



Technical Update • May 2014

Cleveland Clinic Laboratories is dedicated to keeping you updated and informed about recent testing changes. That's why we are happy to provide this technical update on a monthly basis.

Recently changed tests are **bolded**, and could include revisions to methodology, reference range, days performed or CPT code. For your convenience, tests are listed alphabetically and the order and billing codes are provided.

If you wish to compare the new information with previous test demographics, refer to the Test Directory, which can be accessed at clevelandcliniclabs.com.

Deleted tests and new tests are listed separately. Please update your database as necessary. For additional detail, contact Client Services at 216.444.5755 or 800.628.6816 or via email at clientservices@ccf.org.

Test Update Page #	Summary of Changes by Test Name	Order Code	Billing Code	Name Change	New Test	Special Information	Specimen Requirement	Component Change	Methodology	Reference Range	Days Performed/Reported	CPT
3	5-Hydroxyindolacetic Acid, Urine											
3	11-Deoxycorticosterone Qt, Serum / Plasma											
3	25-Hydroxyvitamin D2 and D3, Serum											
9	Alpha-1 Antitrypsin (SERPINA1) Targeted Genotyping											
3	Alpha-1-Antitrypsin Clearance											
3	Alpha-1-Antitrypsin, Stool											
3	Anti IgA Antibody											
3	Anti Mullerian Hormone											
3	Beta Galactosidase, Leukocytes											
4	Bioavailable Testosterone / SHBG, Female & Child											
4	BK Virus Quantitation, Urine											
12	Buprenorphine & Metabolite, Confirmation / Quant, Urine											
9	Buprenorphine Quant, Urine											
4	Carnitine Free & Total, Urine											
9	Circulating Tumor Cells for Prostate Cancer											
4	Complement, Alternate Pathway (AH50), Functional											
4	Complement C6, Functional											
4	Cryptosporidia Examination											
4	Cyanide, Blood											
4	DNA Content, Cell Cycle Analysis, Ploidy & S-Phase											
4	Drug Analysis, Urine											
4	Ethosuximide											

Test Update Page #	Summary of Changes by Test Name	Order Code	Billing Code	Name Change	New Test	Specimen Information	Component Requirement	Methodology	Reference Range	Days Performed/Reported	CPT
4	Ethyl Glucuronide, Urine reflex to Confirm / Quant										
5	Free Cortisol, Urine by LC-MS/MS										
5	FSH with Tanner Stages										
5	Gene Analysis 21 Hydroxylase										
5	Glucagon										
12	GM1 Triad Autoantibody										
9	H pylori Antibody, IgA										
5	H pylori Antibody, IgG										
6	H pylori Antibodies, IgG and IgA										
6	Heavy Metals, Urine										
6	Heavy Metals with Cadmium, Urine										
6	Hexosaminidase A & Total, WBC										
6	HLA B5701										
6	HLA-A, B and C										
6	HLA-DR										
6	Homovanillic Acid, Urine										
6	Human Epididymis Protein 4										
6	Hyperoxaluria, Urine										
7	Interleukin 2										
7	Interleukin-2 Receptor (CD25), Soluble										
7	Interleukin 4										
7	Interleukin 5										
7	Interleukin 6										
7	KIT Gene Mutation AML										
7	Mycoplasma pneumoniae IgA										
7	Niacin										
7	NMO / Aquaporin-4 IgG Cell Binding Assay, CSF										
7	NMR Particle Analysis										
7	Opiates Confirmation, Quantitation, Serum / Plasma										
10	Organic Acids, Neonate, Urine										
12	Organic Acids, Urine										
10-11	Organic Acids, Urine Quant										
7	Phenolphthalein, Stool										
7	Proinsulin, Intact										
7	Pyruvic Acid, CSF										
8	Quantitative Pain Panel, Urine										
8	RHCE Variant Antigen										
8	RHD Variant Antigen										
8	Soluble Transferrin Receptor										
8	Stool Culture, EIA										
8	Sulfonylurea Hypoglycemics, Serum										
8	Tay-Sachs (Hexosaminidase)										
12	Thyroid Cancer Mutation Panel										

Test Update Page #	Summary of Changes by Test Name	Order Code	Billing Code	Name Change	New Test	Specimen Discontinued	Special Information	Component Requirement	Methodology	Reference Range	Days Performed/Reported	CPT
8	Thyroxine, Free by Equilibrium Dialysis LC-MS/MS											
12	Transketolase											
8	Transthyretin DNA Sequencing											
8	Triiodothyronine, Free by Equilibrium Dialysis LC-MS/MS											
8	Tumor Necrosis Factor											
12	Vitamin E (EVIT)											
12	Vitamin E (VITE)											
8	Ziprasidone											

Test Changes

Test Name	Order Code	Billing Code	Change	Effective Date
5-Hydroxyindolacetic Acid, Urine	U5HIAA	89593	Days Performed: Sunday, Tuesday - Saturday Reported: 2 - 5 days	5/19/2014
11-Deoxycorticosterone Qt., Serum / Plasma	11DCOR	89747	Days Performed: Monday, Wednesday, Friday Reported: 2 - 5 days	5/19/2014
25-Hydroxyvitamin D2 and D3, Serum	D2D3	83283	Specimen Requirement: 1 mL plasma from an EDTA lavender top tube; No direct sunlight exposure; Refrigerated	6/9/2014
Alpha-1-Antitrypsin Clearance	A1ACL	87933	Days Performed: Monday - Saturday Reported: 2 - 3 days	5/29/2014
Alpha-1-Antitrypsin, Stool	STA1A	76362	Specimen Requirement: 5 grams of stool in a clean container; Frozen Days Performed: Monday - Saturday Reported: 2 - 3 days	5/29/2014
Anti IgA Antibody	ANTGA	89507	Days Performed: Varies Reported: 6 - 13 days	5/19/2014
Anti Mullerian Hormone	MULLER	84474	Reference Range: Female: 6 months -14 years: 0.256 - 6.345 ng/mL 15 - 17 years: 0.861 - 10.451 ng/mL 18 - 29 years: 0.401 - 16.015 ng/mL 30 - 39 years: 0.176 - 11.705 ng/mL 40 - 45 years: ≤ 6.282 ng/mL 46 - 50 years: ≤ 0.064 ng/mL Post-menopausal: ≤ 0.003 ng/mL Male: 6 - 11 months: 56.677 - 495.299 ng/mL 1 - 6 years: 33.442 - 342.450 ng/mL 7 - 9 years: 20.245 - 189.781 ng/mL 10 - 12 years: 2.903 - 178.243 ng/mL ≥ 13 years: 2.079 - 30.656 ng/mL	4/7/2014
Beta Galactosidase, Leukocytes	BGALA	87825	Specimen Requirement: 7 mL whole blood in an ACD A or B yellow top tube; Collect Monday - Wednesday only; Do not collect the day before a holiday; Informed consent is required for patients residing in New York state; Specimen MUST be sent to Cleveland Clinic Laboratories on the day of collection; Refrigerated	5/29/2014

Test Changes (cont.)

Test Name	Order Code	Billing Code	Change	Effective Date
Bioavailable Testosterone / SHBG, Female & Child	BTSTFC	88688	Specimen Requirement: 1 mL serum from a serum separator tube; Collect between 6 - 10 a.m. Separate serum from cells ASAP or within 2 hours of collection; Refrigerated	5/19/2014
BK Virus Quantitation, Urine	UBKQT	82799	Methodology: Polymerase Chain Reaction (PCR), DNA Probe Hybridization Reference Range: None detected Days Performed: Monday - Saturday Reported: 2 - 4 days	5/29/2014
Carnitine Free & Total, Urine	UCARN1	79813	Specimen Requirement: 1.5 mL random urine in a clean container; Freeze ASAP; Transport Frozen Days Performed: Thursday Reported: 3 - 10 days	5/29/2014
Complement Alternate Pathway (AH50), Functional	COMAP	88533	Specimen Requirement: 1 mL serum from a red top tube; Fasting is preferred; Place specimen on ice after collection; Remove serum from cells ASAP and freeze; Transport Frozen	5/29/2014
Complement C6, Functional	C6FUN	87820	Specimen Requirement: 1 mL serum from a red top tube; Patient should be fasting; Place specimen on ice after collection; Do not use serum separator tubes; Remove serum from cells ASAP and freeze; Transport Frozen	5/29/2014
Cryptosporidia Examination	CRYSP0	89919	Billing Code: Previously 75725	5/1/2014
Cyanide, Blood	CYANID	82600	Days Performed: Monday, Wednesday, Friday Reported: 2 - 5 days	5/29/2014
DNA Content, Cell Cycle Analysis, Ploidy & S-Phase	DNAMIS	88088	Special Information: Test build may need to be modified Test Name: Previously DNA Content, Cell Cycle Analysis, Miscellaneous	5/19/2014
Drug Analysis, Urine	UDRUGC	77037	Includes: Acetaminophen, Amitriptyline, Amobarbital, Bupropion, Butabarbital, Butalbital, Caffeine, Carbamazepine, Carisoprodol, Chlordiazepoxide, Chlorpheniramine, Chlorpromazine, Chlorpropamide, Citalopram, Clomipramine, Clozapine, Cyclobenzaprine, Desipramine, Dextromethorphan, Diazepam, Diltiazem, Diphenhydramine, Doxepin, Doxylamine, EDDP (methadone metabolite) , Ethosuximide, Etomidate , Felbamate, Fentanyl , Fluconazole, Fluoxetine, Gemfibrozil, Hydrocodone, Hydroxyzine, Ibuprofen, Imipramine, Lamotrigine, Lidocaine, Lorazepam, Meperidine, Mephobarbital, Meprobamate, Metaxalone , Methadone, Methocarbamol , Methsuximide , Methylphenidate, Metronidazole, Midazolam, Mirtazapine, Naproxen, Nordiazepam, Normethsuximide , Norpropoxyphene , Nortriptyline, Oxcarbazepine Metabolite, Paroxetine, Pentazocine, Pentobarbital, Pentoxifylline, Phencyclidine, Phenobarbital, Phenytoin, Primidone, Promethazine, Propofol, Propoxyphene , Quetiapine, Quinidine, Salicylate, Secobarbital, Sertraline, Temazepam, Theophylline , Thiopental, Thioridazine, Ticlopidine, Topiramate , Tramadol , Trazodone , Trimipramine , Valproic Acid , Venlafaxine , Verapamil , Zolpidem	6/5/2014
Ethosuximide	ETHO	82692	Includes: Ethosuximide, Ethosuximide Dose , Ethosuximide Draw Time Test build will need to be modified Specimen Requirement: 1 mL serum from a red top tube; Do not use serum separator tubes; Dose information is required with the sample; Separate serum from cells ASAP or within 2 hours of collection; Refrigerated	5/19/2014
Ethyl Glucuronide, Urine reflex to Confirm / Quant	UEGLUC	89509	Special Information: Reporting limit: 500 ng/mL ; Positive ethyl glucuronide results will be confirmed by Liquid Chromatography - Tandem Mass Spectrometry (LC-MS/MS) at an additional cost. Test build may need to be modified Specimen Requirement: 4 mL urine from a random collection in a clean container; Refrigerated Days Performed: Monday, Wednesday, Saturday Reported: 2 - 5 days	5/19/2014

Test Changes (cont.)

Test Name	Order Code	Billing Code	Change	Effective Date
Free Cortisol, Urine by LC-MS/MS	UFCRT	83260	Specimen Requirement: 4 mL urine from a 24 hour collection in a clean container; Refrigerate during collection; Refrigerated	4/07/2014
			Reference Range: Free Cortisol (µg/24 hours) 3 - 8 years: ≤ 18 µg/24 hours 9 - 12 years: ≤ 37 µg/24 hours 13 - 17 years: ≤ 56 µg/24 hours ≥ 18 years: Female: ≤ 45 µg/24 hours Male: ≤ 60 µg/24 hours Free Cortisol (µg/g creatinine) Female: Prepubertal: < 25 µg/g crt ≥ 18 years: < 24 µg/g crt Pregnancy: < 59 µg/g crt Male: Prepubertal: < 25 µg/g crt ≥ 18 years: < 32 µg/g crt	4/07/2014
			Days Performed: Sunday - Saturday	5/19/2014
			Reported: 2 - 5 days	
FSH with Tanner Stages	FSHTAN	89443	Reference Range: Female Tanner Stage I (Age < 9.2 years): 0.6 - 5.0 mU/mL Tanner Stage II (Age 9 - 13.7 years): 0.6 - 8.9 mU/mL Tanner Stage III (Age 10 - 14.4 years): 0.6 - 9.0 mU/mL Tanner Stage IV-V (Age 10.7 - 18.6 years): 0.7 - 11.0 mU/mL Male Tanner Stage I (Age < 9.8 years): 0.3 - 2.9 mU/mL Tanner Stage II (Age 9.8 - 14 years): 0.5 - 4.8 mU/mL Tanner Stage III (Age 10.7 - 15.4 years): 1.0 - 6.4 mU/mL Tanner Stage IV-V (Age 11.7 - 17.3 years): 1.0 - 8.1 mU/mL	5/15/2014
Gene Analysis 21 Hydroxylase	21GENE	88173	Specimen Requirement: 3 mL whole blood in an EDTA lavender top tube; A signed 'Informed Consent for Genetic Testing' form is required for patients residing in New York state. A completed 'CYP21A2 Gene Testing Patient Information' form is required for all patients. Forms are available through Client Services at 800.628.6816 or 216.444.5755; Refrigerated Days Performed: Monday Reported: 6 - 12 days	6/5/2014
Glucagon	GLUCA	82943	Methodology: Immunoassay (IA), Extraction (EXT) Days Performed: Monday, Thursday Reported: 3 - 7 days	5/29/2014
H pylori Antibody, IgG	HPYLRI	76529	Special Information: The performance characteristics of this assay have not been established for use with specimens from cord blood, neonates, pediatric patients, or pre-transplant patients. Specimen Requirement: 0.5 mL serum from a serum separator tube; Refrigerated Methodology: Immunochemiluminometric Assay (ICMA) Reference Range: Negative: < 0.9 U/mL Equivocal: 0.9 - 1.1 U/mL Positive: ≥ 1.1 U/mL Days Performed: Monday, Wednesday, Friday Reported: 1 - 3 days	6/17/2014

Test Changes (cont.)

Test Name	Order Code	Billing Code	Change	Effective Date
H pylori Antibodies, IgG and IgA	HPYGA	88683	Order Code: Previously HPYLGA Specimen Requirement: 1 mL serum from a serum separator tube; Frozen Methodology: Enzyme Linked Immunosorbent Assay (ELISA) Immunochemiluminometric Assay (ICMA) Reference Range: H pylori IgG: Negative: < 0.9 U/mL Equivocal: 0.9 - 1.1 U/mL Positive: ≥ 1.1 U/mL H pylori IgA: Negative: < 20 Units Equivocal: 20 - 24 Units Weak Positive: 25 - 33 Units Positive: > 33 Units Days Performed: Monday, Wednesday - Friday Reported: 1 - 4 days	6/17/2014
Heavy Metals, Urine	UTXM3	88693	Specimen Requirement: 8 mL urine from a well mixed 24 hour collection; Refrigerate during collection; Specimen MUST be collected in a plastic container; Transfer aliquot into a trace metal transport tube (ARUP #43116). Tubes are available by calling Client Services at 800.628.6816 or 216.444.5755; Transport Refrigerated	5/19/2014
Heavy Metals with Cadmium, Urine	UTXM4	88694	Specimen Requirement: 8 mL urine from a well mixed 24 hour collection; Refrigerate during collection; Specimen MUST be collected in a plastic container; Transfer aliquot into a trace metal transport tube (ARUP #43116). Tubes are available by calling Client Services at 800.628.6816 or 216.444.5755; Transport Refrigerated	5/19/2014
Hexosaminidase A & Total, WBC	TAYSAC	82868	Specimen Requirement: 6 mL whole blood in an ACD A or B yellow top tube; Informed consent is required for patients residing in New York state; Collect Monday - Wednesday only; Do not collect the day before a holiday; Deliver to Cleveland Clinic Laboratories by 3 p.m. EST on the day of collection; Refrigerated	6/5/2014
HLA B5701	B5701	84337	Special Information: Informed consent is required for patients residing in New York state. Transfusions will interfere with testing for up to 4 - 6 weeks. Allogenic bone marrow or stem cell transplants will interfere with testing.	5/29/2014
HLA-A, B and C	HLABC	82817	Special Information: This HLA typing should not be used for transplantation. The level of resolution does not meet criteria for transplantation. Specimen Requirement: 10 mL whole blood in an EDTA lavender top tube; Ambient Days Performed: 5 days per week Reported: 9 - 13 days	5/12/2014
HLA-DR	HLADR	83639	Special Information: This HLA typing should not be used for transplantation. The level of resolution does not meet criteria for transplantation. Specimen Requirement: 10 mL whole blood in an EDTA lavender top tube; Ambient Days Performed: 5 days per week Reported: 9 - 13 days	5/12/2014
Homovanillic Acid, Urine	UHVA	77385	Specimen Requirement: 4 mL urine from a well mixed 24 hour collection in a clean container; Refrigerate during collection; Abstain from medications for 72 hours prior to collection; Frozen Days Performed: Sunday, Tuesday - Saturday Reported: 2 - 5 days	5/19/2014
Human Epididymis Protein 4	HEP4	88459	Days Performed: Monday - Saturday Reported: 2 - 4 days	6/5/2014
Hyperoxaluria, Urine	UHYPER	87816	Special Information: Informed consent is required for patients residing in New York state.	5/29/2014

Test Changes (cont.)

Test Name	Order Code	Billing Code	Change	Effective Date
Interleukin 2	INT2	79585	Reference Range: ≤ 12 pg/mL	5/19/2014
Interleukin-2 Receptor (CD25), Soluble	SILR2	43095	Reference Range: ≤ 1033 pg/mL	5/19/2014
Interleukin 4	INT4	83082	Reference Range: ≤ 5 pg/mL	5/19/2014
Interleukin 5	INT5	83706	Reference Range: ≤ 5 pg/mL	5/19/2014
Interleukin 6	INT6	81934	Reference Range: ≤ 5 pg/mL	5/19/2014
KIT Gene Mutation AML	KITAML	84158	CPT: 81404, G0452	5/1/2014
Mycoplasma pneumoniae IgA	MYCIGA	89483	Days Performed: Monday Reported: 2 - 16 days	6/5/2014
Niacin	B3VIT	88112	Specimen Requirement: 4 mL plasma from an EDTA lavender top tube; Protect from light; Centrifuge, aliquot, and freeze plasma ASAP or within 30 minutes of collection ; Frozen Reference Range: 0 - 9 years: 0.50 - 8.91 µg/mL > 9 years: 0.50 - 8.45 µg/mL Days Performed: 1 day/week Reported: 3 - 11 days	6/12/2014
NMO / Aquaporin-4 IgG Cell Binding Assay, CSF	FNMOA4	89630	Days Performed: Monday - Friday Reported: 3 - 7 days	6/5/2014
NMR Particle Analysis	NMRPAR	89316	Includes: LDL Particle Number by NMR HDL Particle Number Small LDL Particle Number LDL Particle Size Large VLDL Particle Number Large HDL Particle Number VLDL Size HDL Size LP Insulin Resistance Score Test build may need to be modified for this test	4/7/2014
Opiates Confirmation, Quantitation, Serum / Plasma	OPISEC	80193	Specimen Requirement: 1 mL serum from a red top tube; Separate serum from cells ASAP or within 2 hours of collection; Do not use serum separator tubes; Refrigerated	5/19/2014
Phenolphthalein, Stool	PHENO	75755	Specimen Requirement: 10 grams of stool in a clean container; Freeze ASAP; Critical Frozen Days Performed: Monday - Friday Reported: 3 - 5 days CPT: 84311	5/19/2014
Proinsulin, Intact	IPROIN	79206	Reference Range: 0 - 17 years: Not established 18 - 99 years: ≤ 8.0 pmol/L	5/19/2014
Pyruvic Acid, CSF	FPYRUV	77614	Special Information: Deproteinize CSF within 30 minutes of collection to stop additional evolution of pyruvate. Specimen processing/deproteinization instructions: 1. Collect 3 mL CSF in clean tube. 2. Within 30 minutes of collection, add 1 mL well mixed CSF to 2 mL cold 12% TCA. 3. In a second, separate tube, add 1 mL well mixed CSF to 2 mL cold 12% TCA. (Note: 1:2 ratio of CSF to 12% TCA must be maintained for accurate quantitation). 4. Vortex precipitation tubes vigorously and refrigerate or place on wet ice for 10 minutes. 5. After 10 minutes of cold incubation, centrifuge for 10 minutes at 1000G. 6. Decant supernatant into a clean, well-sealed transport tube. 7. Label tube as "Spinal fluid TCA Precipitate". 8. Transport precipitated sample at refrigerated temperature. *Stability Information is for precipitated sample. Reference Range: 0.03 - 0.15 mmol/L Days Performed: Monday - Friday Reported: 0 - 4 days	6/3/2014

Test Changes (cont.)

Test Name	Order Code	Billing Code	Change	Effective Date
Quantitative Pain Panel, Urine	UQNTPP	82347	Includes: Benzylecgonine 6-Acetylmorphine Amphetamine Methamphetamine Norbuprenorphine Methadone EDDP Tramadol Desmethyltramadol Fentanyl Norfentanyl Codeine Morphine Dihydrocodeine Hydrocodone Oxycodone Hydromorphone Oxymorphone Creatinine pH Specific Gravity Oxidants Specimen Quality Collection Temperature Note Test build will need to be modified	7/1/2014
RHCE Variant Antigen	RHCE	88772	Special Information: This test is for Research Use Only Days Performed: Varies Reported: 7 - 10 days	7/1/2014
RHD Variant Antigen	RHD	88771	Special Information: This test is for Research Use Only Days Performed: Varies Reported: 7 - 10 days	7/1/2014
Soluble Transferrin Receptor	STRANS	83071	Specimen Requirement: 1 mL serum from a serum separator tube; Remove serum from cells within 2 hours of collection; Frozen Reference Range: 1.8 - 4.6 mg/L Days Performed: Sunday - Saturday Reported: 2 - 3 days	6/5/2014
Stool Culture, EIA	STCUL	77142	Order Code: Previously STOCUL Test build may need to be modified	5/6/2014
Sulfonylurea Hypoglycemics, Serum	SULFON	82893	Special Information: Test build may need to be modified Days Performed: Sunday, Wednesday Reported: 2 - 7 days	5/19/2014
Tay-Sachs (Hexosaminidase)	HEX	76985	Special Information: This test cannot be performed on pregnant women. Patient date of birth is required for testing. Informed consent is required for patients residing in New York state. CPT: 84999	5/29/2014
Thyroxine, Free by Equilibrium Dialysis LC-MS/MS	T4HPLC	89335	Days Performed: Sunday, Tuesday, Thursday Reported: 3 - 6 days	5/19/2014
Transthyretin DNA Sequencing	TTRDNA	81481	Days Performed: Thursday Reported: 15 - 21 days	5/29/2014
Triiodothyronine, Free by Equilibrium Dialysis LC-MS/MS	FT3ED	89295	Days Performed: Sunday, Tuesday, Thursday Reported: 3 - 6 days	5/19/2014
Tumor Necrosis Factor	TNFA2	79800	Reference Range: ≤ 22 pg/mL	5/19/2014
Ziprasidone	ZIPRA	88183	Reference Range: Expected plasma concentration in patients taking recommended daily dosages: ≤ 220 ng/mL Days Performed: Sunday - Saturday Reported: 6 - 10 days	5/29/2014

New Tests

Test Name	Order Code	Billing Code	Test Information	Effective Date
Alpha-1 Antitrypsin (SERPINA1) Targeted Genotyping	A1ADNA	89910	Specimen Requirement: 5 mL whole blood in an EDTA lavender top tube; Minimum 3 mL; Ambient Stability: Ambient: 24 hours; Refrigerated: 7 days; Frozen: Unacceptable Methodology: Polymerase Chain Reaction (PCR) Reference Range: No Mutation Detected, Refer to report Days Performed: Friday Reported: 7 - 10 days CPT: 81332, G0452 Price: \$151.00 (non-discountable)	5/29/2014
Buprenorphine Quant, Urine	UQNTBU	89916	Includes: Buprenorphine, Urine Norbuprenorphine, Urine Specimen Requirement: 5 mL random urine in a clean container; Minimum 0.5 mL; Refrigerated Stability: Ambient: 3 days; Refrigerated: 2 weeks; Frozen: 2 weeks Methodology: Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS) Reference Range: Buprenorphine: < 20 ng/mL Norbuprenorphine: < 20 ng/mL Days Performed: 4 days per week Reported: 2 - 5 days CPT: 83925 Price: \$200.00	6/16/2014
Circulating Tumor Cells for Prostate Cancer	CTCP	89912	Special Information: Patients on Doxorubicin (Adriamycin) must wait a minimum of 7 days after administration before blood can be drawn for this test. Specimen Requirement: Two 7.5 mL CellSave™ Preservative tubes must be drawn. Fill the tubes completely to ensure the correct ratio of sample to anticoagulant and preservative. Minimum 7.5 mL; Immediately mix by gently inverting the tube eight times; Collect Monday - Thursday only; Specimen MUST be sent to Cleveland Clinic Laboratories on the day of collection; Ambient Stability: Ambient: 4 days; Refrigerated: Unacceptable; Frozen: Unacceptable Methodology: Cell Search System Reference Range: < 5 CTC / 7.5 mL whole blood Days Performed: Sunday - Friday Reported: 5 - 6 days CPT: 86152 Price: \$819.00 (non-discountable)	5/22/2014
H pylori Antibody, IgA	HPYLRA	89922	Specimen Requirement: 0.5 mL serum from a serum separator tube; Minimum: 0.2 mL; Frozen Stability: Ambient: 8 hours; Refrigerated: 48 days; Frozen (-20°C): 6 months (avoid repeated freeze/thaw cycles) Methodology: Enzyme-Linked Immunosorbent Assay (ELISA) Reference Range: Negative: < 20 Units Equivocal: 20 - 24 Units Weak Positive: 25 - 33 Units Positive: > 33 Units Days Performed: Monday, Thursday Reported: Available same day if received in testing lab by 7:00 a.m. CPT: 86677 Price: \$118.00	6/17/2014

New Tests (cont.)

Test Name	Order Code	Billing Code	Test Information	Effective Date
Organic Acids, Neonate, Urine	UOANEO	76978	<p>Specimen Requirement: 10 mL random urine in a clean container; Minimum 4 mL; This test is only for neonates < 1 month old; Include family history, clinical condition (asymptomatic or acute episodes), and drug therapy, if any; Frozen</p> <p>Stability: Ambient: Unacceptable; Refrigerated: 2 weeks; Frozen: 416 days</p> <p>Methodology: Gas Chromatography Mass Spectrometry (GCMS)</p> <p>Reference Range: Refer to report</p> <p>Days Performed: Monday - Friday</p> <p>Reported: 4 - 7 days</p> <p>CPT: 83919</p> <p>Price: \$258.00 (non-discountable)</p>	7/1/2014
Organic Acids, Urine Quant	UORA	89797	<p>Special Information: This test is only for patients ≥ 1 month of age</p> <p>Includes:</p> <ul style="list-style-type: none"> Lactate, Pyruvate 2-hydroxybutyrate, Oxalic Acid 3-hydroxybutyrate, 2-hydroxyisovalerate Acetoacetate, 3-Hydroxy-2-methylbutyrate Malonate, 3-hydroxyisovalerate Methylmalonate, Benzoic Acid Ethylmalonate, Succinate Methylsuccinate, Uracil Fumarate, Isobutyrylglycine Glutarate, 3-methylglutarate Butyrylglycine, 2-methylbutyrylglycine Malate, Adipic Acid 5-oxoproline, 3-methylcrotonylglycine 3-hydroxyglutaric Acid, 2-hydroxyglutaric Acid Alpha-ketoglutarate, Hexanoylglycine 4-hydroxyphenylacetate, N-acetylaspatic Acid Suberic Acid, Succinylacetone 2-oxoadipic Acid, Aconitate Isocitric Acid, Methylcitric Acid Sebacic Acid, 4-hydroxy-phenyllactate N-acetyltyrosine, Suberylglycine <p>Specimen Requirement: 10 mL random urine in a clean container; Minimum 5 mL; Place specimen on ice after collection; Transport Frozen</p> <p>Stability: Ambient: 3 hours; Refrigerated: 24 hours; Frozen: 3 months</p> <p>Methodology: Gas Chromatography / Mass Spectrometry (GCMS)</p> <p>Reference Range: (μmol/mmol CRT)</p> <ul style="list-style-type: none"> Lactate: 1 month - 364 days: 20.3 - 103.4 ≥ 1 year: 2.9 - 47.2 Pyruvate: 1 month - 364 days: 0.8 - 8.7 ≥ 1 year: 0.1 - 2.6 2-hydroxybutyrate: 1 month - 364 days: 0.1 - 11.2 ≥ 1 year: 0.0 - 2.7 Oxalic Acid: 1 month - 364 days: 9.3 - 49.2 ≥ 1 year: 0.7 - 12.4 3-hydroxybutyrate: 1 month - 364 days: 0.3 - 7.9 ≥ 1 year: 0.1 - 2.6 2-hydroxyisovalerate: 1 month - 364 days: 0.0 - 0.2 ≥ 1 year: 0.0 - 0.1 Acetoacetate: 1 month - 364 days: 0.0 - 1.0 ≥ 1 year: 0.0 - 0.5 3-Hydroxy-2-methylbutyrate: 1 month - 364 days: 0.0 - 4.4 ≥ 1 year: 0.0 - 1.3 Malonate: 1 month - 364 days: 0.0 - 0.4 ≥ 1 year: 0.0 - 0.1 3-hydroxyisovalerate: 1 month - 364 days: 5.3 - 81.7 ≥ 1 year: 2.1 - 27.3 Methylmalonate: 1 month - 364 days: 0.1 - 1.6 ≥ 1 year: 0.0 - 0.6 Benzoic Acid: 1 month - 364 days: 0.0 - 15.3 ≥ 1 year: 0.0 - 14.6 Ethylmalonate: 1 month - 364 days: 2.9 - 22.9 ≥ 1 year: 0.5 - 6.2 Succinate: 1 month - 364 days: 4.9 - 120.1 ≥ 1 year: 0.3 - 27.4 	7/1/2014

New Tests (cont.)

Test Name	Order Code	Billing Code	Test Information	Effective Date
Organic Acids, Urine Quant			<p>Reference Range (continued)</p> <p>Methylsuccinate: 1 month - 364 days: 0.2 - 5.7 ≥ 1 year: 0.0 - 1.4</p> <p>Uracil: 1 month - 364 days: 0.0 - 5.8 ≥ 1 year: 0.0 - 5.1</p> <p>Fumarate: 1 month - 364 days: 3.0 - 9.5 ≥ 1 year: 0.3 - 2.6</p> <p>Isobutyrylglycine: 1 month - 364 days: 0.0 - 1.7 ≥ 1 year: 0.0 - 1.2</p> <p>Glutarate: 1 month - 364 days: 0.4 - 4.1 ≥ 1 year: 0.0 - 1.4</p> <p>3-methylglutarate: 1 month - 364 days: 0.0 - 1.4 ≥ 1 year: 0.0 - 0.6</p> <p>Butyrylglycine: 1 month - 364 days: 0.0 - 1.5 ≥ 1 year: 0.0 - 0.7</p> <p>2-methylbutyrylglycine: 1 month - 364 days: 0.0 - 0.8 ≥ 1 year: 0.0 - 0.4</p> <p>Malate: 1 month - 364 days: 0.4 - 4.2 ≥ 1 year: 0.0 - 1.1</p> <p>Adipic Acid: 1 month - 364 days: 6.5 - 24.8 ≥ 1 year: 0.3 - 9.2</p> <p>5-oxoproline: 1 month - 364 days: 0.0 - 5.1 ≥ 1 year: 0.4 - 3.1</p> <p>3-methylcrotonylglycine: 1 month - 364 days: < 0.3 ≥ 1 year: < 0.3</p> <p>3-hydroxyglutaric Acid: 1 month - 364 days: 0.0 - 1.8 ≥ 1 year: 0.0 - 0.7</p> <p>2-hydroxyglutaric Acid: 1 month - 364 days: 6.3 - 56.0 ≥ 1 year: 0.6 - 17.7</p> <p>Alpha-ketoglutarate: 1 month - 364 days: 1.1 - 191.5 ≥ 1 year: 0.2 - 42.7</p> <p>Hexanoylglycine: 1 month - 364 days: 0.0 - 0.2 ≥ 1 year: 0.0 - 0.1</p> <p>4-hydroxyphenylacetate: 1 month - 364 days: 29.2 - 376.3 ≥ 1 year: 5.7 - 147.5</p> <p>N-acetylaspartic Acid: 1 month - 364 days: 0.6 - 46.9 ≥ 1 year: 0.1 - 8.9</p> <p>Suberic Acid: 1 month - 364 days: 2.9 - 20.0 ≥ 1 year: 0.0 - 7.4</p> <p>Succinylacetone: 1 month - 364 days: < 0.4 ≥ 1 year: < 0.4</p> <p>2-oxoadipic Acid: 1 month - 364 days: 0.0 - 1.2 ≥ 1 year: 0.0 - 3.3</p> <p>Aconitate: 1 month - 364 days: 40.2 - 203.9 ≥ 1 year: 8.5 - 109.6</p> <p>Isocitric Acid: 1 month - 364 days: 57.7 - 360.5 ≥ 1 year: 9.1 - 271.9</p> <p>Methylcitric Acid: 1 month - 364 days: 2.2 - 27.0 ≥ 1 year: 1.0 - 13.9</p> <p>Sebacic Acid: 1 month - 364 days: 0.0 - 6.6 ≥ 1 year: 0.0 - 0.3</p> <p>4-hydroxyphenyllactate: 1 month - 364 days: 7.4 - 75.9 ≥ 1 year: 1.3 - 23.0</p> <p>N-acetyltyrosine: 1 month - 364 days: 0.2 - 3.0 ≥ 1 year: 0.0 - 1.2</p> <p>Suberylglycine: 1 month - 364 days: 0.0 - 0.0 ≥ 1 year: 0.0 - 0.0</p> <p>Days Performed: 2 days per week</p> <p>Reported: 4 - 7 days</p> <p>CPT: 83919</p> <p>Price: \$258.00 (non-discountable)</p>	

New Tests (cont.)

Test Name	Order Code	Billing Code	Test Information	Effective Date
Thyroid Cancer Mutation Panel	TYMUT	89918	Includes: BRAF Mutation Analysis, Papillary Thyroid Cancer RAS Mutation Analysis RET/PTC Rearrangement, Thyroid Cancer PAX8/PPAR (gamma) Translocation, Thyroid Cancer Specimen Requirement: 4 slides from fine needle aspirate (FNA), 3 of which should be without coverslips; Minimum 2 slides; Coverslipped slides will delay reporting of results *AND* Pathology report; Specimens will be examined by a pathologist for confirmation and microdissection, if warranted; Transport both Ambient Stability: Ambient: Indefinite; Refrigerated: Indefinite; Frozen: Do not freeze Methodology: Real-Time Polymerase Chain Reaction (RT-PCR), Pyrosequencing Reference Range: Refer to report Days Performed: 7 days / week Reported: 5 - 6 days CPT: 81210, 81403, 81404x2, 81275, 81401 Price: \$2,500.00 (non-discountable)	6/5/2014
Vitamin E	EVIT	84446	Includes: Vitamin E, alpha Vitamin E, gamma Specimen Requirement: 2 mL plasma from an EDTA lavender top tube; Minimum 0.7 mL; Protect specimen from direct sun light exposure; Frozen Stability: Ambient: 24 hours; Refrigerated: 1 week; Frozen: 1 year Methodology: High Performance Liquid Chromatography (HPLC) Reference Range: Vitamin E, alpha: 0 - 1 month: 1.0 - 3.5 mg/L 2 - 5 months: 2.0 - 6.0 mg/L 6 months - 1 year: 3.5 - 8.0 mg/L 2 - 12 years: 5.5 - 9.0 mg/L ≥ 13 years: 6.0 - 23.0 mg/L Vitamin E, gamma: 0.3 - 3.2 mg/L Days Performed: 2 days per week Reported: 1 - 6 days CPT: 84446 Price: \$62.00	6/23/2014

Discontinued Tests

Test Name	Order Code	Billing Code	Test Information	Effective Date
Buprenorphine & Metabolite, Confirmation / Quant, Urine	UBUPRC	88722	This test will no longer be available. Suggest ordering Buprenorphine Quant, Urine (UQNTBU)	6/16/2014
GM1 Triad Autoantibody	GM1TRI	76110	This test will no longer be available. Suggest ordering Ganglioside Antibodies (GANGAB)	5/12/2014
Organic Acids, Urine	UORGSC	76978	This test will no longer be available. Suggest ordering Organic Acids, Urine Quant (UORA) or Organic Acids, Neonate, Urine (UOANEO)	7/1/2014
Transketolase	TKETO	88603	This test will no longer be available.	5/1/2014
Vitamin E	VITE	84446	This test will no longer be available. Suggest ordering Vitamin E (EVIT)	6/23/2014