells. A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes of culture media can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Additional Information: A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479

PCPMX 62740

Phencyclidine (PCP) Confirmation, Chain of Custody, Meconium

Specimen Requirements: Supplies: Chain of Custody Meconium Kit (T653) includes the specimen containers, seals, and documentation required Specimen Volume: 1 g (approximately 1 teaspoon) Collection Instructions: Collect entire random meconium specimen. Additional Information: 1. Specimen that arrives with a broken seal does not meet the chain of custody requirements. 2. The laboratory recommends sending chain-of-custody specimens by overnight shipment.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	28 days	
	Ambient	28 days	
	Refrigerated	28 days	

CPT Code Information: 83992; G0480 (if appropriate);

PCPMC

89069

Phencyclidine (PCP) Confirmation, Meconium

Specimen Requirements: Supplies: Stool container. Small (Random), 4 oz (T288)
Container/Tube: Stool container Specimen Volume: 1 g (approximately 1 teaspoon) Collection
Instructions: Collect entire random meconium specimen.

Specimen Minimum Volume: 0.3 g (approximately 1/4 teaspoon)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Meconium	Frozen (preferred)	28 days	
	Ambient	28 days	
	Refrigerated	28 days	

CPT Code Information: 83992; G0480 (if appropriate); ;

PCPUG

9788

Phencyclidine (PCP), Confirmation, serum

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in a plastic vial. Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL sodium heparin plasma refrigerated in a plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	

CPT Code Information: 83992

PCPX

62739

Phencyclidine Confirmation, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain of Custody Kit (T282) Container/Tube:
Chain-of-Custody Kit containing the specimen containers, seals, and documentation required. Specimen
Volume: 10 mL Collection Instructions: Collect specimen in the container provided, seal, and submit
with the associated documentation to satisfy the legal requirements for chain-of-custody testing.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 83992; G0480 (if appropriate);

PCPU 80371

Phencyclidine Confirmation, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container Tube: Plastic, 10 mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. Additional Information: 1. No specimen substitutions. 2. STATS are not accepted for this test.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	72 hours	

CPT Code Information: 83992; G0480 (if appropriate);

PBR 37049

Phenobarbital, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80184

FPGT 91757

Phenosense Combination HIV Drug Resistance Assay

Specimen Requirements: Draw blood into two 5 mL PPT (pearl top) or EDTA (lavender top) tube(s). Immediately centrifuge (within 2 hours of collection) at 1000 Åçâ, -â€œ 1200 x g at room temperature for 10 Åçâ, -â€œ 15 minutes. Do not allow samples to remain in centrifuge after centrifugation. Remove plasma from cells immediately and transfer to a plastic screw cap tube. Freeze immediately. Send 3 mL plasma in a screw-cap vial frozen. RECOMMENDED: 1. Patient's most recent viral load. 2. Viral load collection date. NOTE: 1. Intended for use only for patients with viral loads greater than or equal to 500 copies/mL. For best results, viral loads should be confirmed within 2 weeks prior to submission for testing at Monogram. 2. Patient samples submitted <30 days apart are considered duplicate and will be cancelled.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen		

CPT Code Information: 87900/Infectious agent drug susceptibility phenotype prediction; 87901/Infectious agent genotype analysis by nucleic acid; reverse transcriptase and protease; 87903/Infectious agent phenotype analysis by nucleic acid with drug resistance tissue culture analysis; first through 10 drugs tested; 87904/x12 Each additional drug tested;

FPFUZ 91755

Phenosense Entry HIV Drug Resistance Assay

Specimen Requirements: Draw blood into two 5-mL PPT (pearl top) or EDTA (lavender top) tube. Immediately centrifuge (within 2 hours of collection) at 1000-1200xg at room temperature for 10-15 minutes. Do not allow samples to remain in centrifuge after centrifugation. Remove plasma from cells immediately and transfer to a plastic screw-cap tube. Freeze immediately. Send 3 mL plasma in a screw-cap vial frozen. RECOMMENDED: 1. Patient's most recent viral load 2. Viral load collection date NOTE: 1. Intended for use only for patients with viral loads greater than or equal to 500 copies/mL. For best results, viral loads should be confirmed within two weeks prior to submission for testing at Monogram. 2. Patient samples submitted <30 days apart are considered duplicate and will be canceled.

Specimen Minimum Volume: 1.0 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen		

CPT Code Information: 87903

FPHIV 91756

Phenosense HIV Drug Resistance Replication Capacity

Specimen Requirements: Draw blood into two 5 mL PPT (pearl top) or EDTA (lavender top) tube(s). Immediately centrifuge (within 2 hours of collection) at 1000-1200 x g at room temperature for 10-15 minutes. Do not allow samples to remain in centrifuge after centrifugation. Remove plasma from cells immediately and transfer to a plastic screw cap tube. Freeze immediately. Send 3 mL plasma in a screw-cap vial frozen. RECOMMENDED: Patient's most recent viral load Viral load collection date NOTE: 1. Intended for use only for patients with viral loads greater than or equal to 500 copies/mL. For best results, viral loads should be confirmed within two weeks prior to submission for testing at Monogram. 2. Patient samples submitted <30 days apart are considered duplicate and will be canceled.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen		

CPT Code Information: 87903; 87904 x12;

PKUBS 65593

Phenylalanine and Tyrosine, Blood Spot

Specimen Requirements: Submit only 1 of the following specimen types: Preferred: Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, Ahlstrom 226 filter paper, Munktell filter paper, or blood collected in tubes containing heparin, ACD or EDTA and dried on filter paper. Specimen Volume: 2 Blood spots Collection Instructions: 1. Let blood dry on filter paper at room temperature in a horizontal position for 3 or more hours. 2. At least 2 spots should be complete, ie, unpunched. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred) 90 days/Refrigerated 90 days/Frozen 90 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions. Acceptable: Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin) and yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: Send specimen in original tube. Specimen Stability Information: Refrigerate (preferred) 4 days/Ambient 4 days

Specimen Minimum Volume: Blood spots: 1 Whole blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Varies		

CPT Code Information: 84030; 84510; 82542 (if appropriate for government payers);

PKU 8380

Phenylalanine and Tyrosine, Plasma

Specimen Requirements: Patient Preparation: Fasting (4 hours or more for infants) Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen (preferred)	14 days	
	Refrigerated	14 days	

CPT Code Information: 84030-Phenylalanine; 84510-Tyrosine;

PKUSC 610508

Phenylalanine and Tyrosine, Self-Collect, Blood Spot

Specimen Requirements: Supplies: Blood Spot Collection-Self Collect (T858) Container/Tube: Blood Spot Self Collection Card Specimen Volume: 2 Blood spots Additional Information: 1. Order test each time the patient is to collect a dried blood specimen at home and mail the specimen directly to Mayo Clinic Laboratories. 2. Order should be placed a minimum of 3 days prior to desired date of collection. 3. Enter patient's address information for each order created, including street address, city, state abbreviation, zip code, country, and home phone number. 4. For each order, the Blood Spot Collection-Self Collect kit will be mailed directly to the patient for self-collection. 5. See Dried Blood Spot Collection Tutorial for how to collect blood spots: <https://vimeo.com/508490782>

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	90 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Refrigerated	90 days	FILTER PAPER

CPT Code Information: 84030; 84510; 82542 (if appropriate for government payers);

PHEGP

608032

Phenylalanine Disorders Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81405; 81406 x 2; 81479;

PNYF

37052

Phenytoin, Free, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 2 mL Collection Instructions: Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	14 days	
	Ambient	7 days	

CPT Code Information: 80186

PNTFT

37051

Phenytoin, Total and Free, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 2 mL Collection Instructions: Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	14 days	
	Ambient	7 days	

CPT Code Information: Phenytoin, total-80185; Phenytoin, free-80186;

PNYG
37050

Phenytoin, Total and Phenobarbital Group, Serum

Specimen Requirements: One serum specimen (0.5 mL of serum) may be sent if using a red top tube. Serum for Phenytoin: Container/Tube: Red top Specimen Volume: 0.5 mL Collection Instructions: Red-top tubes should be centrifuged and aliquoted within 2 hours of collection. Serum for Phenobarbital: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL for 2 specimens; 0.25 mL for 1 serum red top

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	72 hours	
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	14 days	
	Ambient	7 days	

CPT Code Information: 80184-Phenobarbital; 80185-Phenytoin, total;

PNYA
37048

Phenytoin, Total, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 0.5 mL Collection Instructions: Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	14 days	
	Ambient	7 days	

CPT Code Information: 80185

PHMA 82736

Phoma betae, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FFPET 75559

Phosphatidylethanol (PEth), whole blood

Specimen Requirements: Specimen Type: Whole Blood Container/Tube: EDTA Specimen Volume: 1 mL Collection Instructions: Collect 1mL whole blood in Lavender top (EDTA) tube and send refrigerated.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80321; G0480 (If appropriate);

PSPT 64704

Phosphatidylserine/Prothrombin Antibody, IgG and IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86148 x 2

PSPTG

62578

Phosphatidylserine/Prothrombin Antibody, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86148

PSPTM

62579

Phosphatidylserine/Prothrombin Antibody, IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86148

PFK1

607456

Phosphofructokinase Enzyme Activity, Blood

Specimen Requirements: Collection Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	11 days	

CPT Code Information: 82657

PFKC

608422

Phosphofructokinase Enzyme Activity, Blood

Specimen Requirements: Only available as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	11 days	

CPT Code Information: 82657**PGKC**
608423**Phosphoglycerate Kinase Enzyme Activity, Blood****Specimen Requirements:** Only available as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood**Specimen Minimum Volume:** 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 82657**PGK1**
607457**Phosphoglycerate Kinase Enzyme Activity, Blood****Specimen Requirements:** Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not transfer blood to other containers.**Specimen Minimum Volume:** 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 82657**PLAIF**
70592**Phospholipase A2 Receptor (PLA2R), Renal Biopsy****Specimen Requirements:** Preferred: Frozen tissue Supplies: Renal Biopsy Kit (T231) Specimen Type: Kidney tissue Container/Tube: Renal Biopsy Kit, Zeus/Michel's, Frozen Specimen Volume: Entire specimen Collection Instructions: Collect specimens according to the instructions in Renal Biopsy Procedure for Handling Tissue for Light Microscopy (LM), Immunofluorescent Histology (IF), and Electron Microscopy (EM) in Special Instructions. Additional Information: If standard immunoglobulin and complement immunofluorescence has already been performed, submit the residual frozen tissue (must contain glomeruli) on dry ice. Acceptable: Frozen tissue Slides: 2 frozen tissue unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick, submitted on dry ice.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
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Special	Frozen (preferred)
	Ambient
	Refrigerated

CPT Code Information: 88346-primary IF

PLA2R 64327

Phospholipase A2 Receptor Antibodies, Serum

Specimen Requirements: Collection Container/Tube: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	8 hours	

CPT Code Information: EURO-83520; SCOPE-86255;

PA2RE 603600

Phospholipase A2 Receptor Enzyme-Linked Immunosorbent Assay, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	8 hours	

CPT Code Information: 83520

PA2RI 603601

Phospholipase A2 Receptor Indirect Immunofluorescence Assay, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	8 hours	

CPT Code Information: 86255

EURO 64328

Phospholipase A2 Receptor, Enzyme Linked Immunosorbent Assay, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see PLA2R / Phospholipase A2 Receptor Antibodies, Serum.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	8 hours	

CPT Code Information: 83520

SCOPE 64326

Phospholipase A2 Receptor, Indirect Immunofluorescence Assay, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see PLA2R / Phospholipase A2 Receptor Antibodies, Serum.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	8 hours	

CPT Code Information: 86255

ACLIP 86179

Phospholipid (Cardiolipin) Antibodies, IgA, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86147

CLPMG
82976

Phospholipid (Cardiolipin) Antibodies, IgG and IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86147 x 2

GCLIP
80993

Phospholipid (Cardiolipin) Antibodies, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86147

MCLIP
81900

Phospholipid (Cardiolipin) Antibodies, IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	

Frozen

21 days

CPT Code Information: 86147**PMMIL**
89656**Phosphomannomutase and Phosphomannose Isomerase,
Leukocytes****Specimen Requirements:** Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.**Specimen Minimum Volume:** 3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 82657**PHOS**
8408**Phosphorus (Inorganic), Serum****Specimen Requirements:** Patient Preparation: Patient should fast overnight (12-14 hours) Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.**Specimen Minimum Volume:** 0.25 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	365 days	
	Refrigerated	7 days	

CPT Code Information: 84100**POU**
610832**Phosphorus, 24 Hour, Urine****Specimen Requirements:** Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: 24-Hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.**Specimen Minimum Volume:** 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 84105

POU_F Phosphorus, Feces

606757

Specimen Requirements: Patient Preparation: No barium, laxatives, or enemas may be used for 96 hours prior to start of, or during, collection. Supplies: Stool containers - 24, 48, 72 Hour Kit (T291) Container/Tube: Stool container Specimen Volume: 10 g Collection Instructions: Collect a very liquid stool specimen.

Specimen Minimum Volume: 5 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	14 days	
	Refrigerated	7 days	
	Ambient	48 hours	

CPT Code Information: 84100

RPHOC Phosphorus, Random, Urine

610829

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 84105

PHTDP Phosphorylated TDP43 Immunostain, Technical Component Only

71482

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PAHD

82786

Phthalic Anhydride, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

TPSPC

72162

Physician Interp Screen, Varies

Specimen Requirements: This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		THIN PREP
	Refrigerated		THIN PREP

CPT Code Information: 88141

CVSPC

72163

Physician Interpretation Conventional, Varies

Specimen Requirements: This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		SLIDE
	Refrigerated		SLIDE

CPT Code Information: 88141

TPDPC 72129

Physician Interpretation, Diagnostic, Varies

Specimen Requirements: This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		THIN PREP
	Refrigerated		THIN PREP

CPT Code Information: 88141

PIGE 82781

Pig Epithelium, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FPIGF 75555

Pigeon Feathers IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

PIGF 82145

Pigeon Feathers, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen

Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FPDD 75548

Pigeon/Dove Droppings Gel Diffusion

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 86331

PIN2 70538

PIN2 (p63/p504S) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88344-TC

PINE 82381

Pine Nut, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number

of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FPINP
75410

Pine Ponderosa IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FPIAP
57670

Pineapple IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

PNAP
82815

Pineapple, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**PINW**
9204**Pinworm Exam, Perianal**

Specimen Requirements: Supplies: Swubes (T300) Specimen Type: Perianal Container/Tube: SWUBE disposable paddle (Falcon) or similar method of collection Specimen Volume: Entire specimen Collection Instructions: See Pinworm Collection Instructions in Special Instructions.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 87172**PIPA**
81326**Pipecolic Acid, Serum**

Specimen Requirements: Patient Preparation: Fasting 12 hours or more. (Draw infants and small children just before next feeding) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	94 days	
	Refrigerated	14 days	

CPT Code Information: 82542**PIPU**
81248**Pipecolic Acid, Urine**

Specimen Requirements: Supplies: Plastic, 10-mL urine tube (T068) Container/Tube: Plastic, 10-mL urine tube (T068) Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
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Urine	Frozen (preferred)	94 days
	Refrigerated	14 days

CPT Code Information: 82542

PISTA 82808

Pistachio, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

PIT1 72124

PIT-1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PLAP 70539

Placental Alkaline Phosphatase (PLAP) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PLAI **82837**

Plaice, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

PBLI **9302**

Plasma Cell Assessment, Blood

Specimen Requirements: Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) Specimen Volume: 10 mL

Specimen Minimum Volume: 4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	72 hours	
	Refrigerated	72 hours	

CPT Code Information: 88184-Flow cytometry, cell surface, cytoplasmic; 88185 x 5-Each additional marker; 88187-Flow cytometry, interpretation; 2 to 8 markers;

PCPRO **61654**

Plasma Cell DNA Content and Proliferation, Bone Marrow

Specimen Requirements: Specimen Type: Redirected bone marrow Preferred: Yellow top (ACD) Acceptable: Lavender top (EDTA) or green top (heparin) Specimen Volume: 4 mL Specimen Stability Information: <72 hours

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88182-Flow cytometry, cell cycle or DNA analysis; 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 5-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each); 88187-Flow cytometry interpretation, 2 to 8 Markers

(added as FCINT);

PCPDS 606079

Plasma Cell Proliferative Disorder, FISH, Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD) Acceptable: Lavender top (EDTA) or green top (heparin) Specimen Volume: 4 mL Collection Instructions: Invert several times to mix bone marrow

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271x1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

PLASF 35293

Plasma Cell Proliferative Disorder, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: For each probe set ordered, 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271x1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

CSPCF 607625

Plasma Cell Proliferative Disorder, Pre-Analysis Cell Sorting, Bone Marrow

Specimen Requirements: Only orderable as a reflex. See PCPDS / Plasma Cell Proliferative Disorder, FISH, Bone Marrow Specimen Type: Bone marrow Preferred: Yellow top (ACD) Acceptable: Lavender top (EDTA) or green top (heparin) Specimen Volume: 4 mL Collection Instructions: Invert several times to mix bone marrow

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 88184-Flow Cytometry; first cell surface, cytoplasmic or nuclear marker; 88185 x 5-Flow Cytometry, additional cell surface, cytoplasmic or nuclear marker (each);

PLHBB 9096

Plasma Free Hemoglobin, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Centrifuge and transfer plasma to a plastic vial within 2 hours of collection. 2. Results could be falsely elevated due to artifactual RBC lysis if not centrifuged within 2 hours of collection.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	
	Ambient	4 days	

CPT Code Information: 83051

PGRBC 609675

Plasmalogens, Blood

Specimen Requirements: Patient Preparation: Specimen must be collected either prior to or 6 weeks after a blood transfusion Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin), yellow top (ACD solution A or ACD solution B) Specimen Volume: 5 mL Collection Instructions: Send specimen in original tube.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	14 days	
	Ambient	14 days	

CPT Code Information: 82542

PGDBS 609664

Plasmalogens, Blood Spot

Specimen Requirements: Specimen must be collected either prior to or 6 weeks after a blood transfusion. Submit only 1 of the following specimens: Preferred: Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood spot collection card Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, Munkell filter paper, Whatman Protein Saver 903 paper, or blood collected in tubes containing ACD, EDTA, or heparin spotted and dried on filter paper Specimen Volume: 2 blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is fingerstick. See Dried Blood Spot Collection Tutorial for how to collect blood spots via fingerstick: <https://vimeo.com/508490782> . 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred) 90 days/Refrigerated 90days/Frozen 90 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions. Acceptable Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin), yellow top (ACD solution A or ACD solution B) Specimen Volume: 2 mL Collection Instructions: Send specimen in original tube. Specimen Stability Information: Refrigerate (preferred) 14 days/Ambient 11 days

Specimen Minimum Volume: Blood Spots: 1 Whole Blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Varies		

CPT Code Information: 82542

FPAI1 75736

Plasminogen Activator Inhibitor 1 (PAI-1) Antigen

Specimen Requirements: Patient Preparation: The patient should be in a resting state and the specimen collected in the morning to avoid diurnal variation of results. Specimen Type: Citrated plasma Collection Container/Tube: Light-blue top (sodium citrate) Specimen Volume: 1 mL Collection Instructions: Draw blood in a light blue-top (Sodium citrate) tube(s). Centrifuge for 10 minutes and carefully remove 2/3 of the plasma using a plastic transfer pipette, being careful not to disturb cells. Deliver to a plastic transport tube, cap, and re-centrifuge for 10 minutes. Use a second plastic pipette to remove plasma, staying clear of the platelets at the bottom of the tube. Send 1 mL of platelet-poor plasma frozen in a plastic vial. Note: Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	365 days	

CPT Code Information: 85415

FPAIG 75142

Plasminogen Activator Inhibitor-1, 4G/5G Genotyping (PAI-1 Polymorphism)

Specimen Requirements: Specimen Type: Whole Blood Preferred: EDTA Acceptable: ACD (Yellow top) Specimen volume: 5 mL Collection Instructions: Draw 5 mL whole blood in a lavender top (EDTA) or yellow top (ACD) tube. Send refrigerated.

Specimen Minimum Volume: 1.00 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	8 days	
	Ambient	8 days	

CPT Code Information: 81400

PSGN 9079

Plasminogen Activity, Plasma

Specimen Requirements: See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (citrate) Submission Container/Tube: Polypropylene vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge, remove plasma, centrifuge plasma again. 2. Aliquot plasma into separate plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 3. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C, or, ideally at < or =-40°C. Additional Information: 1. A double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85420

PLABN 35794

Platelet Antibody Screen, Serum

Specimen Requirements: Patient Preparation: Do not collect within 72 hours of a platelet transfusion. Transfused platelets will interfere with this assay. Container/Tube: Red top Specimen Volume: 1.5 mL Collection Instructions: Serum should be separated from red cells prior to shipping.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen (preferred)	365 days	
	Refrigerated	48 hours	

CPT Code Information: 86022

PNP

Platelet Neutralization Procedure, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma and Whole Blood APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

PLAFL
64278

Platelet Surface Glycoprotein by Flow Cytometry, Blood

Specimen Requirements: Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Collection Container/Tube: ACD solution (A or B) Specimen Volume: 6 mL Pediatric Volume: 1 mL Collection Instructions: Do not transfer blood to other containers.

Specimen Minimum Volume: Adult: 1 mL Pediatric 200 mcL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Ambient	4 days	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each) X5; 88187-Flow cytometry interpretation, 2 to 8 markers;

PTEM
63682

Platelet Transmission Electron Microscopic Study, Whole Blood

Specimen Requirements: Patient Preparation: Fasting is preferred but not required. Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Collection Container/Tube: Preferred: Yellow top (ACD, solution B) Acceptable: Yellow top (ACD, solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Ambient	72 hours	

CPT Code Information: 85390; 88348;

FPLAT
75450

Platinum, Serum

Specimen Requirements: Draw blood in a plain, royal blue top tube(s). (Serum gel tube is not acceptable.) Spin down and send 1 mL of serum refrigerated in an acid washed (MCL Supply T619) or trace metal-free plastic container.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	60 days	
	Ambient	60 days	
	Frozen	60 days	

CPT Code Information: 83018**PLAZO**
65855**Plazomicin, Plasma**

Specimen Requirements: Collection Container/Tube: Preferred: Lavender top (K2 EDTA) Acceptable: K3 EDTA, Na EDTA, Na Citrate, Na Heparin, Li Heparin Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Trough specimens are preferred for monitoring concentrations and should be drawn immediately before the next scheduled dose. 2. Spin down within 2 hours of draw. Plasma must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80299**PLUM**
82809**Plum, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**PMLR**
84114**PML/RARA Quantitative, PCR, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: EDTA (lavender top) Acceptable: ACD (yellow top) Specimen

Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Type: Bone marrow Container/Tube: Preferred: EDTA (lavender top) Acceptable: ACD (yellow top) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Peripheral blood: 4 mL Bone Marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	5 days	PURPLE OR PINK TOP/EDTA
	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81315-PML/RARalpha (t(15;17)), (PML-RARA regulated adaptor molecule 1) (eg promyelocytic leukemia) translocation analysis; all breakpoints (eg, intron 3, intron 6 and variable in exon 6), qualitative or quantitative

PMPDD 66569

PMP22 Gene, Large Deletion/Duplication Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81324

PMS2I 35525

PMS-2, Immunostain (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies			

CPT Code Information: 88342

PMS2Z

35528

PMS2 Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: Prior Authorization is available for this test. Submit the required form with the specimen.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81317-PMS2 (postmeiotic segregation increased 2 [S. cerevisiae]) (eg, hereditary non-polyposis colorectal cancer, Lynch syndrome) gene analysis; full sequence analysis; ; 81319-PMS2 (postmeiotic segregation increased 2 [S. cerevisiae]) (eg, hereditary non-polyposis colorectal cancer, Lynch syndrome) gene analysis; duplication/deletion variants;

PMS2

70540

PMS2 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FPNAP

57589

Pneumococcal Antibody Panel (12 Serotype)

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	365 days	

Ambient

7 days

CPT Code Information: 86317 x 12**PNRP**
81698**Pneumocystis jiroveci, Molecular Detection, PCR, Varies**

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by *Pneumocystis* species DNA is unlikely. Submit only 1 of the following specimens: Preferred Specimen Type: Body fluid Sources: Pleural Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Type: Respiratory Sources: Bronchoalveolar lavage, bronchial washing, tracheal secretions, or sputum Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Type: Tissue Sources: Respiratory Container/Tube: Sterile container Specimen Volume: 5-10 mm Collection Instructions: 1. Submit fresh tissue. 2. Keep tissue moist with sterile water or sterile saline Acceptable Specimen Type: NALC/NaOH-digested respiratory specimens Sources: Lavage fluid, bronchial washing, respiratory fluid, sputum, or tracheal secretion Container/Tube: Sterile container Specimen Volume: 2 mL Collection Instructions:

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798**SPN**
8047**Pneumocystis Smear, Varies**

Specimen Requirements: Specimen source is required. Submit only 1 of the following specimens: Preferred: Specimen Type: Bronchoalveolar lavage Container/Tube: Sterile container Specimen Volume: Minimum of 2 mL Specimen Type: Lung or open lung tissue Container/Tube: Sterile container Specimen Volume: Minimum of a rice size piece Collection Instructions: Tissue should be placed in small amount of sterile saline or sterile water. Alternate: Specimen Type: Bronchial washing, sputum, or tracheal secretion Container/Tube: Sterile container Specimen Volume: Minimum of 1 mL

Specimen Minimum Volume: Varies* Bronchoalveolar lavage: 2mL/Sputum, bronchial washings, and tracheal secretions: 1 mL/Lung tissue and open lung biopsy: rice-sized piece of tissue

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Ambient	7 days	

CPT Code Information: 87206; 87176-Tissue processing (if appropriate);**D240**
70416**Podoplanin (D2-D40) Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered;

sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FPOLO
75165

Poliovirus (Types 1, 3) Antibodies, Neutralization

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerate in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	5 days	

CPT Code Information: 86382 x 2

FPOLE
57942

Pollock White (Pollachius virens) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

PVJAK
65116

Polycythemia Vera, JAK2 V617F with Reflex to JAK2 Exon 12-15, Sequencing for Erythrocytosis, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Blood Container/Tube: EDTA (lavender top) or ACD-B (yellow top) Specimen Volume: 10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen

as blood. Specimen Type: Bone marrow aspirate Container/Tube: EDTA (lavender top) or ACD-B (yellow top) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as bone marrow.

Specimen Minimum Volume: Blood: 4 mL Bone Marrow: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	5 days	
	Ambient	5 days	

CPT Code Information: 81270-JAK2 V617; 0027U (if appropriate);

TALDO 61843

Polyols, Quantitative, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Specimen Volume: 2 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	

CPT Code Information: 82542

FPOM 57918

Pomegranate (*Punica granatum*) IgE

Specimen Requirements: Draw blood in a plain red-top tube, serum gel is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

PDCRF 606122

Pompe Disease Cross-Reactive Immunological Material Status, Fibroblasts

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks

Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy
Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin.. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Varies		

CPT Code Information: 84182-Pompe CRIM; 88233-Fibroblast culture; 88240-Cryopreservation for biochemical studies;

PDCRW 606126

Pompe Disease Cross-Reactive Immunological Material Status, Leukocytes

Specimen Requirements: Supplies: Vacutainer 4.0 mL CPT Mononuclear Cell Preparation, 4.0 mL (T840) Specimen Volume: 4 mL Collection Instructions: 1. Collect 4 mL blood in CPT mononuclear cell preparation tube. 2. Mix by inversion 6 to 8 times. 3. Centrifuge at 1800xg for 30 minutes within 2 hours of collection. 4. Send CPT tube on cold packs. Do not aliquot plasma.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated	7 days	NaCit BLUBLK CellPrep

CPT Code Information: 84182

PD2T 65296

Pompe Disease Second-Tier Newborn Screening, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, Munktell filter paper, Whatman Protein Saver 903 paper, or blood collected in tubes containing ACD, EDTA, or heparin and then spotted and dried on filter paper. Specimen Volume: 3 blood spots Collection Instructions: 1. Completely fill at least 3 circles on the filter paper card (approximately 100 microliters blood per circle). 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	56 days	FILTER PAPER
	Frozen	56 days	FILTER PAPER

Ambient

7 days

FILTER PAPER

CPT Code Information: 83789**PDBS**
602280**Pompe Disease, Blood Spot****Specimen Requirements:** Supplies: Card-Blood Spot Collection (Filter Paper) (T493)

Container/Tube: Preferred: Blood Spot Collection Card Acceptable: PerkinElmer 226 (formerly Ahlstrom 226) filter paper, Munktell filter paper, Whatman Protein Saver 903 paper, or blood collected in tubes containing ACD, EDTA, or heparin and dried on filter paper Specimen Volume: 3 blood spots Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is fingerstick. See Dried Blood Spot Collection Tutorial for how to collect blood spots via fingerstick:

<https://vimeo.com/508490782> . 2. Completely fill at least 3 circles on the filter paper card (approximately 100 microliters blood per circle). 3. Let blood dry completely on the filter paper at ambient temperature in a horizontal position for a minimum of 3 hours. 4. Do not expose specimen to heat or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.**Specimen Minimum Volume:** 1 Blood spot**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	56 days	FILTER PAPER
	Frozen	56 days	FILTER PAPER
	Ambient	7 days	FILTER PAPER

CPT Code Information: 83789**GAAZ**
35430**Pompe Disease, Full Gene Analysis, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1740 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated 24 hours

Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115]) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 2 to 5 Blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient older than 1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection

Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches-3 mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81406-GAA (glucosidase, alpha; acid) (eg, glycogen storage disease type II [Pompe disease]), full gene sequence; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

FPOPW Poplar White (Populus alba) IgE

57557

Specimen Requirements: Draw blood in a plain, red-top tube, serum gel tube are acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

POPSD Poppy Seed, IgE, Serum

82632

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FPORG Pork IgG

57627

Specimen Requirements: Draw blood in a plain red-top tube, serum gel tubes are acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

FPRK4

57564

Pork IgG4

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

PORK

82700

Pork, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

PBALP

64661

Porphobilinogen and Aminolevulinic Acid, Plasma

Specimen Requirements: Patient Preparation: Patient should abstain from alcohol for at least 24 hours prior to specimen collection. Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Preferred: Green top (heparin) Acceptable: Green top (lithium heparin), lavender top (EDTA), yellow top (ACD A or B) Submission Container/Tube: Amber vial Specimen Volume: 1 mL

Collection Instructions: It is recommended that specimen collection occur during the acute phase. Porphobilinogen (PBG) and aminolevulinic acid (ALA) may be normal when the patient is not exhibiting symptoms.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen (preferred)	21 days	LIGHT PROTECTED
	Refrigerated	7 days	LIGHT PROTECTED

CPT Code Information: 82542; 82135;

PBGDW Porphobilinogen Deaminase, Washed Erythrocytes

31894

Specimen Requirements: Patient Preparation: Abstinence from alcohol for at least 24 hours prior to specimen collection is essential as ethanol induces porphobilinogen deaminase (PBGD) activity, which may lead to a false-normal result. Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: Washed erythrocyte suspension Collection Instructions: Collect and process whole blood specimen as follows: 1. Transfer entire specimen to a 12-mL graduated centrifuge tube. 2. Centrifuge specimen for 10 minutes at 2000 rpm. 3. Record volume of packed cells and the total volume of the specimen. 4. Discard supernatant plasma. 5. Wash packed erythrocytes 2 times by resuspension of at least an equal amount of cold 0.9% saline, mix, and centrifuge for 5 minutes at 2000 rpm, discarding supernatant after each washing. 6. Resuspend packed cells to the original total volume with 0.9% saline. Invert specimen gently to mix.

Specimen Minimum Volume: 1 mL of washed and resuspended erythrocytes

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Washed RBC	Frozen (preferred)	14 days	
	Refrigerated	14 days	
	Ambient	48 hours	

CPT Code Information: 82657

PBGD_ Porphobilinogen Deaminase, Whole Blood

88925

Specimen Requirements: Patient Preparation: Abstinence from alcohol for at least 24 hours prior to specimen collection is essential as ethanol induces porphobilinogen deaminase (PBGD) activity, which may lead to a false-normal result. Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Specimen Volume: 4 mL

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	8 days	

Ambient

7 days

CPT Code Information: 82657**PBGU**

82068

Porphobilinogen, Quantitative, Random, Urine

Specimen Requirements: Supplies: Urine Container-Amber, 60 mL (T596) Specimen Volume: 20 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative necessary but pH must be >5.0. 3. Specimens should be frozen immediately following collection.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	7 days	LIGHT PROTECTED
	Refrigerated	7 days	LIGHT PROTECTED

CPT Code Information: 84110**PCGP**

608023

Porphyria Comprehensive Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81405; 81406 x 2; 81479;**PEWE**

31893

Porphyryns Evaluation, Washed Erythrocytes

Specimen Requirements: All porphyrin tests on erythrocytes can be performed on 1 draw tube. Patient Preparation: Patient should abstain from alcohol for 24 hours. Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Dark blue top (metal free heparin) or green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: Washed erythrocyte suspension Collection Instructions: Collect and process whole blood specimen as follows: 1. Immediately place specimen on wet ice. 2. Transfer entire specimen to a 12-mL graduated centrifuge tube. 3. Centrifuge specimen for 10 minutes at 2,000 rpm. 4. Record volume of packed cells and the total volume of the specimen. 5. Discard supernatant plasma. 6. Wash packed erythrocytes 2 times by resuspension of at least an equal amount of cold 0.9% saline, mix, and centrifuge for 5 minutes at 2,000 rpm, discarding supernatant after each washing. 7. Resuspend packed cells to the original total volume with 0.9% saline. Invert specimen gently to mix. 8. Transfer to a plastic tube and freeze.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Washed RBC	Frozen (preferred)	14 days	
	Refrigerated	14 days	

CPT Code Information: 84311-Spectrophotometry, analyte not elsewhere specified;
82542-Chromatography (if appropriate);

PEE 88886

Porphyrins Evaluation, Whole Blood

Specimen Requirements: All porphyrin tests on whole blood can be performed on 1 collection tube. Patient Preparation: Patient should abstain from alcohol for 24 hours. Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Dark blue top (metal free heparin), green top (lithium heparin), lavender top (EDTA) Specimen Volume: Full tube Collection Instructions: Immediately place specimen on wet ice.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated	7 days	

CPT Code Information: 84311; 82542-if appropriate;

FQPPS 81652

Porphyrins, Feces

Specimen Requirements: Container/Tube: Stool container (T291) Specimen Volume: Entire collection (48, 72, or 96 hour). 24-Hour collection is adequate if the collection volume is approximately 100 g. Collection Instructions: 1. Patient should be instructed to refrain from red meat and aspirin-containing medications for 3 days prior to, as well as during, specimen collection. Compliance should be indicated. 2. No barium, laxatives, or enemas may be used within 24 hours of starting the collection. Additional Information: 1. Length of collection period is required. 2. Specimens smaller than 100 g may not provide interpretable results. 3. Include a list of medications the patient is currently taking.

Specimen Minimum Volume: 10 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	14 days	
	Refrigerated	14 days	

CPT Code Information: 84126

PQNU 8562

Porphyrins, Quantitative, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Patient should abstain from alcohol for 24 hours prior to, as well as during, collection. Supplies: Amber, 60-mL urine bottle (T596) Sodium Carbonate, 5 gram (T272) Specimen Volume: 20-50 mL Collection Instructions: 1. Collect a 24-hour urine specimen. 2. Add 5 g of sodium carbonate (T272) as preservative at start of collection. This preservative is intended to achieve a pH of >7. Do not substitute sodium bicarbonate for sodium carbonate. 3. The container should be refrigerated and protected from light as much as possible during collection. An aliquot should be frozen when collection is complete.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen	7 days	LIGHT PROTECTED

CPT Code Information: 84110-Porphobilinogen, quantitative; 84120-Porphyrins, quantitation and fractionation;

PQNRU 60597

Porphyrins, Quantitative, Random, Urine

Specimen Requirements: Patient Preparation: Patient should abstain from alcohol for 24 hours prior to collection. Supplies: Urine Container - Amber, 60 mL (T596) Container/Tube: Amber, 60-mL urine bottle (T596) Specimen Volume: 20-50 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen	72 hours	LIGHT PROTECTED

CPT Code Information: 84110-Porphobilinogen, quantitative; 84120-Porphyrins, quantitation and fractionation;

PTP 8731

Porphyrins, Total, Plasma

Specimen Requirements: Patient Preparation: Patient should abstain from alcohol for at least 24 hours prior to specimen collection. Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Preferred: Green top (heparin) Acceptable: Lavender top (EDTA) Submission Container/Tube: Amber vial Specimen Volume: 3 mL Collection Instructions: 1. Centrifuge specimen and aliquot plasma into amber vial. 2. Send plasma frozen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	14 days	LIGHT PROTECTED

CPT Code Information: 84311-Porphyrins, total; 82542-Porphyrins, fractionation (if appropriate);

FPOS

91997

Posaconazole

Specimen Requirements: Container/Tube: Agar slant or other appropriate media Specimen Volume: Organism in pure culture Complete and submit with specimen: 1. Fungus Testing Lab request form Collection Instructions: Organism must be in pure culture, actively growing. Place specimen in a large infectious container (T146) and label as an etiologic agent/infectious substance.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient		

CPT Code Information: 87188 - mould - MIC microdilution or agar dilution (if appropriate); 87186 - yeast - MIC microdilution or agar dilution (if appropriate);

POSA

89591

Posaconazole, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80187

POSV

9205

Post Vasectomy Check, Semen

Specimen Requirements: Specimen must arrive within 24 hours of collection. Send specimen Monday through Thursday only and not the day before a holiday. If holiday falls on a Saturday, holiday will be observed on the preceding Friday. Sunday holidays are observed on the following Monday. Specimen should be collected and packaged as close to shipping time as possible. Laboratory does not perform testing on weekends. Container/Tube: Semen Analysis Kit (T178) Specimen Volume: Total ejaculate Collection Instructions: Patient should have 2 to 7 days of sexual abstinence at the time of semen collection for accurate results. Additional Information: Include the following information: semen volume and number of days of sexual abstinence.

Specimen Minimum Volume: NA

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Semen	Ambient		

CPT Code Information: 89321

PMARP

65559

Postmortem Arrhythmia Panel, Varies

Specimen Requirements: Preferred: Specimen Type: Tissue Container/Tube: Tissue block
Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Additional Information: Testing will be attempted on blocks of any age but may be canceled if adequate DNA concentration cannot be obtained. Specimen Stability Information: Ambient Acceptable: Specimen Type: Blood spot
Container/Tube: Whatman FTA Classic Card or Whatman Protein Saver 903 Card Specimen Volume: 4-5 blood spots
Collection Instructions: 1. Completely fill at least 3 circles on the filter paper card (approximately 80 microliters of blood per circle) 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Tissue: See Specimen Required Blood Spots: 3

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81443

PMCMP

65560

Postmortem Cardiomyopathy Panel, Varies

Specimen Requirements: Preferred: Specimen Type: Tissue Container/Tube: Tissue block
Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Additional Information: Testing will be attempted on blocks of any age but may be canceled if adequate DNA concentration cannot be obtained. Specimen Stability Information: Ambient (preferred) Acceptable: Specimen Type: Blood spot
Container/Tube: Whatman FTA Classic Card or Whatman Protein Saver 903 Card Specimen Volume: 3-5 blood spots
Collection Instructions: 1. Completely fill at least 3 circles on the filter paper card. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Tissue: See Specimen Required Blood Spots: 3

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81439

PMMFR

65561

Postmortem Marfan and Related Panel, Varies

Specimen Requirements: Preferred: Specimen Type: Tissue Container/Tube: Tissue block
Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Additional Information: Testing will be attempted on blocks of any age but may be canceled if adequate DNA concentration

cannot be obtained. Specimen Stability Information: Ambient Acceptable: Specimen Type: Blood spot Container/Tube: Whatman FTA Classic Card or Whatman Protein Saver 903 Card Specimen Volume: 3-5 blood spots Collection Instructions: 1. Completely fill at least 3 circles on the filter paper card. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Tissue: See Specimen Required Blood Spots: 3

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81410

PMNSR 65562

Postmortem Noonan and Related Panel, Varies

Specimen Requirements: Preferred: Specimen Type: Tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Additional Information: Testing will be attempted on blocks of any age but may be canceled if adequate DNA concentration cannot be obtained. Specimen Stability Information: Ambient Acceptable: Specimen Type: Blood spot Container/Tube: Whatman FTA Classic Card or Whatman Protein Saver 903 Card Specimen Volume: 3-5 blood spots Collection Instructions: 1. Completely fill at least 3 circles on the filter paper card 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Tissue: See Specimen Required Blood Spots: 3

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81479; 81404; 81311; 81405 X2; 81406 X6;

PMSBB 81931

Postmortem Screening, Bile and Blood Spot

Specimen Requirements: Both bile and blood spots are required. Supplies: Card-Postmortem Screening (Filter Paper) (T525) Collection Container/Tube: Postmortem Screening Card Specimen Volume: Properly completed screening card Collection Instructions: 1. Collect blood in a heparin-containing tube and drop 25 mL of blood onto the 2 circles labeled Blood. 2. Collect bile by direct puncture of the gallbladder and drop 25 mL of bile onto the 2 circles labeled Bile. 3. Allow to dry at ambient temperature in a horizontal position for 3 or more hours. 4. Fill out information on page 2 of collection card. 5. Do not expose specimen to heat or direct sunlight. 6. Do not stack wet specimens. 7. Keep specimen dry.

Specimen Minimum Volume: Bile spot: 1 Blood spot: 1

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)		FILTER PAPER
	Frozen		FILTER PAPER
	Refrigerated		FILTER PAPER

CPT Code Information: 83789

KUR
614060

Potassium, 24 Hour, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 84133

RKUR
610696

Potassium, Random, Urine

Specimen Requirements: Supplies: Aliquot tube, 5 mL (T465) Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 84133

KS
602352

Potassium, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated	48 hours	

CPT Code Information: 84132

FPTWG 57539

Potato White IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

FMPG 57931

Poultry and Meat Panel IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001 x 7; ;

PPOXZ 35530

PPOX Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred:

Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Acceptable: Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 Blood spots Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 3

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: PPOX Gene, Full Gene Analysis; 81406-PPOX; ; Fibroblast Culture for Genetic Testing; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

PWAS 35535

Prader-Willi/Angelman Syndrome, Molecular Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Prenatal Specimens Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Blood: 1 mL Amniotic Fluid: 10 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81331-SNRPN/UBE3A, (small nuclear ribonucleoprotein polypeptide Nand ubiquitin protein ligase E3A) (eg, Prader-Willi syndrome and/or Angelman syndrome), methylation analysis; ; Amniotic Fluid Culture/Genetic Test; ; 88235-Tissue culture for amniotic fluid (if appropriate); ; 88240-Cryopreservation (if appropriate); Maternal Cell Contamination, B; ; 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells (if appropriate);

PALB 9005

Prealbumin, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 84134

PGN 65119

Pregabalin, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST is not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw specimen immediately before next scheduled dose. 2. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80366; G0480;

17PRN 88646

Pregnenolone and 17-Hydroxypregnenolone, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	28 days	

CPT Code Information: 84140-Pregnenolone; 84143-17-Hydroxypregnenolone;

PREGN Pregnenolone, Serum

88645

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	28 days	

CPT Code Information: 84140

PADF Prenatal Aneuploidy Detection, FISH

35313

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Supplies: Refrigerate/Ambient Mailer, 5 lb (T329) Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20-25 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Provide gestational age at the time of amniocentesis. 2. Discard the first 2 mL of amniotic fluid. 3. Place the tubes in a Refrigerate/Ambient Mailer, 5 lb (T329). 4. Fill remaining space with packing material. Additional Information: 1. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 2. Bloody specimens are undesirable. 3. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 4. Results will be reported and also telephoned or faxed, if requested. Acceptable: Supplies: CVS Media (RPMI) and Small Dish (T095) Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer chorionic villi to a Petri dish containing transport medium (Such as CVS Media (RPMI) and Small Dish [T095]). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua.

Specimen Minimum Volume: Amniotic Fluid: 2 mL; Chorionic Villi: 2 mg; If ordering in conjunction with other testing: If ordered with CHRAF: 12 mL; with CHRCV: 12 mg; with CMAP: 12 mL or 12 mg; with CHRAF/CHRCV and CMAP: 26 mL or 26 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271 x 1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if

appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

PHSP 5566

Prenatal Hepatitis Evaluation, Serum

Specimen Requirements: Patient Preparation: For 24 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 24 hours.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 87340; 86707 (if appropriate); 87341 (if appropriate); 87350 (if appropriate);

PHEP 48215

Previous Hepatitis (Unknown Type), Serum

Specimen Requirements: Both 0.5 mL of refrigerated serum and 2.5 mL of frozen serum are preferred for this test. Patient Preparation: For 24 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Collection Instructions: 1. Centrifuge blood collection tube per collection tube manufacturer's instructions (eg, centrifuge and aliquot within 2 hours of collection for BD Vacutainer tubes). 2. Transfer 0.5 mL serum into an aliquot tube labeled as HAIGG, and ship refrigerate (required) 3. Transfer remaining 2.5 mL serum into a second aliquot tube labeled as SST Serum, and ship frozen (preferred).

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated	5 days	
Serum SST	Frozen (preferred)	28 days	
	Refrigerated	5 days	

CPT Code Information: 86704; 86706; 86708; 86803 ; 87340; 87341 (if appropriate); 87522 (if appropriate);

PRMB 37053

Primidone and Phenobarbital, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of

collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: PRIMD-80188; PBR-80184;

PTRE 82784

Privet Tree, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

PRKSD 605939

PRKAR1A Full Gene Sequencing and Deletion/Duplication Analysis, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479

GAL2

Probability of Hepatocellular Carcinoma, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see HCCGS / Hepatocellular Carcinoma Risk Panel with GALAD Score, Serum Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Refrigerated	5 days	

CLLDB 610723

Probe, Each Additional (CLLDF) (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88271 x 2; 88275 x 1 - FISH Probe, Analysis; each additional probe set (if appropriate);

CLLMB 610739

Probe, Each Additional (CLLMF) (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88271 x 2; 88275 x1 - FISH Probe, Analysis; each additional probe set (if appropriate);

PA 8683

Procainamide and N-Acetylprocainamide, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	14 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 80192

PCT 83169

Procalcitonin, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic screw-top vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 84145**PINP****61695****Procollagen I Intact N-Terminal, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.25 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	28 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 83519**PRCNG****64869****PROCR Gene, Next-Generation Sequencing, Varies**

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or green top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Provide indication of volume and concentration of the DNA. Specimen Stability: Frozen (preferred)/Refrigerated/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 100 mcL at 50 ng/mcL concentration**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Frozen	14 days	
	Refrigerated	7 days	

CPT Code Information: 81479**PROG****70542****Progesterone Receptor (PR) Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen

Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PGSN
8141

Progesterone, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	180 days	
	Refrigerated	72 hours	
	Ambient	8 hours	

CPT Code Information: 84144

22C3
603762

**Programmed Death-Ligand 1 (PD-L1) (22C3),
Semi-Quantitative Immunohistochemistry, Manual**

Specimen Requirements: Specimen Type: Tissue Supplies: Pathology Packaging Kit (T554) Collection Instructions: Formalin-fixed, paraffin-embedded tissue block; or 3 unstained glass, "positively charged" slides with 4-microns formalin-fixed, paraffin-embedded tissue Additional Information: One slide will be stained with hematoxylin and eosin and returned.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88360

SP142
603769

Programmed Death-Ligand 1 (PD-L1) (SP142),

Semi-Quantitative Immunohistochemistry, Manual

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Formalin-fixed, paraffin-embedded tissue block; or 3 unstained glass, "positively charged" slides with 4-microns formalin-fixed, paraffin-embedded tissue Additional Information: One slide will be stained with hematoxylin and eosin and returned.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88360

SP263
603755

Programmed Death-Ligand 1 (PD-L1) (SP263), Semi-Quantitative Immunohistochemistry, Manual

Specimen Requirements: Supplies: Pathology Packaging Kit (T554) Specimen Type: Formalin-fixed, paraffin-embedded tissue block; or 3 unstained glass, "positively charged" slides with 4-microns formalin-fixed, paraffin-embedded tissue Additional Information: One slide will be stained with hematoxylin and eosin and returned.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88360

GRNZ
35446

Progranulin Gene (GRN), Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81406 GRN (granulin) (eg, frontotemporal dementia), full gene sequence

PINS
80908

Proinsulin, Plasma

Specimen Requirements: Patient Preparation: 1. Patient should be fasting for 8 hours. 2. Infants under 2 years of age should fast a maximum of 6 hours. Collection Container/Tube: Ice-cooled, lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: After collection, place the whole blood on ice for at least 10 minutes, then centrifuge at refrigerated temperature.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	30 days	

CPT Code Information: 84206

PRLI
70541

Prolactin (PRL) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PLPMA
35090

Prolactin, Pituitary Macroadenoma, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL

Specimen Minimum Volume: 1.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	
	Ambient	24 hours	

CPT Code Information: 84146

PRL
85670

Prolactin, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not

take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	
	Ambient	24 hours	

CPT Code Information: 84146

APRI 603183

Prolonged Clot Time Profile Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see APROL / Prolonged Clot Time Profile, Plasma.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-26 Special Coagulation Interpretation

APROL 603308

Prolonged Clot Time Profile, Plasma

Specimen Requirements: Patient Preparation: 1. Patient should not be receiving warfarin (Coumadin) or heparin. 2. Patient should also not be receiving fibrinolytic agents (streptokinase, urokinase, tissue plasminogen activator: tPA). 3. If patient has been recently transfused, it is best to perform this study pretransfusion, if possible. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 5 mL in 5 plastic vials each containing 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma (1-2 mL per aliquot) into 5 separate plastic vials leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or = -40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 4 mL in 4 plastic vials each containing 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85379-DIMER; 85384-CLFIB; 85390-26-APRI; 85610-PTSC; 85613-DRV1; 85670-TTSC; 85730-APTSC; ; 85130-Chromogenic FVIII (if appropriate); 85130-Chromogenic FIX (if appropriate); 85210-Factor II (if appropriate); 85220-Factor V (if appropriate); 85230-Factor VII (if appropriate); 85240-Factor VIII (if appropriate); 85250-Factor IX (if appropriate); 85260-Factor X (if appropriate); 85270-Factor XI (if appropriate); 85280-Factor XII (if appropriate); 85335-Bethesda titer (if appropriate); 85335-Factor V inhibitor screen (if appropriate); 85335-Factor VIII inhibitor screen (if appropriate); 85335-Factor IX inhibitor screen (if appropriate); 85366-Soluble fibrin monomer (if appropriate); 85385-PT-Fibrinogen (if appropriate); 85597-Platelet neutralization for lupus inhibitor (if appropriate); 85598-Staclo LA (if appropriate); 85611-PT mix 1:1 (if appropriate); 85613-DRVVT mix (if appropriate); 85613-DRVVT confirm (if appropriate); 85635-Reptilase time (if appropriate); 85732-APTT mix 1:1 (if appropriate);

PHD2 61683

Prolyl Hydroxylase Domain-2 (PHD2/EGLN1) Gene Sequencing, Whole Blood

Specimen Requirements: Only orderable as part of a profile. For more information see HEMP / Hereditary Erythrocytosis Mutations, Whole Blood.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	30 days	
	Ambient	14 days	

CPT Code Information: 81479-Unlisted molecular pathology procedure

FPHEG 90101

Promethazine (Phenergan)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80342

FIBDD 57459

PROMETHEUS IBD sgi Diagnostic

Specimen Requirements: Requires both whole blood and serum Note: Specimens must be shipped together Note: Informed consent required from NYS clients Blood: Collect 2 mL lavender top EDTA whole blood. Ship refrigerate. Serum: Draw blood in a plain, red-top tube(s). (Serum gel tube is

acceptable.) Spin down and send 2 mL of serum refrigerated.

Specimen Minimum Volume: Blood = 1 mL, Serum = 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	30 days	
	Ambient	4 days	
Whole Blood EDTA	Refrigerated (preferred)	21 days	
	Ambient	4 days	

CPT Code Information: 82397 x 4; 83520 x 6; 86255 x 2 ; 81479; 86140;

FPLAC 91783

PROMETHEUS LactoTYPE

Specimen Requirements: Note: Informed consent required from NYS clients. Collect 5 mL EDTA (lavender top) whole blood. Ship refrigerate.

Specimen Minimum Volume: 3.0 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	30 days	
	Ambient	10 days	

CPT Code Information: 81400

PFN 80295

Propafenone, Serum

Specimen Requirements: Patient Preparation: Samples should only be collected after patient has been receiving propafenone for at least 3 days. Trough concentrations should be collected just before administration of the next dose. Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.5 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge within 2 hours of draw and aliquot to remove serum from spun RBCs.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80299

FPROP 90362

Propofol, Serum/Plasma

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 2 mL of serum refrigerate in plastic vial. Note: 1. Indicate serum on request form. 2. Label specimen appropriately (serum). Plasma Draw blood in a lavender-top (EDTA) tube(s). (Plasma gel tube is not acceptable.) Spin down and send 2 mL of EDTA plasma refrigerate in plastic vial. Note: 1. Indicate plasma on request form. 2. Label specimen appropriately (plasma).

Specimen Minimum Volume: 1.0 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated		

CPT Code Information: 80375; G0480 (if appropriate);

FPD2U 75366

Prostaglandin D2 (PG D2), Urine

Specimen Requirements: Patient Preparation: Patient should not be on aspirin, indomethacin, or anti-inflammatory medications, if possible, for at least 48 hours prior to collection of specimen. Specimen must be frozen within 30 minutes of collection. Specimen Type: Urine Submission Container/Tube: Plastic, 10-mL tube (T068) Specimen Volume: 10 mL Collection Instructions: 1. Collect random urine (NO preservative). 3. Freeze immediately and send specimen frozen in the plastic, 10-mL urine tube (T068) Note: 24 hours urine collection is not acceptable.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen	180 days	

CPT Code Information: 84150

FD2PG 75492

Prostaglandin D2 (PGD2)

Specimen Requirements: Patient preparation: Patient should NOT be on any aspirin, indomethacin, or anti-inflammatory medications, if possible, for at least 48 hours prior to collection of specimen. Serum Specimen Type: Serum Container/Tube: Red top Specimen Volume: 3 mL Collection Instructions: Draw blood in a plain, red-top tube(s), serum-gel tube(s) is acceptable. Separate immediately and send 3 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	60 days	

CPT Code Information: 84150

PHI11
113000

Prostate Health Index Reflex, Serum

Specimen Requirements: Patient Preparation: 1. Specimens for testing should be collected prior to prostate manipulations such as digital rectal examination (DRE), prostatic massage, transrectal ultrasound (TRUS), and prostatic biopsy. 2. A 6-week waiting period between needle biopsy and specimen collection is recommended. 3. Specimens should not be collected from patients receiving therapy with high biotin (vitamin B7) doses (ie, >5 mg/day) until at least 8 hours following the last biotin administration. Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge, aliquot serum into plastic vial, and refrigerate serum within 3 hours of collection.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	150 days	

CPT Code Information: 84153

PSAIM
70543

Prostate Specific Antigen (PSA) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PROF
62665

Prostate Tumor, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Acceptable: Slides Slides: Three consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		

Refrigerated

CPT Code Information: 88271x2, 88291 - DNA probe, each (first probe set), Interpretation and report; 88271x2 - DNA probe, each; each additional probe set (if appropriate); 88271x1 - DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 - DNA probe, each; coverage for sets containing 4 probes (if appropriate); ; 88271x3 - DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 - Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 - Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 - Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

PSA 9284

Prostate-Specific Antigen (PSA) Diagnostic, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection. Additional Information: Free prostate-specific antigen (PSA) can only be added on within 12 hours of performing total PSA. Specimen must have been shipped frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	180 days	
	Refrigerated	5 days	

CPT Code Information: 84153

SPSA 82023

Prostate-Specific Antigen (PSA) Screen, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Red-top tube must be centrifuged and aliquoted within 2 hours of collection. 2. Serum gel tube must be centrifuged within 2 hours of collection.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	180 days	
	Refrigerated	5 days	

CPT Code Information: 84153; G0103 (if appropriate);

PSAU 64061

Prostate-Specific Antigen (PSA) Ultrasensitive, Serum

Specimen Requirements: Patient Preparation: For the 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	180 days	
	Refrigerated	14 days	
	Ambient	7 days	

CPT Code Information: 84153

PSAFT 81944

Prostate-Specific Antigen (PSA), Total and Free, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum within 3 hours of collection.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	90 days	

CPT Code Information: 84153; 84154;

PACPI 70531

Prostatic Acid Phosphatase (PACP) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PACP
8019

Prostatic Acid Phosphatase, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	180 days	

CPT Code Information: 84066

CFX
9339

Protein C Activity, Plasma

Specimen Requirements: See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. Patient Preparation: Patient should be fasting Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 2. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 3. Aliquot plasma into a plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 4. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, at < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85303

PCNGS
606367

Protein C Deficiency, PROC Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or green top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability: Ambient (preferred)/Refrigerate/Frozen Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Provide volume and concentration of the DNA. Specimen Stability: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood: 1 mL blood Extracted DNA: 100 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Frozen	14 days	
	Refrigerated	7 days	

CPT Code Information: 81479

FPCTA
75735

Protein C, Total Antigen

Specimen Requirements: Specimen Type: Plasma Container/Tube: Light Blue (sodium citrate) Specimen Volume: 2 mL Collection Instructions: Draw blood in a Lt. blue sodium citrate tube(s), Spin down and send 2 mL of platelet-poor plasma frozen in a plastic vial. Additional Information: 1. Separate specimens must be submitted when multiple tests are ordered. Specimen must be split prior to transport. 2. Testing cannot be added on to a previously collected specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	90 days	

CPT Code Information: 85302

PCTR
607249

Protein Catabolic Rate, 24 Hour, Urine

Specimen Requirements: Only orderable as part of a profile. For more information see SAT24 / Supersaturation Profile, 24 Hour, Urine.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: Calculation only

PEISO
609781

Protein Electrophoresis and Isotype, Serum

Specimen Requirements: Patient Preparation: Fasting (12 hour) preferred but not required Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	7 days	

CPT Code Information: 84155; 84165; 0077U; 86334 (if appropriate);

S_FX
80775

Protein S Activity, Plasma

Specimen Requirements: See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. Patient Preparation: Patient must not be receiving Coumadin. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 2. Aliquot plasma into a plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 3. Freeze specimen immediately (no longer than 4 hours after collection) at < or =-40°C, if possible. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85306

PSF
80338

Protein S Antigen, Free, Plasma

Specimen Requirements: Only orderable as part of a profile, see PSTF / Protein S Antigen, Plasma. See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. Patient Preparation: Patient must not be receiving heparin or Coumadin. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (citrate) Submission Container/Tube: Plastic vials Specimen Volume: 1 mL in 2 plastic vials each containing 0.5 mL Collection Instructions: 1. Centrifuge, remove plasma, and centrifuge plasma again. 2. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C, or, ideally < or =-40°C. 3. Send specimens in the same shipping container. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. If the patient is being treated with Coumadin, this should be noted. Coumadin will lower protein S. 3. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85306

PSTF
83049

Protein S Antigen, Plasma

Specimen Requirements: Patient Preparation: Patient must not be receiving heparin or Coumadin. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vials Specimen Volume: 1 mL in 2 plastic vials each containing 0.5 mL Collection Instructions: 1. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 2. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 3. Aliquot 0.5 mL of plasma into 2 plastic vials, leaving 0.25 mL in the bottom of centrifuged vial. 4. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally < or =-40°C. 5. Send specimens in the same shipping container. Additional Information: 1. A double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. If the patient is being treated with Coumadin, this should be noted. Coumadin will lower protein S.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85306-Free; 85305-Total (if appropriate);

PST
80994

Protein S Antigen, Total, Plasma

Specimen Requirements: Only orderable as part of a profile. For more information see PSTF / Protein S Antigen, Plasma. See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (citrate) Submission Container/Tube: Plastic vials Specimen Volume: 1 mL in 2 plastic vials each containing 0.5 mL Collection Instructions: 1. Configure, remove plasma, and spin plasma again. 2. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40 degrees C. 3. Send specimens in the same shipping container. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. If the patient is being treated with Coumadin, this should be noted. Coumadin will lower protein S. 3. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85305

PRSNG
64870

Protein S Deficiency, PROS1 Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or green top

(sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability: Ambient (preferred)/Refrigerate/Frozen Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube with indication of volume and concentration of the DNA. Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Provide volume and concentration of the DNA Specimen Stability: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 100 mcL at 50 ng/mL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Frozen	14 days	
	Refrigerated	7 days	

CPT Code Information: 81479

12PU1

614042

Protein, Total, 12 Hour, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, 5 mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a 12-hour urine specimen. Specimens should be collected before fluorescein is given or not collected until at least 24 hour later. 2. No preservative. 3. Invert well before taking 4-mL aliquot. 4. Do not overfill aliquot tube, 4 mL at most. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	24 hours	

CPT Code Information: 84156

PTU

614001

Protein, Total, 24 Hour, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. Specimens should be collected before fluorescein is given or not collected until at least 24 hour later. 2. No preservative. 3. Invert well before taking 4-mL aliquot. 4. Do not over fill aliquot tube 4 mL at most. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	24 hours	

CPT Code Information: 84156

TPBF 606619

Protein, Total, Body Fluid

Specimen Requirements: Specimen Type: Body fluid Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Pericardial Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	24 hours	

CPT Code Information: 84157

TP 8520

Protein, Total, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	180 days	

CPT Code Information: 84155

TPSF 872

Protein, Total, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL Collection Instructions: Centrifuge specimen to remove any cellular material.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	72 hours	
	Frozen	180 days	

CPT Code Information: 84157

RPTU1 614004

Protein/Creatinine Ratio, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. Specimens should be collected before fluorescein is given or not collected until at least 24 hour later. 2. No preservative. 3. Invert well before taking 4 mL aliquot. 4. Do not over fill aliquot tube 4 mL at most.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	24 hours	

CPT Code Information: 84156; 82570;

PR3 82965

Proteinase 3 Antibodies, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516

FPF12 75657

Prothrombin Fragment 1+2 MoAb

Specimen Requirements: Specimen Type: Citrated plasma Collection Container/Tube: Light-blue top (citrate) Specimen Volume: 2 mL Collection Instructions: Draw blood in a light blue-top (Sodium citrate) tube(s). Spin down and send 2 mL citrated plasma frozen in a plastic vial. Note: Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 1 mL (Note: This volume does not allow for repeat testing.)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	180 days	

CPT Code Information: 83520

PTNT 81742

Prothrombin G20210A Mutation, Blood

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD solution B), light-blue top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	14 days	
	Frozen	14 days	
	Refrigerated	14 days	

CPT Code Information: 81240-F2 (prothrombin, coagulation factor II) (eg, hereditary hypercoagulability) gene analysis, 20210G>A variant

PTSC 602171

Prothrombin Time (PT), Plasma

Specimen Requirements: Only orderable as part of a profile or reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85610

PTMSC 602183

Prothrombin Time Mix 1:1, Plasma

Specimen Requirements: Only orderable as a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85611**PTTP**
40934**Prothrombin Time, Plasma**

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge, remove plasma, and centrifuge plasma again. 2. Aliquot plasma into plastic vial leaving 0.25 mL in the bottom of centrifuged vial. Additional Information: Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen (preferred)	30 days	
	Ambient	24 hours	

CPT Code Information: 85610**PPFWE**
31891**Protoporphyrins, Fractionation, Washed Erythrocytes**

Specimen Requirements: All porphyrin tests on erythrocytes can be performed on 1 tube. Patient Preparation: Patient should abstain from alcohol for 24 hours. Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Dark blue top (metal free heparin) or green top (lithium heparin) Submission Container/Tube: Plastic vial Specimen Volume: Washed erythrocyte suspension Collection Instructions: Collect and process whole blood specimen as follows: 1. Transfer entire specimen to a 12-mL graduated centrifuge tube. 2. Centrifuge specimen for 10 minutes at 2000 rpm. 3. Record volume of packed cells and the total volume of the specimen. 4. Discard supernatant plasma. 5. Wash packed erythrocytes 2 times by resuspension of at least an equal amount of cold 0.9% saline, mix, and centrifuge for 5 minutes at 2000 rpm, discarding supernatant after each washing. 6. Resuspend packed cells to the original total volume with 0.9% saline. Invert specimen gently to mix. 7. Transfer washed erythrocytes into a plastic vial and freeze.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Washed RBC	Frozen (preferred)	14 days	
	Refrigerated	14 days	

CPT Code Information: 82542

PPFE

8739

Protoporphyrins, Fractionation, Whole Blood

Specimen Requirements: All porphyrin tests on whole blood can be performed on 1 tube. Patient Preparation: Patient should abstain from alcohol for 24 hours. Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Dark blue top (metal free heparin) or green top (lithium heparin) Specimen Volume: Full tube Collection Instructions: Immediately place specimen on wet ice.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated	7 days	

CPT Code Information: 82542

PROTR

9797

Protriptyline (Vivactyl)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80335

PRSSZ

35532

PRSS1 Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81404-PRSS1 (protease, serine, 1 [trypsin 1]) (eg, hereditary pancreatitis), full gene sequence

PCHE1
606604

Pseudocholinesterase, Total, Serum

Specimen Requirements: Patient Preparation: For cases of prolonged apnea following surgery, wait at least 24 hours before obtaining specimen. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	365 days	
	Ambient	24 hours	

CPT Code Information: 82480

PSY
62235

Psychosine, Blood Spot

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Card-Blood Spot Collection (Filter Paper) Acceptable: Ahlstrom 226 filter paper, Munktell filter paper, Whatman protein Saver 903 paper, or blood collected in tubes containing heparin or EDTA and dried on filter paper Specimen Volume: 2 blood spots Collection Instructions: 1. Completely fill at least 2 circles on the filter paper card (approximately 100 microliters blood per circle). 2. Let blood dry on filter paper at ambient temperature in a horizontal position for 3 or more hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	96 days	FILTER PAPER
	Frozen	96 days	FILTER PAPER
	Refrigerated	96 days	FILTER PAPER

CPT Code Information: 82542

PSYCF
606146

Psychosine, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial. Specimen Volume: 0.150 mL Collection Instructions: Do not aliquot.

Specimen Minimum Volume: 0.100 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen	7 days	

CPT Code Information: 82542

PSYR 606145

Psychosine, Whole Blood

Specimen Requirements: Collection Container/Tube: Preferred: Lavender top (EDTA)
Acceptable: Green top (sodium heparin, lithium heparin) or yellow top (ACD) Specimen Volume: 2 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated	7 days	

CPT Code Information: 82542

PSYQP 610060

Psychotropic Pharmacogenomics Gene Panel, Varies

Specimen Requirements: Prior Authorization is available for this test. Submit the required form with the specimen. Submit only 1 of the following specimens: Specimen Type: Whole blood
Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 Swab Collection Instructions: Collect and send specimen per kit instructions. Additional Information: Due to lower concentration of DNA yielded from saliva, testing cannot proceed to reflex testing for CYP2D6 sequencing and will stop after initial testing is complete. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred) 1 year/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 1 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479; 81226; 81225; 81227; 81230; 81231; 81291; 81381 x 2;

PTFIB 65820

PT-Fibrinogen, Plasma

Specimen Requirements: Only orderable as part of a coagulation reflex. For more information

see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85385

PTENZ 35534

PTEN Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81321; ; Hereditary Colon Cancer CGH Array, additional test; 81228;

FPTH 90182

PTH Antibody

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum ambient in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Ambient (preferred)	14 days	
	Frozen	28 days	
	Refrigerated	14 days	

CPT Code Information: 83519

PU1 70545

PU.1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

PUSE 82362

Pumpkin Seed, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

PUPYP 65151

Purines and Pyrimidines Panel, Plasma

Specimen Requirements: Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge at 4°C and aliquot plasma. Send plasma frozen.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	90 days	

CPT Code Information: 82542

PUPYU 41977

Purines and Pyrimidines Panel, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 3 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen	90 days	

CPT Code Information: 82542**FPYRE**
57540**Pyrethrum IgE**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003**FPYD**
90281**Pyridostigmine, Serum/Plasma**

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and freeze immediately. Send 5 mL of serum frozen in a plastic vial. Note: 1. Indicate serum on request form. 2. Label specimen appropriately (serum). Plasma Draw blood in a lavender-top tube(s) or a green-top tube(s). (Plasma gel tube is not acceptable.) Spin down and freeze immediately. Send 5 mL of EDTA or heparinized plasma frozen in a plastic vial. Note: 1. Indicate plasma on request form. 2. Label specimen appropriately (plasma).

Specimen Minimum Volume: 2.2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Frozen	21 days	

CPT Code Information: 80299**FP5PC**
75216**Pyridoxal 5-phosphate (CSF)**

Specimen Requirements: Medical Neurogenetics collection kit (MCL T657) required. NOTE: One set of tubes is required per patient. Total CSF volume required is 4.5 milliliters Each collection kit contains 5 micro centrifuge tubes. Tube #3 contains antioxidants necessary to perform this test. COLLECTION PROTOCOL: CSF should be collected from the first drop into the tubes in the numbered order. 1) Fill each tube to the marked line with the required volumes. Tube 1: 0.5 mL Tube 2: 1.0 mL Tube 3: 1.0 mL (contains antioxidants necessary to protect the sample integrity) Tube 4: 1.0 mL Tube 5: 1.0 mL - If sample's not blood contaminated, the tubes should be placed on dry ice at bedside -

If sample's are blood contaminated, the tubes should immediately be centrifuged (prior to freezing) and the clear CSF transferred to new similarly labeled tubes, then frozen - Store samples at -80 until they can be shipped 2) Complete Medical Neurogenetics, LLC request form. Include test required, sample date and date of birth. 3) Label tubes with patient name and ID number, leaving the tube number viewable. 4) Place samples inside a specimen transport bag and the Medical Neurogenetics, LLC request form inside the pouch of the transport bag. 5) Ship samples frozen on dry ice.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen		CSF KIT

CPT Code Information: 82542

PLP
42359

Pyridoxal 5-Phosphate (PLP), Plasma

Specimen Requirements: Patient Preparation: 1. Fasting-overnight (12-14 hours) (infants-draw prior to next feeding). 2. Patient must not ingest vitamin supplements for 24 hours before the specimen is drawn. Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Green top (sodium or lithium heparin) or plasma gel separator tube (PST) Submission Container/Tube: Amber vial Specimen Volume: 1 mL Collection Instructions: Centrifuge at 4°C within 2 hours of collection, then aliquot all plasma into amber vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Heparin	Refrigerated (preferred)	7 days	LIGHT PROTECTED
	Frozen	14 days	LIGHT PROTECTED

CPT Code Information: 84207

B6PA
42361

Pyridoxic Acid (PA), Plasma

Specimen Requirements: Only orderable as part of a profile. For more information see B6PRO / Vitamin B6 Profile (PLP and PA), Plasma.

Specimen Minimum Volume: 0.25mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Heparin	Refrigerated (preferred)	7 days	LIGHT PROTECTED
	Frozen	14 days	LIGHT PROTECTED

CPT Code Information: 82542

P5NT
80650

Pyrimidine 5' Nucleotidase, Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable:

Lavender top (EDTA) Specimen Volume: 5 mL

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 83915

PDHC 83899

Pyruvate Dehydrogenase Complex, Fibroblasts

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Varies		

CPT Code Information: 84311-PDHC; 88233-Fibroblast culture; 88240-Cryopreservation for biochemical studies;

PK1 607459

Pyruvate Kinase Enzyme Activity, Blood

Specimen Requirements: Collection Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 84220

PKC 608418

Pyruvate Kinase Enzyme Activity, Blood

Specimen Requirements: Only available as part of a profile. For more information see: HAEV1 / Hemolytic Anemia Evaluation, Blood EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 84220

PKLRG 64564

Pyruvate Kinase Liver and Red Blood Cell (PKLR), Full Gene Sequencing and Large Deletion Detection, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Yellow top (ACD solution B) or Purple top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Refrigerated 30 days Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 microliters Collection Instructions: 1. The preferred volume is 100 microliters at a concentration of 250 ng/mcL 2. Include concentration and volume on tube Specimen Stability Information: Frozen preferred; Ambient/Refrigerate acceptable

Specimen Minimum Volume: Whole blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81405-PKLR

PYRC 83356

Pyruvate, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.6 mL Collection Instructions: Send specimen from vial 2.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	7 days	
	Ambient	7 days	
	Refrigerated	7 days	

CPT Code Information: 84210

PYR 8657

Pyruvic Acid, Blood

Specimen Requirements: Call 800-533-1710 or 507-266-5700 to order special collection tube. Patient Preparation: Fasting (at least 4 hours) Supplies: Perchloric Acidâ€“Pyruvate Tube (T012) Container/Tube: Special collection tube containing 2.5 mL of 6% perchloric acid Specimen Volume: Exactly 1 mL Collection Instructions: 1. Special collection tube must be prechilled prior to collection. 2. Draw enough blood directly into syringe to add exactly 1 mL of blood to the prechilled special collection tube. 3. Once drawn, immediately transfer blood to the prechilled, special collection tube and shake

vigorously to mix. Additional Information: 1. Check expiration date before using. Supplied collection tube expires 12 months after preparation. 2. If perchloric acid spills, obtain new, prechilled tube.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated	15 days	PYRUVATE

CPT Code Information: 84210

QFP 83149

Q Fever Antibody, IgG and IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 86638 x 4

QUAD1 113145

Quad Screen (Second Trimester) Maternal, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL Collection Instructions: 1. Do not draw specimen after amniocentesis as this could affect results. 2. Centrifuge immediately Additional Information: 1. For an assessment that includes neural tube defect results, gestational age must be between 15 weeks, 0 days and 22 weeks, 6 days. 2. Assessments for trisomy 21 (Down syndrome) and trisomy 18 (Edwards syndrome) only are available between 14 weeks, 0 days and 22 weeks, 6 days. 3. Initial or repeat testing is determined in the laboratory at the time of report and will be reported accordingly. To be considered a repeat test for the patient, the testing must be within the same pregnancy and trimester, with interpretable results for the same tests, and both tests are performed at Mayo Clinic. 4. Maternal Serum Screening patient education brochure (T522) is available upon request.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 81511

QFT4 112563

QuantiFERON-TB Gold Plus, Blood

Specimen Requirements: Supplies: -Standard Altitude: QuantiFERON-TB Gold Plus Collection Kit (T794) -High Altitude: QuantiFERON-TB Gold Plus High Altitude Collection Kit (T795) Collection Instructions: 1. Special collection, incubation, and centrifugation procedures must be followed. 2. For blood collection options (1-tube collection or 4-tube collection) and specimen transport instructions, see Mycobacterium tuberculosis Infection Determination by Quanti-FERON-TB Gold Plus Collection and Processing Instructions (T688) in Special Instructions.

Specimen Minimum Volume: 4 mL: 1 mL per tube (4 tubes)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated	28 days	QTBKIT

CPT Code Information: 86480

TBBS 9336

Quantitative Lymphocyte Subsets: T, B, and Natural Killer [NK] Cells, Blood

Specimen Requirements: For serial monitoring, we recommend that specimen draws be performed at the same time of day. Container/Tube: 4 mL Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	52 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86355-B cells, total count; 86357-Natural killer (NK) cells, total count; 86359-T cells, total count; 86360-Absolute CD4/CD8 count with ratio;

QPALM 82863

Queen Palm, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FQUET
91727

Quetiapine (Seroquel)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80342

QUIN
8302

Quinidine, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 80194

FQUIN
57922

Quinoa (Chenopodium quinoa) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

REPII

82782

Rabbit Epithelium, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

RAMB

82860

Rabbit Meat, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

RSER

82544

Rabbit Serum Proteins, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

RUPR

82148

Rabbit Urine Proteins, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FRFIT

90330

Rabies Antibody Endpoint

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain red-top tube(s), Spin down and send 2 mL of serum refrigerated in a plastic vial. Note: 1. Serum gel tube is acceptable, but must be poured off into plastic vial. 2. Collection date is required.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	60 days	

CPT Code Information: 86382

FRAD

57933

Radish (*Raphanus sativus*) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FRAJI

57860

Raji Cell Immune Complex Assay

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	30 days	

CPT Code Information: 86332

RASE 82366

Rape Seed, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

RWEED 82616

Rape Weed, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

MAL 9240

Rapid Malaria/Babesia Smear, Varies

Specimen Requirements: Both blood and slides are required. Specimen Type: Blood Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL Collection Instructions: 1. Invert several times to mix blood. 2. Do not transfer blood to other containers. Send specimen in original tube. Specimen Type: Blood films Slides: 2 thin blood films and 2 thick blood films Container/Tube: Plastic slide container Collection Instructions: 1. Slides must be clean and grease-free. 2. Blood films should be

made from fresh blood using fingerstick or drops of blood from needle following venipuncture. However, EDTA anticoagulated blood is also acceptable. 3. Prepare thin blood films as follows: a. Prepare 2 thin smears with the mini prep-slide machine. OR b. Prepare a thin film with a "feathered edge" that is no more than a single cell thick. c. Allow the film to thoroughly air dry and then fix by briefly immersing in either absolute or 95% methyl alcohol. d. Allow to air dry after fixation. 4. Prepare thick blood films as follows: a. Place a large drop of blood (approximately the size of a dime and preferably from a fingerstick) on a slide. b. Using a corner of a second slide spread the drop in a circular motion while applying firm pressure to literally scratch the blood onto the carrier slide. This technique allows the blood to dry quickly and adhere well to the slide. Use approximately 20 circular sweeps with the second slide. The drop of blood should be about the size of a quarter when finished. c. Do not fix. Air dry thoroughly (approximately 45 minutes) before placing in transport container.

Specimen Minimum Volume: Blood: 0.5 mL Slides: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 87207

RPRRT 603262

Rapid Plasma Reagin Screen Response to Therapy, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86592; 86593-Rapid Plasma Reagin Titer (if appropriate);

RPRS 603261

Rapid Plasma Reagin Screen with Reflex, Serum

Specimen Requirements: Only available as a reflex test. For more information see SYPHT / Syphilis Total Antibody with Reflex, Serum. Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Information: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86592; 86593-Rapid Plasma Reagin Titer (if appropriate); 86780-Syphilis Antibody by TP-PA (if appropriate);

RASFP 36517

RAS/RAF Targeted Gene Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area: tissue 36 mm(2). -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. In this document, the sizes are given as 4mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3mm x 1mm x 10 slides: approximate/equivalent to 36mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and cover slipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: RAS/RAF Targeted Gene Panel by Next Generation Sequencing, Tumor; 81210-BRAF (v-raf murine sarcoma viral oncogene homolog B1) (eg, colon cancer), gene analysis, V600E variant; 81275-KRAS (v-Ki-ras2 Kirsten rat sarcoma viral oncogene) (eg, carcinoma) gene analysis, variants in codons 12 and 13 ; 81403-HRAS (v-Ha-ras Harvey rat sarcoma viral oncogene homolog) (eg, Costello syndrome), exon 2 sequence; 81311-NRAS (neuroblastoma RAS viral [v-ras] oncogene homolog) (eg, colorectal carcinoma), gene analysis, variants in exon 2 (eg, codons 12 and 13) and exon 3 (eg, codon 61); Slide Review; 88381-Microdissection, manual;

FRASP 57665

Raspberry IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	

Ambient

7 days

CPT Code Information: 86001**RASP**
86305**Raspberry, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**RAT**
82725**Rat Epithelium, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**RTSP**
82793**Rat Serum Protein, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

RTUP
82794

Rat Urine Protein, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

RAVUM
609500

Ravulizumab Complement Blockage Monitoring, Serum

Specimen Requirements: Patient Preparation: Fasting preferred. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge at 4°C and aliquot serum into 5 mL plastic vial. 3. Freeze specimen within 30 minutes.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	14 days	

CPT Code Information: 86161

RAVU
609420

Ravulizumab, Serum

Specimen Requirements: Patient Preparation: Natalizumab or eculizumab must be discontinued at least 4 weeks prior to testing for ravulizumab quantitation in serum. Preferred: Red top Acceptable: Serum gel Specimen Volume: 2.5 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge within 2 hours of collection.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80299

FRMTA 75310

Recombx MaTa Autoantibody Test

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 83520

RCVBS 610009

Recoverin-IgG Antibody, Immunoblot, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 84182

EEEV1 607493

Red Blood Cell (RBC) Enzyme Evaluation, Blood

Specimen Requirements: Container/Tube: Yellow top (ACD solution B) Specimen Volume: 12 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	11 days	

CPT Code Information: 82955-G6PD Enzyme Activity; 84087-Glucose phosphate isomerase; 84220-Pyruvate Kinase Enzyme Activity; 82657-Hexokinase; 82657-Adenylate Kinase; 82657-Phosphofructokinase; 82657-Phosphoglycerate Kinase; 82657-Triosephosphate Isomerase; 82978-Glutathione ; 83915-Pyrimidine 5â€™ Nucleotidase;

EEEEVI
608087

Red Blood Cell (RBC) Enzyme Interpretation

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	11 days	

NGENZ
64937

Red Blood Cell Enzyme Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood (preferred) Container/Tube: Preferred: Lavender top (EDTA) or Yellow top or (ACD) Acceptable: Green top (heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood Specimen Stability: Refrigerated < or =30 days Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Indicate volume and concentration of the DNA. 2. Label specimen as extracted DNA and source of specimen. Specimen Stability: Frozen/Refrigerated/Ambient < or =30 days

Specimen Minimum Volume: Blood, Bone Marrow: 1 mL Extracted DNA: 100 mcL at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443

RBCME
64897

Red Blood Cell Membrane Evaluation, Blood

Specimen Requirements: A whole blood EDTA specimen, an EDTA control specimen, and 2 well-made peripheral blood smears (Wright stained or fixed in absolute methanol) are required for testing. Patient: Specimen Type: Blood Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: 1. Immediately refrigerate specimen after draw. Refrigerate at 0 to 4°C. Do not freeze. Freezing causes sample lysis, and tests will not be performed on hemolyzed specimens. 2. Send specimen in original tube. Do not aliquot. 3. Rubber band patient specimen and control vial together. Control must accompany the patient sample at all times to ensure the reliability of testing results. 4. Be sure specimen and control are stored and transported together at refrigerate temperature, carefully following proper handling and shipping instructions. Patient: Specimen Type: Slides Container/Tube: Blood smears Specimen Volume: 2 well-made peripheral blood smears Collection Instructions: Collect 2 well-made peripheral blood smears (Wright stained or fixed in absolute methanol). Normal Shipping Control: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 4 mL Collection Instructions: 1. Draw a control specimen from a normal (healthy), unrelated, nonsmoking person at the same time as the patient. 2. Label clearly on outermost label normal control. 3. Immediately refrigerate specimen after draw. Refrigerate at 0 to 4°C. Do not freeze. Freezing causes sample lysis, and tests will not be performed on hemolyzed specimens. 4. Send specimen in original tube. Do not aliquot. 5. Rubber band patient specimen and control vial together. Control must accompany the patient sample at all times to ensure the reliability of testing results.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Control	Refrigerated	72 hours	PURPLE OR PINK TOP/EDTA
Whole Blood EDTA	Refrigerated	72 hours	
Whole Blood Slide	Refrigerated		CARTRIDGE

CPT Code Information: 85557-Osmotic fragility; 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker x 1; 85060-Morphology review;

NGMEM 64938

Red Blood Cell Membrane Panel, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood (Preferred) Container/Tube: Preferred: Lavender top (EDTA) or Yellow top (ACD) Acceptable: Green top (heparin) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. 3. Label specimen as blood. Specimen Stability: Refrigerated < or =30 days Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube Specimen Volume: Entire specimen Collection Instructions: 1. Indicate volume and concentration of the DNA. 2. Label specimen as extracted DNA and source of specimen. Specimen Stability: Frozen/Refrigerated/Ambient < or =30 days

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 100 mcL at 20 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81364; 81405; 81479;

RECR 82369

Red Currant, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FRSE 57939

Red Snapper (*Lutjanus spp*) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

SORR 82737

Red Sorrel, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

REDT 82901

Red Top, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

URED 607696

Reducing Substance, Feces

Specimen Requirements: Supplies: Stool container, Small (Random), 4 oz Random (T288)

Container/Tube: Fecal container Specimen Volume: 3 g Collection Instructions: 1. Collect a loose, unpreserved, random fecal specimen. 2. Freeze immediately. Additional Information: If additional tests are ordered, aliquot and separate sample prior to freezing to allow 1 container per test.

Specimen Minimum Volume: 2 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen	7 days	

CPT Code Information: 84376

RBCS 36440

Relative B-Cell Subset Analysis Percentage, Blood

Specimen Requirements: For serial monitoring, we recommend that specimen draws be performed at the same time of day. Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: < or =14 years: 4 mL >14 years: 10 mL Collection Instructions: 1. Send specimen in original tube. Do not aliquot. 2. Label specimen as blood for RBCS / Relative B Cell Subset Analysis Percentage.

Specimen Minimum Volume: < or =14 years: 3 mL; >14 years: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86356 x7

TFEBF 64973

Renal Cell Carcinoma, 6p21.1 (TFEB) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Specimen Type: Slides Specimen Volume: 4 Consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271 x 1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set

(if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

RFAMA Renal Function Panel, Serum

113634

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated	24 hours	

CPT Code Information: KS: 84132; NAS: 84295; CL: 82435; HCO3: 82374; BUN: 84520; CRTS1: 82565; CA: 82310; GLURA: 82947; ALB: 82040; PHOS: 84100;

RPCWT Renal Pathology Consultation, Wet Tissue

70591

Specimen Requirements: Specimen Type: Tissue Supplies: Renal Biopsy Kit (T231) Source: Kidney Specimen Volume: Entire specimen Collection Instructions: Collect specimens according to the instructions in Renal Biopsy-Procedures of Handling Tissue for Light Microscopy, Immunohistology, and Electron Microscopy in Special Instructions.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Kidney Biopsy	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88305 (If appropriate); 88348 (If appropriate); 88313 (If appropriate); 88346 (If appropriate); 88350 (If appropriate); ;

PRA Renin Activity, Plasma

8060

Specimen Requirements: Patient Preparation: The plasma renin activity cannot be interpreted if the patient is being treated with spironolactone (Aldactone). Spironolactone should be discontinued for 4 to 6 weeks before testing. Collection Container/Tube: Chilled, lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Draw blood in a chilled syringe from a patient in a seated position; place specimen in a chilled, lavender-top (EDTA) tube; and mix. 2. Alternatively, draw blood directly in a chilled, lavender top (EDTA) tube. 3. Immediately place EDTA tube into an ice-water bath until thoroughly cooled. 4. Refrigerate specimen during centrifugation and immediately transfer plasma to plastic vial. (If a refrigerated centrifuge is unavailable, chill the centrifuge carriers. Centrifuge specimen for < or =5 minutes, then promptly transfer plasma.) 5. Immediately freeze plasma. Additional Information: See Renin-Aldosterone Studies in Special Instructions for further information.

Specimen Minimum Volume: 1.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	14 days	

CPT Code Information: 84244**RTSC**
602185**Reptilase Time, Plasma**

Specimen Requirements: See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge, remove plasma, and centrifuge plasma again. 2. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85635**RP**
609409**Respiratory Panel, PCR, Nasopharyngeal**

Specimen Requirements: Specimen Type: Nasopharyngeal swab Supplies: -NP Swab (T861) -Culture Swab - Liquid Stuarts/Single Swab (NP Swab) (T515) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) -M4-RT (T605) Collection Container/Tube: Swab Submission Container/Tube: Viral transport medium. See Additional Information for acceptable media. Specimen Volume: Nasopharyngeal swab in minimum volume of 1 mL of viral transport media Collection Instructions: Nasopharyngeal swab specimens should be collected according to standard technique and immediately placed into viral transport media and submitted for testing. Additional Information: If any nasopharyngeal swab or viral transport media not listed below is utilized, testing may be canceled. -Acceptable nasopharyngeal swabs are: Copan Rayon Swabs, Copan Nylon Flocked Swabs, Copan Polyester Swabs, Puritan Calcium Alginate Swabs. -Acceptable viral transport media are: Remel M4, Remel M4-RT, Remel M5, Remel M6, BD Universal Viral Transport vial, PrimeStore Molecular Transport Medium (MTM), Sigma-Virocult Viral Collection and Transport System (Swab and transport medium), and Copan ESwab Sample Collection and Delivery System (Swab and Liquid Amies Medium).

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	72 hours	
	Frozen	30 days	
	Ambient	4 hours	

CPT Code Information: 0202U

RESLR
606760

Respiratory Pathogen Panel, PCR, Varies

Specimen Requirements: Specimen Type: Fluid Sources: Bronchoalveolar lavage (BAL) or bronchial washings Container/Tube: Sterile container Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	72 hours	
	Frozen	30 days	

CPT Code Information: 87633; 87798; 87581; 87486;

RPR1
62046

Respiratory Profile, Region 1, North Atlantic (CT, MA, ME, NJ, NH, NY, PA, RI, VT), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.8 mL

Specimen Minimum Volume: 1.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 25-Each individual allergen;

RPR10
62056

Respiratory Profile, Region 10, Southwestern Grasslands (OK, TX), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 2 mL

Specimen Minimum Volume: 1.55 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 25-Each individual allergen ;

RPR11
62057**Respiratory Profile, Region 11, Rocky Mountain (AZ [Mt]; CO; ID [Mt]; NM, UT [Mt]; WY), Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.7 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 24-Each individual allergen;

RPR12
62058**Respiratory Profile, Region 12, Arid Southwest (Southern AZ Desert, Southern CA Desert), Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.7 mL

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 22-Each individual allergen;

RPR13
62059**Respiratory Profile, Region 13, Southern Coastal California, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.7 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 24-Each individual allergen;

RPR14
62060**Respiratory Profile, Region 14, Central California, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.7 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 23-Each individual allergen;

RPR15 62061

Respiratory Profile, Region 15, Intermountain West (Southern ID, NV), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.6 mL

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 22-Each individual allergen;

RPR16 62062

Respiratory Profile, Region 16, Inland Northwest (OR, Central and Eastern WA), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.6 mL

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 21-Each individual allergen;

RPR17 62063

Respiratory Profile, Region 17, Pacific Northwest (Northwestern CA, Western OR, WA), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.7 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 23-Each individual allergen;

RPR18 **62064**

Respiratory Profile, Region 18, Alaska, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.3 mL

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 15-Each individual allergen;

RPR19 **62065**

Respiratory Profile, Region 19, Puerto Rico, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.6 mL

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 21-Each individual allergen;

RPR2 **62047**

Respiratory Profile, Region 2, Mid-Atlantic (DC, DE, MD, NC, VA), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.7 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 23-Each individual allergen;

RPR3 62048

Respiratory Profile, Region 3, South Atlantic (GA, N.FA, SC), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.6 mL

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 22-Each individual allergen;

RPR4 62049

Respiratory Profile, Region 4, Sub-tropic Florida (Florida S. of Orlando), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.6 mL

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 22-Each individual allergen;

RPR5 62050

Respiratory Profile, Region 5, Ohio Valley (IN, KY, OH, TN, WV), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 2 mL

Specimen Minimum Volume: 1.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 82785-IgE; 86003 x 26-Each individual allergen ;

RPR6 62051

Respiratory Profile, Region 6, South Central (AL, AR, LA, MS), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.6 mL

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 22-Each individual allergen ;

RPR7 62052

Respiratory Profile, Region 7, Northern Midwest (MI, MN, WI), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.7 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 23-Each individual allergen;

RPR8 62053

Respiratory Profile, Region 8, Central Midwest (IA, IL, MO), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 2 mL

Specimen Minimum Volume: 1.55 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

90 days

CPT Code Information: 82785-IgE; 86003 x 25-Each individual allergen ;

RPR9
62054

Respiratory Profile, Region 9, Great Plains (KS, ND, NE, SD), Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.6 mL

Specimen Minimum Volume: 1.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 82785-IgE; 86003 x 22-Each individual allergen;

RSVAB
601948

Respiratory Syncytial Virus (RSV) In Situ Hybridization, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 4 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88365-TC, Primary; 88364-TC, if additional ISH;

FRSVQ
75669

Respiratory Syncytial Virus (RSV) RNA, Qualitative Real-Time PCR

Specimen Requirements: Specimen Type: Bronchoalveolar lavage or bronchial wash Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Collect in a sterile leak-proof container (no media or preservative). Ship refrigerated. Note: Specimen type is required.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	

Frozen	30 days
Ambient	48 hours

CPT Code Information: 87634

RETZ 35539

RET Proto-Oncogene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81406-RET (ret proto-oncogene) (eg, Hirschsprung disease), full gene sequence

RTIC 9108

Reticulocytes, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	48 hours	
	Ambient	24 hours	

CPT Code Information: 85045

RB1 604028

Retinoblastoma Protein (Rb) Immunostain, Tech Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope (T693) Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FRBP 75570

Retinol Binding Protein

Specimen Requirements: Specimen Type: Serum Container/Tube: Red Top/SST acceptable
Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial. Required: Fasting for at least 12 hours.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	20 days	
	Frozen	180 days	

CPT Code Information: 83883

RB24 609449

Retinol-Binding Protein, 24 Hour, Urine

Specimen Requirements: Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. No preservative. 3. Mix well before taking 5-mL aliquot. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 83883

RBR 610010

Retinol-Binding Protein, Random, Urine

Specimen Requirements: Container/Tube: Plastic, 5-mL tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Urine	Refrigerated (preferred)	7 days
	Frozen	7 days

CPT Code Information: 83883

FRGAM Rheumatoid Factor (RF); IgG, IgA & IgM

75557

Specimen Requirements: Container/Tube: Red-top tube Acceptable: SST tube Specimen Volume: 1.50 mL Collection Instructions: Draw blood in a plain, red-top tube(s) or a serum-gel tube(s). Spin down and send 1.50 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.50 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	5 days	
	Frozen	365 days	
	Ambient	5 days	

CPT Code Information: 83520 x 3

RHUT Rheumatoid Factor, Serum

603415

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 86431

RHNI Rhizopus nigricans, IgE, Serum

82856

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

FRDG 57959

Rhodotorula IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FRUB 57920

Rhubarb (Rheum raphaniticum) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

VITB2 42363

Riboflavin (Vitamin B2), Plasma

Specimen Requirements: Patient Preparation: Fasting-overnight (12-14 hours) (infants-draw prior to next feeding) Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Preferred: Green top (sodium or lithium heparin) Acceptable: Light-green top (sodium or lithium heparin plasma gel) Submission Container/Tube: Amber vial Specimen Volume: 2 mL Collection Instructions: Centrifuge within 2 hours of collection and aliquot into amber vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Plasma Heparin	Refrigerated (preferred)	28 days	LIGHT PROTECTED
	Frozen	28 days	LIGHT PROTECTED
	Ambient	72 hours	LIGHT PROTECTED

CPT Code Information: 84252

RIB
87837

Ribosome P Antibodies, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516

FRICE
57633

Rice IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

RICE
82709

Rice, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

90 days

CPT Code Information: 86003**FRIFA**
75628**Rifampin Level (PKRIF)**

Specimen Requirements: Container/Tube: Red Top Preferred: Red top tube Acceptable: Serum gel tube Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain, red-top tube(s). Separate serum from cells immediately by centrifugation and aliquot into a polypropylene or similar plastic tube. Send 2 mL of serum frozen in plastic vial. Note: 1. The following information is required: A. Specimen Type (source) B. Dose (specify PO, IV, IM) C. Date and time of last dose (for IV start/end time) 2. If the time of last dose and the blood draw are not accurately recorded, accurate interpretation of the concentration is not possible.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	365 days	

CPT Code Information: 80299**ROMA2**
46917**Risk Score, if Postmenopausal, Serum**

Specimen Requirements: Only orderable as part of a profile. For more information see ROMA / Ovarian Malignancy Risk Algorithm.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	84 days	
	Refrigerated	48 hours	

ROMA1
46916**Risk Score, if Premenopausal, Serum**

Specimen Requirements: Only orderable as part of a profile. For more information see ROMA / Ovarian Malignancy Risk Algorithm.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	84 days	
	Refrigerated	48 hours	

FRISP
91105**Risperidone (Risperdal) and 9-Hydroxyrisperidone**

Specimen Requirements: Submit only 1 of the following specimens: Plasma Specimen Type: Plasma (Preferred) Container/Tube: Green-top (sodium heparin) tube(s). Specimen volume: 3 mL Collection Instructions: Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum Specimen Type: Serum Container/Tube: Red-top tube, serum gel is not acceptable. Specimen volume: 3 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80342

RIVAR 65847

Rivaroxaban, Anti-Xa, Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Specimen should be collected 2 to 4 hours (peak) after a dose or just prior (trough) to the next dose for rivaroxaban concentrations. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma into a plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. A double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	42 days	

CPT Code Information: 80299

RNAP 83397

RNA Polymerase III Antibodies, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516

RNP
81357

RNP Antibodies, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86235

ROMA
62661

ROMA Score (Ovarian Malignancy Risk Algorithm), Serum

Specimen Requirements: Patient Preparation: Patients receiving therapy with high biotin doses (ie, >5 mg/day) should not have their specimen collected until at least 8 hours following the last biotin administration. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	84 days	
	Refrigerated	48 hours	

CPT Code Information: 86305-HE4, S; 86304-Cancer Ag 125 (CA 125), S;

FROPI
57171

Ropivacaine, Serum/Plasma

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 1 mL serum refrigerate in a plastic vial. Plasma Draw blood in a lavender-top (EDTA) or pink top tube(s). (Plasma gel tube is not acceptable.) Spin down and send 1 mL plasma refrigerate in plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	28 days	
	Frozen	240 days	

CPT Code Information: 80299

ROTA 8886

Rotavirus Antigen, Feces

Specimen Requirements: Supplies: Stool Collection Kit, Random (T635) Container/Tube:
Preferred: Sterile fecal container Acceptable: Swab Specimen Volume: 5-10 g Collection Instructions:
Place specimen in a tightly sealed plastic bag.

Specimen Minimum Volume: 1 g

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Frozen (preferred)	7 days	
	Refrigerated	72 hours	

CPT Code Information: 87425

MARS 82701

Rough Marsh Elder, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen
Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

RRRP 82723

Rough Pigweed, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen
Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

RBPG
34938**Rubella Antibodies, IgG, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86762

ROC
5194**Rubeola (Measles) Antibodies, IgG and IgM, Spinal Fluid**

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.25 mL

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86765 x 2

RUFI
63030**Rufinamide, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. For sustained-release formulations ONLY, draw blood a minimum of 12 hours after last dose. 3. Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80210

RUSS
82681**Russian Thistle, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FRFYG 57579

Rye Food IgG

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

RYEG 82908

Rye Grass, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

RYE 82689

Rye, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen

Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

2SC 610031

S-(2-Succinyl)-Cysteine (2SC) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

S100 70547

S-100 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

F100B 57349

S-100B Protein, Serum

Specimen Requirements: Draw blood in a plain, red-top tube(s). Serum gel tube is acceptable. Allow specimen to clot at room temperature. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	
	Ambient	24 hours	

CPT Code Information: 86316**SSCTU**
607001**S-Sulfocysteine Panel, Urine****Specimen Requirements:** Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 3 mL Collection Instructions: Collect a random urine specimen.**Specimen Minimum Volume:** 2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Frozen	90 days	

CPT Code Information: 82542**SCERA**
610002**Saccharomyces cerevisiae Antibody, IgA, Serum****Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.4 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86671**SCERG**
610003**Saccharomyces cerevisiae Antibody, IgG, Serum****Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.4 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86671

FSFLE
57541

Safflower (*Carthamus tinctorius*) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FSAG
57957

Sage (*Artemisia* spp.) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

SALCA
37061

Salicylate, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80179

SALL4 71534

SALL4 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FSALG 57631

Salmon IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

SALM 82754

Salmon, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SALMC 606220

Salmonella Culture, Feces

Specimen Requirements: Patient Preparation: Medications: Do not use barium or bismuth before collection of specimen. Supplies: C and S Vial (T058) Specimen Type: Preserved Feces Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Ambient (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 87046-Salmonella Culture, Stool-with isolation and preliminary examination; 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87147 x 1-3-Serologic Agglut Method 1 Ident (if appropriate) ; 87077-Ident by MALDI-TOF mass spec (if appropriate);

HEXBZ 608026

Sandhoff Disease, HEXB Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479

SARCP 606427

Sarcoma Targeted Gene Fusion/Rearrangement Panel, Next-Generation Sequencing, Tumor

Specimen Requirements: This assay requires at least 10% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area: tissue 36 mm(2) -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. In this document, the sizes are given as 4mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3mm x 1mm x 10 slides: approximate/equivalent to 36mm(2). Preferred: Specimen Type: Formalin-fixed, paraffin-embedded

(FFPE) tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block. Acceptable: Specimen Type: FFPE Tissue Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Specimen Type: Cytology slide (direct smears or ThinPrep) Slide: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and coverslipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81455

SARD 82818

Sardine (Pilchard), IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FSAR2 75727

SARS-CoV-2 Neutralizing Antibody

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Draw blood in a serum gel tube(s), plain red-top tube(s) is acceptable. Centrifuge and aliquot serum; send one aliquot. DO NOT heat-inactivate. Ship 1 mL serum in a plastic vial, frozen.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	72 hours	
	Ambient	24 hours	

CPT Code Information: 86409

SATB2 **607600**

SATB2 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FSCA6 **91588**

SCA 6 (CACNA1A) Repeat Expansion

Specimen Requirements: 8 mL whole blood collected in a lavender-top (EDTA) tube(s). Send EDTA whole blood at ambient temperature. Note: Collection date is required.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)	10 days	
	Refrigerated	10 days	

CPT Code Information: 81184

FSCA1 **91585**

SCA1 (ATXN1) Repeat Expansion

Specimen Requirements: Specimen Type: Whole Blood Container/Tube: Lavender top (EDTA) Specimen Volume: 8 mL Collection Instructions: Send 8 mL whole blood (lavender-top) EDTA tubes Note: Collection date is required.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)	10 days	
	Refrigerated	10 days	

CPT Code Information: 81178

FSCA3 **91587**

SCA3 (MJC/ATXN3) Repeat Expansion

Specimen Requirements: Specimen Type: Whole Blood Container/Tube: Lavender top (EDTA)
Specimen volume: 8 mL Collection Instructions: Send 8 mL whole blood in original tube ambient

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)	10 days	
	Refrigerated	10 days	

CPT Code Information: 81180

SCLE 82716

Scale, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen
Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SCALS 82259

Scallop, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen
Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x
number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SHUR 60451

Schistosoma Exam, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube:
Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube
Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. Preferred time
of collection between the hours of 12 noon and 3 p.m. but not required. A 24-hour urine collection is

also acceptable. 2. No preservative.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated	7 days	

CPT Code Information: 87210; 87015;

BILHA **65019**

Schistosoma species Antibody, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: 86682

SCL70 **80178**

Scl 70 Antibodies, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86235

FSCPR **75625**

Scleroderma Comprehensive Profile

Specimen Requirements: Collection Container/Tube: 10 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1.0 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 86038; 83516; 86235 x 5; 86256;

FSCN4 75263

SCN4A (Myotonia) DNA Sequencing Test

Specimen Requirements: Draw blood in a lavender-top (EDTA) tube(s) and send 8 mL of whole blood. Ship Ambient. Note: Collection date and informed consent are required.

Specimen Minimum Volume: 6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)	10 days	
	Refrigerated	10 days	

CPT Code Information: 81406

SDHBZ 37442

SDHB Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81405-SDHB (succinate dehydrogenase complex, subunit B, iron sulfur) (eg, hereditary paraganglioma), full gene sequence; 81403-SDHB duplication/deletion;

SDHB 70550

SDHB Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SDHP 37441

SDHB, SDHC, SDHD Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81403 x 2; 81404 x 2; 81405 x 2;

SDHCZ 37443

SDHC Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81405-SDHC (succinate dehydrogenase complex, subunit C, integral membrane protein, 15kDa) (eg, hereditary paraganglioma-pheochromocytoma syndrome), full gene sequence; 81404-SDHC duplication/deletion ;

SDHDZ 37444

SDHD Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81404-SDHD (succinate dehydrogenase complex, subunit D, integral membrane protein) (eg, hereditary paraganglioma), full gene sequence; 81403-SDHD duplication/deletion;

SEAFP 31770

Seafood Allergen Profile, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.7 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003 x 5

SEAS 31766

Seasonal Inhalants Allergen Profile, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003 x 10

SECOS Secobarbital, Serum

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable)
Submission Container/Tube: Plastic vial Specimen Volume: 1.2 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum in plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80345; G0480 (if appropriate);

FSHPU 58038

Sedative Hypnotic Panel, Urine-Forensic

Specimen Requirements: Collect 10 mL random urine without preservatives. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	365 days	
	Ambient	72 hours	

CPT Code Information: 80307

SEWB 65600

Selenium, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Royal blue-top (EDTA) Specimen Volume: 0.8 mL Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 84255**SES**
9765**Selenium, Serum**

Specimen Requirements: Patient Preparation: High concentrations of gadolinium, iodine, and barium are known to interfere with most metals tests. If gadolinium-, iodine, or barium-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: -Metal Free B-D Tube (No Additive), 6 mL (T184) -Metal Free Specimen Vial (T173) Collection Container/Tube: 6-mL Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Metal-free, screw-capped, polypropylene vial Specimen Volume: 0.8 mL Collection Instructions: 1. Allow the specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into a metal-free, polypropylene vial, avoid transferring the cellular components of blood. Do not insert a pipette into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Ambient	28 days	METAL FREE
	Frozen	28 days	METAL FREE

CPT Code Information: 84255**SEMB**
60556**Semen Analysis with Strict Morphology, Semen**

Specimen Requirements: Patient Preparation: Patient should have 2 to 7 days of sexual abstinence at the time of semen collection for accurate results. Supplies: Semen Analysis Kit - Dilution Media (T178) Specimen Volume: Total ejaculate Collection Instructions: 1. After collection, allow the specimen to liquefy for 1 hour. 2. Measure the volume. 3. Place the specimen into media within 1 hour.

Specimen Minimum Volume: A minimum count is needed. Lab will determine.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Semen	Ambient	36 hours	

CPT Code Information: 89310-Semen Analysis; 89398-Strict Criteria Sperm Morphology; If both components performed,; 89322-Semen Analysis with Strict Morphology;

FER
81641**Semen Analysis, Semen**

Specimen Requirements: Patient Preparation: Patient should have 2 to 7 days of sexual abstinence at the time of semen collection for accurate results. Supplies: Semen Analysis Kit - Dilution Media (T178) Specimen Volume: Total ejaculate Collection Instructions: 1. After collection, allow the specimen to liquefy for 1 hour. 2. Measure the volume. 3. Place the specimen into media within 1 hour.

Specimen Minimum Volume: Total ejaculate

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Semen	Ambient		

CPT Code Information: 89310

SMFL 82858

Seminal Fluid, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SEQA 113398

Sequential Maternal Screening, Part 1, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. The ultrasound and blood draw must be completed within a gestational window of 10 weeks, 0 days and 13 weeks, 6 days, which corresponds to a crown-rump length (CRL) range of 31 to 80 mm. 2. Centrifuge and aliquot serum within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 84163

SEQB 113399

Sequential Maternal Screening, Part 2, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect blood between 15 weeks, 0 days and 22 weeks, 6 days. Do not collect blood after performing amniocentesis, as that may lead to an artificially increased serum alpha-fetoprotein level and unreliable results. 2. Centrifuge and aliquot within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 81511; 82105 (if appropriate); 82677 (if appropriate); 84702 (if appropriate); 86336 (if appropriate);

SALS 45328

Serologic Agglut Method 1 Ident (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87147

EC 45106

Serologic Agglut Method 2 Ident (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87147

SIDC 66697

Serologic Agglut Method 4 Ident (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87147

FSERO 75621

SeroNeg RAdx3 Profile

Specimen Requirements: Collection Container/Tube: 10 mL Red Submission Container/Tube: Plastic vial Specimen Volume: 3 mL Acceptable: SST Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 3 mL of serum refrigerated in a

plastic vial.

Specimen Minimum Volume: 3 mL (volume does NOT allow for repeat testing)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	60 days	
	Ambient	7 days	

CPT Code Information: 83520 x 3

FSRAU 57820

Serotonin Release Assay, Unfractionated Heparin

Specimen Requirements: Collection Container/Tube: Preferred: Red Top Acceptable: Serum gel Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	180 days	

CPT Code Information: 86022

FPORC 91763

Serotonin Release Assay, Unfractionated Heparin

Specimen Requirements: Specimen Type: Serum Container/Tube: Red/ SST acceptable Specimen Volume: 5 mL Collection Instruction: Draw blood in a plain, red-top tube, serum gel tube is acceptable. Spin down and remove serum from clot. Ship 5 mL of serum refrigerated in a plastic vial. Note: Date of birth required.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen		

CPT Code Information: 86022

SERU 87834

Serotonin, 24 Hour, Urine

Specimen Requirements: Patient Preparation: 1. Patients should not eat avocados, bananas, butternuts, cantaloupe, dates, eggplant, grapefruit, hickory nuts, honeydew melon, kiwifruit, melon, nuts, pecans, pineapple, plantains, plums, tomatoes, or walnuts, which are high in serotonin for 48 hours before and during collection. 2. Patient should be off of medications that may elevate urine serotonin

concentration including lithium, monoamine oxidase-inhibitors, methyl dopa, morphine, and reserpine. Patient should also be off of selective serotonin reuptake inhibitors (eg, PROZAC) that can lead to depletion of platelet serotonin levels and result in false-negative urine serotonin tests. 3. Patient should avoid heavy nicotine consumption during the 24-hr collection period. Container/Tube: Plastic, 10-mL urine tube (T068) Specimen Volume: 5 mL Collection Instructions: 1. Add 25 mL of 50% acetic acid as preservative at start of collection. 2. Collect urine for 24-hours. 3. Refrigerate specimen during collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	48 hours	

CPT Code Information: 84260

SERWB 84373

Serotonin, Blood

Specimen Requirements: Supplies: Serotonin Tube (T259) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Serotonin tube (T259) containing ascorbic acid Specimen Volume: 2.5 mL Collection Instructions: 1. Immediately after the venipuncture, transfer approximately 2.5 mL of whole blood to serotonin tube and mix well (any volume of whole blood from 1.5-3 mL is acceptable). 2. Immediately freeze specimen (necessary to lyse the RBCs).

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Frozen	90 days	SEROTONIN TUBE

CPT Code Information: 84260

SER 84395

Serotonin, Serum

Specimen Requirements: Patient Preparation: Patient should be off of medications that may affect serotonin concentrations including lithium, monoamine oxidase inhibitors, methyl dopa, morphine, and reserpine. Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2.5 mL Collection Instructions: Centrifuge as soon as blood has clotted and aliquot into plastic vial.

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	90 days	

Ambient

4 days

CPT Code Information: 84260**SERPZ**

63128

SERPINA1 Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Ambient		
	Frozen		

CPT Code Information: 81479**FSERT**

91345

Sertraline (Zoloft) and Desmethylsertraline

Specimen Requirements: Submit only 1 of the following specimens: Plasma Specimen Type: Plasma Container/Tube: Green Top Specimen Volume: 2 mL Collection Instructions: Draw blood in a green-top (sodium heparin) tube, plasma gel tube is not acceptable. Spin down and send 2 mL of sodium heparin plasma refrigerated in a plastic vial. Serum Specimen Type: Serum Container/Tube: Red Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain, red-top tube, serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80332**FSESG**

57682

Sesame Seed IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001**SESA**
82728**Sesame Seed, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**CORBS**
609799**Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) IgG, Blood Spot**

Specimen Requirements: Supplies: Card-Blood Spot Collection (Filter Paper) (T493)
 Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, Ahlstrom 226 filter paper and Munktell filter paper Specimen Volume: 2 Filled blood spots Collection Instructions: 1. See Dried Blood Spot Collection Tutorial for how to collect blood spots: <https://vimeo.com/508490782> 2. Let blood dry completely on filter paper at ambient temperature in a horizontal position for a minum of 3 hours. 3. At least 2 spots should be complete, ie, unpunched. 4. Do not expose specimen to heat, moisture, or direct sunlight. 5. Do not stack wet specimens. 6. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions-Fingerstick in Special Instructions. 2. For collection instructions in Portuguese, see Blood Spot Collection Instructions-Fingerstick-Portuguese in Special Instructions. 3. For collection instructions in Spanish, see Blood Spot Collection Instructions-Fingerstick-Spanish in Special Instructions.

Specimen Minimum Volume: 1 Blood spot**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient	25 days	FILTER PAPER

CPT Code Information: 86769

COVNG
614197

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Lineage, Clade, and Spike Gene Mutation Detection, Next-Generation Sequencing, Varies

Specimen Requirements: Call 800-533-1710 to have this test added to a previously collected specimen that tested positive for SARS-CoV-2 with COVOO, COVID, or COFLU. A new specimen would not be needed if there is sufficient specimen volume remaining. Specimen Type: Nasopharyngeal (NP), oropharyngeal (OP; ie, throat), nasal mid-turbinate, or nares/nasal swab Supplies: Swab, Sterile Polyester, 10 per package (T507) Collection Container/Tube: Preferred: Sterile polyester swab Acceptable: Dacron-tipped swab with plastic shaft Submission Container/Tube: Universal transport media, viral transport media, or equivalent (eg, Copan UTM-RT, BD VTM, MicroTest M4, M4-RT, M5). Media should not contain guanidine thiocyanate (GTC). For more information on acceptable transport media, see

www.fda.gov/medical-devices/emergency-situations-medical-devices/faqs-diagnostic-testing-sars-cov-2

Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media.

Collection Instructions: 1. Collect specimen by swabbing back and forth over nasal or pharyngeal mucosa surface to maximize recovery of cells. For more information on OP swab specimen collection, see COVID-19 Oropharyngeal Collection Instructions in Special Instructions. 2. NP and OP swab specimens may be combined at collection into a single vial of transport media but only 1 swab is required for analysis. 3. Swab must be placed into transport medium. Swab shaft should be broken or cut so that there is no obstruction to the sample or pressure on the media container cap. 4. Do not send in glass tubes, vacutainer tubes, or tubes with push caps. 5. Do not overfill with more than 3 mL total volume of media. Specimen Type: Nasopharyngeal aspirate or nasal washings Container/Tube: Sterile container Specimen Volume: Minimum of 1.5 mL Additional Information: Do not aliquot into viral transport media, glass tubes, vacutainer tubes, or tubes with push caps. Specimen Type: Nasopharyngeal aspirate or nasal washings, bronchoalveolar lavage (BAL) fluid, bronchial washings, endotracheal aspirate, sputum Container/Tube: Sterile container Specimen Volume: Minimum of 1.5 mL Additional Information: Do not aliquot into viral transport media, glass tubes, vacutainer tubes, or tubes with push caps.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen (preferred)	14 days	
	Refrigerated	72 hours	

CPT Code Information: 87999

COFLU
610293

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) RNA and Influenza Virus Type A and Type B RNA Detection, PCR, Varies

Specimen Requirements: Specimen Type: Nasopharyngeal (NP), nasal mid-turbinate, or nares/nasal swab Supplies: Swab, Sterile Polyester (T507) Container/Tube: Universal transport media, viral transport media, or equivalent (eg, Copan UTM-RT, BD VTM, MicroTest M4, M4-RT, M5) Media should not contain guanidine thiocyanate (GTC). For more information on acceptable transport media, see <https://www.fda.gov/medical-devices/emergency-situations-medical-devices/faqs-diagnostic-testing-sars-cov-2> Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media. Collection Instructions: 1. Collect specimen by swabbing back and forth over nasal mucosa surface to maximize recovery of cells. 2. Swab must be placed into transport medium. Swab shaft should be broken or cut so that there is no obstruction to the sample or pressure on the media container cap. 3. Do not send in glass tubes, vacutainer tubes, or tubes with push caps. 4. Do not overfill with more than 3 mL

total volume of media. Specimen Type: Nasopharyngeal aspirate or nasal washings Container/Tube: Sterile container Specimen Volume: Minimum of 1.5 mL Additional Information: Do not aliquot into viral transport media, glass tubes, vacutainer tubes, or tubes with push caps.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen (preferred)	14 days	
	Refrigerated	72 hours	

CPT Code Information: 87636

COVID 608825

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) RNA Detection, PCR, Varies

Specimen Requirements: Specimen Type: Nasopharyngeal (NP), oropharyngeal (OP; ie, throat), nasal mid-turbinate, or nares/nasal swab Supplies: -Swab, Sterile Polyester, 10 per package (T507) -Dacron-tipped swab with plastic shaft is acceptable Container/Tube: Universal transport media, viral transport media, or equivalent (eg, Copan UTM-RT, BD VTM, MicroTest M4, M4-RT, M5) Media should not contain guanidine thiocyanate (GTC). For more information on acceptable transport media, see

www.fda.gov/medical-devices/emergency-situations-medical-devices/faqs-diagnostic-testing-sars-cov-2

Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media.

Collection Instructions: 1. Collect specimen by swabbing back and forth over nasal or pharyngeal mucosa surface to maximize recovery of cells. For more information on OP swab specimen collection, see COVID-19 Oropharyngeal Collection Instructions in Special Instructions. 2. NP and OP swab specimens may be combined at collection into a single vial of transport media but only one swab is required for analysis. 3. Swab must be placed into transport medium. Swab shaft should be broken or cut so that there is no obstruction to the sample or pressure on the media container cap. 4. Do not send in glass tubes, vacutainer tubes, or tubes with push caps. 5. Do not overfill with more than 3 mL total volume of media. Specimen Type: Nasopharyngeal aspirate or nasal washings Container/Tube: Sterile container Specimen Volume: Minimum of 1.5 mL Additional Information: Do not aliquot into viral transport media, glass tubes, vacutainer tubes, or tubes with push caps. Specimen Type: Lower respiratory tract Sources: Bronchoalveolar lavage (BAL) fluid, bronchial washings, endotracheal aspirate, sputum Container/Tube: Sterile container Specimen Volume: Minimum of 1.5 mL Additional Information: Do not aliquot into viral transport media, glass tubes, vacutainer tubes, or tubes with push caps.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen (preferred)	14 days	
	Refrigerated	72 hours	

CPT Code Information: U0003 ; U0005-(If applicable);

COV00 610012

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) RNA Detection, Varies

Specimen Requirements: Specimen Type: Nasopharyngeal (NP), oropharyngeal (OP; ie, throat), nasal mid-turbinate, or nares/nasal swab Supplies: Swab, Sterile Polyester (T507) Container/Tube: Universal transport media, viral transport media, or equivalent (eg, Copan UTM-RT, BD VTM, MicroTest M4, M4-RT, M5) Media should not contain guanidine thiocyanate (GTC). For more information on acceptable transport media, see www.fda.gov/medical-devices/emergency-situations-medical-devices/faqs-diagnostic-testing-sars-cov-2 Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media. Collection Instructions: 1. Collect specimen by swabbing back and forth over nasal or pharyngeal mucosa surface to maximize recovery of cells. For more information on OP swab specimen collection, see COVID-19 Oropharyngeal Collection Instructions in Special Instructions. 2. NP and OP swab specimens may be combined at collection into a single vial of transport media but only one swab is required for analysis. 3. Swab must be placed into transport medium. Swab shaft should be broken or cut so that there is no obstruction to the sample or pressure on the media container cap. 4. Do not send in glass tubes, vacutainer tubes, or tubes with push caps. 5. Do not overfill with more than 3 mL total volume of media. Specimen Type: Nasopharyngeal aspirate or nasal washings Container/Tube: Sterile container Specimen Volume: Minimum of 1.5 mL Additional Information: Do not aliquot into viral transport media, glass tubes, vacutainer tubes, or tubes with push caps.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen (preferred)	14 days	
	Refrigerated	72 hours	

CPT Code Information: U0003 ; U0005-(If applicable);

CVOOA
610435

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) RNA Detection, Varies

Specimen Requirements: Specimen Type: Nasopharyngeal (NP), oropharyngeal (OP; ie, throat). Supplies: Swab, Sterile Polyester (T507) Container/Tube: Universal transport media, viral transport media, or equivalent (eg, Copan UTM-RT, BD VTM, MicroTest M4, M4-RT, M5) Media should not contain guanidine thiocyanate (GTC). For more information on acceptable transport media, see <https://www.fda.gov/medical-devices/emergency-situations-medical-devices/faqs-diagnostic-testing-sars-cov-2> Specimen Volume: Entire specimen with a minimum of 1.5 mL (maximum 3 mL) of transport media. Collection Instructions: 1. Collect specimen by swabbing back and forth over nasal or pharyngeal mucosa surface to maximize recovery of cells. For more information on OP swab specimen collection, see COVID-19 Oropharyngeal Collection Instructions in Special Instructions. 2. NP and OP swab specimens may be combined at collection into a single vial of transport media but only one swab is required for analysis. 3. Swab must be placed into transport medium. Swab shaft should be broken or cut so that there is no obstruction to the sample or pressure on the media container cap. 4. Do not send in glass tubes, vacutainer tubes, or tubes with push caps. 5. Do not overfill with more than 3 mL total volume of media. Specimen Type: Lower respiratory tract Sources: Bronchoalveolar lavage (BAL) fluid, bronchial washings, endotracheal aspirate, sputum Container/Tube: Sterile container Specimen Volume: Minimum of 2.2 mL Additional Information: Do not aliquot into viral transport media glass tubes, vacutainer tubes, or tubes with push caps.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Varies	Frozen (preferred)	14 days
	Refrigerated	72 hours

CPT Code Information: U0003

SARS2 608934

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) RNA, Varies

Specimen Requirements: Specimen Type: Nasopharyngeal (NP), oropharyngeal (OP; ie, throat), nares/nasal, or nasal mid-turbinate swab Supplies: Swab, Sterile Polyester (T507) Container/Tube: Universal transport media, viral transport media, or equivalent (eg, Copan UTM-RT, BD VTM, MicroTest M4, M4-RT, M5). Media should not contain guanidine thiocyanate (GTC). For more information on alternative transport media, see

www.fda.gov/medical-devices/emergency-situations-medical-devices/faqs-diagnostic-testing-sars-cov-2

Specimen Volume: Entire collection with a minimum of 2.2 mL (maximum 3 mL) of transport medium

Collection Instructions: 1. Collect specimen by swabbing back and forth over nasal or pharyngeal mucosa surface to maximize recovery of cells. For more information on OP swab specimen collection, see COVID-19 Oropharyngeal Collection Instructions in Special Instructions. 2. NP and OP swab specimens may be combined at collection into a single vial of transport media but only one swab is required for analysis. 3. Swab must be placed into transport medium. Swab shaft should be broken or cut so that there is no obstruction to the sample or pressure on the media container cap. 4. Do not send in glass tubes, vacutainer tubes, or tubes with push caps. 5. Do not overfill with more than 3 mL total volume of media. Specimen Type: Nasopharyngeal aspirate, nasal washing Container/Tube: Sterile container Specimen Volume: Minimum of 1.5 mL Additional Information: Do not aliquot into viral transport media glass tubes, vacutainer tubes, or tubes with push caps. Specimen Type: Lower respiratory tract Sources: Bronchoalveolar lavage (BAL) fluid, bronchial washings, endotracheal aspirate, sputum Container/Tube: Sterile container Specimen Volume: Minimum of 2.2 mL Additional Information: Do not aliquot into viral transport media glass tubes, vacutainer tubes, or tubes with push caps.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Frozen (preferred)	14 days	
	Refrigerated	72 hours	

CPT Code Information: U0003

COVTA 609709

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), Nucleocapsid, Total Antibody, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	

Frozen	28 days
Ambient	7 days

CPT Code Information: 86769

RSARB 613979

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), Rapid, PCR Charge (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated	72 hours	

CPT Code Information: U0005

SCOV 610689

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), RNA Detection, ddPCR, Tissue

Specimen Requirements: Specimen Type: Formalin-fixed, paraffin-embedded tissue. Sources: Lung tissue, sputum (cell block), tracheal aspirate (cell block), bronchoalveolar fluid (cell block), cardiac tissue, brain tissue, kidney tissue, other Preferred: Specimen Type: Tissue Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tissue block. Acceptable: Specimen Type: Tissue Container/Tube: Slides Specimen Volume: 5 unstained Collection Instructions: Submit 5 unstained, non-baked slides with 10-micron thick sections of tissue, preferably along with an Hematoxylin and Eosin slide (not required). Acceptable: Specimen Type: Tissue Container/Tube: Scrolls Specimen Volume: 5 scrolls Collection Instructions: Submit 5 scrolls of FFPE tissue cut at 10 microns thick, preferably along with an H&E slide (not required).

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87635

COVSQ 614035

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), Spike Antibody, Semi-Quantitative, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86769

SCDGP 62190

Severe Combined Immunodeficiency Panel (63 genes), Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated 14 days Specimen Type: Blood spot Supplies: Card-Blood Spot Collection Filter Paper (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Whatman FTA Classic paper, Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 2 to 5 blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient <1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Peripheral blood mononuclear cells (PBMCs) Container/Tube: Cell pellet Collection Instructions: Send as a suspension in freezing medium or cell pellet frozen on dry ice. Specimen Stability Information: Frozen Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Additional Information: Indicate the tests to be performed on the fibroblast culture cells. A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes of culture media can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin). Specimen Volume: 4-mm punch Additional Information: A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443

SCTF 35843

Sex Chromosome Determination, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE)

tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin (H and E)-stained slide.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

SHBG1 608102

Sex Hormone-Binding Globulin, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	
	Ambient	7 days	

CPT Code Information: 84270

SRYF 35301

Sex-Determining Region Y, Yp11.3 Deletion, FISH

Specimen Requirements: Submit only 1 of the following specimens: Supplies: Refrigerate/Ambient Shipping Box, 5 lb (T329) Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20-25 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Provide gestational age at the time of amniocentesis. 2. Discard the first 2 mL of amniotic fluid. 3. Place the tubes in a Styrofoam container (T329). 4. Fill remaining space with packing material. Additional Information: 1. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 2. Bloody specimens are undesirable. 3. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 4. Results will be reported and also telephoned or faxed, if requested. Supplies: Hank's Solution (T132) Specimen Type: Autopsy Container/Tube: Sterile container with sterile Hank's balanced salt solution (T132), Ringer's solution, or normal saline Specimen Volume: 4 mm diameter Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis. Specimen Type: Blood Container/Tube: Green top (sodium heparin)

Specimen Volume: 5 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. Supplies: CVS Media (RPMI) and Small Dish (T095) Specimen Type: Chorionic villus Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-25 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer chorionic villi to a Petri dish containing transport medium (T095). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Type: Fixed cell pellet Container/Tube: Sterile container with a 3:1 fixative (methanol:glacial acetic acid) Specimen Volume: Entire specimen Supplies: Hank's Solution (T132) Specimen Type: Products of conception or stillbirth Container/Tube: Sterile container with sterile Hank's balanced salt solution (T132), Ringer's solution, or normal saline Specimen Volume: 1 cm(3) of placenta (including 20-mg of chorionic villi) and a 1-cm(3) biopsy specimen of muscle/fascia from the thigh Collection Instructions: If a fetus cannot be specifically identified, collect villus material or tissue that appears to be of fetal origin. Additional Information: Do not send entire fetus. Supplies: Hank's Solution (T132) Specimen Type: Skin biopsy Container/Tube: Sterile container with sterile Hank's balanced salt solution (T132), Ringer's solution, or normal saline Specimen Volume: 4 mm diameter Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. A local anesthetic may be used. 5. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis.

Specimen Minimum Volume: Amniotic Fluid: 5 mL Autopsy, Skin Biopsy: 4 mm Blood: 2 mL Chorionic Villi: 5 mg Fixed Cell Pellet: 1 pellet Products of Conception: 1 cm(3)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271x1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88273 w/modifier 52-Chromosomal in situ hybridization, less than 10 cells (if appropriate); 88273-Chromosomal in situ hybridization, 10-30 cells (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

SZDIA
64750

Sezary Diagnostic Flow Cytometry, Blood

Specimen Requirements: Collection Container/Tube: Preferred: Yellow top (ACD) Acceptable: Lavender top (EDTA), green top (heparin) Specimen Volume: 6 mL Collection Instructions: 1. Send in original tube. Do not transfer blood to other containers. 2. Label specimen as blood.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	72 hours	
	Refrigerated	72 hours	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker

x 1; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each) ; 88188-Flow Cytometry Interpretation, 9 to15 markers (if appropriate); 88189-Flow Cytometry Interpretation, 16 or more markers (if appropriate);

SZMON 64749

Sezary Monitoring Flow Cytometry, Blood

Specimen Requirements: Collection Container/Tube: Preferred: Yellow top (ACD) Acceptable: Lavender top (EDTA), green top (heparin) Specimen Volume: 6 mL Collection Instructions: 1. Send in original tube. Do not transfer blood to other containers. 2. Label specimen as blood.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	72 hours	
	Refrigerated	72 hours	

CPT Code Information: 88184-Flow cytometry; first cell surface, cytoplasmic or nuclear marker x 1; 88185-Flow cytometry; additional cell surface, cytoplasmic or nuclear marker (each) ; 88188-Flow Cytometry Interpretation, 9 to15 markers (if appropriate); 88189-Flow Cytometry Interpretation, 16 or more markers (if appropriate);

SF1 72121

SF-1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SHWL 82747

Sheep Wool, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**STFRP**

35148

Shiga Toxin, Molecular Detection, PCR, Feces

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by shiga toxin DNA is unlikely. Submit only 1 of the following specimens: Preferred: Specimen Type: Preserved feces Supplies: C and S Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of nonnutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of feces; 5 mL Collection Instructions: 1. Collect fresh fecal specimen and submit in container with transport medium. 2. Place feces in preservative within 2 hours of collection. Specimen Stability Information: Ambient (preferred) <7 days/Refrigerated <7 days Acceptable: Specimen Type: Unpreserved feces Supplies: -Stool container, Small (Random), 4 oz Random (T288) -Stool Collection Kit, Random (T635) Container/Tube: Fecal container Specimen Volume: Representative portion of feces Collection Instructions: Collect fresh fecal specimen and submit representative sample in fecal container. Specimen Stability Information: Refrigerated (preferred) <7 days/Frozen <7 days

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Fecal	Varies	7 days	

CPT Code Information: 87798**SHIGC**

606221

Shigella Culture, Feces

Specimen Requirements: Patient Preparation: Medications: Do not use antacids, barium, bismuth, antidiarrheal medication, or oily laxatives before collection of specimen. Supplies: C and S vial (T058) Specimen Type: Preserved Feces Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Fecal	Ambient (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 87046-Shigella Culture, Stool-with isolation and preliminary examination; 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87147 x 4-Serologic Agglut Method 3 Ident (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate);

SRW
82667**Short Ragweed, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SCADZ
35544**Short-Chain Acyl-CoA Dehydrogenase (SCAD) Deficiency, Full Gene Analysis, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-25 flask Specimen Volume: 2 Full flasks Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 Blood Spots on collection card (Whatman Protein Saver 903 Paper; Ahlstrom 226 filter paper; or Blood Spot Collection Card, T493) Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches-3 mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81405-ACADS (acyl-CoA dehydrogenase C-2 to C-3 short chain) (eg, short chain acyl-CoA dehydrogenase deficiency), full gene sequence

FSHDH
75677**SHOX, DHPLC**

Specimen Requirements: Specimen Type: Whole Blood Preferred: Lavender top (EDTA)

Acceptable: Yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: Draw blood in a lavender-top (EDTA) or Yellow top (ACD) tube(s) and send 3 mL whole blood ambient. Required: New York Clients-Informed consent is required. Please document on the request form or electronic order that a copy is on file. An Informed Consent for Genetic Testing is available in Special Instructions.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient (preferred)	28 days	
	Refrigerated	28 days	

CPT Code Information: 81479

FSHRG 57542

Shrimp IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

SHRI 82677

Shrimp, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SDEX 9180

Sickle Solubility, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow

top (ACD solution B), green top (heparin) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	14 days	

CPT Code Information: 85660

STAT6 70554

Signal Transducer and Activator of Transcription 6 (STAT6), Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FSILS 75690

Silicon, Serum

Specimen Requirements: Specimen Type: Serum Collection Container/Tube: Plastic Royal Blue top tube (Trace metal-free; No additive) Specimen Volume: 2 mL Collection Instructions: Draw blood in a plastic, trace metal free, royal blue top, no additive tube(s). (Serum gel tube is not acceptable.) Promptly centrifuge and separate 2 mL into an acid washed plastic screw capped vial (T619). Ship refrigerated.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	Acid Washed Plastic (MML Supply T619)
	Ambient	14 days	Acid Washed Plastic (MML Supply T619)
	Frozen	14 days	Acid Washed Plastic (MML Supply T619)

CPT Code Information: 84285

SILK 82771

Silk, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen

Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

BIR
82674

Silver Birch, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FSINS
75400

Sinemet, Serum

Specimen Requirements: Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 1 mL of serum frozen in a preservative-free plastic vial. Specimen must be frozen immediately or results will be compromised.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	6 days	

CPT Code Information: 80299

SIIRO
35144

Sirolimus, Whole Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Draw blood immediately before a scheduled dose. 2. Do not centrifuge. 3. Send specimen in original tube. Additional Information: Therapeutic range applies to trough specimen drawn immediately prior to a.m. dose.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80195**SLIRV**

35549

Slide Review in Molecular Genetics (Bill Only)**Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 88381**SM**

81358

Sm Antibodies, IgG, Serum**Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.35 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86235**SMADZ**

35551

SMAD4 Gene, Full Gene Analysis, Varies**Specimen Requirements:** Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.**Specimen Minimum Volume:** 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81406 ; ; Hereditary Colon Cancer CGH Array, additional test; 81228;

SLL 65884

Small Lymphocytic Lymphoma, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Lymph node Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: For each probe set ordered, 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide. Specimen Type: Solid tumor Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: For each probe set ordered, 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: See Specimen Required.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88377-if 1 probe set; 88377 x 2-if 2 probe sets; 88377 x 3-if 3 probe sets; 88377 x 4-if 4 probe sets; 88377 x 5-if 5 probe sets; 88377 x 6-if 6 probe sets; 88377 x 7-if 7 probe sets; 88377 x 8-if 8 probe sets;

DHCRZ 608025

Smith Lemli Optiz, DHCR7 Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81405

SLO
81595

Smith-Lemli-Opitz Screen, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Green top (sodium or lithium heparin) Acceptable: Lavender top (EDTA), pearl white top (EDTA plasma gel), yellow top (ACD A/ACD B) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge and aliquot plasma into plastic vial. 2. Send plasma frozen.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen (preferred)	92 days	
	Refrigerated	28 days	
	Ambient	14 days	

CPT Code Information: 82542

SMN1Z
65941

SMN1 Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Supplies: Fibroblast Biopsy Transport Media (T115) Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Specimen Type: Blood spot Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card Specimen Volume: 5 Blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 3 punches 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81336; 88233-Tissue culture, skin, or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

SMAS 609515

Smooth Muscle Antibody Screen, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.8 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86255; 86256-if appropriate;

SMAT 608956

Smooth Muscle Antibody Titer, Serum

Specimen Requirements: Only orderable as part of a reflex. For more information see SMAS / Smooth Muscle Antibody Screen, Serum. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.8 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86256

SMOTH 70552

Smoothelin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

FCRNS 57961

Smut Corn (Ustilago maydis) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003**SNAIL**

82344

Snail, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**NAU**

610734

Sodium, 24 Hour, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 84300**NAURF**

610843

Sodium, Fetal, Random, Urine

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 84300**RNAUR
610785****Sodium, Random, Urine**

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 84300**NAS
602353****Sodium, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Ambient	14 days	

CPT Code Information: 84295**SOLEF
86310****Sole, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**CAPN**
35594**Solid Tumor-Targeted Cancer Gene Panel, Next-Generation Sequencing, Varies**

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area: tissue 36 mm(2). -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. In this document, the sizes are given as 4 mm x 4 mm x 10 slides as preferred; approximate/equivalent to 144 mm(2) and the minimum as 3 mm x 1 mm x 10 slides; approximate/equivalent to 36 mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 Stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and cover slipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81445-Targeted genomic sequence analysis panel, solid organ neoplasm; Slide Review; 88381-Microdissection, manual;**FSFM**
58015**Soluble Fibrin Monomer**

Specimen Requirements: Draw 4.5 mL 3.2% Sodium Citrated whole blood. Spin down and send 1.5 mL of platelet-poor plasma frozen in plastic vial. STRICT FROZEN - Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
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Plasma Na Cit

Frozen

14 days

CPT Code Information: 85366**SOLFM**

602175

Soluble Fibrin Monomer, Plasma

Specimen Requirements: Only orderable as part of a coagulation reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR / Thrombophilia Profile, Plasma APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85366**FSLAA**

57735

Soluble Liver Antigen (SLA) Autoantibody

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	8 days	
	Frozen	28 days	
	Ambient	48 hours	

CPT Code Information: 83520**STFR**

84283

Soluble Transferrin Receptor (sTfR), Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	90 days	
	Refrigerated	7 days	

Ambient

72 hours

CPT Code Information: 84238**SLC1Q**
610061**Solute Carrier Organic Anion Transporter Family Member 1B1 (SLC01B1) Genotype, Statin, Varies**

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mL (microliters) Collection Instructions: 1. The preferred volume is 100 mL at a concentration of 50 ng/mL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81328**SOMAT**
70553**Somatostatin (SOMATO) Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FSOMA
90172**Somatostatin (Somatotropin Release-Inhibiting Factor, SRIF)**

Specimen Requirements: Patient preparation: Â 1. Patient should be fasting 10-12 hours prior to collection. Â 2. Patient should not be on any medications that affect insulin secretion or intestinal motility, if possible for at least 48 hours prior to collection. Specimen Type: Plasma Container/Tube: EDTA tube containing GI preservative: EDTAGI Specimen Volume: 1 mL Collection Instructions:

Collect 10 mL of blood in special tube containing G.I. Preservative (T125). Specimen should be separated immediately and send 3 mL plasma frozen as soon as possible.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
GI Plasma	Frozen	90 days	

CPT Code Information: 84307

SSTR2 113597

Somatostatin Receptor 2 (SSTR2), Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostains Technical Only Envelope (T693) Preferred: 2 unstained positively charged glass slide (25 x 75 x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FSOTA 91123

Sotalol (Betapace)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80299

SOX10 70555

SOX10 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered;

sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SOX11
70556

SOX11 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FSOYG
57551

Soybean IgG

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

FSYG4
57574

Soybean IgG4

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	28 days
	Frozen	365 days
	Ambient	7 days

CPT Code Information: 86001

SOY 82886

Soybean, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SPAGR 113392

Special Red Cell Antigen Typing, Whole Blood

Specimen Requirements: Container/Tube: 6 mL pink (EDTA) Submission Container/Tube: Original tube Collection Instructions: Send specimen in original tube.

Specimen Minimum Volume: Pediatric: 3 mL blood in 6 mL (pink) EDTA tube

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Ambient	72 hours	

CPT Code Information: 86905-Each red cell antigen typing (if more than one ordered)

SS1PO 113319

Special Stain Group I, Microorganism, Profile Only (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88312-26

SS3PO
113323**Special Stain Group III, Enzyme, Profile Only (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88319-26**SS1PC**
113318**Special Stain, Group I, Microorganisms (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88312**SS2PC**
113320**Special Stain, Group II, Other, (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88313**SS2PO**
113321**Special Stain, Group II, Other, Profile Only (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88313-26

SS3PC
113322

Special Stain, Group III, Enzyme (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88319

SGUR
606565

Specific Gravity, Random, Urine

Specimen Requirements: Container/Tube: Plastic urine container Specimen Volume: 20 mL
Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

SPID2
610297

Specimen Identification by PCR (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87798

SPECI
35552

Specimen Source Identification

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL
Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.
Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Tissue block or slide
Collection Instructions: 1. Submit formalin-fixed, paraffin-embedded (FFPE) tissue block (preferred) or 4 to 10 unstained sections (each 5-microns thick) plus 1 slide stained with hematoxylin and eosin. 2. The number of unstained sections required depends on the amount of tissue that can be used for

analysis. 3. For very small tissue fragments, 10 sections are recommended; for large tissue fragments, 4 sections are generally sufficient. 4. If known and unknown specimens are within the same block, include labeled hematoxylin-and-eosin slide identifying the known and unknown specimens. 5. Specimen ID tests involving very small fragments of tissue, including most floaters, are performed at the discretion of the reviewing pathologist. Cases involving floaters are usually rejected due to an insufficient amount of the floater tissue.

Specimen Minimum Volume: Blood: 0.5 mL Tissue: see Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells; ; Added as needed:: 81266 each additional specimen (eg additional cord blood donor, additional fetal samples from different cultures, or additional zygosity in multiple birth pregnancies); ;

HCFPC 113324

SpecStain, frozen (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88314

FSPNG 57678

Spinach IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

SPIN

Spinach, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SMNCS
65574

Spinal Muscular Atrophy Carrier Screening, Deletion/Duplication Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call Mayo Clinic Laboratories for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate. Specimen Type: Blood spot Supplies: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Card-Blood Spot Collection Filter paper (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 5 Blood Spots on collection card (Whatman Protein Saver 903 Paper; Ahlstrom 226 filter paper; or Blood Spot Collection Card, T493) Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions. Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Tissue biopsy Supplies: Muscle Biopsy Kit (T541) Collection Instructions: Prepare and transport specimen per instructions in Muscle Biopsy Specimen Preparation in Special Instructions. Additional Information: Muscle Biopsy Shipping Kits (T541) are available. Specimen Volume: 10-80 mg Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 1 mL Tissue Biopsy: 200 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Varies

Varies

CPT Code Information: 81329; 88233 (if appropriate); 88240 (if appropriate);

SMNDX 65575

Spinal Muscular Atrophy Diagnostic Assay, Deletion/Duplication Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: To ensure a minimum DNA amount and concentration, the preferred blood volume must be submitted. Testing may be canceled if the specimen supplied is inadequate. Specimen Stability Information: Ambient (preferred)/Refrigerated Prenatal Specimens Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Submit only 1 of the following specimens: Specimen Type: Amniotic fluid Container/Tube: Preferred: Screw-capped, sterile centrifuge tubes Acceptable: T-25 flasks of confluent cultured cells Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Chorionic villi Container/Tube: Preferred: 15-mL tube containing 15 mL of transport media Acceptable: T-25 flasks of confluent cultured cells Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Specimen Type: Blood spot Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 5 Blood Spots on collection card (Whatman Protein Saver 903 Paper; Ahlstrom 226 filter paper; or Blood Spot Collection Card) Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Amniotic Fluid: 10 mL Chorionic villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81329; 88235 (if appropriate); 88240 (if appropriate); 88233 (if appropriate); 88240 (if appropriate); 81265 (if appropriate);

SBULB 35542

Spinobulbar Muscular Atrophy (Kennedy Disease), Molecular Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81204-AR (androgen receptor)(eg, spinal and bulba muscular atrophy, Kennedy disease, X chromosome inactivation) gene analysis; characterization of alleles (eg, expanded size or methylation status)

SSP

9673

Sporothrix Antibody, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL Collection Instructions: Do not collect from a line.

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	14 days	

CPT Code Information: 86671

SSPC

81532

Sporothrix Antibody, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86671

SFGP

83679

Spotted Fever Group Antibody, IgG and IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

14 days

CPT Code Information: 86757 x 2**SPRU**
82394**Spruce, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**FSCCA**
75689**Squamous Cell Carcinoma, Serum****Specimen Requirements:** Specimen Type: Serum Container/Tube: Red Acceptable: SST Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain, red-top tube(s) or serum gel tube(s). Allow serum to clot completely at room temperature. Spin down and send 2 mL serum frozen in a plastic vial.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	60 days	
	Refrigerated	14 days	
	Ambient	48 hours	

CPT Code Information: 86316**SQUA**
82797**Squash, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	

Frozen

90 days

CPT Code Information: 86003**SQUID**

82631

Squid, IgE, Serum**Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**SSAB**

82403

SS-A and SS-B Antibodies, IgG, Serum**Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.35 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86235 x 2**SSA**

81360

SS-A/Ro Antibodies, IgG, Serum**Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.35 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86235

SSB
81359**SS-B/La Antibodies, IgG, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86235

STLPC
83916**St. Louis Encephalitis Antibody Panel, IgG and IgM, Spinal Fluid**

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.8 mL

Specimen Minimum Volume: 0.70 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86653 x 2

STLP
83154**St. Louis Encephalitis Antibody, IgG and IgM, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86653 x 2

ST2S
61723**ST2, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen (preferred)	90 days	
	Refrigerated	7 days	
	Ambient	72 hours	

CPT Code Information: 83006

FSTAB

57891

Stachybotrys chartarum/atra IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FSPII

57592

Stachybotrys Panel II

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 1.0 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001/Allergen specific IgG; quantitative or semiquantitative; 86003/Allergen specific IgE; quantitative or semiquantitative; 83520/not otherwise specified;

STACL

602186

StacLOT Lupus Anticoagulant, Plasma

Specimen Requirements: Only orderable as part of a reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited, Plasma AATHR /

Thrombophilia Profile, Plasma APROL / Prolonged Clot Time Profile, Plasma ADIC / Disseminated Intravascular Coagulation/Intravascular Coagulation and Fibrinolysis (DIC/ICF) Profile, Plasma

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85598

STEM
82696

Stemphyllium, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

STER
82079

Sterols, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Green top (sodium or lithium heparin) Acceptable: Lavender top (EDTA), pearl white top (EDTA plasma gel), yellow top (ACD A/ACD B) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge specimen and aliquot plasma into plastic vial. 2. Send plasma frozen.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen (preferred)	92 days	
	Refrigerated	28 days	
	Ambient	14 days	

CPT Code Information: 82542

INSEC
31765

Stinging Insects Allergen Profile, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.8 mL

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003 x 5**STKZ**
35556**STK11 Gene, Full Gene Analysis, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81405; ; Hereditary Colon Cancer CGH Array, additional test; 81228;**FSTBG**
57656**Strawberry IgG**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001**STBY**
82676**Strawberry, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x

number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SABP
86537

Streptococcal Antibodies Profile, Serum

Specimen Requirements: Patient Preparation: Fasting preferred but not required Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 86060; 86215;

SPNEU
83150

Streptococcus pneumoniae Antigen, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 2 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Excessively bloody or very turbid specimens containing protein, cells, or particulates will be canceled as they can inhibit the function of the test. 4. Centrifuging to remove particulates is not approved. 5. Specimens with any dyes or unnatural color are not acceptable and will be canceled.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	24 hours	

CPT Code Information: 87899

SPNC
89971

Streptococcus pneumoniae Antigen, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 87899**PN23**
83640**Streptococcus pneumoniae IgG Antibodies, 23 Serotypes, Serum****Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.4 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86317 x 22**PNT0**
608969**Streptococcus pneumoniae IgG Antibodies, Total, Serum****Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86317**PNTOR**
608970**Streptococcus pneumoniae IgG Antibodies, Total, with Reflex, Serum****Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86317; 86317 x 23 (if appropriate);

MSTC 80749

Strict Criteria Sperm Morphology for Infertility Diagnosis and Treatment, Semen

Specimen Requirements: Semen specimen must arrive within 24 hours of collection. Send specimen Monday through Thursday only and not the day before a holiday. If holiday falls on a Saturday, holiday will be observed on the preceding Friday. Sunday holidays are observed on the following Monday. Specimen should be collected and packaged as close to shipping time as possible. Laboratory does not perform testing on weekends. Container/Tube: Semen Analysis Kit (T178) Collection Instructions: Patient should have 2 to 7 days of sexual abstinence at the time of semen collection for accurate results. Specimen Volume: Total ejaculate Additional Information: Specimen volume is required.

Specimen Minimum Volume: A minimum count is needed. Lab will determine.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Semen	Ambient		

CPT Code Information: 89398

MSTC1 35184

Strict Criteria Sperm Morphology for Infertility Diagnosis and Treatment, Semen

Specimen Requirements: Patient Preparation: Patient should have 2 to 7 days of sexual abstinence at the time of semen collection for accurate results. Container/Tube: Slides Specimen Volume: 2 slides-10 microL of liquefied semen on each slide Collection Instructions: 1. If sperm concentration is <10 million/mL, centrifuge the specimen at 300 x G for 10 minutes before making slides. 2 Label 2 frosted slides in pencil with the patient's first and last name and the date of specimen collection. No adhesive labels. 3. Allow the semen to liquefy for 30 minutes. 4. Place 10 microL of liquefied semen on the label end of each slide, and evenly smear the specimen using a plain slide (this process is the same as making a blood smear). 5. Allow the smears to air dry for 15 minutes before placing both slides into 1 slide holder for shipment.

Specimen Minimum Volume: A minimum count is needed; lab will determine

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Semen	Ambient		

CPT Code Information: 89398

STRNG 63866

Strongyloides Antibody, IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: 86682

FSTYR 91094

Styrene, Occupational Exposure, Blood

Specimen Requirements: Collect 2 tubes green-top (sodium heparin) whole blood. Send 20 mL sodium heparin whole blood refrigerated. Collect specimen at end of shift or prior to next shift. Tubes should be filled to prevent loss of volatile compound into headspace.

Specimen Minimum Volume: 2.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Refrigerated (preferred)	14 days	
	Frozen	180 days	

CPT Code Information: 84600

SUBS 45381

Subseq Antib MIC (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

SUAC 83635

Succinylacetone, Blood Spot

Specimen Requirements: Submit only 1 of the following specimen types: Preferred: Specimen Type: Blood Spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, Ahlstrom 226 filter paper, Munktel filter paper, or blood collected in tube containing heparin, ACD or EDTA and dried on filter paper. Specimen Volume: 2 blood spots Collection Instructions: 1. At least 1 spot should be complete, ie, unpunched. 2. Do not expose specimen to heat or direct sunlight. 3. Do not stack wet specimens. 4. Keep specimen dry. 5. If collection of a new specimen is necessary, let blood dry on the Blood Spot Collection Card (T493) at ambient temperature in a horizontal position for 3 hours. Specimen Stability Information: Ambient (preferred) 90 days/Refrigerated 90 days/Frozen 90 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish

Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions. Acceptable Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin) and yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: Send specimen in original tube. Specimen Stability Information: Refrigerate (preferred) 4 days/Ambient 4 days

Specimen Minimum Volume: Blood Spot: 1 Whole Blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Varies		

CPT Code Information: 84510; 82542; 82542 (if appropriate for government payers);

FSUCC 57460

Succinyladenosine, CSF

Specimen Requirements: Submit 1 mL of spinal fluid (CSF) in a sterile, plastic screw-cap vial. Freeze specimen after collection and ship at frozen temperature. Note: Complete and submit with specimen, Medical Neurogenetics Neurochemistry request form with Physician name and phone number. Also include test required, sample date, date of birth, current medications and relevant history.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen		

CPT Code Information: 82542

SUDC 606930

Sudden Cardiac Death Pathology Consultation

Specimen Requirements: Specimen Type: Heart Supplies: Pathology Packaging Kit (T554) Refrigerate/Ambient Shipping Box, 5 lb (T329) Specimen Volume: Entire specimen Collection Instructions: 1. Fix entire specimen in formalin for a minimum of 24 hours. 2. Following fixation, lightly wrap specimen in formalin-soaked paper towel, place in a leak-proof sealable bag with a small amount of formalin, seal, and ship ambient in a sturdy shipping container. Additional Information: Paraffin block may be accepted. Specimen Type: Blood Container/Tube: Lavender top (EDTA) Specimen Volume: 10 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
SUDC Study Specimen	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 88037

FSCNE 57543

Sugar Cane (*Saccharum officinarum*) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

SBSE 82382

Sugarbeet Seed, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SFZ 8238

Sulfamethoxazole, Serum

Specimen Requirements: Collection Container/Tube: Red top (gel tubes/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum for a peak level should be collected 60 minutes after dose. 2. Centrifuge within 2 hours of collection.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80299

SULFU

606479

Sulfate, 24 Hour, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, 5-mL urine tube Specimen Volume: 4 mL Collection Instructions: Collect urine for 24 hours. 2. No preservative. 3. Specimen must be kept refrigerated during and after collection. 4. Specimen pH should be between 4.5 and 8 and will stay in this range if kept refrigerated. Specimens with pH >8 indicate bacterial contamination, and testing will be cancelled. Do not attempt to adjust pH as it will adversely affect results. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 84392

FSUAB

75230

Sulfatide Autoantibody Test

Specimen Requirements: Collection Container/Tube: 5 mL Red/Serum gel tube is also acceptable. Submission Container/Tube: plastic vial Collection Instructions: Draw blood in a plain, red-top tube(s), serum gel tube is acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	365 days	
	Ambient	72 hours	

CPT Code Information: 83520 x2 Immunoassay, analyte, quant; not otherwise specified

FSLFU

57710

Sulfonylurea Screen, Urine

Specimen Requirements: Collection Container: Plastic urine container Specimen Volume: 5 mL Collection Instructions: Collect 5 mL random urine without preservative. Ship refrigerated in a plastic container.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80377

FSUNG 57681

Sunflower Seed IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

SUNFS 82813

Sunflower Seed, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SUNF 82615

Sunflower, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SAT24

36971

Supersaturation Profile, 24 Hour, Urine

Specimen Requirements: Supplies: Diazolidinyl Urea (Germall) 5.0 mL (T822) Collection Container/Tube: 24-hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 60-mL urine bottle Specimen Volume: 35 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Add 5 mL of diazolidinyl urea as preservative at start of collection, or refrigerate specimen during and after collection. 3. Specimen pH should be between 4.5 and 8 and will stay in this range if kept refrigerated. Specimens with pH >8 indicate bacterial contamination, and testing will be cancelled. Do not attempt to adjust pH as it will adversely affect results. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 82340-Calcium; 82436-Chloride; 82507-Citrate excretion; 82570-Creatinine; 83735-Magnesium; 83935-Osmolality; 83945-Oxalate; 83986-pH; 84105-Phosphorus; 84133-Potassium; 84300-Sodium; 84392-Sulfate; 84560-Uric acid; 82140-Ammonium; 84540-Urea Nitrogen;

SSATR

36907

Supersaturation Profile, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Aliquot Tubes, 5 mL (T465) Container/Tube: 3 Plastic, 10-mL urine tubes and 4 plastic, 5-mL tubes Specimen Volume: 40 mL Collection Instructions: 1. Collect a random urine specimen and divide the urine into 6 tubes. 2. Refrigerate specimen after collection. Specimen pH should be between 4.5 and 8 and will stay in this range if kept refrigerated. Specimens with pH over 8 indicate bacterial contamination and testing will be canceled. Do not attempt to adjust pH as it will adversely affect results.

Specimen Minimum Volume: 30 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 82310-Calcium; 82436-Chloride; 82507-Citrate excretion; 82570-Creatinine; 83735-Magnesium; 83935-Osmolality; 83945-Oxalate; 83986-pH; 84105-Phosphorus; 84133-Potassium; 84300-Sodium; 84392-Sulfate; 84560-Uric acid; 82140-Ammonium;

SNS

82594

Supplemental Newborn Screen, Blood Spot

Specimen Requirements: Patient must be older than 12 hours and less than 1 week of age. Supplies: Card-Blood Spot Collection Filter Paper (T493) Preferred: Blood Spot Collection Card

Acceptable: Whatman Protein Saver 903 Paper, Munktell, PerkinElmer 226 (formerly Ahlstrom 226) filter paper Specimen Volume: 3 Blood spots Collection Instructions: 1. Do not use device or capillary tube containing EDTA to collect specimen. 2. Completely fill at least 3 circles on the filter paper card (approximately 100 microliters blood per circle). 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. 6. If collection of a new specimen is necessary, let blood dry on the Blood Spot Collection Card at ambient temperature in a horizontal position for 3 hours. Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)		FILTER PAPER
	Frozen		FILTER PAPER
	Refrigerated		FILTER PAPER

CPT Code Information: 83789

STPPC

113335

Surgical Pathology Touch Prep (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88333

STAPC

113336

Surgical Pathology Touch Prep Additional (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88334

SUS

45391

Susceptibility (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87181**RSLG**
61088**Susceptibility Slow Grower (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Specimen Minimum Volume:** Isolate**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87186**MIC**
801659**Susceptibility, MIC (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87186**STV1**
62507**Susceptibility, Mtb Complex, Broth (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87188 x 3**STVP**
83597**Susceptibility, Mtb Complex, PZA (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
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Varies

Varies

CPT Code Information: 87188**STV2**

62508

Susceptibility, Mtb Cx, 2nd Line (Bill Only)**Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87186**TBPZA**

34549

Susceptibility, Mycobacterium tuberculosis Complex, Pyrazinamide, Varies

Specimen Requirements: Specimen Type: Organism Supplies: Infectious Container, Large (T146) Container/Tube: Middlebrook 7H10 agar slant Specimen Volume: Isolate Collection
Instructions: Organism must be in pure culture, actively growing.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87188-Susceptibility, Mycobacterium tuberculosis Complex, Pyrazinamide; 87153-Mtb PZA Confirmation, pncA Sequencing (if appropriate);

TB2LN

34550

Susceptibility, Mycobacterium tuberculosis Complex, Second Line, Varies

Specimen Requirements: Specimen Type: Organism Supplies: Infectious Container, Large (T146) Container/Tube: Middlebrook 7H10 agar slant Specimen Volume: Isolate Collection
Instructions: Organism must be in pure culture, actively growing.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 87186-Susceptibility, Mtb Cx, 2nd Line**SGUM**

82483

Sweet Gum, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SPOT 82799

Sweet Potato, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

VERG 82909

Sweet Vernal Grass, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SWORD 82346

Swordfish, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

SYNAP
70557

Synaptophysin (SYNAPTO) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

SS18F
35303

Synovial Sarcoma (SS), 18q11.2 (SS18 or SYT) Rearrangement, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5-micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5-micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 $\tilde{\text{A}}\hat{\text{c}}\hat{\text{a}},\neg\hat{\text{a}}\in\text{œ}$ DNA probe, each (first probe set), Interpretation and report; 88271x2 $\tilde{\text{A}}\hat{\text{c}}\hat{\text{a}},\neg\hat{\text{a}}\in\text{œ}$ DNA probe, each; each additional probe set (if appropriate); 88271x1 $\tilde{\text{A}}\hat{\text{c}}\hat{\text{a}},\neg\hat{\text{a}}\in\text{œ}$ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 $\tilde{\text{A}}\hat{\text{c}}\hat{\text{a}},\neg\hat{\text{a}}\in\text{œ}$ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 $\tilde{\text{A}}\hat{\text{c}}\hat{\text{a}},\neg\hat{\text{a}}\in\text{œ}$ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 $\tilde{\text{A}}\hat{\text{c}}\hat{\text{a}},\neg\hat{\text{a}}\in\text{œ}$ Interphase in situ hybridization, <25 cells, each probe set

(if appropriate); 88274 $\hat{A}\hat{c}\hat{a}$, $\hat{a}\hat{e}$ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 $\hat{A}\hat{c}\hat{a}$, $\hat{a}\hat{e}$ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

FSCSC 75608

Synthetic Cannabinoid Metabolites Screen, Expanded (2019 Scope), Urine

Specimen Requirements: Specimen Type: Urine Container/Tube: Plastic preservative-free urine container Specimen Volume: 5 mL Collection Instructions: Collect 5 mL random urine specimen without preservative. Send specimen refrigerated in a plastic urine container. Note: Known interference(s): 4-carboxy-AMB-PINACA : 5-fluoro-PIC-ACID (5-Fluoro-PB-22 3-Carboxyindole) 5-fluoro-PIC-ACID: 5-fluoro-PICA 3,3-dimethylbutanoic acid FUBINACA 3,3-dimethylbutanoic acid: Quetiapine

Specimen Minimum Volume: 2.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	30 days	
	Ambient	30 days	
	Frozen	30 days	

CPT Code Information: 80307

SGSU 81035

Synthetic Glucocorticoid Screen, Random, Urine

Specimen Requirements: Supplies: Urine tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen	14 days	

CPT Code Information: 80299

SGSS 81031

Synthetic Glucocorticoid Screen, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL

Specimen Minimum Volume: 1.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	14 days	
	Refrigerated	7 days	

Ambient

24 hours

CPT Code Information: 80299**TPPA**
61480**Syphilis Antibody, Treponema pallidum Particle Agglutination, Serum****Specimen Requirements:** Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86780**SYPNB**
605983**Syphilis Total Antibody Bill Only 1 (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 86780**SYPPB**
605984**Syphilis Total Antibody Bill Only 2 (Bill Only)****Specimen Requirements:** This test is for billing purposes only. This is not an orderable test.**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 0064U (PLA)**SYPHT**
603259**Syphilis Total Antibody with Reflex, Serum****Specimen Requirements:** Collection Container/Tube: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into a plastic vial.**Specimen Minimum Volume:** 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86780; 86592 (if appropriate); 86780 (if appropriate); 86593 (if appropriate);

SYPHN

603260

Syphilis Total Antibody, Serum

Specimen Requirements: Collection Container/Tube: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86780

TBNY

82589

T, B and NK Lymphocyte Quantitation, New York, Blood

Specimen Requirements: Container/Tube: 4 mL Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	52 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86355; 86357; 86359; 86360;

TBET

70559

T-Box Expressed in T Cells (TBET) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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TECHONLY	Ambient (preferred)
	Refrigerated

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

COGTF 113529

T-Cell Acute Lymphoblastic Leukemia (T-ALL), Children's Oncology Group Enrollment Testing, FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1 to 2 mL Collection Instructions: Invert several times to mix bone marrow. Acceptable Specimen Type: Blood Container/Tube: Green top (sodium heparin) Specimen Volume: 6 mL Collection Instructions: Invert several times to mix blood.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

TALLF 35296

T-Cell Acute Lymphoblastic Leukemia (T-ALL), FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Green top (sodium heparin) Specimen Volume: 7-10 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1-2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes

(if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

BTIA1 605160

T-Cell Intracellular Antigen 1 (TIA-1) Immunostain, Bone Marrow, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TIA1 70566

T-Cell Intracellular Antigen 1 (TIA-1) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TCL1A 70561

T-Cell Leukemia/Lymphoma Protein 1A (TCL1A) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

TLYM 65911

T-Cell Lymphoma, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Lymph node Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: For each probe set ordered, 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide. Specimen Type: Solid tumor Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: For each probe set ordered, 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: For each probe set ordered, 2 consecutive, unstained, 5 micron-thick sections placed on positively charged slides. Include 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88377-if 1 probe set; 88377 x 2-if 2 probe sets; 88377 x 3-if 3 probe sets; 88377 x 4-if 4 probe sets;

TLPF 35298

T-Cell Lymphoma, FISH, Varies

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Bone marrow Container/Tube: Green top (sodium heparin) Specimen Volume: 1-2 mL Collection Instructions: Invert several times to mix bone marrow. Acceptable: Specimen Type: Blood Container/Tube: Green top (sodium heparin) Specimen Volume: 7-10 mL Collection Instructions: Invert several times to mix blood.

Specimen Minimum Volume: Blood: 2 mL Bone Marrow: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271x2-DNA probe, each; each additional probe set (if appropriate); 88271x1-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

TCRF1 70560

T-Cell Receptor Beta (TCR Beta F1) Immunostain, Technical

Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope (T693) Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TCRGD 70562

T-Cell Receptor Delta Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TREC 87959

T-Cell Receptor Excision Circles (TREC) Analysis, Blood

Specimen Requirements: For serial monitoring, we recommend that specimen draws be performed at the same time of day. Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Container/Tube: Lavender top (EDTA) Specimen Volume: Adults: 10 mL Pediatrics: -Preferred volume for >1 year = 5 mL -Preferred volume for < or =1 year old = 3 mL Collection Instructions: 1. Do not draw specimen through a butterfly needle. 2. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: Adults: 10 mL/Pediatrics: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81479-Unlisted molecular pathology procedure

TCGR 83122

T-Cell Receptor Gene Rearrangement, PCR, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 4 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send

specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 81340-TCB (T cell antigen receptor, beta) (eg, leukemia and lymphoma), gene rearrangement analysis to detect abnormal clonal population(s); using amplification methodology (eg, PCR); 81342-TCG@ (T cell receptor, gamma) (eg, leukemia and lymphoma), gene rearrangement analysis, evaluation to detect abnormal clonal population(s);

TCGBM 31139

T-Cell Receptor Gene Rearrangement, PCR, Bone Marrow

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: 1. Invert several times to mix bone marrow. 2. Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Bone Marrow	Ambient (preferred)	7 days	
	Refrigerated	7 days	

CPT Code Information: 81340-TCB (T cell antigen receptor, beta) (eg, leukemia and lymphoma), gene rearrangement analysis to detect abnormal clonal population(s); using amplification methodology (eg, PCR); 81342-TCG (T cell receptor, gamma) (eg, leukemia and lymphoma), gene rearrangement analysis, evaluation to detect abnormal clonal population(s);

TCGRV 31140

T-Cell Receptor Gene Rearrangement, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Body fluid Container/Tube: Sterile container Specimen Volume: At least 5 mL Collection Instructions: 1. If the volume is large, pellet cells prior to sending. 2. Send less volume at ambient temperature or as a frozen cell pellet. Specimen Stability Information: Body fluid: Ambient/Refrigerated/Frozen Cell pellet: Frozen Specimen Type: Paraffin-embedded bone marrow aspirate clot Container/Tube: Paraffin block Specimen Stability Information: Ambient Specimen Type: Frozen tissue Container/Tube: Plastic container Specimen Volume: 100 mg Collection Instructions: Freeze tissue within 1 hour of collection. Specimen Stability Information: Frozen Specimen Type: Paraffin-embedded tissue Container/Tube: Paraffin block Specimen Stability Information: Ambient Specimen Type: Tissue slides Container/Tube: Unstained tissue slides Specimen Volume: 10 slides Specimen Stability: Ambient Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 5 to 10 mL Specimen Stability Information: Ambient/Refrigerated Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube with indication of volume and concentration of DNA Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen 2. Indicate volume and concentration of DNA on label Specimen Stability Information: Refrigerated/Ambient

Specimen Minimum Volume: Body fluid or Spinal fluid: 1 mL Tissue: 50 mg Extracted DNA:

50 microliters at 20 ng/mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81340-TCB (T cell antigen receptor, beta) (eg, leukemia and lymphoma), gene rearrangement analysis to detect abnormal clonal population(s), using amplification methodology (eg, PCR); 81342-TCG (T cell receptor, gamma) (eg, leukemia and lymphoma), gene rearrangement analysis, evaluation to detect abnormal clonal population(s);

TCP
89319

T-Cell Subsets, Naive, Memory, and Activated, Blood

Specimen Requirements: For serial monitoring, it is recommended that specimens are collected at the same time of day. Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86356 x 7; 86360;

TREGS
89318

T-Cell Subsets, Regulatory (Tregs), Blood

Specimen Requirements: For serial monitoring, it is recommended that specimens are collected at the same time of day. Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	72 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 86359; 86361;

TLBLF
65413

T-Lymphoblastic Leukemia/Lymphoma, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Specimen Type: Slides Specimen Volume: 19 Consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: Formalin-fixed paraffin-embedded tissue block or for each probe set ordered, 9 unstained consecutive tissue sections cut at 5 microns and placed on positively charged

microscope slides. Include 1 hematoxylin and eosin (H and E) stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271 x 2, 88291-DNA probe, each (first probe set), Interpretation and report; 88271 x 2-DNA probe, each; each additional probe set (if appropriate); 88271-DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271 x 2-DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271 x 3-DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52-Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274-Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275-Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

TPIT
607889

T-PIT Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FRT3
9404

T3 (Triiodothyronine), Free, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 84481

RT3
9405

T3 (Triiodothyronine), Reverse, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel

Submission Container/Tube: Plastic vial Specimen Volume: 0.8 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 84482

T3 8613

T3 (Triiodothyronine), Total, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 84480

FRT4D 8859

T4 (Thyroxine), Free, Dialysis, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2.6 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Centrifuge and aliquot serum into plastic vial within 2 hours of draw.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	21 days	
	Ambient	7 days	

CPT Code Information: 84439

FRT4 8725

T4 (Thyroxine), Free, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	72 hours	

CPT Code Information: 84439

T4FT4 **36108**

T4 (Thyroxine), Total and Free, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.625 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	72 hours	

CPT Code Information: 84436-Total; 84439-Free;

T4 **8724**

T4 (Thyroxine), Total Only, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 84436

TAKRO

35145

Tacrolimus, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: 1. Draw blood immediately before a schedule dose. 2. Do not centrifuge. 3. Send specimen in original tube. Additional Information: Therapeutic range applies to trough specimens drawn immediately prior to a.m. dose.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80197

TACPK

88157

Tacrolimus, Peak, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: 1. Do not centrifuge. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80197

TAPEN

62594

Tapentadol and Metabolite, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Aliquot Tube, 5 mL (T465) Specimen Volume: 2 mL
Collection Instructions: No preservative.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80372; G0480 (if appropriate);

FIOCA

57944

Tapioca IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

TBSU

604262

Targeted Benzodiazepine Screen, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80347; G0480 (if appropriate);

TABSU

604267

Targeted Benzodiazepine Screen, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: CSMPU / Controlled Substance Monitoring Panel, Random, Urine TBSU / Targeted Benzodiazepine Screen, Random, Urine Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80347; G0480 (if appropriate);

TOPSU **65059**

Targeted Opioid Screen, Random, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: CSMPU / Controlled Substance Monitoring Panel, Random, Urine TOSU / Targeted Opioid Screen, Random, Urine Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80364 (G0481 if appropriate)

TOSU **604261**

Targeted Opioid Screen, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80364 (G0481 if appropriate)

TSTIM **610273**

Targeted Stimulant Screen, Random, Urine

Specimen Requirements: Only orderable as part of profile. For more information see: -CSMPU / Controlled Substance Monitoring Panel, Random, Urine -TSPU / Targeted Stimulant Screen, Random, Urine Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	28 days	

CPT Code Information: 80326; (G0480 if appropriate);

TSPU 610272

Targeted Stimulant Screen, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	28 days	

CPT Code Information: 80326; (G0480 if appropriate);

TARR 82486

Tarragon, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

TRAP 70570

Tartrate-Resistant Acid Phosphatase (TRAP) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		

Refrigerated

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TAU3 70628

TAU 3 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TAU4 70627

TAU 4 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TAUI 70558

TAU Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

HEXAZ Tay-Sachs Disease, HEXA Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81406

TSDP 35562

Tay-Sachs Disease, HEXA Mutation Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 2.6 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. Specimen Stability Information: Ambient (preferred) 4 days/Refrigerated/Frozen Prenatal Specimens Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Blood: 0.5 mL Amniotic Fluid: 10 mL Chorionic Villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81255-HEXA (hexosaminidase A, alpha polypeptide) (eg, Tay-Sachs disease) gene analysis, common variants (eg, 1278insTATC, 1421+1G->C, G269S); 88233-Tissue culture, skin or solid tissue biopsy (if appropriate) 88235-Tissue culture for amniotic fluid (if appropriate) ; 88240-Cryopreservation (if appropriate); 81265-Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells (if appropriate) ;

TCRVB 62930

TCR V-Beta Repertoire Analysis by Spectratyping, Blood

Specimen Requirements: For serial monitoring, it is recommended to perform specimen

collection at the same time of day, if possible. Supplies: Ambient Shipping Box-Critical Specimens Only (T668) Specimen Type: Blood Container/Tube: Lavender top (EDTA) Specimen Volume: Adults: 10 mL Pediatrics: -Preferred volume for >1 year: 3 mL -Preferred volume for < or =1 year: 1 mL Collection Instructions: Send specimen in original tube.

Specimen Minimum Volume: Adults: 5 mL Pediatrics: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Ambient	48 hours	PURPLE OR PINK TOP/EDTA

CPT Code Information: 81340-TRG (T cell antigen receptor, beta) (eg, leukemia and lymphoma), gene rearrangement analysis to detect abnormal clonal population(s); using amplification methodology (eg, polymerase chain reaction)

FGTEA 57684

Tea IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

TEA 82625

Tea, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

NTFPC 601985

Teased Fiber (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

CPT Code Information: 88362

TELGP 65668

Telomere Defects Gene Panel

Specimen Requirements: Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Blood spot Supplies: Card-Blood Spot Collection Filter Paper (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Whatman FTA Classic paper, Ahlstrom 226 filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient <1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Peripheral blood mononuclear cells (PBMCs) Container/Tube: Cell pellet Collection Instructions: Send as a suspension in freezing medium or cell pellet frozen on dry ice. Specimen Stability Information: Frozen Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Additional Information: Indicate the tests to be performed on the fibroblast culture cells. A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Supplies: Fibroblast Biopsy Transport Media (T115) Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes of culture media can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Additional Information: A separate culture charge will be assessed under FIBR / Fibroblast Culture. An additional 4 weeks is required to culture fibroblasts before genetic testing can occur. Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 250 ng/mcL 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Whole blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81479

FFTEM 80763

Temazepam (Restoril), Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container

Varies	Refrigerated (preferred)	7 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80346; G0480 (if appropriate); ; ;

TDT 70563

Terminal Deoxynucleotidyl Transferase (TdT) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TERT 65415

TERT Promoter Analysis, Tumor

Specimen Requirements: This assay requires at least 20% tumor nuclei. -Preferred amount of tumor area with sufficient percent tumor nuclei: tissue 144 mm(2) -Minimum amount of tumor area: tissue 36 mm(2). -These amounts are cumulative over up to 10 unstained slides and must have adequate percent tumor nuclei. -Tissue fixation: 10% neutral buffered formalin, not decalcified -For specimen preparation guidance, see Tissue Requirement for Solid Tumor Next-Generation Sequencing in Special Instructions. In this document, the sizes are given as 4mm x 4mm x 10 slides as preferred: approximate/equivalent to 144 mm(2) and the minimum as 3mm x 1mm x 10 slides: approximate/equivalent to 36mm(2). Preferred: Specimen Type: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block with acceptable amount of tumor tissue. Acceptable: Specimen Type: Tissue slide Slides: 1 stained and 10 unstained Collection Instructions: Submit 1 slide stained with hematoxylin and eosin and 10 unstained, nonbaked slides with 5-micron thick sections of the tumor tissue. Note: The total amount of required tumor nuclei can be obtained by scraping up to 10 slides from the same block. Specimen Type: Cytology slide (direct smears or ThinPrep) Slides: 1 to 3 slides Collection Instructions: Submit 1 to 3 slides stained and cover slipped with a preferred total of 5000 nucleated cells or a minimum of at least 3000 nucleated cells. Note: Glass coverslips are preferred; plastic coverslips are acceptable but will result in longer turnaround times. Additional Information: Cytology slides will not be returned.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81345; 88381;

TTBS
80065**Testosterone, Total and Bioavailable, Serum**

Specimen Requirements: Container/Tube: Red top (serum gel/SST are not acceptable)
Specimen Volume: 1 mL

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	60 days	

CPT Code Information: 84403; 84410;

TGRP
8508**Testosterone, Total and Free, Serum**

Specimen Requirements: Container/Tube: Red top (serum gel/SST are not acceptable)
Specimen Volume: 2.5 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	60 days	

CPT Code Information: 84402; 84403; ;

TTFB
83686**Testosterone, Total, Bioavailable, and Free, Serum**

Specimen Requirements: Container/Tube: Red top (serum gel/SST are not acceptable)
Specimen Volume: 3.5 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	60 days	

CPT Code Information: 84402; 84403; 84410;

TTST
8533**Testosterone, Total, Mass Spectrometry, Serum**

Specimen Requirements: Container/Tube: Red top (serum gel/SST are not acceptable)
Specimen Volume: 1 mL

Specimen Minimum Volume: 0.215 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	60 days	

CPT Code Information: 84403

TTIGS

36667

Tetanus Toxoid IgG Antibody, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Frozen	30 days	

CPT Code Information: 86317

TTOX

82138

Tetanus Toxoid, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FFTEN

57102

Tetrahydrobiopterin and Neopterin Profile (BH4, N)

Specimen Requirements: Medical Neurogenetics collection kit (T657) required. Each collection kit contains 5 microcentrifuge tubes. COLLECTION PROTOCOL: 1) CSF should be collected from the first drop into the tubes in the numbered order. Fill each tube to the marked line with the required volumes Tube 1: 0.5 mL Tube 2: 1.0 mL Tube 3: 1.0 mL (contains antioxidants necessary to protect the sample integrity) Tube 4: 1.0 mL Tube 5: 1.0 mL - If sample's not blood contaminated, the tubes should be placed on dry ice at bedside - If sample's are blood contaminated, the tubes should immediately be centrifuged (prior to freezing) and the clear CSF transferred to new similarly labeled tubes, then frozen -

Store samples at -80 until they can be shipped 2) Complete Medical Neurogenetics, LLC request form. Include test required, sample date and date of birth. 3) Label tubes with patient name and ID number, leaving the tube number viewable. 4) Place samples inside a specimen transport bag and the Medical Neurogenetics, LLC request form inside the pouch of the transport bag. 5) Ship samples frozen on dry ice.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen		CSF KIT

CPT Code Information: 82542

THEV1 608085

Thalassemia and Hemoglobinopathy Evaluation, Blood and Serum

Specimen Requirements: Blood and serum are required. Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 15 mL Collection Instructions: Send specimen in original tube. Do not aliquot. Specimen Type: Serum Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection. 3. Label specimen as serum.

Specimen Minimum Volume: Blood: 2.5 mL Serum: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated	7 days	
Whole Blood EDTA	Refrigerated	7 days	

CPT Code Information: 83020-26-Hemoglobinopathy Interpretation; 83020-Hb Variant, A2 and F Quantitation; 83021-HPLC Hb Variant; 82728-Ferritin; 82664 (if appropriate); 83068 (if appropriate); 83789 (if appropriate); 88184 (if appropriate);

THEV0 608092

Thalassemia Summary Interpretation, Blood

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated		

TLU 8603

Thallium, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. Aliquot 10 mL

into a plastic 10-mL urine tube (T068) or a clean, plastic aliquot container with no metal cap or glued insert. 4. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83018

TLB 8149

Thallium, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Metal Free B-D Tube (EDTA), 6 mL (T183) Container/Tube: Royal blue-top (EDTA) plastic trace element blood collection tube Specimen Volume: Full tube Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original tube. Additional Information: If ordering the trace element blood collection tube from BD, order catalog #368381.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83018

TLCRU 60325

Thallium/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container with no metal cap or glued insert Submission Container/Tube: Plastic, 10-mL urine tube (T068) or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 2 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 1.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 83018 Thallium concentration; 82570 Creatinine concentration;

THBNG 64872

THBD Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Peripheral blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or green top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability: Ambient (preferred)/Refrigerate/Frozen Specimen Type: Extracted DNA Container/Tube: 1.5- to 2-mL tube with indication of volume and concentration of the DNA. Specimen Volume: Entire specimen Collection Instructions: 1. Label specimen as extracted DNA and source of specimen. 2. Provide indication of volume and concentration of the DNA. Specimen Stability: Frozen (preferred)/Refrigerate/Ambient

Specimen Minimum Volume: Blood: 1 mL Extracted DNA: 100 mcL at 50 ng/mcL concentration

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	7 days	
	Frozen	14 days	
	Refrigerated	7 days	

CPT Code Information: 81479

FFTCC 75149

THC Confirmation, MS, SP

Specimen Requirements: Submit only 1 of the following specimens: Serum: Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 5 mL of serum refrigerated in plastic vial. Plasma: Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 5 mL sodium heparin plasma refrigerated in plastic vial.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	

CPT Code Information: 80349

THEO 8661

Theophylline, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80198

TAMV
82514

Thermoactinomyces vulgaris, IgG Antibodies, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 86609

TDP
42356

Thiamine (Vitamin B1), Whole Blood

Specimen Requirements: Patient Preparation: Fasting overnight (12-14 hours). Infants-draw prior to next feeding. Water can be taken as needed. Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Amber vial Specimen Volume: 4 mL Collection Instructions: 1. Invert 8 to 10 times to mix blood. 2. Transfer whole blood into amber vial or tube and freeze within 24 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Frozen	28 days	LIGHT PROTECTED

CPT Code Information: 84425

FFTIO
57708

Thiocyanate, Serum

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a

green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 1 mL sodium heparin plasma refrigerated in plastic vial. Serum Draw blood in a plain, red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in plastic vial.

Specimen Minimum Volume: 0.50 mL Does not allow for repeat testing

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 84430

THIO

65381

Thiopurine Metabolites, Whole Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL
Collection Instructions: Send specimen in original tube. Do not aliquot, centrifuge, or freeze.

Specimen Minimum Volume: 1.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	8 days	
	Ambient	24 hours	

CPT Code Information: 80299

TPNUQ

610062

Thiopurine Methyltransferase (TPMT) and Nudix Hydrolase (NUDT15) Genotyping, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: One swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 0034U

TPMT3
65188

Thiopurine Methyltransferase Activity Profile, Erythrocytes

Specimen Requirements: Patient Preparation: Thiopurine methyltransferase (TPMT) enzyme activity can be inhibited by several drugs and may contribute to falsely low results. Patients should abstain from the following drugs for at least 48 hours prior to TPMT testing: naproxen (Aleve), ibuprofen (Advil, Motrin), ketoprofen (Orudis), furosemide (Lasix), sulfasalazine (Azulfidine), mesalamine (Asacol), olsalazine (Dipentum), mefenamic acid (Ponstel), trimethoprim (Proloprim), methotrexate, thiazide diuretics, and benzoic acid inhibitors. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin), navy blue top (metal free sodium heparin), or plasma gel tubes Specimen Volume: 5 mL

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	6 days	
	Ambient	6 days	

CPT Code Information: 82657

FUTHI
75403

Thiosulfate, Urine

Specimen Requirements: Send 4 mL from a random urine collection. Send specimen refrigerated in a plastic (preservative-free) urine container.

Specimen Minimum Volume: 1.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	30 days	
	Frozen	14 days	

CPT Code Information: 82542; 82570; 81002 (if appropriate);

FFTHI
91126

Thiothixene (Navane)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 3 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Varies	Refrigerated (preferred)	14 days
	Frozen	180 days
	Ambient	72 hours

CPT Code Information: 80342

TTSC 602184

Thrombin Time (Bovine), Plasma

Specimen Requirements: Patient Preparation: Fasting preferred Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 2. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 3. Aliquot plasma into a separate plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 4. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85670

FFTAC 75672

Thrombin-Antithrombin Complex

Specimen Requirements: Specimen Type: Citrated plasma Collection Container/Tube: Light-blue top (citrate) Specimen Volume: 2 mL Collection Instructions: Draw blood in a light blue-top (Sodium citrate) tube(s). Spin down and send 2 mL citrated plasma frozen in a plastic vial. Note: Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	365 days	

CPT Code Information: 83520

AATHI 603184

Thrombophilia Profile Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see AATHR / Thrombophilia Profile, Plasma.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-26 Special Coagulation Interpretation

AATHR 603304 Thrombophilia Profile, Plasma and Whole Blood

Specimen Requirements: Both blood and plasma are required. Patient Preparation: 1. Patient should not be receiving Coumadin (warfarin), heparin, direct thrombin inhibitors (argatroban, dabigatran), or direct factor Xa inhibitors (apixaban, rivaroxaban, and edoxaban). 2. Specimen must be collected prior to initiation of anticoagulants and thrombolytic therapy. 3. If patient has been recently transfused, it is best to perform this study pretransfusion, if possible. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD), light-blue top (3.2% sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Do not aliquot. 3. Label specimen as whole blood. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial (polypropylene preferred) Specimen Volume: 5 mL in 5 plastic vials; each containing 1 mL Collection Instructions: 1. Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma (1-2 mL per aliquot) into 5 separate plastic vials leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. If priority specimen, mark request form, give reason, and request a call-back.

Specimen Minimum Volume: Plasma: 5 mL in 5 plastic vials each containing 1 mL Whole Blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	
Whole blood	Ambient (preferred)	14 days	
	Frozen	14 days	
	Refrigerated	14 days	

CPT Code Information: 81240-F2 (prothrombin, coagulation factor II) (eg, hereditary hypercoagulability) gene analysis, 20210G->A variant; 85300-AT activity; 85303-Protein C activity; 85306-Protein S antigen, free; 85307-Activated protein resistance V; 85379-D-Dimer; 85384-Fibrinogen; 85390-26-Special coagulation interpretation; 85610-PT; 85613-DRVVT; 85670-Thrombin time; 85730-APTT; 81241-F5 (coagulation factor V) (eg, hereditary hypercoagulability) gene analysis, Leiden variant (if appropriate); 85210-Factor II (if appropriate); 85220-Factor V (if appropriate); 85230-Factor VII (if appropriate); 85240-Factor VIII (if appropriate); 85250-Factor IX (if appropriate); 85260-Factor X (if appropriate); 85270-Factor XI (if appropriate); 85280-Factor XII (if appropriate); 85301-Antithrombin antigen (if appropriate); 85302-Protein C antigen (if appropriate); 85305-Protein S antigen, total (if appropriate); 85306-Protein S activity (if appropriate); 85366-Soluble fibrin monomer (if appropriate); 85385-PT-Fibrinogen (if appropriate); 85597-Platelet neutralization for lupus inhibitor (if appropriate); 85598-Sta clot LA (if appropriate); 85611-PT mix 1:1 (if appropriate); 85613-DRVVT mix (if appropriate); 85613-DRVVT confirmation (if appropriate); 85635-Reptilase time (if appropriate); 85732-APTT mix 1:1 (if appropriate);

FFTPO 57822

Thrombopoietin (TPO)

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	30 days	

CPT Code Information: 83520

THSIF 605244

Thrombospondin Type 1 Domain Containing 7A (THSD7A), Immunofluorescence

Specimen Requirements: Specimen Type: Kidney tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; paraffin sections 3 to 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) kidney tissue block

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Special	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 88346-Primary IF; 88350-If additional IF;

THSD7 603290

Thrombospondin Type-1 Domain-Containing 7A Antibodies, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Plastic vial Specimen Volume: 1 mL Collection Information: Centrifuge within 2 hours. Aliquot and ship in plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	
	Ambient	8 hours	

CPT Code Information: 86255

THYM

82606

Thyme, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

TGAB

84382

Thyroglobulin Antibody, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Red top (gel tubes/SST are not acceptable) Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 86800

THYR

70565

Thyroglobulin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TGMS

62749

Thyroglobulin Mass Spectrometry, Serum

Specimen Requirements: Container/Tube: Red top (gel tubes/SST are not acceptable) Specimen

Volume: 1.25 mL

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	416 days	
	Ambient	72 hours	

CPT Code Information: 84432

HTGR 62936

Thyroglobulin, Tumor Marker Reflex, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 86800

TFNAB 607714

Thyroglobulin, Tumor Marker, Fine-Needle Aspiration Biopsy Needle Wash

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Plain, plastic, screw-top tube Specimen Volume: 1 to 1.5 mL Collection Instructions: 1. Needle wash specimens for analysis should be collected in conjunction with cytology specimens. 2. Have saline available prior to start of procedure. Saline is the only acceptable solution for needle washings. 3. After each fine-needle aspiration biopsy (FNAB) has been collected and the material in the needle has been expelled onto a slide for cytologic analysis, attach the used FNAB needle to an empty syringe. 4. Withdraw between 0.10 mL and 0.25 mL of saline up through the needle until the saline starts to fill the hub of the needle or end of the syringe. 5. Expel this fluid back through the needle into a separate plastic screw-top tube. This is the needle washing used for analysis. 6. Repeat steps 2 through 4 for each needle pass of the same biopsied site and empty into the same tube, accumulating a total of 0.5 mL to 1.5 mL of fluid to send to the laboratory. (If more than 1 site is biopsied, see Additional Information) 7. Inspect specimen for visible blood or tissue contamination: -a. If bloody, centrifuge specimen and transfer supernatant to a new plastic aliquot tube (5-mL standard tube) to send to laboratory. The supernatant, not the cellular material, is used for analysis. -b. If specimen is clear, centrifugation is not necessary. 8. Refrigerate within 1 to 2 hours of collection. Send specimen frozen (preferred) or refrigerate. Additional Information 1. If more than 1 site is biopsied, each washing material should be submitted on a separate tube and under a different order number. 2. A minimum of 0.5 mL is required for testing; however, the

total collection volume should not exceed 1.5 mL. Specimen volumes outside these parameters may be rejected. 3. Do not send a saline control. This test has been validated to rule-out saline matrix effect.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fine Needle Wash	Frozen (preferred)	90 days	
	Refrigerated	14 days	
	Ambient	7 days	

CPT Code Information: 84432

HTG2 62800

Thyroglobulin, Tumor Marker, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Red top (serum gel tubes are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 84432-Thyroglobulin, tumor marker; 86800-Thyroglobulin antibody screen;

TAB 82041

Thyroid Autoantibodies Profile, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Red top Specimen Volume: 1 mL Collection Instructions: Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 86376-Thyroperoxidase antibody; 86800-Thyroglobulin antibody ;

THSCM 83633

Thyroid Function Cascade, Serum

Specimen Requirements: Patient Preparation: 1. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. 2. In patients receiving therapy with high biotin doses (ie, >5 mg/day), no specimen should be taken until at least 8 hours after the last biotin administration. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	72 hours	

CPT Code Information: 84443-Thyroid-stimulating hormone-sensitive (s-TSH); 84439-T4 (thyroxine), free (if appropriate); 84480-T3 (triiodothyronine), total (if appropriate); 86376-Thyroperoxidase (TPO) antibodies (if appropriate);

TTF8G 70575

Thyroid Transcription Factor (8G7G3/1) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TTFSP 70576

Thyroid Transcription Factor (SPT24) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TTFK5 70489

Thyroid Transcription Factor 1 (TTF1) (SPT24) and Keratin 5 (KRT5) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88344-TC

TSH 70574

Thyroid-Stimulating Hormone (TSH), Beta Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

STSH 8939

Thyroid-Stimulating Hormone-Sensitive (s-TSH), Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 84443

TSI
8634

Thyroid-Stimulating Immunoglobulin, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	60 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 84445

TPO
81765

Thyroperoxidase Antibodies, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.6 mL Collection Instructions: Centrifuge and aliquot serum within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 86376

THYRO
81797

Thyrotropin Receptor Antibody, Serum

Specimen Requirements: Patient Preparation: 1. For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. 2. Patient should not be receiving heparin treatment. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	

Frozen

30 days

CPT Code Information: 83520**TBGI**
9263**Thyroxine-Binding Globulin (TBG), Serum**

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 84442**T4BPE**
38507**Thyroxine-Binding Protein Electrophoresis, Serum**

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1.6 mL

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	24 hours	

CPT Code Information: 82664; 84436;**FGTIA**
75019**Tiagabine (Gabitril), Serum**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 3 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	

Frozen	180 days
Ambient	72 hours

CPT Code Information: 80199

TICKS

83265

Tick-Borne Disease Antibodies Panel, Serum

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	10 days	
	Frozen	14 days	

CPT Code Information: 86618; 86666 x 2; 86753; 86617 x 2-Lyme disease Western blot (if appropriate);

TKPNL

40203

Tick-Borne Panel, Molecular Detection, PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	7 days	

CPT Code Information: 87798 x 8

FFTIC

91273

Ticlopidine, Serum/Plasma

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a plain, red-top tube(s). (Serum gel tube is not acceptable.) Spin down and send 1 mL of serum refrigerate in preservative-free plastic vial. Note: Label specimen appropriately (serum). Plasma Draw blood in a purple-top (EDTA) tube(s). (Plasma gel tube is not acceptable.) Spin down and send 1 mL of EDTA plasma refrigerate in preservative-free plastic vial. Note: Label specimens appropriately (plasma).

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	16 days	
	Frozen	60 days	

CPT Code Information: 80299

FFTIL
57558

Tilapia IgE

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

TIMG
82891

Timothy Grass, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FFTIB
91137

Tin, Blood

Specimen Requirements: Draw blood in a royal blue-top (metal free EDTA) tube. Send 2 mL metal free EDTA whole blood refrigerated.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA - Metal Free (ERB)	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 83018

FFTIN

91101

Tin, Serum

Specimen Requirements: Submit only 1 of the following specimens: Serum Draw blood in a metal free tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of metal free serum refrigerated in a plastic vial. Plasma Draw blood in an EDTA metal-free royal blue-top tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL metal-free EDTA plasma refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 83018

FXTDS

57733

Tissue Drug Screen

Specimen Requirements: 50 grams of tissue in sterile container, frozen immediately.

Specimen Minimum Volume: 2 grams

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Frozen (preferred)	180 days	
	Refrigerated	14 days	

CPT Code Information: 80307

TISSR

45444

Tissue Processing (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87176

TSTGP

83671

Tissue Transglutaminase Antibodies, IgA and IgG Profile, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516 x 2

TTGA 82587

Tissue Transglutaminase Antibody, IgA, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516

TTGG 83660

Tissue Transglutaminase Antibody, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 83516

TIS 89367

Titanium, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: -Metal Free B-D Tube (No Additive), 6 mL (T184) -Metal Free Specimen Vial (T173) Collection Container/Tube: Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL

Metal-free, screw-capped, polypropylene vial Specimen Volume: 1.2 mL Collection Instructions: 1. Allow specimen to clot for 30 minutes; then centrifuge the specimen to separate serum from the cellular fraction. 2. Remove the stopper. Carefully pour specimen into a metal-free, polypropylene vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: If ordering the trace element blood collection tube from BD, order catalog #368380.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Frozen	28 days	METAL FREE
	Ambient	7 days	METAL FREE

CPT Code Information: 83018

TLE1 70567

TLE-1 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FNFAS 57889

TNF-alpha (TNF-a) Serum

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 1 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 1 mL of serum frozen in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	365 days	

CPT Code Information: 83520

TOBPA 37063

Tobramycin, Peak, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Specimen Volume: 0.5 mL Collection Instructions: 1. Serum for a peak level should be drawn 30 to 60 minutes after last dose. 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80200

TOBRA 37065 Tobramycin, Random, Serum

Specimen Requirements: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL
Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80200

TOBTA 37064 Tobramycin, Trough, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Specimen Volume: 0.5 mL Collection Instructions: 1. Draw blood no more than 30 minutes before next scheduled dose. 2. Serum gel tubes should be centrifuged within 2 hours of collection. 3. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80200

TCZ
609499

Tocilizumab Quantitation, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection, patients should not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Container/Tube: Preferred: Â Serum gel Acceptable: Red top Specimen Volume: 0.6 mL

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	

CPT Code Information: 80299

FHIPP
91121

Toluene as Hippuric Acid, Occupational Exposure, Urine

Specimen Requirements: 10 mL aliquot of random or spot urine collected at end of shift. Send specimen refrigerated. Tubes should be filled to prevent loss of volatile compound into headspace.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	180 days	

CPT Code Information: 83921/Organic acid, single, quantitative; 82570/Creatinine, other source;

FFTLB
91141

Toluene, Occupational Exposure, Blood

Specimen Requirements: Draw blood in 2 green top (sodium heparin) tubes. Tubes should be filled to prevent loss of volatile compound into headspace. Send 20 mL of sodium heparin whole blood refrigerated.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Refrigerated (preferred)	14 days	
	Frozen	365 days	

CPT Code Information: 84600

FMATG

57628

Tomato IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

TOMA

82695

Tomato, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

TOPI

81546

Topiramate, Serum

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Serum must be separated from cells within 2 hours of drawing.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80201

TRCHG

61859

ToRCH Profile IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial.

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86644-CMV; 86695-Herpes simplex, type 1; 86696-Herpes simplex, type 2; 86762-Rubella; 86777-Toxoplasma;

TOXOC 65873

Toxocara Antibody, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	5 days	

CPT Code Information: 86682

FGGMC 75519

Toxoplasma gondii Antibodies (IgG, IgM), ELISA, CSF

Specimen Requirements: Specimen Type: Spinal Fluid Sources: CSF Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: Submit 1 mL of spinal fluid (CSF) in a sterile, plastic screw-cap vial. Refrigerate specimen after collection and ship at refrigerate temperature.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 86777-IgG; 86778-IgM;

TOXGP 34972

Toxoplasma gondii Antibody, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86777

TXMGP 39857

Toxoplasma gondii Antibody, IgM and IgG, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Aliquot tube Specimen Volume: 1.5 mL

Specimen Minimum Volume: 1.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86778-Toxoplasma IgM; 86777-Toxoplasma IgG;

TXM 39856

Toxoplasma gondii Antibody, IgM, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Aliquot tube Specimen Volume: 1 mL

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86778

TOXB 62977

Toxoplasma gondii, Molecular Detection, PCR, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

PTOX 81795

Toxoplasma gondii, Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Spinal fluid Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Preferred: 12 x 75-mm screw cap vial (T465) Acceptable: Sterile vial Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Specimen Type: Fresh tissue Supplies: -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Container/Tube: Preferred: Multimicrobe Medium (M4-RT) (T605) Acceptable: Sterile container with 1 to 2 mL of sterile saline Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue in a sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT, M4, or M5) Specimen Type: Ocular fluid Supplies: Aliquot Tube, 5 mL (T465) Collection Container: 12 x 75-mm screw cap vial (T465) Specimen Volume: 0.3 mL Collection Instructions: Do not centrifuge.

Specimen Minimum Volume: Amniotic Fluid, Ocular Fluid, Spinal Fluid: 0.3 mL Tissue: 2 x 2mm biopsy

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

TOXO 70569

Toxoplasma Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

CSP53 607599

TP53 Gene Somatic Mutation Pre-Analysis Cell Sorting, Varies

Specimen Requirements: Only orderable as a reflex. For more information see P53CA /

Hematologic Neoplasms, TP53 Somatic Mutation, DNA Sequencing Exons 4-9, Varies.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)	10 days	
	Refrigerated	10 days	

CPT Code Information: 88184-Flow cytometry, first cell surface, cytoplasmic or nuclear marker;
88185 x 4-Each additional marker;

TP53Z 35523

TP53 Gene, Li Fraumeni Syndrome, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81351; ; Hereditary Colon Cancer CGH Array, additional test; 81228;

TRAG 82495

Tragacanth, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

TRAM 62595

Tramadol and Metabolite, Random, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Aliquot Tube, 5 mL Specimen Volume: 2 mL Collection Instructions: No preservative.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Ambient	14 days	
	Frozen	14 days	

CPT Code Information: 80373; G0480 (if appropriate);

TFE3I 70564

Transcription Factor E3 (TFE3) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TRSF 34623

Transferrin, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	7 days	

CPT Code Information: 84466

FGFB 58044

Transforming Growth Factor beta, Serum

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and immediately freeze and send 1 mL of serum in a plastic vial. Note: Critical frozen. Separate specimens must be submitted when multiple tests are ordered.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	365 days	

CPT Code Information: 83520

FFTRZ 75024

Trazodone (Desyrel)

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80338

FHEAV 57949

Tree of Heaven (Ailanthus spp) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

TREE1 81886

Tree Panel #1, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**TREE3**
81704**Tree Panel #3, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**TREE4**
81705**Tree Panel #4, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL**Specimen Minimum Volume:** 0.3 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**TREPE**
70571**Treponema pallidum Immunostain, Technical Component Only****Specimen Requirements:** Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		

Refrigerated

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

FHAL
90119

Triazolam (Halcion)

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80346; G0480 (if appropriate);

STRIC
9017

Trichinella Antibody, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Refrigerated	5 days	

CPT Code Information: 86784

FFTRU
91099

Trichloroacetic Acid, Urine

Specimen Requirements: Submit a 10 mL aliquot from a random or spot urine collected at end of shift, end of exposure, or end of workweek. Send specimen refrigerated.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	180 days	

CPT Code Information: 83921 Organic acid, single, quantitative; 82570 Creatine, other source;

TRVI 82853

Trichoderma viride, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

TVRNA 61755

Trichomonas vaginalis, Nucleic Acid Amplification, Varies

Specimen Requirements: This test is performed only on female patients. Submit only 1 of the following specimens: Specimen Type: Endocervix Supplies: Swab, Aptima Male/Female Collection (T583) (also known as Aptima Collection Unisex Swab) Specimen Volume: Adequate amount Collection Instructions: 1. Endocervix specimens must be collected using the Aptima Collection Unisex Swab. 2. Use cleaning swab (white shaft) to remove excess mucus from endocervix and discard. 3. Insert second swab (blue shaft) 1 to 1.5 cm into endocervical canal, and rotate swab gently for 30 seconds. Avoid touching vaginal wall when removing swab. 4. Place second swab (blue shaft) into Aptima transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 5. Cap tube securely and label tube with patient's entire name and collection date and time. 6. Transport and store swab container at 2 to 30°C (refrigerate is preferred temperature) within 60 days of collection. Specimen Type: Vaginal Supplies: Swab, Aptima Multitest Swab Specimen Collection Kit (T584) Specimen Volume: Adequate amount Collection Instructions: 1. Vaginal specimens must be collected using the Aptima Multitest Swab Specimen Collection Kit, formerly called Aptima Vaginal Swab Specimen Collection Kit). 2. Insert swab (pink shaft) about 5 cm past introitus and rotate gently for 30 seconds. 3. Place swab into Aptima transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 4. Cap tube securely and label tube with patient's entire name and collection date and time. 5. Transport and store swab container at 2 to 30°C (refrigerate is preferred temperature) within 60 days of collection. Specimen Type: ThinPrep Specimen (Endocervix) Supplies: Aptima Thin Prep Transport Tube (T652) Container/Tube: ThinPrep (also called PreservCyt) Collection Kit Specimen Volume: 1 mL Collection Instructions: 1. Aliquot ThinPrep specimen for Trichomonas testing before processing for Pap smear. For each specimen, use a new pair of clean gloves. 2. Vortex ThinPrep/PreservCyt vial 3 to 10 seconds. Within 1 minute of vortexing: A. Transfer 1 mL of specimen into the Aptima Specimen Transfer Tube using a disposable transfer pipette or a pipette tip containing a filter (aerosol barrier or hydrophobic plug). B. Process only 1 ThinPrep and transfer tube set at a time. C. Recap Aptima Specimen Transfer Tube tightly and gently invert 3 times to mix. 3. Label Aptima transfer tube with appropriate label. 4. Use remainder of ThinPrep specimen for Pap testing. 5. Transport and store specimen transport tube at 2 to 30°C (refrigerate is preferred temperature) within 30 days of collection.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		APTIMA VIAL
	Frozen	180 days	APTIMA VIAL
	Ambient		APTIMA VIAL

CPT Code Information: 87661

MTRNA **Trichomonas vaginalis, Nucleic Acid Amplification, Varies**

61756

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Urine Supplies: Aptima Urine Transport Tube (T582) Container/Tube: Aptima Urine Specimen Transport Tube Specimen Volume: 15 to 20 mL Collection Instructions: 1. Patient should not have urinated for at least 1 hour prior to specimen collection. 2. Patient should collect first portion of random voided urine (first part of stream) into a sterile, plastic, preservative-free container. 3. Transfer 2 mL of urine into the Aptima urine specimen transport tube using the disposable pipette provided within 24 hours of collection. The correct volume of urine has been added when the fluid level is between the black fill lines on the Aptima urine transport tube. Specimen Type: Urine (following prostatic massage) Supplies: Aptima Urine Transport Tube (T582) Container/Tube: Aptima Urine Specimen Transport Tube Specimen Volume: 15 to 20 mL Collection Instructions: 1. Patient should not have urinated for at least 1 hour prior to specimen collection. 2. Patient should void a small amount of urine prior to prostatic massage. Pre-massage urine can be discarded or submitted for other testing as applicable. 3. Patient then ceases voiding and a prostatic massage is performed by the urologist or other health care professional. 4. Collect post-massage urine into a sterile, plastic, preservative-free container. 5. Transfer 2 mL of post-massage urine specimen into the Aptima urine specimen transport tube using the disposable pipette provided within 24 hours of collection. The correct volume of urine has been added when the fluid level is between the black fill lines on the Aptima urine transport tube. Specimen Type: Urethral Supplies: Swab, Aptima Male/Female Collection (T583) Container/Tube: Aptima Collection Unisex Swab Specimen Volume: Swab Collection Instructions: 1. Urethral specimens must be collected using an Aptima Collection Unisex Swab. 2. Patient should not have urinated for at least 1 hour prior to collection. 3. With a rotating movement, insert swab (blue shaft) 2 to 4 cm into urethra. 4. Once inserted, rotate swab gently at least 1 full rotation using sufficient pressure to ensure swab comes into contact with all urethral surfaces. Allow swab to remain inserted for 2 to 3 seconds. 5. Place swab in the Aptima transport tube provided in collection kit. Snap off swab at score line so swab fits into closed tube. 6. Cap tube securely and label tube with patient's entire name and collection date and time.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	30 days	APTIMA VIAL
	Ambient	30 days	APTIMA VIAL

CPT Code Information: 87661

FFTMV **Trichophyton Mentagrophytes (var interdigitale) IgE**

75554

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003**TCPT**
82720**Trichophyton rubrum, IgE, Serum****Specimen Requirements:** Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested**Specimen Minimum Volume:** For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**TGLBF**
606918**Triglycerides, Body Fluid****Specimen Requirements:** Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Pericardial Fluid Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Body Fluid	Frozen (preferred)	30 days	
	Refrigerated	7 days	
	Ambient	24 hours	

CPT Code Information: 84478**TRIGC**
21090**Triglycerides, CDC, Serum****Specimen Requirements:** Only orderable as part of a profile. For more information see LMPP /

Lipoprotein Metabolism Profile, Serum.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	60 days	

CPT Code Information: 84478

TRIGN 113636

Triglycerides, Non-Fasting, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 84478

TRIG 8316

Triglycerides, Serum

Specimen Requirements: Patient Preparation: 1. Fasting-overnight (12-14 hours) 2. Patient must not consume any alcohol for 24 hours before the specimen is collected. Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 84478

TMP 80146

Trimethoprim, Serum

Specimen Requirements: Collection Container/Tube: Red top (gel tubes/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Serum for a peak level should be drawn at least 60 minutes after a dose. 2. Centrifuge within 2 hours of collection.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80299

TRMP 64269

Trimipramine, Serum

Specimen Requirements: Collection Container/Tube: Red top (Serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Collect specimen immediately before next scheduled dose (minimum 12 hours after last dose). 2. Centrifuge and aliquot serum into plastic vial. Serum must be separated from cells within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	7 days	

CPT Code Information: 80335; G0480 (if appropriate);

TPIC 608424

Triosephosphate Isomerase Enzyme Activity, Blood

Specimen Requirements: Only available as part of a profile. For more information see: -HAEV1 / Hemolytic Anemia Evaluation, Blood -EEEV1 / Red Blood Cell (RBC) Enzyme Evaluation, Blood

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 82657

TPI1 607458

Triosephosphate Isomerase Enzyme Activity, Blood

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Lavender top (EDTA) Specimen Volume: 6 mL Collection Instructions: Send in original tube. Do not transfer blood to other containers.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD-B	Refrigerated	20 days	

CPT Code Information: 82657

TPPTL 89494

Tripeptidyl Peptidase 1 and Palmitoyl-Protein Thioesterase 1, Leukocytes

Specimen Requirements: Container/Tube: Preferred: Yellow top (ACD solution B) Acceptable: Yellow top (ACD solution A) Specimen Volume: 6 mL Collection Instructions: Send specimen in original tube. Do not aliquot.

Specimen Minimum Volume: 5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood ACD	Refrigerated (preferred)	6 days	YELLOW TOP/ACD
	Ambient	6 days	YELLOW TOP/ACD

CPT Code Information: 82657

FFTRP 91774

Trofile Co-Receptor Tropism Assay

Specimen Requirements: Draw blood in either PPT (pearl top) or lavender-top (EDTA) tubes. Remove plasma from cells immediately, and transfer specimen to a screw-capped, plastic vial. Freeze 3 mL of PPT plasma or EDTA plasma immediately, send specimen frozen. **RECOMMENDED:** 1. Patient's most recent viral load 2. Viral load collection date Note: 1. Intended to use only for patients with viral loads greater than or equal to 1000 copies/mL. For best results, viral loads should be confirmed within two weeks prior to submission for testing at Monogram. 2. Patient samples submitted <30 days apart are considered duplicate and will be cancelled.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	14 days	

CPT Code Information: 87999

FFTRO 57159

Trofile DNA Co-Receptor Tropism Assay

Specimen Requirements: Draw 4 mL blood in a lavender-top (EDTA) tube(s), (Do not centrifuge.) Freeze and ship frozen. Note: Trofile DNA is recommended for patients with undetectable viral loads.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Frozen	14 days	

CPT Code Information: 87999

WHIPB 87974

Tropheryma whipplei, Molecular Detection, PCR, Blood

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by *Tropheryma whipplei* DNA is unlikely. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL Collection Instructions: Send specimen in original tube (preferred).

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	7 days	

CPT Code Information: 87798

TWRP 80909

Tropheryma whipplei, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by *Tropheryma whipplei* DNA is unlikely. Submit only 1 of the following specimens: Specimen Type: Fresh tissue or biopsy Sources: Small intestine (duodenum, ileum, or jejunum), lymph node, bone, joint, synovial, liver, pancreas, spleen, lung, heart valve (and other heart tissues), or brain Container/Tube: Sterile container Specimen Volume: Entire collection or 5 mm(3) - approximately the size of a pencil eraser Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit tissue only, do not add fluid to tissue. 3. Refrigerate or freeze specimen. Specimen Stability Information: Refrigerated (preferred) <7 days /Frozen <7 days Preferred Paraffin-embedded tissue block: Supplies: Tissue Block Container (T553) Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Small intestine (duodenum, ileum, or jejunum), lymph node, bone, joint, synovial, liver, pancreas, spleen, lung, heart valve (and other heart tissues), or brain Container/Tube: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded tissue block to be cut and returned. Specimen Stability Information: Ambient (preferred)/Refrigerated Acceptable Paraffin-embedded tissue block: Specimen Type: Formalin-fixed, paraffin-embedded tissue block (FFPE) Sources: Small intestine (duodenum, ileum, or jejunum), lymph node, bone, joint, synovial, liver, pancreas, spleen, lung, heart valve (and other heart tissues), or brain Container/Tube: Sterile container for each individual cut section (scroll). Collection Instructions: Perform microtomy and prepare five separate 10-micron sections. Each section (scroll) must be placed in a separate sterile container for submission. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Fluid Sources: Cerebrospinal or ocular (eg, vitreous humor) Container/Tube: Sterile vial Specimen Volume: 0.5 mL Specimen Stability Information: Refrigerated (preferred) <7 days/Frozen <7 days Specimen Type: Synovial fluid Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Pink top (EDTA), royal blue top

(EDTA), sterile vial containing EDTA-derived aliquot, red clot tube (no anticoagulant), or sterile container Specimen Volume: 0.5 mL Collection Instructions: Send specimen in original tube (preferred). Specimen Stability Information: Refrigerated (preferred) <7 days /Frozen <7 days

Specimen Minimum Volume: Fluid: 0.5 mL Fresh tissue or biopsy: 5 mm(3) Paraffin-embedded tissue block: two 10-micron sections

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87798

TRK
603300

Tropomyosin Receptor Kinase (TRK) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TPNI
81767

Troponin I, Serum

Specimen Requirements: Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	30 days	
	Ambient	24 hours	
	Refrigerated	24 hours	

CPT Code Information: 84484

TRPS
65862

Troponin T, 5th Generation, Plasma

Specimen Requirements: Collection Container/Tube: Preferred: Lithium heparin gel
Acceptable: Lithium heparin Submission Container/Tube: Plastic vial Specimen Volume: 1 mL
Collection Instructions: 1. Lithium heparin gel tubes should be centrifuged within 2 hours of collection.
2. Plasma from lithium heparin tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Li Heparin	Frozen (preferred)	365 days	
	Ambient	24 hours	
	Refrigerated	24 hours	

CPT Code Information: 84484

TROT 82788

Trout, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

RCHAG 65945

Trypanosoma cruzi IgG Antibody, Lateral Flow Assay, Serum

Specimen Requirements: Only orderable as a reflex. For more information see CHAG / Trypanosoma cruzi IgG Antibody ELISA, Serum. Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	14 days	

CPT Code Information: 86753

TRYPN 70572

Trypsin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TRPTS
70573

Tryptase Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TRYPA
32283

Tryptase, Autopsy, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)		14 days
	Refrigerated		7 days

CPT Code Information: 83520

TRYPT
81608

Tryptase, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Frozen (preferred)	14 days
	Refrigerated	7 days

CPT Code Information: 83520

TRYPP 82955

Tryptophan, Plasma

Specimen Requirements: Patient Preparation: Fasting (overnight preferred, 4 hours minimum). Infants should be drawn just before next feeding (2-3 hours without total parenteral nutrition: TPN if possible). Collection Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Centrifuge within 4 hours, if specimen is stored at refrigerated temperature, and aliquot plasma. 2. Send plasma frozen.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma	Frozen	14 days	

CPT Code Information: 82131

TRYP 83823

Tryptophan, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 2 mL Collection Instructions: Collect a random urine specimen.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Frozen (preferred)	70 days	
	Refrigerated	14 days	

CPT Code Information: 82131

TTF40 602647

TTF41 (SPT24) + p40 Immunostain, Technical Component Only

Specimen Requirements: Specimen Type: Tissue Supplies: Immunostain Technical Only Envelope (T693) Container/Tube: Immunostains Technical Only Envelope (T693) Preferred: 2 unstained positively charged glass slide (25 x 75 x 1mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88344-TC

ATTRZ
35352

TTR Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81404-TTR (transthyretin) (eg, familial transthyretin amyloidosis), full gene sequence

RTRP2
614047

Tubular Reabsorption of Phosphorus, Random Urine and Serum

Specimen Requirements: Both serum and urine are required. Patient Preparation: Fasting Specimen Type: Serum Collection Container/Tube: Red top or serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Label specimen as serum. Specimen Type: Urine Container/Tube: Plastic, 5-mL tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative. 3. Label specimen as urine.

Specimen Minimum Volume: Urine: 1 mL Serum: 0.625 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)	7 days	
	Refrigerated	7 days	
Urine	Refrigerated (preferred)	30 days	
	Frozen	14 days	
	Ambient	7 days	

CPT Code Information: 82565; 82570; 84100; 84105;

TNFA
63022

Tumor Necrosis Factor (TNF), Plasma

Specimen Requirements: Collection Container/Tube: Lavender-top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge at 1,500 x g for 10 minutes and aliquot plasma. 3. Freeze specimen within 30 minutes.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	21 days	
	Refrigerated	24 hours	

CPT Code Information: 83520

TUNA 82547

Tuna, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

TURKF 82824

Turkey Feathers, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FGORG 57641

Turkey IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

TURK 82702

Turkey, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FCTUR 57544

Turmeric (*Curcuma longa*) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

TRYPI 82848

Tyrophagus putrescentiae, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x

number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

TYROS
70577

Tyrosinase (TYROS) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

TYRGP
608033

Tyrosine Disorders Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81406 81479

TYRBS
607550

Tyrosinemia Follow Up Panel, Blood Spot

Specimen Requirements: Submit only 1 of the following specimen types: Preferred: Specimen Type: Blood spot Supplies: Card-Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Blood Spot Collection Card Acceptable: Whatman Protein Saver 903 Paper, Ahlstrom 226 filter paper, Munktell filter paper, or blood collected in tubes containing heparin, ACD or EDTA and dried on filter paper Specimen Volume: 2 Blood spots Collection Instructions: 1. Let blood dry on filter paper at room temperature in a horizontal position for 3 or more hours. 2. At least 2 spots should be complete (ie, unpunched). 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet

specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred) 90 days/Refrigerated 90days/Frozen 90 days Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions. Acceptable: Specimen Type: Whole Blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin) and yellow top (ACD) Specimen Volume: 2 mL Collection Instructions: Send specimen in original tube. Specimen Stability Information: Refrigerate (preferred) 4 days/Ambient 4 days

Specimen Minimum Volume: Blood Spots: 1 Whole Blood: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Varies		

CPT Code Information: 84510; 84030; 82131; 82542; 80299;

TYRSC 610495

Tyrosinemia Follow-Up Panel, Self-Collect, Blood Spot

Specimen Requirements: Supplies: Blood Spot Collection-Self Collect (T858) Container/Tube: Blood Spot Self Collection Card Specimen Volume: 2 Blood spots Additional Information: 1. Order test each time the patient is to collect a dried blood specimen at home and mail the specimen directly to Mayo Clinic Laboratories. 2. Order should be placed a minimum of 3 days prior to desired date of collection. 3. Enter patient's address information for each order created, including street address, city, state abbreviation, zip code, country, and home phone number. 4. For each order, the Blood Spot Collection-Self Collect kit will be mailed directly to the patient for self-collection. 5. See Dried Blood Spot Collection Tutorial for how to collect blood spots: <https://vimeo.com/508490782>

Specimen Minimum Volume: 1 Blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	90 days	FILTER PAPER
	Frozen	90 days	FILTER PAPER
	Refrigerated	90 days	FILTER PAPER

CPT Code Information: 84510; 84030; 82131; 82542; 80299; 82542 only (if appropriate for government payers) ; ;

FSABI 58004

Tysabri (Natalizumab) Immunogenicity

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Send 1 mL serum frozen in plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen (preferred)		

Refrigerated

14 days

CPT Code Information: 83516**UBE3Z**
35565**UBE3A Gene, Full Gene Analysis, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated/Frozen Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin [T115]). Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81406-UBE3A (ubiquitina protein ligase E3A) (eg, Angelman syndrome), full gene sequence; Fibroblast Culture for Genetic Test; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); ;

UBIQ
70578**Ubiquitin (UBIQ) Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

UGTFG
65428**UDP-Glucuronosyl Transferase 1A1 (UGT1A1), Full Gene Sequencing, Varies**

Specimen Requirements: Multiple whole blood EDTA tests can be performed on a single specimen after a single extraction. See Multiple Whole Blood EDTA Genotype Tests in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens:

Specimen Type: Whole blood Container/Tube: Adults: Lavender top (EDTA) Pediatrics: Purple microtube Specimen Volume: Adults: 3 mL Pediatrics: 1 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Container/Tube: Saliva Swab Collection Kit Specimen Volume: One swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.45 mL Saliva: one swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81404

U1A1Q 610063

UDP-Glucuronosyl Transferase 1A1 TA Repeat Genotype, UGT1A1, Varies

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81350-UGT1A1 (UDP glucuronosyltransferase 1 family, polypeptide A1) (eg, irinotecan metabolism), gene analysis, common variants (eg, *28, *36, *37)

ULCH 82546

Ulocladium chartarum, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**UNIPD**
35566**Uniparental Disomy, Varies**

Specimen Requirements: For optimal interpretation of results, 3 specimens are required to perform this test. In addition to child or fetal specimen, a blood specimen from both parents is required. Each specimen must have a separate order for Uniparental Disomy (UNIPD / Uniparental Disomy, Varies). Only the proband specimen will be charged. Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Prenatal specimens can be sent Monday through Thursday and must be received by 5 p.m. CST on Friday in order to be processed appropriately. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Blood: 0.5 mL Amniotic Fluid: 10 mL Chorionic Villi: 5 mg**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81402**FURA**
90316**Uranium, Urine**

Specimen Requirements: Collect urine in acid washed or trace metal free plastic container (T619). Submit 1 mL of urine refrigerate. Note: Avoid exposure to gadolinium based contrast media for 48 hours prior to sample collection.

Specimen Minimum Volume: 0.4 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	16 days	Acid Washed Plastic (MML Supply T619)

Frozen	30 days	Acid Washed Plastic (MML Supply T619)
Ambient	9 days	Acid Washed Plastic (MML Supply T619)

CPT Code Information: 83018

UCDP 608020

Urea Cycle Disorders Gene Panel, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81443

UEBF 606598

Urea Nitrogen, Body Fluid

Specimen Requirements: Preferred Source: -Peritoneal fluid (peritoneal, abdominal, ascites, paracentesis) -Pleural fluid (pleural, chest, thoracentesis) -Drain fluid (drainage, JP drain) -Peritoneal dialysate (dialysis fluid) -Pericardial Acceptable Source: Write in source name with source location (if appropriate) Collection Container/Tube: Sterile container Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge to remove any cellular material and transfer into a plastic vial. 2. Indicate the specimen source and source location on label.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Body Fluid	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	24 hours	

CPT Code Information: 84520

URAU 607234

Urea, 24 Hour, Urine

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Container/Tube: Plastic, urine tube Specimen Volume: 4 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Mix well before taking aliquot. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 84540

URCON

614061

Urea, Random, Urine

Specimen Requirements: Supplies: Plastic, 5-mL tube (T465) Container/Tube: Plastic tube Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 84540

URBRP

65133

Ureaplasma species, Molecular Detection, PCR, Blood

Specimen Requirements: Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Specimen Volume: 1 mL Collection Instructions: Send specimen in original tube (preferred). Additional Information: The high sensitivity of amplification by PCR requires the specimen to be processed in an environment in which contamination of the specimen by Ureaplasma DNA is not likely.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798 x 2

URPRP

65135

Ureaplasma species, Molecular Detection, PCR, Plasma

Specimen Requirements: The high sensitivity of amplification by PCR requires the specimen to

be processed in an environment in which contamination of the specimen by Ureaplasma DNA is unlikely. Collection Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Royal blue top (EDTA), pink top (EDTA), or sterile vial containing EDTA-derived aliquot Submission Container/Tube: Screw-capped, sterile container Specimen Volume: 1 mL Collection Instructions: Centrifuge and separate plasma within 24 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798 x 2

URRP 60758

Ureaplasma species, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction (PCR) requires the specimen to be processed in an environment in which contamination of the specimen by Ureaplasma DNA is not likely. Submit only 1 of the following specimens: Specimen Type: Swab Supplies: -Culturette (BBL Culture Swab) (T092) -BD E-Swab (T853) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) -M4-RT (T605) Sources: Vaginal, cervix, urethra, urogenital, chest/mediastinal; bronchus or lung (donor swab), or upper respiratory sources (only infants <3 months: nasopharynx, nose, throat) Container/Tube: Preferred: Culture swab transport system (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Acceptable: Swab in transport media: M4, M4-RT, M5, M6, universal transport media, or ESwab Specimen Volume: 1 swab Collection Instructions: Vaginal: 1. Collect specimen by swabbing back and forth over mucosa surface to maximize recovery of cells. 2. Place swab back into swab cylinder. Urethra or cervical: 1. Collect specimen by inserting swab 1 to 3 cm and rotating 360 degrees. 2. Place swab back into swab cylinder. Wound: 1. Collect specimen by swabbing back and forth over wound surface to maximize recovery of cells. 2. Place swab back into swab cylinder. Specimen Type: Fluid Supplies: -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) -M4-RT (T605) Sources: Pelvic, peritoneal, amniotic, prostatic secretions, semen, reproductive drainage or fluid, pleural/chest, chest tube, pericardial, sputum, tracheal secretions, bronchial washings, bronchoalveolar lavage, lung; or nasal washings (only infants <3 months) Container/Tube: Preferred: Sterile container Acceptable: Specimen in 3 mL of transport media: M4, M4-RT, M5, M6, or universal transport media Specimen Volume: 1 to 2 mL Specimen Type: Synovial fluid Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Pink top (EDTA), royal blue top (EDTA), sterile vial containing EDTA-derived aliquot, red top (no anticoagulant), or sterile container Specimen Volume: 1 mL Collection Instructions: Send specimen in original tube. Specimen Type: Urine-first void, kidney/bladder stone, or ureter Container/Tube: Sterile container Specimen Volume: 10 mL or entire specimen Collection instructions: Urine first void: Specimen can be collected at any time during the day. The patient should not have urinated for at least 1 hour prior to specimen collection. The first voided portion is the initial 20 to 30 mL of the urine stream obtained without cleaning the external urethra. Specimen Type: Tissue Sources: Placenta, products of conception, urogenital, respiratory, bronchus, chest/mediastinal, bone, spine, or joint Container/Tube: Sterile container Specimen Volume: 5 mm(3) Collection Instructions: 1. Collect fresh tissue specimen. 2. Submit fresh tissue only, do not add fluid to tissue 3. Refrigerate or freeze specimen.

Specimen Minimum Volume: Fluid: 1 mL Urine-first void: 2 mL Swab: 1 swab Tissue: 5 mm(3)

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	

Frozen

7 days

CPT Code Information: 87798 x 2**URCU**
614044**Uric Acid, 24 Hour, Urine**

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: 24-Hour graduated urine container with no metal cap or glued insert Submission Container/Tube: Plastic, 5 mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 5 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 84560**FUABF**
75099**Uric Acid, Body Fluid**

Specimen Requirements: Acceptable specimens: Drain, Peritoneal/Ascites, Pleural or Synovial Fluid. Collect 1 mL body fluid, centrifuge and separate to remove cellular material. Send frozen in plastic container.

Specimen Minimum Volume: 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Body Fluid	Frozen (preferred)	180 days	
	Refrigerated	5 days	
	Ambient	24 hours	

CPT Code Information: 84560**URIC**
8440**Uric Acid, Serum**

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Submission Container/Tube: Plastic vial Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	180 days	

CPT Code Information: 84550**RURC1**
614048**Uric Acid/Creatinine Ratio, Random, Urine**

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Plastic urine container Submission Container/Tube: Plastic, 5-mL tube or a clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 4 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	30 days	
	Ambient	7 days	

CPT Code Information: 84560; 82570;**GALE**
64372**Uridine Diphosphate--Galactose 4' Epimerase, Blood**

Specimen Requirements: Multiple whole blood tests for galactosemia can be performed on 1 specimen. Prioritize order of testing when submitting specimens. See Galactosemia-Related Test List in Special Instructions for a list of tests that can be ordered together. Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Green top (sodium or lithium heparin) or yellow top (ACD) Specimen Volume: 5 mL

Specimen Minimum Volume: 2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	14 days	
	Ambient	6 days	

CPT Code Information: 82542**UPGDW**
31892**Uroporphyrinogen Decarboxylase, Washed Erythrocytes**

Specimen Requirements: Patient Preparation: Patient should abstain from alcohol for 24 hours. Abstinence from alcohol is essential for at least 24 hours as alcohol suppresses enzyme activity for 24 hours after ingestion. Collection Container/Tube: Preferred: Green top (heparin) Acceptable: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: Washed erythrocyte suspension

Collection Instructions: Collect and process whole blood specimen as follows: 1. Transfer entire specimen to a 12-mL graduated centrifuge tube. 2. Centrifuge specimen for 10 minutes at 2,000 rpm. 3. Record volume of packed cells and the total volume of the specimen. 4. Discard supernatant plasma. 5. Wash erythrocytes 2 times by resuspension with 5 mL of cold 0.9% saline, discarding supernatant after each washing. 6. Resuspend packed cells to the original total volume with 0.9% saline. Invert specimen gently to mix.

Specimen Minimum Volume: 1 mL of washed and resuspended erythrocytes

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Washed RBC	Frozen (preferred)	14 days	
	Refrigerated	14 days	
	Ambient	4 days	

CPT Code Information: 82657

UPGD 8599

Uroporphyrinogen Decarboxylase, Whole Blood

Specimen Requirements: Patient Preparation: Patient should abstain from alcohol for 24 hours. Abstinence from alcohol is essential for at least 24 hours as alcohol suppresses enzyme activity for 24 hours after ingestion. Container/Tube: Preferred: Green top (sodium heparin) Acceptable: Lavender top (EDTA) or green top (lithium heparin) Specimen Volume: Full tube

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	14 days	
	Ambient	7 days	

CPT Code Information: 82657

UPGC 80288

Uroporphyrinogen III Synthase (Co-Synthase), Erythrocytes

Specimen Requirements: All porphyrin tests on erythrocytes can be performed on 1 collection tube. Patient Preparation: Patient should abstain from alcohol for 24 hours. Container/Tube: Green top (heparin) Specimen Volume: Full tube Collection Instructions: Immediately place specimen on wet ice.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
WB Heparin	Refrigerated	7 days	

CPT Code Information: 82657

FUROC

35328

UroVysion for Detection of Bladder Cancer, Urine

Specimen Requirements: Specimen Type: Urine Sources: Voided urine, catheterized urine, bladder washings, stoma collections, ureteral brushings or washings, renal pelvic brushings or washings Supplies: FISH for Urothelial Carcinoma Urine Collection Kit (T509) Container/Tube: Preferred: FISH for Urothelial Carcinoma in Urocyte Urine Collection Kit Acceptable: 70% ethanol, PreservCyt, CytoLyt, ThinPrep UroCyte (UroCyte PreservCyt Solution) Specimen Volume: 30 mL Collection Instructions: 1. Follow instructions included with Urocyte Urine Collection Kit. 2. If kit is not used, submit a random urine specimen with an equal volume of 70% ethanol, PreservCyt, or CytoLyt.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		
	Ambient		

CPT Code Information: 88120

USPF

58104

USP6 (17p13), Aneurysmal Bone Cyst and Nodular Fasciitis, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Container/Tube: Formalin-fixed, paraffin-embedded tumor tissue block Collection Instructions: Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used Acceptable: Slides Specimen Volume: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides and 1 hematoxylin and eosin-stained slide

Specimen Minimum Volume: Two consecutive, unstained, 5-micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 Ñ DNA probe, each (first probe set), Interpretation and report; 88271x2 Ñ DNA probe, each; each additional probe set (if appropriate); 88271x1 Ñ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 Ñ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 Ñ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 Ñ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 Ñ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate); 88275 Ñ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate);

USTEK

609476

Ustekinumab Quantitation with Antibodies, Serum

Specimen Requirements: Patient Preparation: Collect immediately before the next dose of drug administration (trough level) Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.35 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	21 days	
	Frozen	21 days	

CPT Code Information: 80299 83520

USNU
82388

Ustilago nuda, Mold Grain Rust, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL More than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

UMM3F
35269

Uveal Melanoma, Chromosome 3 Monosomy, FISH, Tissue

Specimen Requirements: Submit only 1 of the following specimens: Specimen Type: Tissue Preferred: Tissue block Collection Instructions: Submit a formalin-fixed, paraffin-embedded (FFPE) tumor tissue block. Blocks prepared with alternative fixation methods may be acceptable; provide fixation method used. Acceptable: Slides Collection Instructions: Four consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Specimen Minimum Volume: Two consecutive, unstained, 5 micron-thick sections placed on positively charged slides, and 1 hematoxylin and eosin-stained slide.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Tissue	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88271x2, 88291 ~ DNA probe, each (first probe set), Interpretation and report; 88271x2 ~ DNA probe, each; each additional probe set (if appropriate); 88271x1 ~ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 ~ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 ~ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88274 w/modifier 52 ~ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 ~ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 ~ Interphase in situ hybridization, 100 to 300 cells, each probe set (if

appropriate);

FNSVG 75140

Vaginitis (VG), NuSwab

Specimen Requirements: Submit one vaginal swab in APTIMA vaginal or unisex swab. Ship refrigerate.

Specimen Minimum Volume: One swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Swab	Refrigerated (preferred)	30 days	
	Ambient	30 days	

CPT Code Information: 87801; 87798 x 3; 87661;

VALPG 37067

Valproic Acid, Free and Total, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 2 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: VALPA - 80164; VALPF - 80165;

VALPF 37068

Valproic Acid, Free, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 2 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80165

VALPA
37066**Valproic Acid, Total, Serum**

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and aliquoted within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 80164

VANPA
37069**Vancomycin, Peak, Serum**

Specimen Requirements: Container/Tube: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Serum for a peak level should be drawn 1 hour after completion of dose. 2. Centrifuge and aliquot serum within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	365 days	
	Ambient	48 hours	

CPT Code Information: 80202

VANRA
37071**Vancomycin, Random, Serum**

Specimen Requirements: Collection Container/Tube: Red top Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: Centrifuge and aliquot serum within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	365 days	
	Ambient	48 hours	

CPT Code Information: 80202

VANTA
37070

Vancomycin, Trough, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 0.5 mL Collection Instructions: 1. Draw specimen immediately prior to the next dose (within 30 minutes). 2. Centrifuge and aliquot serum within 2 hours of collection.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	14 days	
	Frozen	365 days	
	Ambient	48 hours	

CPT Code Information: 80202

VRERP
84406

Vancomycin-Resistant Enterococcus, Molecular Detection, PCR, Varies

Specimen Requirements: The high sensitivity of amplification by polymerase chain reaction requires the specimen to be processed in an environment in which contamination of the specimen by vancomycin-resistant Enterococcus DNA is unlikely. Submit only 1 of the following specimens: Preferred: Specimen Type: Perianal, perirectal, rectal Supplies: Culturette (BBL Culture Swab) (T092) Container/Tube: Culture transport swab (Dacron or rayon swab with aluminum or plastic shaft with either Stuart or Amies liquid medium) Specimen Volume: Swab Acceptable: Specimen Type: Preserved Feces Supplies: C and S Vial (T058) Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair, Para-Pak C and S) Specimen Volume: Representative portion of feces Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. Specimen Type: Unpreserved Feces Supplies: -Stool container, Small (Random), 4 oz Random (T288) -Stool Collection Kit, Random (T635) Container/Tube: Fecal container Specimen Volume: Representative portion of feces Collection Instructions: Collect fresh fecal specimen and submit representative sample in fecal container.

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Ambient	7 days	
	Frozen	7 days	

CPT Code Information: 87500

FVANG
57669

Vanilla IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

VANIL 82621

Vanilla, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

VH 9254

Vanillylmandelic Acid and Homovanillic Acid, Random, Urine

Specimen Requirements: Patient Preparation: Administration of L-dopa may falsely increase homovanillic acid and vanillylmandelic acid results; it should be discontinued 24 hours prior to and during collection of specimen. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Adjust urine pH to 1 to 5 with 50% acetic or hydrochloric acid.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	180 days	

CPT Code Information: 83150-HVA; 84585-VMA;

VMA 9454

Vanillylmandelic Acid, 24 Hour, Urine

Specimen Requirements: Patient Preparation: Administration of L-dopa may falsely-increase vanillylmandelic acid results; it should be discontinued 24 hours prior to and during collection of specimen. Supplies: Urine Tubes, 10 mL (T068) Specimen Volume: 5 mL Collection Instructions: 1. Collect a 24-hour urine specimen. 2. Add 25 mL of 50% acetic acid as preservative at the start of collection. If specimen is refrigerated during collection, preservative may be added up to 12 hours after collection. Use 15 mL of 50% acetic acid for children <5 years old. This preservative is intended to achieve a pH of between approximately 1 and 5. If necessary, adjust urine pH to 1 to 5 with 50% acetic or hydrochloric acid. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	180 days	

CPT Code Information: 84585

VMAR 60274

Vanillylmandelic Acid, Random, Urine

Specimen Requirements: Patient Preparation: Administration of L-dopa may falsely increase vanillylmandelic acid results; it should be discontinued 24 hours prior to and during collection of specimen. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container Submission Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 5 mL Collection Instructions: 1. Collect a random urine specimen. 2. Adjust the random urine pH to a level between 1 and 5 by adding 50% acetic acid dropwise and checking the pH.

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	180 days	

CPT Code Information: 84585

VZV 70581

Varicella Zoster Virus (VZV) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

VZPG
34944

Varicella-Zoster Antibody, IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86787

VZGM
61856

Varicella-Zoster Antibody, IgM and IgG, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 1 mL

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86787-Varicella IgG; 86787-Varicella IgM;

VZM
80964

Varicella-Zoster Virus (VZV) Antibody, IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86787

FVZGC

58045

Varicella-Zoster Virus Antibody, IgG, CSF

Specimen Requirements: Collect 0.5 mL CSF in sterile plastic container and ship refrigerate.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	365 days	

CPT Code Information: 86787

LVZV

81241

Varicella-Zoster Virus, Molecular Detection, PCR, Varies

Specimen Requirements: Submit only 1 of the following specimens: Supplies: Aliquot Tube, 5 mL (T465) Specimen Type: Fluid Sources: Spinal, pleural, peritoneal, ascites, pericardial, amniotic, or ocular Container/Tube: Sterile container Specimen Volume: 0.5 mL Collection Instructions: Do not centrifuge. Supplies: -Culturette (BBL Culture Swab) (T092) -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Specimen Type: Swab Sources: Miscellaneous; dermal, eye, nasal, or throat Container/Tube: Multimicrobe media (M4-RT) (T605) and ESwabs Collection Instructions: Place swab back into multimicrobe media (M4-RT [T605], M4, or M5). Supplies: -Culturette (BBL Culture Swab) (T092) -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Specimen Type: Swab Sources: Genital; cervix, vagina, urethra, anal/rectal, or other genital sources Container/Tube: Multimicrobe media (M4-RT) (T605) and ESwabs Collection Instructions: Place swab back into multimicrobe media (M4-RT [T605], M4, or M5). Specimen Type: Fluid Sources: Respiratory; bronchial washing, bronchoalveolar lavage, nasopharyngeal aspirate or washing, sputum, or tracheal aspirate Container/Tube: Sterile container Specimen Volume: 1.5 mL Supplies: -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Specimen Type: Tissue Sources: Brain, colon, kidney, liver, lung, etc. Container/Tube: Preferred: Multimicrobe media (M4-RT) (T605) Acceptable: Sterile container with 1 to 2 mL of sterile saline Specimen Volume: Entire collection Collection Instructions: Submit only fresh tissue in a sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT [T605], M4, or M5)

Specimen Minimum Volume: Body Fluid, Ocular Fluid, or Spinal Fluid: 0.3 mL Respiratory Specimens: 1 mL Tissue: 2 x 2-mm biopsy

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

VEGF

63019

Vascular Endothelial Growth Factor, Plasma

Specimen Requirements: Collection Container/Tube: Lavender-top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL Collection Instructions: 1. Immediately after specimen collection, place the tube on wet ice. 2. Centrifuge at 1,500 x g for 10 minutes and aliquot plasma. 3. Freeze specimen within 30 minutes.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	21 days	
	Refrigerated	24 hours	

CPT Code Information: 83520**VIP**
8150**Vasoactive Intestinal Polypeptide, Plasma**

Specimen Requirements: Patient Preparation: Fasting (8 hours) Collection Container/Tube: Lavender top (EDTA) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and freeze immediately.

Specimen Minimum Volume: 0.55 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen	90 days	

CPT Code Information: 84586**VIPI**
70580**Vasoactive Intestine Polypeptide (VIP), Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**VDSFQ**
65036**VDRL Titer, Spinal Fluid**

Specimen Requirements: Only orderable as a reflex. For more information see VDSF / VDRL, Spinal Fluid. Collection Container/Tube: Sterile vial Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
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CSF	Frozen (preferred)	14 days
	Refrigerated	14 days

CPT Code Information: 86593

VDSF 9028

VDRL, Spinal Fluid

Specimen Requirements: Collection Container/Tube: Sterile vial Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Frozen (preferred)	14 days	
	Refrigerated	14 days	

CPT Code Information: 86592

VEDOZ 603025

Vedolizumab Quantitation with Antibodies, Serum

Specimen Requirements: 1. Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. 2. Nivolumab (Opdivo) must be discontinued at least 4 weeks prior to testing for vedolizumab quantitation in serum. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.5 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose (trough specimen). 2. Centrifuge within 2 hours of draw.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	

CPT Code Information: 80280; 82397;

VEDOL 602807

Vedolizumab Quantitation with Reflex to Antibodies, Serum

Specimen Requirements: 1. Patient Preparation: For 12 hours before specimen collection do not take multivitamins or dietary supplements containing biotin (vitamin B7), which is commonly found in hair, skin, and nail supplements and multivitamins. 2. Nivolumab (Opdivo) must be discontinued at least 4 weeks prior to testing for vedolizumab quantitation in serum. Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1.5 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose (trough specimen). 2. Centrifuge within 2 hours of draw.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	

CPT Code Information: 80280; 82397 (if appropriate);

VELV 82917

Velvet Leaf, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FVENE 75577

Venison IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

VENLA 83732

Venlafaxine, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Draw blood immediately before next scheduled dose. 2. Blood drawn from patients 12 hours after an oral dose is also appropriate. It is customary to treat the patient at bedtime with a dose, and then collect specimen the following morning prior to next dose. 3. Centrifuge and aliquot serum into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80299**FBMBL**
57975**Venom Bumble Bee (*Bombus terrestris*) IgE****Specimen Requirements:** Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003**FHOBG**
57714**Venom Honey Bee IgG****Specimen Requirements:** Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001**FWFHG**
57799**Venom W-F Hornet IgG****Specimen Requirements:** Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.**Specimen Minimum Volume:** 0.5 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

VLCZ
35571

Very Long Chain Acyl-CoA Dehydrogenase Deficiency, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogeneic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper, or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 Blood Spots on collection card (Whatman Protein Saver 903 Paper; Ahlstrom 226 filter paper; or Blood Spot Collection Card) Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions. Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 Full T-75 or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches, 3-mm diameter

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81406-ACADV (acyl-CoA dehydrogenase, very long chain) (eg, very long chain acyl-coenzyme A dehydrogenase deficiency), full gene sequence

VHLE
37839

VHL Gene, Erythrocytosis, Mutation Analysis, Varies

Specimen Requirements: Only orderable as part of a profile. For more information see HEMP / Hereditary Erythrocytosis Mutations. This test is only available as a reflex from the HEMP / Hereditary Erythrocytosis Mutations. VHLE is not a single orderable test.

Specimen Minimum Volume: Blood: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Varies	Ambient (preferred)
	Frozen
	Refrigerated

CPT Code Information: 81404-VHL (von Hippel-Lindau tumor suppressor) (eg, von Hippel-Lindau familial cancer syndrome), full gene sequence

VHLZ 37440

VHL Gene, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81404-VHL (von Hippel-Lindau tumor suppressor) (eg, von Hippel-Lindau familial cancer syndrome), full gene sequence; 81403-VHL duplication/deletion;

VIBC 89658

Vibrio Culture, Feces

Specimen Requirements: Patient Preparation: Medications: Do not use barium or bismuth before collection of specimen. Supplies: C and S Vial (T058) Specimen Type: Preserved feces Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Fecal	Ambient (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 87046-Vibrio culture, stool; 87077-Identification by MALDI-TOF mass spec (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate);

VIGA 91089

Vigabatrin (Sabril)

Specimen Requirements: Submit only 1 of the following specimens Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 1 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 1 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	14 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80339

VIM 70579

Vimentin Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

VIRNR 87266

Viral Culture, Non-Respiratory, Varies

Specimen Requirements: Specimen Type: Body fluid Sources: Pericardial, peritoneal, amniotic Container/Tube: Sterile container Specimen Volume: 1 mL Specimen Type: Lip Supplies: -Swab, Sterile Polyester (T507) -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Container/Tube: Multimicrobe media (M4-RT) Specimen Volume: Swab Collection Instructions: Place swab into multimicrobe media (M4-RT, M4, or M5). Specimen Type: Rectal Supplies: -Swab, Sterile Polyester (T507) -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Container/Tube: Multimicrobe media (M4-RT) Specimen Volume: Swab Collection Instructions: Place swab into multimicrobe media (M4-RT, M4, or M5). Specimen Type: Spinal fluid Container/Tube: Sterile vial Specimen Volume: 1 mL Specimen Type: Feces Supplies: Stool Collection Kit, Random (T635) Container/Tube: Sterile container Specimen Volume: 5-10 g Specimen Type: Tissue Supplies: -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Sources: Brain, colon, kidney, liver, etc. Container/Tube: Sterile container containing 1 mL to 2 mL of sterile saline or multimicrobe medium (M4-RT, M4, or M5). Specimen Volume: Entire collection Specimen Type: Dermal (for enterovirus only) Supplies: -Swab, Sterile Polyester (T507) -M4-RT (T605) -Bartels FlexTrans VTM-3 mL (T892) -Jiangsu VTM-3 mL (T891) Container/Tube: Multimicrobe media (M4-RT) Specimen Volume: Swab Collection Instructions: 1. Place swab in M4-RT media or other viral transport media (M4 or M5). 2. Clearly label "enterovirus" to ensure proper handling and test setup.

Specimen Minimum Volume: Body Fluid or Spinal Fluid: 1 mL Feces: 5 g Tissue Biopsy: 5 mm

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated	7 days	

CPT Code Information: 87252-Viral culture, non-respiratory; 87176-Tissue processing (if appropriate); 87253-Additional testing virus, identification (if appropriate); 87254-Viral smear, shell vial (if appropriate);

SVIR 45472

Viral Smear, Shell Vial (Bill Only)

Specimen Requirements: This test is for billing purposes only. This is not an orderable test.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 87254

VISCS 8168

Viscosity, Serum

Specimen Requirements: Container/Tube: Red top Specimen Volume: 1.5 mL Collection Instructions: Keep specimen at 37°C (eg, 37°C Thermopak, heat block) until after centrifugation and separation of cells.

Specimen Minimum Volume: 0.65 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	14 days	

CPT Code Information: 85810

VITAE 605267

Vitamin A and Vitamin E, Serum

Specimen Requirements: Patient Preparation: Fasting overnight (12-14 hours) (infants-draw prior to next feeding) Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Amber vial Specimen Volume: 1 mL Collection Instructions: Within 24 hours of collection, aliquot specimen into amber vial to protect from light.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	LIGHT PROTECTED
	Frozen	28 days	LIGHT PROTECTED
	Ambient	7 days	LIGHT PROTECTED

CPT Code Information: 84446; 84590;

VITA 42357

Vitamin A, Serum

Specimen Requirements: Patient Preparation: Fasting overnight (12-14 hours) (infants: draw prior to next feeding) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 84590

VITAP 605124

Vitamin A, Serum

Specimen Requirements: Only orderable as part of a profile. For more information see VITAE / Vitamin A and Vitamin E, Serum. Patient Preparation: Fasting overnight (12-14 hours) (infants: draw prior to next feeding). Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Amber vial Specimen Volume: 0.5 mL Collection Instructions: Within 24 hours of collection, aliquot specimen into amber vial to protect from light.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	LIGHT PROTECTED
	Frozen	28 days	LIGHT PROTECTED
	Ambient	7 days	LIGHT PROTECTED

CPT Code Information: 84590

FB12 9156

Vitamin B12 and Folate, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 1 mL Collection Instructions: Fasting (8 hours) Additional Information: Do not order on

patients who have recently received methotrexate or other folic acid antagonist.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 82607-Vitamin B12; 82746-Folate;

B12 9154

Vitamin B12 Assay, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.6 mL Collection Instructions: 1. Serum gel tubes should be centrifuged within 2 hours of collection. 2. Red-top tubes should be centrifuged and the serum aliquoted into a plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	90 days	

CPT Code Information: 82607

FVITB 57319

Vitamin B12 Binding Capacity

Specimen Requirements: Draw blood in a plain, red-top tube(s). (Serum gel tube is acceptable.) Spin down and send 1 mL of serum refrigerated in a plastic vial. Note: Patient should fast for 12 hours prior to collection. Vitamin B12 supplements should not be administered within 72 hours of drawing blood for this test.

Specimen Minimum Volume: 0.1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	30 days	
	Ambient	6 hours	

CPT Code Information: 82608

FNIAC 91379

Vitamin B3 Niacin in Plasma

Specimen Requirements: Specimen Type: Plasma Container/Tube: EDTA Specimen Volume: 4

mL Collection Instructions: Draw sufficient blood in a lavender-top (EDTA) tube(s). Spin down and transfer to a plastic Amber vial (T192) to protect from light within 30 minutes of collection. Freeze and send 4 mL EDTA plasma frozen on dry ice.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Frozen (preferred)	56 days	LIGHT PROTECTED
	Refrigerated	48 hours	LIGHT PROTECTED

CPT Code Information: 84591

FPAB 57394

Vitamin B5 (Pantothenic Acid) Bioassay

Specimen Requirements: Draw blood in a SST (serum separator tube). Spin down and transfer to plastic Amber vial (T192) to protect from light. Send 1 mL serum frozen.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum SST	Frozen (preferred)	21 days	LIGHT PROTECTED
	Refrigerated	7 days	LIGHT PROTECTED

CPT Code Information: 84591

B6PRO 42360

Vitamin B6 Profile (Pyridoxal 5-Phosphate and Pyridoxic Acid), Plasma

Specimen Requirements: Patient Preparation: 1. Fasting-overnight (12-14 hours) (infants-collect prior to next feeding). 2. Patient must not ingest vitamin supplements for 24 hours before specimen collection. Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Green top (sodium or lithium heparin) or plasma gel separator tube (PST) Submission Container/Tube: Amber vial Specimen Volume: 1 mL Collection Instructions: Centrifuge at 4°C within 2 hours of collection, then aliquot all plasma into amber vial.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Heparin	Refrigerated (preferred)	7 days	LIGHT PROTECTED
	Frozen	14 days	LIGHT PROTECTED

CPT Code Information: 82542-Quantitative; 84207-Pyridoxal phosphate (vitamin B6);

FBIOT 81902

Vitamin B7, H (Biotin)

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 2 mL Collection Instructions: Draw blood in a plain, no additive red-top tube(s) or serum gel tube(s). Spin down and send 2 mL serum frozen in amber vial (T192) to protect from light.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	14 days	LIGHT PROTECTED

CPT Code Information: 84591

VITE 42358

Vitamin E, Serum

Specimen Requirements: Patient Preparation: Fasting overnight (12-14 hours) (infants-draw prior to next feeding) Supplies: Amber Frosted Tube, 5 mL (T192) Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Amber vial Specimen Volume: 0.5 mL Collection Instructions: Within 24 hours of collection, aliquot specimen into amber vial to protect from light.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	44 days	LIGHT PROTECTED
	Frozen	44 days	LIGHT PROTECTED
	Ambient	7 days	LIGHT PROTECTED

CPT Code Information: 84446

VITK1 42364

Vitamin K1, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Red top Acceptable: Serum gel Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Fasting overnight (12-14 hours) (infants-draw prior to next feeding).

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	30 days	
	Ambient	30 days	
	Frozen	30 days	

CPT Code Information: 84597

VLTB

89190

Volatile Screen, Blood

Specimen Requirements: Container/Tube: Preferred: Grey top (potassium oxalate/sodium fluoride) Acceptable: Any anticoagulant Specimen Volume: 1 mL Collection Instructions: Do not use alcohol to clean arm. Use alternatives such as Betadine to cleanse arm before collecting any specimen for volatile testing.

Specimen Minimum Volume: 0.5 mL or amount to fill 1 tube

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	24 hours	

CPT Code Information: 80320; G0480 (if appropriate);

VLTBX

62745

Volatile Screen, Chain of Custody, Blood

Specimen Requirements: Supplies: Chain-of-Custody Kit (T282) Container/Tube: Chain-of-Custody Kit containing the specimen container seals and documentation required. Preferred: Grey top (potassium oxalate/sodium fluoride) Acceptable: Any anticoagulant Specimen Volume: 1 mL Collection Instructions: 1. Do not use alcohol to clean arm. Use alternative such as Betadine to cleanse arm before collecting any specimen for volatile testing. 2. Specimen must be sent in original tube. Collect specimen, seal, and submit with the associated documentation to satisfy the legal requirements for chain of custody testing.

Specimen Minimum Volume: 0.5 mL or amount to fill 1 tube

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	24 hours	

CPT Code Information: 80320; G0480 (if appropriate);

VLTX

62746

Volatile Screen, Chain of Custody, Random, Urine

Specimen Requirements: Supplies: Chain-of-Custody Kit (T282) Container/Tube: Chain-of-Custody Kit containing the specimen containers, seals, and documentation required. Specimen Volume: 10 mL Collection Instructions: Collect a random urine specimen using the container provided, seal, and submit with the associated documentation to satisfy the legal requirements for chain of custody testing.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Urine	Refrigerated (preferred)	14 days
	Frozen	28 days
	Ambient	24 hours

CPT Code Information: 80320; G0480 (if appropriate);

VLТУ 8826

Volatile Screen, Random, Urine

Specimen Requirements: Supplies: Urine Tubes, 10 mL (T068) Container/Tube: Plastic, 10-mL urine tube Specimen Volume: 10 mL Collection Instructions: 1. Collect a random urine specimen. 2. No preservative.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	24 hours	

CPT Code Information: 80320; G0480 (if appropriate);

VLTS 8632

Volatile Screen, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: Full tube Collection Instructions: 1. Patient arm must be cleansed with water only. 2. Avoid exposure of specimen to atmosphere. 3. Do not aliquot serum gel tubes. 4. Centrifuge red-top tubes and aliquot serum in plastic vial within 2 hours of collection. Send serum aliquot refrigerated.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	28 days	
	Ambient	24 hours	

CPT Code Information: 80320; G0480 (if appropriate);

VWD8B 605011

von Willebrand Disease 2N (Subtype Normandy), Plasma

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Polypropylene vial Specimen Volume: 1 mL Collection Instructions: 1. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 2. Centrifuge, transfer all plasma into a vial, and centrifuge plasma again. 3. Aliquot plasma into a separate tube leaving 0.25 mL in the bottom of the centrifuged vial. 4. Freeze plasma immediately (no longer than 4 hours after collection) at < or =-20°C,

or, ideally < or = -40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	56 days	

CPT Code Information: 85246

AVWPQ von Willebrand Disease Profile Interpretation

603186

Specimen Requirements: Only orderable as a reflex. For more information see AVWPR / von Willebrand Disease Profile, Plasma.

Specimen Minimum Volume: Only orderable as a reflex. For more information see AVWPR / von Willebrand Disease Profile, Plasma.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390-26 Special Coagulation Interpretation

AVWPI von Willebrand Disease Profile Technical Interpretation

603551

Specimen Requirements: Only orderable as part of a profile. For more information see AVWPR / von Willebrand Disease Profile, Plasma.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85390

AVWPR von Willebrand Disease Profile, Plasma

603550

Specimen Requirements: Patient Preparation: 1. Patient should not be receiving anticoagulant treatment (eg, warfarin, heparin). Treatment with heparin causes false-positive results of in vitro coagulation testing for lupus anticoagulant. Coumadin (warfarin) treatment may impair ability to detect the more subtle varieties of lupus-like anticoagulants. 2. Patient should also not be receiving fibrinolytic agents (streptokinase, urokinase, tissue plasminogen activator: tPA). 3. If patient has been recently transfused, it is best to perform this study pretransfusion, if possible. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: 3 Plastic vials Specimen Volume: 3 mL in 3 plastic vials, each containing 1 mL Collection Instructions: 1.

Specimen must be collected prior to factor replacement therapy. 2. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 3. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 4. Aliquot plasma (1-2 mL per aliquot) into 3 separate plastic vials, leaving 0.25 mL in the bottom of centrifuged vial. 5. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or = -40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 2 plastic vials each containing 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85240-Coagulation factor VIII assay; 85246-von Willebrand factor antigen; 85397-von Willebrand factor activity; 85245-von Willebrand factor ristocetin cofactor activity (if appropriate); 85247-von Willebrand factor multimer (if appropriate); 85335-Bethesda titer (if appropriate); 85335-Coagulation factor VIII inhibitor screen (if appropriate); 85390-26-Special coagulation interpretation (if appropriate);

VWFNG 65447

von Willebrand Disease, VWF Gene, Next-Generation Sequencing, Varies

Specimen Requirements: Results will be reported and also telephoned or faxed, if requested. Submit only 1 of the following specimens: Specimen Type: Peripheral blood or cord blood Container/Tube: Preferred: Lavender top (EDTA) Acceptable: Yellow top (ACD) or light-blue top (sodium citrate) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 7 days/Refrigerated 7 days/Frozen 14 days Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Specimen Type: Amniotic fluid Supplies: Refrigerate/Ambient Mailer, 5 lb (T329) Container/Tube: Amniotic fluid container Specimen Volume: 10-20 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. 2. Discard the first 2 mL of amniotic fluid. 3. Place the tubes in a Styrofoam container. 4. Fill remaining space with packing material. 5. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 6. Bloody specimens are undesirable. 7. If the specimen does not grow in culture, you will be notified within 7 days of receipt. Additional Information: A separate culture charge will be assessed under CULAF / Amniotic Fluid Culture for Genetic Testing Specimen Stability Information: Refrigerated (preferred) <24 hours/Ambient <24 hours Specimen Type: Chorionic villi Supplies: CVS Media (RPMI) and Small Dish (T095) Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer the chorionic villi specimen to a Petri dish containing transport medium. 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Additional Information: A separate culture charge will be assessed under CULFB / Fibroblast Culture for Genetic Testing Specimen Stability Information: Refrigerated (preferred) <24 hours/Ambient <24 hours Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 Flasks approximately 90% confluent Collection Instructions: Submit confluent cultured cells from another laboratory Additional Information: There will be no culture charge. Specimen Stability Information: Ambient (preferred) <24 hours/Refrigerated <24 hours

Specimen Minimum Volume: Blood: 1 mL Amniotic fluid: 10 mL Chorionic villi: 10 mg Confluent cultured cells: 2 full flasks

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81408

VWACT von Willebrand Factor Activity, Plasma

602170

Specimen Requirements: See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (citrate) Submission Container/Tube: Polypropylene vial Specimen Volume: 2 mL in 2 vials each containing 1 mL Collection Instructions: 1. Specimen must be drawn prior to factor replacement therapy. 2. Centrifuge, remove plasma, and centrifuge plasma again. 3. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or ideally, < or =-40 degrees C. 4. Send specimens in the same shipping container. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85397

VWAG von Willebrand Factor Antigen, Plasma

9051

Specimen Requirements: Specimen Type: Platelet-poor plasma Collection Container/Tube: Light-blue top (3.2% sodium citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. For complete instructions, see Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. 2. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 3. Aliquot plasma into a plastic vial, leaving 0.25 mL in the bottom of centrifuged vial. 4. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	14 days	

CPT Code Information: 85246

VWFMF von Willebrand Factor Multimer Analysis, Plasma

604411

Specimen Requirements: Only orderable as part of a coagulation reflex. For more information see: ALUPP / Lupus Anticoagulant Profile, Plasma ALBLD / Bleeding Diathesis Profile, Limited,

Plasma AVWPR / von Willebrand Disease Profile, Plasma See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	42 days	

CPT Code Information: 85247

VWFMS von Willebrand Factor Multimer Analysis, Plasma

603851

Specimen Requirements: See Coagulation Guidelines for Specimen Handling and Processing in Special Instructions. Patient Preparation: 1. Fasting is preferred. 2. Specimen should be drawn prior to coagulation factor replacement therapy. Collection Container/Tube: Light-blue top (citrate) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: 1. Centrifuge, transfer all plasma into a plastic vial, and centrifuge plasma again. 2. Aliquot plasma into a plastic vial leaving 0.25 mL in the bottom of centrifuged vial. 3. Freeze plasma immediately (no longer than 4 hours after collection) at -20°C or, ideally, < or =-40°C. Additional Information: 1. Double-centrifuged specimen is critical for accurate results as platelet contamination may cause spurious results. 2. Each coagulation assay requested should have its own vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma Na Cit	Frozen	42 days	

CPT Code Information: 85247

FVORI Voriconazole

91998

Specimen Requirements: Container/Tube: Agar slant or other appropriate media Specimen Volume: Organism in pure culture Complete and submit with specimen: 1. Fungus Testing Lab request form Collection Instructions: Organism must be in pure culture, actively growing. Place specimen in a large infectious container (T146) and label as etiologic agent/infectious substance.

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient		

CPT Code Information: 87188 - mould - MIC microdilution or agar dilution (if appropriate); 87186 - yeast - MIC microdilution or agar dilution (if appropriate);

VORI Voriconazole, Serum

88698

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 2 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.6 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80285

FWALP
57561

Wall Eyed Pike (Sander vitreus)(Stizostedium vitreum) IgE

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

FWCR1
75573

Walnut Component rJug r 1

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86008

FFWNC
75584

Walnut Component rJug r 3

Specimen Requirements: Specimen Type: Serum Container/Tube: Red or SST Specimen Volume: 0.5 mL Collection Instructions: Draw blood in a plain red-top tube(s), serum gel tube is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	84 days	
	Ambient	28 days	

CPT Code Information: 86008

FWALG Walnut Food (Juglans spp) IgG

57640

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

WALN Walnut Tree, IgE, Serum

82732

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

BLW Walnut-Food, IgE, Serum

82898

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x

number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

WARSQ Warfarin Response Genotype, Varies

610065

Specimen Requirements: Multiple genotype tests can be performed on a single specimen after a single extraction. See Multiple Genotype Test List in Special Instructions for a list of tests that can be ordered together. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred) 9 days/Refrigerated 30 days Specimen Type: Saliva Patient Preparation: Patient should not eat, drink smoke, or chew gum 30 minutes prior to collection. Supplies: Saliva Swab Collection Kit (T786) Specimen Volume: 1 swab Collection Instructions: Collect and send specimen per kit instructions. Specimen Stability Information: Ambient 30 days Specimen Type: Extracted DNA Container/Tube: 2 mL screw top tube Specimen Volume: 100 mcL (microliters) Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL. 2. Include concentration and volume on tube. Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Minimum Volume: Blood: 0.4 mL Saliva: 1 swab

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 0030U

FWARP Warfarin, Plasma

75517

Specimen Requirements: Container/Tube: EDTA (lavender top) or Pink top Specimen Volume: 3 mL Draw blood in EDTA (lavender top) or Pink top tube(s) (Plasma gel tube is not acceptable.) Spin down and send 1 mL of plasma refrigerate in preservative-free plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Plasma EDTA	Refrigerated (preferred)	30 days	
	Ambient	30 days	
	Frozen		

CPT Code Information: 80375

WSPV
82659**Wasp Venom, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FWATG
57677**Watermelon IgG**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

WMEL
86304**Watermelon, IgE, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL dead space

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

WEED1
81882**Weed Panel # 1, Serum**

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen
Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

WEED2

81883

Weed Panel # 2, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen
Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

WEED3

81884

Weed Panel # 3, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen
Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

WEED4

81885

Weed Panel # 4, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen
Volume: 0.5 mL

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

WNVCI 36779

West Nile CSF Interpretation

Specimen Requirements: Only orderable as part of a profile. See WNC / West Nile Virus Antibody, IgG and IgM, Spinal Fluid.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	7 days	
	Frozen	30 days	

WNVSI 36778

West Nile Serum Interpretation

Specimen Requirements: Only orderable as part of a profile. For more information see WNS / West Nile Virus Antibody, IgG and IgM, Serum.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

WNS 36769

West Nile Virus Antibody, IgG and IgM, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: IgG-86789; IgM-86788;

WNC
36772**West Nile Virus Antibody, IgG and IgM, Spinal Fluid**

Specimen Requirements: Supplies: Aliquot Tube, 5 mL (T465) Collection Container/Tube: Sterile vial Submission Container/Tube: Plastic vial Specimen Volume: 1 mL

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: IgG: 86789; IgM: 86788;

WNGS
36771**West Nile Virus Antibody, IgG, Serum**

Specimen Requirements: Only orderable as part of a profile. For more information see WNS / West Nile Virus Antibody, IgG and IgM, Serum.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86789

WNGC
36774**West Nile Virus Antibody, IgG, Spinal Fluid**

Specimen Requirements: Only orderable as part of a profile. See WNC / West Nile Virus Antibody, IgG and IgM, Spinal Fluid.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 86789

WNMS
36770**West Nile Virus Antibody, IgM, Serum**

Specimen Requirements: Only orderable as part of a profile. For more information see WNS / West Nile Virus Antibody, IgG and IgM, Serum.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86788

WNMC **36773**

West Nile Virus Antibody, IgM, Spinal Fluid

Specimen Requirements: Only orderable as part of a profile. See WNC / West Nile Virus Antibody, IgG and IgM, Spinal Fluid.

Specimen Minimum Volume: 0.8 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	7 days	
	Frozen	30 days	

CPT Code Information: 86788

WNVBL **608438**

West Nile Virus, RNA, PCR, Molecular Detection, Blood

Specimen Requirements: Container/Tube: Lavender top (EDTA) Specimen Volume: 1 mL

Specimen Minimum Volume: See Specimen Required

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated	7 days	

CPT Code Information: 87798

WNVUR **608437**

West Nile Virus, RNA, PCR, Molecular Detection, Random, Urine

Specimen Requirements: Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: 1. Collect random urine in a sterile container. 2. Label specimen as urine.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

WNVS
608436

West Nile Virus, RNA, PCR, Molecular Detection, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top
Submission Container: Sterile container Specimen Volume: 0.5 mL Collection Instructions: 1.
Centrifuge and aliquot the serum into a sterile container within 6 hours of collection. 2. Label specimen
as serum.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

WNCSF
608435

West Nile Virus, RNA, PCR, Molecular Detection, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.5 mL Collection
Instructions: Do not centrifuge or heat inactivate.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87798

FONS
75448

Western blot for anti-optic nerve autoantibodies in the serum

Specimen Requirements: Submit only one of the following specimens: Serum: Draw blood in a
plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 5 mL serum refrigerated in a
plastic vial. Plasma: Draw blood in a lavender-top (EDTA) tube(s). Spin down and send 5 mL EDTA
plasma refrigerated in a plastic vial. Complete and submit with specimen: Completed OHSU Ocular
request form Clinical history Referring physician information (name & phone number) -NOTE: Without
this information, testing cannot be completed.

Specimen Minimum Volume: 3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated	7 days	

CPT Code Information: 84181

WEEPC
83918

Western Equine Encephalitis Antibody Panel, IgG and IgM, Spinal Fluid

Specimen Requirements: Container/Tube: Sterile vial Specimen Volume: 0.8 mL

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
CSF	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86654 x 2

WEEP
83156

Western Equine Encephalitis Antibody, IgG and IgM, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 0.5 mL

Specimen Minimum Volume: 0.15 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	14 days	

CPT Code Information: 86654 x 2

WRW
82666

Western Ragweed, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FWHTG **Wheat IgG**

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

FWHG4

57570

Wheat IgG4

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

WHT

82686

Wheat, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FWHGY

57577

Whey IgG

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.

Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	7 days	

CPT Code Information: 86001

WHEY 82622

Whey, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

ASHW 82730

White Ash, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

BENW 82726

White Bean, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x

number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

WFHV
82658

White Faced Hornet Venom, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

WHIC
82719

White Hickory, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

WPIN
82729

White Pine, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

POTA 82710

White Potato, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

FWHFE 57545

Whitefish IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.6 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

WEGG 610357

Whole Egg, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
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Serum	Refrigerated (preferred)	14 days
	Frozen	90 days

CPT Code Information: 86003

WRGR 82830

Wild Rye Grass, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

WS7F 35321

Williams Syndrome, 7q11.23 Deletion, FISH, Varies

Specimen Requirements: Provide a reason for referral with each specimen. The laboratory will not reject testing if this information is not provided, but appropriate testing and interpretation may be compromised or delayed. Advise Express Mail or equivalent if not on courier service. Submit only 1 of the following specimens: Preferred: Specimen Type: Blood Container/Tube: Green top (sodium heparin) Specimen Volume: 5 mL Collection Instructions: 1. Invert several times to mix blood. 2. Other anticoagulants are not recommended and are harmful to the viability of the cells. Acceptable: Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20-25 mL Collection Instructions: 1. Optimal timing for specimen collection is during 14 to 18 weeks of gestation, but specimens collected at other weeks of gestation are also accepted. Provide gestational age at the time of amniocentesis. 2. Discard the first 2 mL of amniotic fluid. Additional Information: 1. Place the tubes in a Styrofoam container (T329). 2. Fill remaining space with packing material. 3. Unavoidably, about 1% to 2% of mailed-in specimens are not viable. 4. Bloody specimens are undesirable. 5. If the specimen does not grow in culture, you will be notified within 7 days of receipt. 6. Results will be reported and also telephoned or faxed, if requested. Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport medium Specimen Volume: 20-30 mg Collection Instructions: 1. Collect specimen by the transabdominal or transcervical method. 2. Transfer chorionic villi to Petri dish containing transport medium (T095). 3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua. Specimen Type: Skin biopsy Container/Tube: Sterile container with sterile Hank's balanced salt solution (T132), Ringer's solution, or normal saline Specimen Volume: 4 mm diameter Collection Instructions: 1. Wash biopsy site with an antiseptic soap. 2. Thoroughly rinse area with sterile water. 3. Do not use alcohol or iodine preparations. 4. A local anesthetic may be used. 5. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis.

Specimen Minimum Volume: Amniotic Fluid: 5 mL/Blood: 2 mL/Chorionic Villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)		

CPT Code Information: 88271x2, 88291 Æâ, -âœ DNA probe, each (first probe set), Interpretation and report; 88271x2 Æâ, -âœ DNA probe, each; each additional probe set (if appropriate); 88271x1 Æâ, -âœ DNA probe, each; coverage for sets containing 3 probes (if appropriate); 88271x2 Æâ, -âœ DNA probe, each; coverage for sets containing 4 probes (if appropriate); 88271x3 Æâ, -âœ DNA probe, each; coverage for sets containing 5 probes (if appropriate); 88273 w/modifier 52-Chromosomal in situ hybridization, less than 10 cells (if appropriate); 88273-Chromosomal in situ hybridization, 10-30 cells (if appropriate); 88274 w/modifier 52 Æâ, -âœ Interphase in situ hybridization, <25 cells, each probe set (if appropriate); 88274 Æâ, -âœ Interphase in situ hybridization, 25 to 99 cells, each probe set (if appropriate) ; 88275 Æâ, -âœ Interphase in situ hybridization, 100 to 300 cells, each probe set (if appropriate); ;

WILL 82731

Willow, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

WT11 70582

Wilms Tumor (WT-1) Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

WDZ 35573

Wilson Disease, Full Gene Analysis, Varies

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Additional Information: To ensure minimum volume and concentration of DNA is met, the preferred volume of blood must be submitted. Testing may be canceled if DNA requirements are inadequate.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81406

FWING

57955

Wingscale (Atriplex Canescens) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

WINS

113124

Wisconsin Newborn Screen, Blood Spot

Specimen Minimum Volume: WINS: 4 blood spots LDALD: 1 blood spot

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Ambient (preferred)	365 days	
	Frozen	365 days	
	Refrigerated	365 days	

CPT Code Information: S3620

WORM

82680

Wormwood, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**XALDZ**
35575**X-Linked Adrenoleukodystrophy, Full Gene Analysis, Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Preferred: Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Specimen Type: Cultured fibroblasts Container/Tube: T-75 or T-25 flask Specimen Volume: 1 full T-75 flask or 2 full T-25 flasks Specimen Stability Information: Ambient (preferred)/Refrigerated <24 hours Supplies: Fibroblast Biopsy Transport Media (T115) Specimen Type: Skin biopsy Container/Tube: Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Specimen Volume: 4-mm punch Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Blood spot Supplies: Card - Blood Spot Collection (Filter Paper) (T493) Container/Tube: Preferred: Collection card (Whatman Protein Saver 903 Paper) Acceptable: Ahlstrom 226 filter paper or Blood Spot Collection Card (T493) Specimen Volume: 2 to 5 Blood spots on collection card Collection Instructions: 1. An alternative blood collection option for a patient >1 year of age is finger stick. 2. Let blood dry on the filter paper at ambient temperature in a horizontal position for 3 hours. 3. Do not expose specimen to heat or direct sunlight. 4. Do not stack wet specimens. 5. Keep specimen dry. Specimen Stability Information: Ambient (preferred)/Refrigerated Additional Information: 1. For collection instructions, see Blood Spot Collection Instructions in Special Instructions. 2. For collection instructions in Spanish, see Blood Spot Collection Card-Spanish Instructions (T777) in Special Instructions. 3. For collection instructions in Chinese, see Blood Spot Collection Card-Chinese Instructions (T800) in Special Instructions.

Specimen Minimum Volume: Blood: 1 mL Blood Spots: 5 punches-3 mm diameter**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81405-ABCD1 (ATP-binding cassette, sub-family D [ALD] member 1) (eg, adrenoleukodystrophy) full gene sequence; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate);

XHIM
82964**X-Linked Hyper IgM Syndrome, Blood**

Specimen Requirements: For serial monitoring, we recommend that specimen draws be performed at the same time of day. Container/Tube: Green top (sodium heparin) Specimen Volume: 4 mL Collection Instructions: 1. Send specimen in original tube. Do not aliquot. 2. Specimens received more than 72 hours after collection will be rejected and the assay will not be performed.

Specimen Minimum Volume: 1.2 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
WB Sodium Heparin	Ambient	72 hours	GREEN TOP/HEP

CPT Code Information: 88184-Flow cytometry, cell surface, cytoplasmic; 88185 x 6-Each additional marker;

YMCRO Y Chromosome Microdeletions, Molecular Detection, Varies

35576

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Specimen Type: Whole blood Container/Tube: Preferred: Lavender top (EDTA) or yellow top (ACD) Acceptable: Any anticoagulant Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube.

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Frozen		
	Refrigerated		

CPT Code Information: 81403-DAZ/SRY (deleted in azoospermia and sex determining region Y) (eg, male infertility), common deletions (eg, AZFa, AZFb, AZFc, AZFd)

YFHV

82657

Yellow Faced Hornet Venom, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003

YJV

82661

Yellow Jacket Venom, IgE, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 0.5 mL for every 5 allergens requested

Specimen Minimum Volume: For 1 allergen: 0.3 mL For more than 1 allergen: (0.05 mL x number of allergens) + 0.25 mL deadspace

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	14 days	
	Frozen	90 days	

CPT Code Information: 86003**YERSC**
606222**Yersinia Culture, Feces**

Specimen Requirements: Patient Preparation: Medications: Do not use barium or bismuth before collection of specimen. Supplies: C and S vial (T058) Specimen Type: Preserved Feces Container/Tube: Commercially available transport system specific for recovery of enteric pathogens from fecal specimens (15 mL of non-nutritive transport medium containing phenol red as a pH indicator, either Cary-Blair or Para-Pak C and S) Specimen Volume: Representative portion of fecal specimen Collection Instructions: 1. Collect fresh feces and submit 1 gram or 5 mL in container with transport medium. 2. Place feces in preservative within 2 hours of collection. 3. Place vial in a sealed plastic bag.

Specimen Minimum Volume: 1 mL**Transport Temperature:**

Specimen Type	Temperature	Time	Special Container
Fecal	Ambient (preferred)	4 days	
	Refrigerated	4 days	

CPT Code Information: 87046-Yersinia Culture, Stool-with isolation and preliminary examination; 87077-Bacteria Identification (if appropriate); 87153-Aerobe Ident by Sequencing (if appropriate); 87077-Additional Identification Procedure (if appropriate); 87077-Ident by MALDI-TOF mass spec (if appropriate);

YAP1
70583**Yes-Associated Protein (YAP) Immunostain, Technical Component Only**

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Preferred: 2 Unstained, positively charged glass slides (25- x 75- x 1-mm) per test ordered; sections 4-microns thick Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;**FYABS**
57847**Yo Antibody Screen with Reflex to Titer and Western Blot**

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable.

Spin down and send 0.5 mL of serum ambient in a plastic vial. Note: Overnight fasting is preferred.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Ambient (preferred)	7 days	
	Frozen	21 days	
	Refrigerated	14 days	

CPT Code Information: 86255 Screen; 84181 Western Blot with interpretation and report (if appropriate); 86256 Titer, each antibody (if appropriate);

FYOG 57915

Yogurt (Lactobacillus bulgaricus) IgE

Specimen Requirements: Draw blood in a plain red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

BTB46 605254

ZBTB46 Immunostain, Technical Component Only

Specimen Requirements: Supplies: Immunostain Technical Only Envelope (T693) Specimen Type: Tissue Container/Tube: Immunostain Technical Only Envelope Preferred: 2 unstained positively charged glass slide (25- x 75- x 1-mm) per test ordered; sections 4-microns thick. Acceptable: Formalin-fixed, paraffin-embedded (FFPE) tissue block

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
TECHONLY	Ambient (preferred)		
	Refrigerated		

CPT Code Information: 88342-TC, primary; 88341-TC, if additional IHC;

MZIKV 65275

Zika Virus IgM Antibody Capture ELISA, Serum

Specimen Requirements: Container/Tube: Preferred: Serum gel Acceptable: Red top Specimen Volume: 2.5 mL

Specimen Minimum Volume: 2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Frozen	30 days	

CPT Code Information: 86794

RZIKU 65182

Zika Virus, PCR, Molecular Detection, Random, Urine

Specimen Requirements: Container/Tube: Sterile container Specimen Volume: 1 mL Collection Instructions: 1. Collect random urine in a sterile container. 2. Label specimen as urine.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87662

RZIKS 65181

Zika Virus, PCR, Molecular Detection, Serum

Specimen Requirements: Collection Container/Tube: Preferred: Serum gel Acceptable: Red top Submission Container: Sterile container Specimen Volume: 0.5 mL Collection Instructions: 1. Collect whole blood in a serum gel tube. 2. Centrifuge and aliquot the serum into a sterile container within 6 hours of collection. 3. Label specimen as serum.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	7 days	
	Frozen	7 days	

CPT Code Information: 87662

NEZPP 89375

Zinc Protoporphyrin, Blood

Specimen Requirements: Patient Preparation: High concentrations of gadolinium and iodine are known to interfere with most metals tests. If either gadolinium- or iodine-containing contrast media has been administered, a specimen should not be collected for 96 hours. Supplies: -Metal Free B-D Tube (EDTA), 6 mL (T183) -Metal Free (Lead only) EDTA Tube, 3 mL (T615) -Microtainer (EDTA) Tube, 0.5 mL (T174) -If ordering the EDTA trace element Vacutainer tube from BD, order catalog #368381. Container/Tube: Preferred: Royal blue-top BD Vacutainer Plus with EDTA blood collection tube (T183) Acceptable: Tan-top (lead only) BD Vacutainer Plus with EDTA blood collection tube (T615) or BD Microtainer with EDTA (T174) or royal blue-top Monoject trace element blood collection tube Specimen

Volume: 1 mL Collection Instructions: 1. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. 2. Send specimen in original tube.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Whole blood	Refrigerated	28 days	

CPT Code Information: 84202

EZNT8

64926

Zinc Transporter 8 (ZnT8) Antibody, Serum

Specimen Requirements: Container/Tube: Preferred: Red top Acceptable: Serum gel Specimen Volume: 2 mL

Specimen Minimum Volume: 1 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	28 days	
	Ambient	72 hours	

CPT Code Information: 86341

ZNU

8591

Zinc, 24 Hour, Urine

Specimen Requirements: Patient Preparation: High concentrations of barium are known to interfere with this test. If barium-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container with no metal cap or glued insert Submission Container/Tube: Plastic urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 10 mL Collection Instructions: 1. Collect urine for 24 hours. 2. Refrigerate specimen within 4 hours of completion of 24-hour collection. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions. Additional Information: See Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens in Special Instructions for multiple collections.

Specimen Minimum Volume: 0.4 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 84630

ZNS

8620

Zinc, Serum

Specimen Requirements: Patient Preparation: High concentrations of gadolinium, iodine, and barium are known to interfere with most metals tests. If gadolinium-, iodine-, or barium-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: -Metal Free B-D Tube (No Additive), 6 mL (T184) -Metal Free Specimen Vial (T173) Collection Container/Tube: 6-mL Plain, royal blue-top Vacutainer plastic trace element blood collection tube Submission Container/Tube: 7-mL Metal-free, screw-capped, polypropylene vial Specimen Volume: 0.8 mL Collection Instructions: 1. Allow the specimen to clot for 30 minutes after collection; then centrifuge the specimen to separate serum from the cellular fraction. Serum must be removed from cellular fraction within 4 hours of specimen collection. Avoid hemolysis. 2. Remove the stopper. Carefully pour specimen into a metal-free, polypropylene vial, avoiding transfer of the cellular components of blood. Do not insert a pipet into the serum to accomplish transfer, and do not ream the specimen with a wooden stick to assist with serum transfer. 3. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 0.2 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	METAL FREE
	Ambient	28 days	METAL FREE
	Frozen	28 days	METAL FREE

CPT Code Information: 84630

ZNCRU

60527

Zinc/Creatinine Ratio, Random, Urine

Specimen Requirements: Patient Preparation: High concentrations of barium are known to interfere with most metals tests. If barium-containing contrast media has been administered, a specimen should not be collected for at least 96 hours. Supplies: Urine Tubes, 10 mL (T068) Collection Container/Tube: Clean, plastic urine collection container with no metal cap or glued insert Submission Container/Tube: Plastic urine tube or clean, plastic aliquot container with no metal cap or glued insert Specimen Volume: 3 mL Collection Instructions: 1. Collect a random urine specimen. 2. See Trace Metals Analysis Specimen Collection and Transport in Special Instructions for complete instructions.

Specimen Minimum Volume: 0.7 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 84630 Zinc Concentration; 82570 Creatinine Concentration;

FZIP

57107

Ziprasidone (Geodone, Zeldox)

Specimen Requirements: Submit only 1 of the following specimens Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.3 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80342

FZOLP 57738

Zolpidem (Ambien), serum or plasma

Specimen Requirements: Submit only 1 of the following specimens: Plasma Draw blood in a green-top (sodium heparin) tube(s), plasma gel tube is not acceptable. Spin down and send 2 mL sodium heparin plasma refrigerated in a plastic vial. Serum Draw blood in a plain red-top tube(s), serum gel tube is not acceptable. Spin down and send 2 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.25 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Refrigerated (preferred)	7 days	
	Frozen	180 days	
	Ambient	72 hours	

CPT Code Information: 80368

ZONI 83685

Zonisamide, Serum

Specimen Requirements: Collection Container/Tube: Red top (serum gel/SST is not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge and aliquot serum into plastic vial within 2 hours of collection.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Refrigerated (preferred)	28 days	
	Ambient	28 days	
	Frozen	28 days	

CPT Code Information: 80203

FZCCE
57562**Zucchini (Cucurbita spp) IgE**

Specimen Requirements: Draw blood in a plain, red-top tube(s), serum gel tube(s) is acceptable. Spin down and send 0.5 mL of serum refrigerated in a plastic vial.

Specimen Minimum Volume: 0.5 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum	Refrigerated (preferred)	28 days	
	Frozen	365 days	
	Ambient	28 days	

CPT Code Information: 86003

MULT
35577**Zygosity Testing (Multiple Births), Varies**

Specimen Requirements: Patient Preparation: A previous bone marrow transplant from an allogenic donor will interfere with testing. Call 800-533-1710 for instructions for testing patients who have received a bone marrow transplant. Submit only 1 of the following specimens: Specimen Type: Whole blood Container/Tube: Lavender top (EDTA) or yellow top (ACD) Specimen Volume: 3 mL Collection Instructions: 1. Invert several times to mix blood. 2. Send specimen in original tube. Specimen Stability Information: Ambient (preferred)/Refrigerated Due to the complexity of prenatal testing, consultation with the laboratory is required for all prenatal testing. Prenatal specimens can be sent Monday through Thursday and must be received by 5 p.m. CST on Friday in order to be processed appropriately. All prenatal specimens must be accompanied by a maternal blood specimen. Specimen Type: Amniotic fluid Container/Tube: Amniotic fluid container Specimen Volume: 20 mL Specimen Stability Information: Refrigerated (preferred)/Ambient Specimen Type: Chorionic villi Container/Tube: 15-mL tube containing 15 mL of transport media Specimen Volume: 20 mg Specimen Stability Information: Refrigerated Acceptable: Specimen Type: Confluent cultured cells Container/Tube: T-25 flask Specimen Volume: 2 flasks Collection Instructions: Submit confluent cultured cells from another laboratory. Specimen Stability Information: Ambient (preferred)/Refrigerated

Specimen Minimum Volume: Blood: 0.5 mL Amniotic Fluid: 10 mL Chorionic Villi: 5 mg

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Varies	Varies		

CPT Code Information: 81265 Comparative analysis using Short Tandem Repeat (STR) markers; patient and comparative specimen (eg, pre-transplant recipient and donor germline testing, post-transplant non-hematopoietic recipient germline [eg, buccal swab or other germline tissue sample] and donor testing, twin zygosity testing or maternal cell contamination of fetal cells; Fibroblast Culture for Genetic Test; 88233-Tissue culture, skin or solid tissue biopsy (if appropriate); 88240-Cryopreservation (if appropriate); ; Amniotic Fluid Culture/Genetic Test; 88235-Tissue culture for amniotic fluid (if appropriate); 88240-Cryopreservation (if appropriate); ; Added as needed; 81266 each additional specimen (eg additional cord blood donor, additional fetal samples from different cultures, or additional zygosity in multiple birth pregnancies);

[-2]Pro Prostate Specific Antigen with Prostate Health Index, Serum

Specimen Requirements: Patient Preparation: 1. Specimens for testing should be collected prior to prostate manipulations such as digital rectal examination (DRE), prostatic massage, transrectal ultrasound (TRUS), and prostatic biopsy. 2. A 6-week waiting period between needle biopsy and specimen collection is recommended. 3. Specimens should not be collected from patients receiving therapy with high biotin (vitamin B7) doses (ie, >5 mg/day) until at least 8 hours following the last biotin administration. Collection Container/Tube: Red top (serum gel/SST are not acceptable) Submission Container/Tube: Plastic vial Specimen Volume: 1 mL Collection Instructions: Centrifuge, aliquot serum into plastic vial, and refrigerate serum within 3 hours of collection.

Specimen Minimum Volume: 0.75 mL

Transport Temperature:

Specimen Type	Temperature	Time	Special Container
Serum Red	Frozen	150 days	

CPT Code Information: 84153-Total PSA; 84154-Free PSA; 86316-[-2]ProPSA;