

Technical Update • January 2013

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	Test Discontinued	Specimen Information	Component Requirement	Methodology	Reference Range	Days Performed/Reported	CPT	Price
3	Aldolase											
7	Alpha Thalassemia Gene Deletions											
6	Alpha Thalassemia Gene Deletions, PCR											
7	Alpha-1-Antitrypsin Clearance											
7	Arbovirus IgM Abs, CSF											
7	Arbovirus IgM Antibodies											
7	Babesia Microti IgG & IgM Abs											
7	Barbiturates											
7	Beta-2 Transferrin											
7	Beta Galactosidase, Leukocytes											
3	BK Virus Quantitation PCR, Plasma											
3, 7	BK Virus Quantitation, Urine											
7	Candida Immune Complex											
3	Carbohydrate Deficient Transferrin											
3	Carbohydrate Deficient Transferrin, Pediatric											
3	Carnitine Free & Total, Urine											
3, 7	Complement, Alternate Pathway (AH50), Functional											
7	Complement C6, Functional											
7	Complement C9, Functional											
3	Constitutional Whole Genome SNP Microarray											
7	Echinococcus Ab, IgG											
3	EGFR Mutation Analysis, Cell Pellet											
7	Factor XIII V34L DNA											
7	Fatty Acid Oxidation Probe Assay, Fibroblast Culture											
7	Fentanyl and Metabolite, Urine											

[illegible]

Test Changes

Test Name	Order Code	Billing Code	Change	Effective Date																								
Aldolase	ALD	82085	Reference Range: 0 - 30 days: 6.0 - 32.0 U/L 1 - 5 months: 3.0 - 12.0 U/L 6 - 35 months: 3.5 - 10.0 U/L 3 - 6 years: 2.7 - 8.8 U/L 7 - 17 years: 3.3 - 9.7 U/L ≥ 18 years: 1.5 - 8.1 U/L Days Performed: Sunday - Saturday Reported: 2 - 3 days	12/13/2012																								
BK Virus Quantitation PCR, Plasma	BKQUAN	82611	Specimen Requirement: 2 mL plasma from an EDTA lavender top tube; Refrigerated Reference Range: Negative for BK Virus DNA Days Performed: Tuesday, Friday Reported: 5 days	2/12/2013																								
BK Virus Quantitation, Urine	UBKQT	82799	Specimen Requirement: 1 mL of random urine in a sterile container; Send to Cleveland Clinic Laboratories on the day of collection; Refrigerated	1/10/2013																								
Carbohydrate Deficient Transferrin	CDTRAN	82110	Specimen Requirement: 0.1 mL serum from a serum separator tube; Patient should be greater or equal to 21 years of age; Patient age is required; Frozen Methodology: Affinity Chromatography - Mass Spectrometry (MS) Days Performed: Monday, Wednesday, Thursday Reported: 6 - 9 days	1/31/2013																								
Carbohydrate Deficient Transferrin, Pediatric	CDTRAP	87674	Includes: Mono-oligo/Di-oligo Ratio A-oligo/Di-oligo Ratio Tri-sialo/Di-oligo Ratio Apo CIII-1/CIII-2 Ratio Apo CIII-0/Apo CIII-2 Ratio Test build may need to be modified Specimen Requirement: 0.1 mL serum from a serum separator tube; Reason for referral and patients age are required; Frozen Methodology: Affinity Chromatography - Mass Spectrometry (MS) <table><tr><td>Reference Range:</td><td>Normal</td><td>Indeterminate</td><td>Abnormal</td></tr><tr><td>Mono-oligo/Di-oligo Ratio</td><td>≤ 0.06</td><td>0.07 - 0.09</td><td>≥ 0.10</td></tr><tr><td>A-oligo/Di-oligo Ratio</td><td>≤ 0.011</td><td>0.012 - 0.021</td><td>≥ 0.022</td></tr><tr><td>Tri-sialo/Di-oligo Ratio</td><td>≤ 0.05</td><td>0.06 - 0.12</td><td>≥ 0.13</td></tr><tr><td>Apo CIII-1/CIII-2 Ratio</td><td>≤ 2.91</td><td>2.92 - 3.68</td><td>≥ 3.69</td></tr><tr><td>Apo CIII-0/Apo CIII-2 Ratio</td><td>≤ 0.48</td><td>0.49 - 0.68</td><td>≥ 0.69</td></tr></table> Days Performed: Monday, Wednesday, Thursday Reported: 6 - 9 days	Reference Range:	Normal	Indeterminate	Abnormal	Mono-oligo/Di-oligo Ratio	≤ 0.06	0.07 - 0.09	≥ 0.10	A-oligo/Di-oligo Ratio	≤ 0.011	0.012 - 0.021	≥ 0.022	Tri-sialo/Di-oligo Ratio	≤ 0.05	0.06 - 0.12	≥ 0.13	Apo CIII-1/CIII-2 Ratio	≤ 2.91	2.92 - 3.68	≥ 3.69	Apo CIII-0/Apo CIII-2 Ratio	≤ 0.48	0.49 - 0.68	≥ 0.69	1/3/2013
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Carnitine Free & Total, Urine	UCARN1	79813	Methodology: Flow Injection Analysis - Tandem Mass Spectrometry (FIA -MS/MS)	1/10/2013																								
Complement, Alternate Pathway (AH50), Functional	COMAP	88533	Specimen Requirement: 1 mL of serum from a serum separator tube; Fasting is preferred; Frozen	1/10/2013																								
Constitutional Whole Genome SNP Microarray	WGSNP	88472	CPT: 81229, 88230	1/1/2013																								
EGFR Mutation Analysis, Cell Pellet	EGFRCP	n/a	Special Information: The specimen submitted for analysis should contain >20% tumor cells. Please include ThinPrep slide and a copy of cytology report. CytoLyt solution containers are available by calling Client Services at 216.444.5755 or 800.628.6816. Note: EGFR Mutation Analysis of FFPE tissue and cytopathology cell blocks should be ordered with test EGFR, Mutation Analysis, Tissue.	12/18/2012																								
Gene Analysis 21 Hydroxylase	21GENE	88173	Special Information: DNA extraction will no longer have a separate fee. Specimen Requirement: 3 mL whole blood in an EDTA lavender top tube; A completed and signed 'Informed Consent for Genetic Testing' form and completed 'CYP21A2 Gene Testing Patient Information' form are both required. These forms are available through Client Services at 800.628.6816 or 216.444.5755; Refrigerated Days Performed: Monday - Friday Reported: 6 - 9 days	1/10/2013																								

Test Changes (cont.)

Test Name	Order Code	Order Code	Change	Effective Date
Hantavirus IgG & IgM Antibodies	HANTAB	82155	Special Information: If Hantavirus IgG is ≥ 2.00 and Hantavirus IgM is ≥ 2.00 , then Sin Nombre Virus IgG immunoblot will be performed at an additional charge. If Hantavirus IgM is ≥ 2.00 , then Sin Nombre Virus IgM by ELISA will be performed at an additional cost. Specimen Requirement: 1 mL of serum from a serum separator tube; Refrigerated Reference Range: Hantavirus IgG: < 2.00 Hantavirus IgM: < 2.00	12/27/2012
HLA B5701	B5701	84337	Special Information: DNA extraction will no longer have a separate fee. Specimen Requirement: 3 mL whole blood in an EDTA lavender top tube; A completed and signed 'Informed Consent Form for Genetic Testing' is required and is available through Client Services at 800.628.6816 or 216.444.5755; Refrigerated Days Performed: Tuesday, Friday Reported: 2 - 6 days	1/10/2013
HPV, Genotypes 16 and 18	HPVGEN	88554	Special Information: Not a stand alone test. Order to detect HPV genotypes 16 and 18 in females with positive high-risk HPV results. Specimen Requirement: One cervical brush in ThinPrep Test Media; Place each specimen in an individually sealed bag; Females should avoid high concentrations of antifungal cream, contraceptive jelly, or douche at time of collection.	1/10/2013
Hypercoagulation Diagnostic Interpretive Panel	HYPER	173	CPT: 81240, 83090, 85240, 85300, 85303, 85306, 85307, 85384, 85390, 85610, 85730, 85732, 86140, 86147	1/1/2013
KIT Asp816Val Mutation Analysis	KITMST	84159	Special Information: DNA extraction will no longer have a separate fee Specimen Requirement: 2 mL bone marrow in an EDTA lavender top tube; A completed 'Hematopathology Patient Information Form' is required. This form is available through Client Services at 800.628.6816 or 216.444.5755; Send specimen to Cleveland Clinic Laboratories on the day of collection; Ambient	1/10/2013
Myeloma Prognostic Risk Signature	MYPRS	88729	CPT: 81228, 86849, 88184, 88185	1/1/2013
Ovarian Antibody	OVARAN	75497	Special Information: Due to circumstances beyond our control, the titer for the Ovarian Antibody announced in the November Technical Update will not be added as planned. We apologize for any extra work this may have caused.	12/18/2012
pH, Fecal	FECLPH	88532	Special Information: Unacceptable: Specimens containing barium, diapers, stool in media or preservatives.	1/10/2013
Pneumocystis jiroveci PCR	PCPPCR	87814	Reference Range: Not applicable	1/24/2013
PTH Related Peptide	PTHPEP	77085	Specimen Requirement: 0.7 mL of plasma from an EDTA lavender top tube. Patient should be fasting. Collect in pre-chilled EDTA lavender top tube and place on ice after collection; Spin down ASAP in a refrigerated centrifuge or refrigerated centrifuge cups.; Frozen Days Performed: Monday - Thursday Reported: 3 -7 days	1/24/2013
Purine Profile, Urinary	UPURIN	82937	CPT: 82570 x2	1/3/2013

Test Changes (cont.)

Test Name	Order Code	Billing Code	Change	Effective Date
Sex Hormone Binding Globulin	SHBG2	79803	<p>Special Information: Human antimouse antibodies (HAMA) may be present in specimens from patients who have received immunotherapy utilizing monoclonal antibodies. Other heterophile antibodies may also be present in patient specimens. This assay has been specifically formulated to minimize the effects of these antibodies on the assay. However, results from patients known to have such antibodies must be carefully evaluated.</p> <p>TANNER STAGE INFORMATION: MALES: Puberty onset (transition from Tanner stage I to Tanner stage II) occurs for boys at a median age of 11.5 (+/-2) years. For boys, there is no definite proven relationship between puberty onset and body weight or ethnic origin. Progression through Tanner stages is variable. Tanner stage V (young adult) should be reached by age 18. FEMALES: Puberty onset occurs for girls at a median age of 10.5 (+/-2) years. There is evidence that it may occur up to 1 year earlier in obese girls and in African American girls. Progression through Tanner stages is variable. Tanner stage V should be reached by age 18.</p> <p>Days Performed: Monday - Saturday Reported: 2 - 4 days</p>	1/22/2013
Thiocyanate	THIOCY	84430	<p>Reference Range: 0.0 - 2.9 mg/dL</p>	12/6/2012
Thiopurine Methyltransferase (TPMT)	PPRENZ	81574	<p>Methodology: Enzymatic End Point, Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS)</p> <p>Reference Range: Normal: ≥ 15.0 U/mL RBC Low Normal: 10.1 - 14.9 U/mL RBC Carrier: 6.0 - 10.0 U/mL RBC Deficient: 0.0 - 5.9 U/mL RBC</p> <p>Days Performed: Monday, Wednesday - Friday Reported: 5 - 8 days</p>	1/31/2013
Topiramate	TOPIR	79904	<p>Days Performed: Monday - Friday Reported: 0 - 3 days</p>	2/12/2013
von Willebrand Disease Type 2N Binding	VWD2N	82953	<p>Specimen Requirement: 0.5 mL of plasma from a Sodium citrate (Lt. Blue top) tube; Remove plasma from cells ASAP or within 4 hours of collection and freeze; Frozen</p> <p>Reference Range: ≥ 86%</p>	12/4/2012
Ziprasidone	ZIPRA	88183	<p>CPT: 82542</p>	1/10/2013

New Tests

Test Name	Order Code	Billing Code	Test Information	Effective Date																																																									
Alpha Thalassemia Gene Deletions, PCR	ATHALS	84123	Includes: -alpha3.7 -alpha4.2 -(alpha)20.5 -SEA -MED -FIL Specimen Requirement: 5 mL whole blood in an EDTA lavender top tube; Ambient Methodology: Polymerase Chain Reaction (PCR) Capillary Electrophoresis (CE) Reference Range: Refer to report Days Performed: 1 day per week Reported: 7 - 10 days CPT: 81257 Price: \$590.00 (non-discountable)	1/29/2013																																																									
Insulin Like Growth Factor 1	IGF1	75072	Specimen Requirement: 0.5 mL serum from a serum separator tube; Refrigerated Methodology: Liquid Chromatography Mass Spectrometry (MS) Reference Range: <table><tr><td>Pediatric:</td><td>Male (ng/mL)</td><td>Female (ng/mL)</td></tr><tr><td><1 year:</td><td>≤ 142</td><td>≤ 185</td></tr><tr><td>1 - 1.9 years:</td><td>≤ 134</td><td>≤175</td></tr><tr><td>2 - 2.9 years:</td><td>≤ 135</td><td>≤ 178</td></tr><tr><td>3 - 3.9 years:</td><td>30-155</td><td>38-214</td></tr><tr><td>4 - 4.9 years:</td><td>28-181</td><td>34-238</td></tr><tr><td>5 - 5.9 years:</td><td>31-214</td><td>37-272</td></tr><tr><td>6 - 6.9 years:</td><td>38-253</td><td>45-316</td></tr><tr><td>7 - 7.9 years:</td><td>48-298</td><td>58-367</td></tr><tr><td>8 - 8.9 years:</td><td>62-347</td><td>76-424</td></tr><tr><td>9 - 9.9 years:</td><td>80-398</td><td>99-483</td></tr><tr><td>10 - 10.9 years:</td><td>100-449</td><td>125-541</td></tr><tr><td>11 - 11.9 years:</td><td>123-497</td><td>152-593</td></tr><tr><td>12 - 12.9 years:</td><td>146-541</td><td>178-636</td></tr><tr><td>13 - 13.9 years:</td><td>168-576</td><td>200-664</td></tr><tr><td>14 - 14.9 years:</td><td>187-599</td><td>214-673</td></tr><tr><td>15 - 15.9 years:</td><td>201-609</td><td>218-659</td></tr><tr><td>16 - 16.9 years:</td><td>209-602</td><td>208-619</td></tr><tr><td>17 - 17.9 years:</td><td>207-576</td><td>185-551</td></tr></table> Adult: (ng/mL) 18 - 19.9 years: 108-548 20 - 24.9 years: 83-456 25 - 29.9 years: 63-373 30 - 39.9 years: 53-331 40 - 49.9 years: 52-328 50 - 59.9 years: 50-317 60 - 69.9 years: 41-279 70 - 79.9 years: 34-245 > 80 years: 34-246 Z-Score (Male): -2.0 - +2.0 SD 12/6/2010 Z-Score (Female): -2.0 - +2.0 SD 12/6/2010 Days Performed: Sunday - Friday Reported: 6 - 7 days CPT: 84305 Price: \$183.00	Pediatric:	Male (ng/mL)	Female (ng/mL)	<1 year:	≤ 142	≤ 185	1 - 1.9 years:	≤ 134	≤175	2 - 2.9 years:	≤ 135	≤ 178	3 - 3.9 years:	30-155	38-214	4 - 4.9 years:	28-181	34-238	5 - 5.9 years:	31-214	37-272	6 - 6.9 years:	38-253	45-316	7 - 7.9 years:	48-298	58-367	8 - 8.9 years:	62-347	76-424	9 - 9.9 years:	80-398	99-483	10 - 10.9 years:	100-449	125-541	11 - 11.9 years:	123-497	152-593	12 - 12.9 years:	146-541	178-636	13 - 13.9 years:	168-576	200-664	14 - 14.9 years:	187-599	214-673	15 - 15.9 years:	201-609	218-659	16 - 16.9 years:	209-602	208-619	17 - 17.9 years:	207-576	185-551	1/2/2013
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Fee Increases

Test Name	Order Code	Billing Code	List Fee	CPT Code
Alpha-1-Antitrypsin Clearance	A1ACL	87933	\$198.00 (non-discountable)	82103
Arbovirus IgM Abs CSF	ARIGMC	82593	\$325.00 (non-discountable)	86651, 86652, 86653, 86654, 86788
Babesia Microti IgG & IgM Abs	BMICGM	81936	\$200.00	86753 x2
Barbiturates	BARBS	77070	\$108.00 (non-discountable)	82205
Beta-2 Transferrin	B2TRAN	82885	\$405.00 (non-discountable)	86335
Beta Galactosidase, Leukocytes	BGALA	87825	\$365.00 (non-discountable)	82657
BK Virus Quantitation, Urine	UBKQT	82799	\$363.00 (non-discountable)	87799
Candida Immune Complex	CNDIMM	82919	\$135.00 (non-discountable)	86628
Carnitine Free & Total, Urine	UCARN1	79813	\$313.00 (non-discountable)	82379
Complement, Alternate Pathway (AH50), Functional	COMAP	88533	\$202.00 (non-discountable)	86161
Complement C6, Functional	C6FUN	87820	\$195.00 (non-discountable)	86161
Complement C9, Functional	C9FUN	87809	\$195.00 (non-discountable)	86161
Echinococcus Ab, IgG	ECHINO	75457	\$118.00	86682
Factor XIII V34L DNA	XIIIVL	83871	\$139.00 (non-discountable)	81400
Fatty Acid Oxidation Probe Assay, Fibroblast Culture	FAO	82923	\$570.00 (non-discountable)	82017
GM1 Antibody Panel	GM1ABP	77133	\$226.00	83516x2
Herpes Simplex Virus by PCR	HSPCRC	81443	\$322.00 (non-discountable)	87529
Meconium Drug Screen 5	MECDS5	82109	\$310.00	80104x5
PAI-1 Genotype 5G/4G	PAIGEN	83781	\$148.00 (non-discountable)	81400
Platelet Antibody Detection	PLTDET	86022	\$175.00 (non-discountable)	86022
RNA Polymerase III Ab, IgG	RNAIII	88118	\$105.00 (non-discountable)	83516
Silicon	SILIC	80440	\$145.00 (non-discountable)	84285

Fee Reductions

Test Name	Order Code	Billing Code	List Fee	CPT Code
Arbovirus IgM Antibodies	ARBIGM	81074	\$325.00 (non-discountable)	86651, 86652, 86653, 86654, 86788
Fentanyl and Metabolite, Urine	UFENT	82344	\$160.00	80299
HIV Genotyping	HIVGEN	80797	\$105.00	87901
Nicotine and Cotinine, Serum	NICOT	76556	\$108.00 (non-discountable)	83887
NMR LipoProfile	NMRLIP	82739	\$95.00 (non-discountable)	83704, 82465, 83718, 84478
Pancreatitis Panel	PANCPL	83724	\$2,600.00 (non-discountable)	81223, 81404, 81479
Rett Syndrome	RETT	81741	\$1300.00 (non-discountable)	83891, 83898x7, 83904x6, 83909
Ribosomal P Protein IgG Autoantibodies	RIBPRO	83701	\$95.00	83520
Thallium Urine	UTHAL	84116	\$95.00	83018
Toxoplasma Antibody Evaluation, CSF	CSFTOX	81721	\$300.00	86777, 86778

Discontinued Tests

Test Name	Order Code	Billing Code	List Fee	Effective Date
Alpha Thalassemia Gene Deletions	ATHAL	84123	This test will no longer be available. Suggest ordering Alpha Thalassemia Gene Deletions, PCR (ATHALS)	1/29/2013
Insulin Like Growth Factor	ILGF1	75072	This test will no longer be available. Suggest ordering Insulin Like Growth Factor 1 (IGF1)	1/2/2013
Plasma Cell Labeling Index Profile	PCLI	81483	This test will no longer be available.	1/24/2013