

Technical Update • October 2018

Cleveland Clinic Laboratories is dedicated to keeping you updated and informed about recent testing changes. This Technical Update is provided on a monthly basis to notify you of any changes to the tests in our catalog.

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

To compare the new information with previous test information, refer to the online Test Directory at clevelandcliniclabs.com. Test information is updated in the online Test Directory on the Effective Date stated in the Technical Update. 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	Name Change Order Code	New Test	Test Discontinued	Special Information	Specimen Requirement	Component Change(s)	Methodology Reference Range	Days Performed/Reported	Stability	CPT	Fee
3	Alkaline Phosphatase Isoenzymes											
17	Allergen, Alpha Lactalbumin IgE											
17	Allergen, Beta Lactoglobulin IgE											
17	Allergen, Casein IgE											
3, 16	Allergen, Cow Milk Components IgE											
4	Allergen, Egg Components IgE											
4-5, 16	Allergen, Peanut Components IgE											
5	Anaerobe Culture											
5	BCR/ABL1 Mutation Analysis for Tyrosine Kinase Inhibitor Resistance by NGS											
5	Bromine-Total, Blood											
6	Calculi (Stone) Analysis											
6	Calprotectin, Fecal											
17	Carnitine Free & Total, Urine											
13	Carnitine, Free & Total, Urine by Tandem Mass Spectrometry											
6	Cathartic Laxative, Urine											
6	Celiac Gluten Free Panel											
6	Clonazepam & Metabolite, Urine											
6	Clostridium difficile Toxin by PCR											
6	Cobalt, Blood											
6	Colchicine Level											

Summary of Changes
by Test Name

Order Code	Name Change	New Test	Special Information	Specimen Requirement	Component Change(s)	Methodology	Days Performed/Reported	Reference Range	Stability	CPT	Fee
7	Cortisol, Plasma										
13-14	Cystic Fibrosis Pathogenic Variant Analysis										
17	Cystic Fibrosis Screen139 Variant Assay										
7	Diphenhydramine										
7	Diphenhydramine, Urine										
7-8	Enterovirus by PCR										
17	Enterovirus, Miscellaneous Sites, PCR										
17	Enterovirus PCR Plasma										
8, 16	Familial Mediterranean Fever (MEFV) Sequencing										
8	Fluoride										
17	Herpesvirus 6 PCR, Quant, CSF										
17	Herpesvirus 6 PCR, Quant, Plasma										
8	Histone IgG Antibody										
17	HLA-B27										
14	Human Herpesvirus 6 (HHV-6A and HHV-6B) by Quantitative PCR										
8	Insulinoma Associated Antibody 2										
8	Ketamine & Metabolite, Serum/Plasma										
9	Ketorolac										
9	Levamisole										
9	Levetiracetam										
17	Lindane										
9	LSD, Urine										
9	Mephenytoin & Normephenytoin										
9	Metformin										
10, 16	Methadone & Metabolite										
17	Methazolamide										
10	Methyl Ethyl Ketone, Urine										
10	Metoprolol, Serum/Plasma										
17	Monoclonal Protein, Blood										
15	Monoclonal Protein with Immunoglobulins and Free Light Chains, serum										
16	Mycobacterium tuberculosis (MTB) and Rifampin Resistance Detection by PCR										
10	Neisseria gonorrhoea Antibodies, Total										
17	Peroxisomal Panel										
17	Phenelzine										
17	Phenylpropanolamine										
10	Platinum										
10	Propylene Glycol										
11	Protein Electrophoresis, Serum, with IFE										
11	Silver, Urine										
11	Synthetic Cannabinoid Metabolites – Expanded, Urine (Qualitative)										

Test Update Page #	Summary of Changes by Test Name	Order Code	Name Change	New Test	Special Information	Specimen Requirement	Component Change(s)	Methodology	Reference Range	Days Performed/Reported	Stability	CPT	Fee
11	Thiopurine Metabolites by LC-MS/MS												
17	Tier 2 B-Cell Clonality Using BIOMED2 Primers												
11	Toluene, Blood												
11	Torseamide, Serum/Plasma												
17	TP53 Sequencing (Exons 5-8)												
12	VRE Culture Screen												
12	West Nile Virus IgM, CSF												

Test Changes

Test Name	Order Code	Change	Effective Date
Alkaline Phosphatase Isoenzymes	ALKISO	Specimen Requirement: 2 mL serum from a serum separator (gold) tube; Minimum: 1.5 mL ; Refrigerated	Effective immediately
Allergen, Cow Milk Components IgE	MILKE	<p>For Interfaced Clients Only: Test build may need to be modified</p> <p>Test Name: Previously Allergen, Food, Milk (Cow's) Components IgE</p> <p>Note: <i>The following alias names will be added: Alpha-lactalbumin, Beta-lactoglobulin, Casein, Cow Milk. Special Information will be removed.</i></p> <p>Includes: Allergen, Casein IgE Allergen, Alpha Lactalbumin IgE Allergen, Beta Lactoglobulin IgE</p> <p>Allergen Class Guide</p> <p>Clinical Information: Alpha-lactalbumin, beta-lactoglobulin, and casein are the allergens included in this panel. Allergen results of 0.10–0.34 kU/L are intended for specialist use as the clinical relevance is undetermined. The correlation of allergy laboratory results with clinical history and in vivo reactivity to specific allergens is essential. A negative test may not rule out clinical allergy or even anaphylaxis.</p> <p>Specimen Requirement: 0.8 mL serum from a serum separator (gold) tube; Minimum: 0.5 mL; Submitting the minimum volume will not allow for repeat testing or add-ons; Required volume of 0.8 mL is preferred; An extra 50 µL will be required for each additional allergen ordered; Refrigerated</p> <p>*OR* 0.8 mL plasma from an EDTA (lavender) tube; Minimum: 0.5 mL; Submitting the minimum volume will not allow for repeat testing or add-ons; Required volume of 0.8 mL is preferred; An extra 50 µL will be required for each additional allergen ordered; Refrigerated</p> <p>*OR* 0.8 mL plasma from a lithium heparin (green) tube; Minimum: 0.5 mL; Submitting the minimum volume will not allow for repeat testing or add-ons; Required volume of 0.8 mL is preferred; An extra 50 µL will be required for each additional allergen ordered; Refrigerated</p> <p>Stability: Ambient: 1 day Refrigerated: 7 days Frozen: 14 days</p> <p>Reference Range: Allergen, Casein IgE: < 0.35 kU/L Allergen, Alpha Lactalbumin IgE: < 0.35 kU/L Allergen, Beta Lactoglobulin IgE: < 0.35 kU/L</p> <p>Days Performed: Sunday–Saturday</p> <p>Reported: 1–2 days</p> <p>CPT: 86008 x 3</p>	11/27/18

Test Changes (Cont.)

Test Name	Order Code	Change	Effective Date
Allergen, Egg Components IgE	EGGIGE	<p>For Interfaced Clients Only: Test build may need to be modified</p> <p>Test Name: Previously Allergen, Food, Egg Components IgE</p> <p>Note: <i>The following alias names will be added: Egg white, Ovalbumin, Ovomuroid. Special Information will be removed.</i></p> <p>Includes: Ovomuroid Ovalbumin</p> <p>Allergen Class Guide</p> <p>Clinical Information: Ovomuroid and ovalbumin are the allergens included in this panel. Allergen results of 0.10–0.34 kU/L are intended for specialist use as the clinical relevance is undetermined. The correlation of allergy laboratory results with clinical history and in vivo reactivity to specific allergens is essential. A negative test may not rule out clinical allergy or even anaphylaxis.</p> <p>Specimen Requirement: 0.5 mL serum from a serum separator (gold) tube; Minimum: 0.3 mL; Submitting the minimum volume will not allow for repeat testing or add-ons; Required volume of 0.5 mL is preferred; An extra 50 µL will be required for each additional allergen ordered; Refrigerated</p> <p>*OR* 0.5 mL plasma from an EDTA (lavender) tube; Minimum: 0.3 mL; Submitting the minimum volume will not allow for repeat testing or add-ons; Required volume of 0.5 mL is preferred; An extra 50 µL will be required for each additional allergen ordered; Refrigerated</p> <p>*OR* 0.5 mL plasma from a lithium heparin (light green) plasma separator tube (PST); Minimum: 0.3 mL; Submitting the minimum volume will not allow for repeat testing or add-ons; Required volume of 0.5 mL is preferred; An extra 50 µL will be required for each additional allergen ordered; Refrigerated</p> <p>Stability: Ambient: 1 day Refrigerated: 7 days Frozen: 14 days</p> <p>Reference Range: Ovomuroid: < 0.35 kU/L Ovalbumin: < 0.35 kU/L</p> <p>Days Performed: Sunday–Saturday</p> <p>Reported: 1–2 days</p> <p>CPT: 86008 x 2</p>	11/27/18
Allergen, Peanut Components IgE	PNUTCP	<p>For Interfaced Clients Only: Test build may need to be modified</p> <p>Test Name: Previously Allergen, Food, Peanut Components IgE</p> <p>Note: <i>The following alias names will be added: Peanut, Peanut IgE, rAra h 1, rAra h 2, rAra h 3, rAra h 8, rAra h 9. Special Information will be removed.</i></p> <p>Includes: Ara h 1 Ab IgE Ara h 2 Ab IgE Ara h 3 Ab IgE Ara h 9 Ab IgE Ara h 8 Ab IgE ALGN Food Pnut Components Interp</p> <p>Allergen Class Guide</p> <p>Clinical Information: Allergen results of 0.10–0.34 kU/L for whole peanut are intended for specialist use as the clinical relevance is undetermined. The correlation of allergy laboratory results with clinical history and in vivo reactivity to specific allergens is essential. A negative test may not rule out clinical allergy or even anaphylaxis.</p> <p><i>(continued on page 5)</i></p>	11/27/18

Test Changes (Cont.)

Test Name	Order Code	Change	Effective Date
Allergen, Peanut Components IgE <i>(continued from page 4)</i>		<p>Specimen Requirement: 0.8 mL serum from a serum separator (gold) tube; Minimum: 0.5 mL; Submitting the minimum volume will not allow for repeat testing or add-ons; Required volume of 0.8 mL is preferred; An extra 50 µL will be required for each additional allergen ordered; Refrigerated</p> <p>*OR* 0.8 mL plasma from an EDTA (lavender) tube; Minimum: 0.5 mL; Submitting the minimum volume will not allow for repeat testing or add-ons; Required volume of 0.8 mL is preferred; An extra 50 µL will be required for each additional allergen ordered; Refrigerated</p> <p>*OR* 0.8 mL plasma from a lithium heparin (light green) plasma separator tube (PST); Minimum: 0.5 mL; Submitting the minimum volume will not allow for repeat testing or add-ons; Required volume of 0.8 mL is preferred; An extra 50 µL will be required for each additional allergen ordered; Refrigerated</p> <p>Stability: Ambient: 1 day Refrigerated: 7 days Frozen: 14 days</p> <p>Reference Range: Ara h 1 Ab IgE: < 0.1 kU/L Ara h 2 Ab IgE: < 0.1 kU/L Ara h 3 Ab IgE: < 0.1 kU/L Ara h 9 Ab IgE: < 0.1 kU/L Ara h 8 Ab IgE: < 0.1 kU/L</p> <p>Days Performed: Sunday–Saturday Reported: 1–2 days CPT: 86008 x 5</p>	
Anaerobe Culture	ANACUL	<p>Stability: Ambient: 24 hours Refrigerated: Unacceptable Frozen: Unacceptable</p>	12/4/18
BCR/ABL1 Mutation Analysis for Tyrosine Kinase Inhibitor Resistance by NGS	KINASE	<p>For Interfaced Clients Only: Test build may need to be modified</p> <p>Test Name: Previously BCR/ABL1, Tyrosine Kinase Inhibitor Resistance, Kinase Domain Mutation Screen, Sanger Sequencing</p> <p>Special Information: Serum, plasma, and specimens collected in anticoagulants other than EDTA are unacceptable. Frozen, clotted or severely hemolyzed specimens will be rejected. For specimens having no t(9;22) fusion, this test will be canceled, and an ABL1 amplification confirmation test will be ordered. This test is New York DOH approved.</p> <p>Clinical Information: Order only for patients with an established diagnosis of a BCR-ABL1 positive leukemia. Used to determine if a mutation is present that would interfere with response to TKI therapy in Philadelphia chromosome positive (Ph+) lymphoblastic leukemia or chronic myelogenous leukemia (CML). This test detects all common mutations, including T315I.</p> <p>Specimen Requirement: 5 mL whole blood in an EDTA (lavender) tube; Minimum: 1 mL; Must send to Cleveland Clinic Laboratories on the day of collection; Refrigerated</p> <p>*OR* 3 mL bone marrow in an EDTA (lavender) tube; Minimum: 1 mL; Must send to Cleveland Clinic Laboratories on the day of collection; Refrigerated</p> <p>Stability: Ambient: 1 hour Refrigerated: 48 hours Frozen: Unacceptable</p> <p>Methodology: Massive Parallel Sequencing</p> <p>Days Performed: Varies Reported: 11–13 days</p>	12/6/18
Bromine-Total, Blood	BROMWB	<p>Days Performed: Monday–Sunday Reported: 8–9 days</p>	10/15/18

Test Changes (Cont.)

Test Name	Order Code	Change	Effective Date
Calculi (Stone) Analysis	CSA	For Interfaced Clients Only: Test build may need to be modified Includes: Calculi Stone Type Calculi Stone Color Calculi Stone Size and Weight Calculi Stone Composition Calculus Analysis	12/6/18
Calprotectin, Fecal	CALPRO	Note: Changes for this test were published in the June Technical Update, and the date was changed to TBD in the August Technical Update. The new go-live date will be 10/16/18 . We apologize for any inconvenience this may have caused.	10/16/18
Cathartic Laxative, Urine	UCATH	Methodology: High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) Days Performed: Monday–Sunday Reported: 8–9 days	10/15/18
Celiac Gluten Free Panel	CELGLU	Specimen Requirement: 1 mL serum from a serum separator (gold) tube; Minimum: 0.5 mL; This assay requires multiple specimen types; Ambient *AND* 4 mL whole blood in an EDTA (lavender) tube; Minimum: 4 mL; Ambient *OR* 1 mL serum from a plain no additive (red) tube; Minimum: 0.5 mL; This assay requires multiple specimen types; Ambient *AND* 7 mL whole blood in an ACD A or B (yellow) tube; Minimum: 4 mL; Ambient Stability: Ambient: Serum: 24 hours; Whole Blood: 1 week Refrigerated: Serum: 7 days; Whole blood: 1 week Frozen: Serum: 14 days (Multiple freeze-thaw cycles for serum are not recommended); Whole blood: Unacceptable	Effective immediately
Clonazepam & Metabolite, Urine	UCLONO	Special Information: Frozen specimens will be rejected. This test is New York State approved. Days Performed: Monday–Sunday Reported: 5–6 days	10/15/18
Clostridium difficile Toxin by PCR	CDPCR	Special Information: Due to the high sensitivity and negative predictive value of the PCR assay, only one sample per week is accepted for testing. Formed stools, samples from patients < 2 years old, and specimens received in preservative, frozen, on swabs or wooden applicator sticks will be rejected. Clinical Information: Unformed stools are tested for the presence of C. difficile toxin B gene by PCR. A positive PCR result for C. difficile may represent infection or colonization. The positive predictive value of the PCR assay for C. difficile infection (CDI) is highest for patients with significant diarrhea (3 or more unformed stools in 24 hours) who do not have an alternative explanation (e.g., recent receipt of laxatives). Contact isolation is required for patients who are colonized or infected with C. difficile. Once a patient is diagnosed with CDI, therapeutic response should be based on clinical signs and symptoms; a “test of cure” should not be done since patients may remain colonized with toxin-producing strains following recovery.	Effective immediately
Cobalt, Blood	COBALB	Days Performed: Sunday–Saturday Reported: 2–6 days	Effective immediately
Colchicine Level	COLCH	Special Information: This test is New York State approved. Specimens received at room temperature will be rejected. Polymer gel separation tubes are unacceptable. Clinical Information: Reporting limit is 0.20 ng/mL. Purpose: Therapeutic drug monitoring. Following 1 mg p.o.: Peak plasma concentration was 5.5 ng/mL (range 4.0 to 7.6) at 1 hour Stability: Ambient: 1 day Refrigerated: 30 days Frozen: 8 months Days Performed: Monday–Sunday Reported: 8–9 days	12/3/18

Test Changes (Cont.)

Test Name	Order Code	Change	Effective Date
Cortisol, Plasma	PCORT	<p>Special Information: Specimen should be collected between 8–10 a.m. This test is New York DOH approved.</p> <p>Note: <i>Clinical Information will be removed.</i></p> <p>Specimen Requirement: 1 mL plasma from a sodium or lithium heparin (green) tube; Minimum: 0.5 mL; Specimen should be collected between 8–10 a.m.; Separate plasma from cells ASAP or within 2 hours of collection and transfer into standard aliquot tube; Frozen</p> <p>*OR* 1 mL plasma from an EDTA (lavender) tube; Minimum: 0.5 mL; Specimen should be collected between 8–10 a.m.; Separate plasma from cells ASAP or within 2 hours of collection and transfer into standard aliquot tube; Frozen</p> <p>Stability: Ambient: After separation from cells: 1 week Refrigerated: After separation from cells: 1 week Frozen: After separation from cells: 6 months</p> <p>Days Performed: Wednesday, Saturday</p> <p>Reported: 3–6 days</p>	11/29/18
Diphenhydramine	DIPHEN	<p>Special Information: Polymer gel separation tubes (serum separator tubes or plasma separator tubes) will be rejected.</p> <p>Methodology: High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)</p> <p>Days Performed: Monday–Sunday</p> <p>Reported: 4–5 days</p>	10/15/18
Diphenhydramine, Urine	UDIPHN	<p>Methodology: High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)</p> <p>Days Performed: Monday–Sunday</p> <p>Reported: 4–5 days</p>	10/15/18
Enterovirus by PCR	ENTNAS	<p>Test Name: Previously Enterovirus by PCR, Nasopharyngeal Swab</p> <p>Special Information: Specimen source required. Heparinized specimens will be rejected. For cerebrospinal fluid (CSF) specimens, order Enterovirus PCR CSF (ENTPCR). This test is New York DOH approved.</p> <p>Specimen Requirement: 1 mL plasma from an EDTA (lavender) tube; Minimum: 0.5 mL; Separate plasma from cells and transfer into sterile aliquot tube; Must indicate specimen source; Frozen</p> <p>*OR* 1 mL serum from a serum separator (gold) tube; Minimum: 0.5 mL; Separate serum from cells and transfer into sterile aliquot tube; Must indicate specimen source; Frozen</p> <p>*OR* One nasopharyngeal swab in Viral Transport Media; Must indicate specimen source; Frozen</p> <p>*OR* 1 mL pericardial fluid in a sterile container; Minimum: 0.5 mL; Please include disclaimer for approval to perform testing on this specimen type; Must indicate specimen source; Frozen</p> <p>*OR* 1 mL peritoneal fluid in a sterile container; Minimum: 0.5 mL; Please include disclaimer for approval to perform testing on this specimen type; Must indicate specimen source; Frozen</p> <p>*OR* 1 mL pleural fluid in a sterile container; Minimum: 0.5 mL; Please include disclaimer for approval to perform testing on this specimen type; Must indicate specimen source; Frozen</p> <p>*OR* 1 mL nasopharyngeal aspirate in a sterile container; Minimum: 0.5 mL; Please include disclaimer for approval to perform testing on this specimen type; Must indicate specimen source; Frozen</p> <p>*OR* 1 mL tracheal aspirate in a sterile container; Minimum: 0.5 mL; Please include disclaimer for approval to perform testing on this specimen type; Must indicate specimen source; Frozen</p> <p><i>(continued on page 8)</i></p>	12/4/18

Test Changes (Cont.)

Test Name	Order Code	Change	Effective Date
Enterovirus by PCR <i>(continued from page 7)</i>		<p>*OR* 1 mL bronchoalveolar lavage (BAL) specimen in a sterile container; Minimum: 0.5 mL; Please include disclaimer for approval to perform testing on this specimen type; Must indicate specimen source; Frozen</p> <p>*OR* 1 mL sputum in a sterile container; Minimum: 0.5 mL; Please include disclaimer for approval to perform testing on this specimen type; Must indicate specimen source; Frozen</p> <p>*OR* 1 mL bronch washings in a sterile container; Minimum: 0.5 mL; Please include disclaimer for approval to perform testing on this specimen type; Must indicate specimen source; Frozen</p>	
Familial Mediterranean Fever (MEFV) Sequencing	FAMMED	<p>For Interfaced Clients Only: Test build may need to be modified</p> <p>Test Name: Previously Familial Mediterranean Fever, Complete</p> <p>Special Information: Submit the Patient History for Periodic Fever Syndromes Testing form with the specimen. Counseling and informed consent are recommended for genetic testing. Send samples refrigerated. This test is New York DOH approved.</p> <p>Clinical Limitation: Diagnostic errors can occur due to rare sequence variations. Regulatory region, intronic mutations and large deletions/duplications will not be detected.</p> <p>Clinical Information: Preferred test for suspected familial Mediterranean fever. Background information: Characteristics: Recurrent episodes of inflammation, fever, abdominal pain, chest pain, joint pain, skin eruptions and the development of renal amyloidosis. Prevalence: 1 in 1,000 worldwide. Inheritance: Primarily autosomal recessive; some activating mutations appear to be autosomal dominant. Cause: Pathogenic MEFV gene mutations. Clinical Sensitivity: Approximately 80%. Methodology: Bidirectional sequencing of the entire MEFV coding region and intron-exon boundaries. Analytical Sensitivity and Specificity: 99%</p> <p>Specimen Requirement: 3 mL whole blood in an EDTA (lavender) tube; Minimum: 1 mL; Submit the Patient History for Periodic Fever Syndromes Testing form with the specimen; Refrigerated</p> <p>*OR* 3 mL whole blood in an ACD A or B (yellow) tube; Minimum: 1 mL; Submit the Patient History for Periodic Fever Syndromes Testing form with the specimen; Refrigerated</p> <p>Stability: Ambient: 72 hours Refrigerated: 1 week Frozen: Unacceptable</p> <p>Methodology: Polymerase Chain Reaction/Sequencing</p> <p>Days Performed: Varies</p> <p>Reported: 15–22 days</p> <p>CPT: 81404 x 1</p>	12/11/18
Fluoride	BFLUOR	<p>Days Performed: Monday–Sunday</p> <p>Reported: 8–9 days</p>	10/15/18
Histone IgG Antibody	HISTON	<p>Days Performed: Thursday</p> <p>Reported: 1–7 days</p>	10/23/18
Insulinoma Associated Antibody 2	IA2AB	<p>Stability: Ambient: 1 day Refrigerated: 7 days Frozen: 14 days</p>	11/27/18
Ketamine & Metabolite, Serum/Plasma	KETMIN	<p>Special Information: Polymer gel separation tubes (serum separator tubes or plasma separator tubes) will be rejected. Reporting limit: 20 ng/mL for both Ketamine and Norketamine</p> <p>Days Performed: Monday–Sunday</p> <p>Reported: 5–6 days</p>	10/15/18

Test Changes (Cont.)

Test Name	Order Code	Change	Effective Date
Ketorolac	KETOR	<p>Special Information: MUST protect from light. Specimens not received light-protected will be rejected. Polymer gel separation tubes (serum separator tubes or plasma separator tubes) are unacceptable. This test is New York State approved.</p> <p>Days Performed: Monday–Sunday</p> <p>Reported: 8–9 days</p>	10/15/18
Levamisole	LEVAM	<p>Special Information: Specimens received at ambient temperature will be rejected. Polymer gel separation tubes (serum separator tubes or plasma separator tubes) are unacceptable.</p> <p>Clinical Information: Reporting limit is 0.1 mcg/mL</p> <p>Specimen Requirement: 1 mL serum from a plain no additive (red) tube; Minimum: 0.4 mL; Promptly centrifuge and transfer serum into plastic screw-capped vial; Do not use serum separator tubes; Refrigerated</p> <p>*OR* 1 mL plasma from an EDTA (lavender) tube; Minimum: 0.4 mL; Promptly centrifuge and transfer plasma into plastic screw-capped vial; Do not use plasma separator tubes; Refrigerated</p> <p>Days Performed: Monday–Sunday</p> <p>Reported: 8–9 days</p>	10/15/18
Levetiracetam	LEVET	<p>Special Information: Collect specimen immediately prior to next dose. Remove plasma/serum from whole blood as soon as possible, preferably within 1 hour after collection. Hydrolysis of levetiracetam may occur in the presence of whole blood. This test is not suitable for patients receiving treatment with the drug brivaracetam (Briviact). The drug causes an interference that may lead to falsely elevated levetiracetam results. Brivaracetam (Briviact) interferes with measurements of levetiracetam (Keppra) in the levetiracetam assay. Patients undergoing a switch in drug therapy involving Keppra and Briviact should not be monitored for levetiracetam using the assay. Brivaracetam is a chemical analog of levetiracetam. They are structurally similar, and thus immunochemical crossreactivity is possible. The circulating half-life of each drug is approximately 8 to 9 hours. Sufficient time should be allowed for clearance prior to using the Levetiracetam assay. Please contact Client Services at 800.628.6816 or 216.444.5755 for suitable testing.</p>	11/13/18
LSD, Urine	ULSD	<p>Special Information: MUST protect from light. Specimens received not light-protected will be rejected. Do not collect in glass containers.</p> <p>Specimen Requirement: 2 mL random urine in a clean container; Minimum: 0.85 mL; Protect from light; Refrigerated</p> <p>Days Performed: Monday–Sunday</p> <p>Reported: 8–9 days</p>	10/15/18
Mephenytoin & Normephenytoin	MEPNOR	<p>Special Information: Polymer gel separation tubes (serum separator tubes or plasma separator tubes) are unacceptable. This test is New York State approved.</p> <p>Days Performed: Monday–Sunday</p> <p>Reported: 8–9 days</p>	10/15/18
Metformin	MTFORM	<p>Special Information: Polymer gel separation tubes (serum separator tubes or plasma separator tubes) will be rejected. Oral Hypoglycemic Agent</p> <p>Methodology: High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)</p> <p>Days Performed: Monday–Sunday</p> <p>Reported: 8–9 days</p>	10/15/18

Test Changes (Cont.)

Test Name	Order Code	Change	Effective Date
Methadone & Metabolite	MMTAB	<p>Special Information: For medical purposes only; not valid for forensic use. Separator tubes, plasma or whole blood collected in sodium citrate (light blue) tubes, specimens exposed to repeated freeze/thaw cycles, and hemolyzed specimens will be rejected. This test is New York DOH approved.</p> <p>Clinical Information: Used to monitor patient adherence. The absence of expected drug(s) and/or drug metabolite(s) may indicate non-compliance, inappropriate timing of specimen collection relative to drug administration, poor drug absorption, or limitations of testing. The concentration value must be greater than or equal to the cutoff to be reported as positive.</p> <p>Specimen Requirement: 1 mL plasma from a potassium oxalate/sodium fluoride (gray) tube; Minimum: 0.5 mL; Separate plasma from cells ASAP or within 2 hours of collection and transfer into standard aliquot tube; Refrigerated</p> <p>*OR* 1 mL serum from a plain no additive (red) tube; Minimum: 0.5 mL; Do not use serum separator tubes; Separate serum from cells ASAP or within 2 hours of collection and transfer into standard aliquot tube; Refrigerated</p> <p>*OR* 1 mL plasma from a sodium heparin (green) tube; Minimum: 0.5 mL; Do not use plasma separator tubes; Separate plasma from cells ASAP or within 2 hours of collection and transfer into standard aliquot tube; Refrigerated</p> <p>*OR* 1 mL plasma from an EDTA (lavender) tube; Minimum: 0.5 mL; Separate plasma from cells ASAP or within 2 hours of collection and transfer into standard aliquot tube; Refrigerated</p> <p>Stability: Ambient: After separation from cells: 1 week (Avoid repeated freeze/thaw cycles) Refrigerated: After separation from cells: 2 weeks (Avoid repeated freeze/thaw cycles) Frozen: After separation from cells: 3 years (Avoid repeated freeze/thaw cycles)</p> <p>Methodology: Quantitative Liquid Chromatography–Tandem Mass Spectrometry</p> <p>Reference Range: Methadone: cutoff: 10 ng/mL Methadone Metabolite: cutoff: 10 ng/mL</p> <p>Days Performed: Sunday–Saturday Reported: 2–5 days</p>	12/11/18
Methyl Ethyl Ketone, Urine	UMEK	<p>Special Information: MUST send frozen. Specimens received at ambient temperature or refrigerated will be rejected. This test is New York State approved.</p> <p>Days Performed: Monday–Sunday Reported: 5–6 days</p>	10/15/18
Metoprolol, Serum/Plasma	METOP	<p>Special Information: Polymer gel separation tubes (serum separator tubes or plasma separator tubes) will be rejected.</p> <p>Days Performed: Monday–Sunday Reported: 8–9 days</p>	10/15/18
Neisseria gonorrhoea Antibodies, Total	NGAB	<p>Special Information: Label specimens plainly as 'acute' or 'convalescent.' Plasma is unacceptable. Contaminated, icteric, lipemic, or turbid specimens will be rejected. This test is New York DOH approved.</p> <p>Specimen Requirement: 1 mL serum from a serum separator (gold) tube; Minimum: 0.15 mL; Transfer 1 mL serum to standard aliquot tube; Mark specimens plainly as 'acute' or 'convalescent; Refrigerated</p>	Effective immediately
Platinum	PLATIN	<p>Special Information: Polymer gel separation tubes (serum separator tubes or plasma separator tubes) will be rejected.</p> <p>Days Performed: Monday–Sunday Reported: 8–9 days</p>	10/15/18
Propylene Glycol	PROPYL	<p>Special Information: Polymer gel separation tubes (serum separator tubes or plasma separator tubes) will be rejected.</p> <p>Days Performed: Monday–Sunday Reported: 8–9 days</p>	10/15/18

Test Changes (Cont.)

Test Name	Order Code	Change	Effective Date
Protein Electrophoresis, Serum, with IFE	SEPGRX	For Interfaced Clients Only: Test build may need to be modified Clinical Information: Serum protein electrophoresis is useful as a screening procedure in the detection of gammopathies, dysproteinemias, and various pathophysiologic states such as inflammation, protein loss, and cirrhosis. If an M protein is identified, it will be quantitated by densitometry and the sample will be reflexed for confirmation using immunofixation electrophoresis (IFE).	11/27/18
Silver, Urine	UAG	Special Information: MUST protect from light. Specimens not received light-protected will be rejected. Avoid exposure to gadolinium-based contrast media for 48 hours prior to sample collection. Days Performed: Monday–Sunday Reported: 8–9 days	10/15/18
Synthetic Cannabinoid Metabolites–Expanded, Urine (Qualitative)	K2	Days Performed: Monday–Sunday Reported: 5–6 days	10/15/18
Thiopurine Metabolites by LC-MS/MS	THIMET	Special Information: Patient Prep: Trough collection (within 1 hour prior to the next dose) is required. Following the determination of the RBC concentration, the thiopurine metabolites are analyzed by LC-MS/MS in the red blood cells. Hemolyzed specimens are unacceptable. Frozen specimens and heparinized whole blood will be rejected. MUST send refrigerated. Clinical Information: 6-Mercaptopurine (Purinethol) and its imidazolyl derivative, Azathioprine (Imuran), are immunosuppressive drugs. 6-Mercaptopurine (6-MP) is indicated for remission induction and maintenance therapy of acute lymphoblastic leukemia (ALL). Azathioprine is indicated as an adjunct for the prevention of rejection in kidney transplant patients and for management of rheumatoid arthritis, and also for management of inflammatory bowel disease. Azathioprine is cleaved to 6-MP. 6-MP is metabolized via a series of enzymatic steps to 6-thioguanine nucleotides (6-TGNs), to 6-methyl-mercaptopurine (6-MMPNs) by the enzyme thiopurine methyltransferase (TPMT), and to 6-thiouric acid by the enzyme xanthine oxidase (XO). TPMT enzyme activity has large inter-individual variations which affect the efficacy, toxicity and variability of the treatment. Therapeutic drug monitoring of 6-MP metabolites (6-TGNs and 6-MMPNs) in erythrocytes is recommended to assist therapy, particularly in combination with TPMT enzyme activity or mutation analysis. Specimen Requirement: 5 mL whole blood in an EDTA (lavender) tube; Minimum: 2.5 mL; Patient Prep: Trough collection (within 1 hour prior to the next dose); MUST send refrigerated (use cold packs); Deliver to Cleveland Clinic Laboratories on the day of collection; Must be received in the Send Outs laboratory at Cleveland Clinic Laboratories by 3 p.m. EST on Friday; Refrigerated Stability: Ambient: 6 hours Refrigerated: 5 days Frozen: Unacceptable Methodology: Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS) Reference Range: 6-Thioguanine: 235–400 pmol/8x10(8) RBC 6-CH3-mercaptopurine: < 5700 pmol/8x10(8) RBC Days Performed: Tuesday–Saturday Reported: 3–5 days	10/16/18
Toluene, Blood	TOLUEN	Days Performed: Monday–Sunday Reported: 5–6 days	10/15/18
Torse mide, Serum/Plasma	TORSE	Special Information: Polymer gel separation tubes (serum separator tubes or plasma separator tubes) will be rejected. Days Performed: Monday–Sunday Reported: 8–9 days	10/15/18

Test Changes (Cont.)

Test Name	Order Code	Change	Effective Date
VRE Culture Screen	VRESC	Specimen Requirement: One rectal swab in Amies or Stuart's media without charcoal; Collect specimen with BBL Culture swab in liquid Stuart's medium (Cardinal #4320109) or Copan swab in liquid Amies medium (Cardinal #4320147); Both swabs are made by Copan; Ambient	11/6/18
West Nile Virus IgM, CSF	CWESTM	Special Information: Contaminated, heat-inactivated, or hemolyzed specimens will be rejected. If possible, specimens from New York clients will be sent out to a New York DOH approved laboratory. Methodology: Semi-Quantitative Enzyme-Linked Immunosorbent Assay	Effective immediately

New Tests

Test Name	Order Code	Change	Effective Date
Carnitine, Free & Total, Urine by Tandem Mass Spectrometry	UCARFT	<p>Special Information: CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered. Refrigerated or room temperature specimens will be rejected. This test is New York DOH approved.</p> <p>Clinical Information: Useful in the diagnosis of primary carnitine deficiency (carnitine uptake defect) in conjunction with free and total plasma carnitine. The concentration of esterified carnitine is derived from a mathematical calculation using free and total carnitine.</p> <p>Specimen Requirement: 5 mL random urine in a clean container; Minimum: 2 mL; Freeze immediately after collection; Separate specimens must be submitted when multiple tests are ordered; Critical Frozen</p> <p>Stability: Ambient: Unacceptable Refrigerated: Unacceptable Frozen: 1 month</p> <p>Methodology: Tandem Mass Spectrometry (MS-MS)</p> <p>Reference Range: Carnitine, Total, Urine 0–5 Months: 160–1552 $\mu\text{mol/g}$ creatinine 6–23 Months: 231–1710 $\mu\text{mol/g}$ creatinine 2 Years and older: 73–731 $\mu\text{mol/g}$ creatinine Carnitine, Free, Urine 0–5 Months: 16–922 $\mu\text{mol/g}$ creatinine 6–23 Months: 37–1066 $\mu\text{mol/g}$ creatinine 2 Years and older: 7–407 $\mu\text{mol/g}$ creatinine Carnitine, Esterified, Urine 0–5 Months: 138–525 $\mu\text{mol/g}$ creatinine 6–23 Months: 175–613 $\mu\text{mol/g}$ creatinine 2 Years and older: 55–317 $\mu\text{mol/g}$ creatinine Carnitine, E/F Ratio, Urine 0–5 Months: 0.4–6.8 6–23 Months: 0.4–5.0 2 Years and older: 0.5–7.3</p> <p>Days Performed: Tuesday</p> <p>Reported: 3–10 days</p> <p>CPT: 82379 x 1</p> <p>Price: \$83.00 (non-discountable)</p>	11/29/18
Cystic Fibrosis Pathogenic Variant Analysis	CFMDX	<p>Special Information: This test may not be appropriate for follow-up testing of the partners of known carriers. Genetics consultation may be of benefit in determining the appropriate testing strategy in these circumstances.</p> <p>Clinical Limitation: The test does not include all known pathogenic variants of CFTR. A negative result reduces but does not eliminate the risk of carrier status or cystic fibrosis. Residual risk after a negative test varies with ethnicity, which influences both the carrier rate and the test's detection rate.</p> <p>Clinical Information: The test is intended for cystic fibrosis carrier screening in adults of reproductive age, in confirmatory diagnostic testing, and as an initial test to aid in the diagnosis of individuals with suspected cystic fibrosis. This test is not indicated for use for newborn screening, fetal diagnostic testing, pre-implantation testing, or for stand-alone diagnostic purposes. The test includes 142 pathogenic variants, including the 23 ACMG/ACOG recommended common CFTR variants. The increased number of variants improves the detection rate across a wider spectrum of patient ethnicities.</p> <p>Specimen Requirement: 4 mL whole blood in an EDTA (lavender) tube; Blood specimens are transported and stored at room temperature no longer than 48 hours; Ambient</p> <p>Stability: Ambient: Blood may be transported ambient temperature within 48 hours Refrigerated: Blood may be transported ambient temperature within 48 hours; After 48 hours blood must be stored at 2–8 °C for up to 7 days Frozen: Frozen samples will be rejected</p>	11/27/18

(continued on page 14)

New Tests (Cont.)

Test Name	Order Code	Change	Effective Date
Cystic Fibrosis Pathogenic Variant Analysis <i>(continued from page 13)</i>		<p>Methodology: Matrix-assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry (MALDI-TOF) Polymerase Chain Reaction (PCR) Single Nucleotide Extension (SNE)</p> <p>Days Performed: 1 day per week</p> <p>Reported: 10 days</p> <p>CPT: 81220 x 1, G0452 x 1</p> <p>Price: \$268.00 (non-discountable)</p>	
Human Herpesvirus 6 (HHV-6A and HHV-6B) by Quantitative PCR	HHV6QT	<p>Special Information: Specimen source is required. Heparinized specimens will be rejected. This test is New York DOH approved.</p> <p>Clinical Information: Useful for detecting and quantifying HHV6 subtypes A and B in immunocompromised patients. The quantitative range of this assay is 3.0–6.0 log copies/mL (1,000–999,000 copies/mL). A negative result (< 3.0 log copies/mL or < 1,000 copies/mL) does not rule out the presence of PCR inhibitors in the patient specimen or HHV6 DNA in concentrations below the level of detection of the test. Inhibition may also lead to underestimation of viral quantitation. There is no international standard currently available for calibration of this test. Caution should be taken when interpreting results generated by different methodologies. The limit of quantification for this DNA assay is 3.0 log copies/mL (1,000 copies/mL). If the assay did NOT detect the virus, the test result will be reported as "< 3.0 log copies/mL (< 1,000 copies/mL)." If the assay DETECTED the presence of the virus but was not able to accurately quantify the number of copies, the test result will be reported as "Not Quantified."</p> <p>Specimen Requirement: 1 mL plasma from an EDTA (lavender) tube; Minimum: 0.5 mL; Separate plasma from cells and transfer into a sterile aliquot tube; Must indicate specimen source; Frozen</p> <p>*OR* 1 mL serum from a serum separator (gold) tube; Minimum: 0.5 mL; Separate serum from cells and transfer into a sterile aliquot tube; Must indicate specimen source; Frozen</p> <p>*OR* 1 mL cerebrospinal fluid (CSF) in a sterile container; Minimum: 0.5 mL; Must indicate specimen source; Frozen</p> <p>Stability: Ambient: 24 hours Refrigerated: 5 days Frozen: 3 months</p> <p>Methodology: Polymerase Chain Reaction (PCR), Quant</p> <p>Reference Range: Not detected</p> <p>Days Performed: Tuesday–Saturday</p> <p>Reported: 2–5 days</p> <p>CPT: 87533 x 1</p> <p>Price: \$188.00 (non-discountable)</p>	12/6/18

New Tests (Cont.)

Test Name	Order Code	Change	Effective Date
Monoclonal Protein with Immunoglobulins and Free Light Chains, serum	SERMPA	<p>Includes: IgG IgA IgM Lambda, Free, Serum Kappa, Free, Serum Kappa/Lambda Ratio MPA Result Immunofixation Screen, Serum Staff Review</p> <p>Clinical Information: Evaluation of monoclonal gammopathies</p> <p>Specimen Requirement: 2 mL serum from a serum separator (gold) tube; Minimum: 0.5 mL; Refrigerated</p> <p>Stability: Ambient: 4 days Refrigerated: 2 weeks Frozen: 6 months</p> <p>Methodology: Immunofixation Electrophoresis Nephelometry (NEPH)</p> <p>Reference Range: IgG 0–6 Months: 206–676 mg/dL 6–9 Months: 208–868 mg/dL 9–12 Months: 282–1026 mg/dL 1–2 Years: 331–1164 mg/dL 2–3 Years: 407–1009 mg/dL 3–4 Years: 423–1090 mg/dL 4–5 Years: 444–1187 mg/dL 5–8 Years: 608–1229 mg/dL 8–10 Years: 584–1509 mg/dL 10–99 Years: 717–1411 mg/dL IgA 0–6 Months: 8–67 mg/dL 6–9 Months: 11–89 mg/dL 9–12 Months: 16–83 mg/dL 1–2 Years: 14–105 mg/dL 2–3 Years: 14–122 mg/dL 3–4 Years: 22–157 mg/dL 4–5 Years: 25–152 mg/dL 5–8 Years: 33–200 mg/dL 8–10 Years: 45–234 mg/dL 10–99 Years: 78–391 mg/dL IgM 0–6 Months: 33–97 mg/dL 6–9 Months: 32–120 mg/dL 9–12 Months: 39–142 mg/dL 1–2 Years: 41–164 mg/dL 2–3 Years: 46–120 mg/dL 3–4 Years: 45–190 mg/dL 4–5 Years: 41–186 mg/dL 5–8 Years: 46–197 mg/dL 8–10 Years: 49–230 mg/dL 10–99 Years: 53–334 mg/dL Lambda, Free, Serum: 5.7–26.3 mg/L Kappa, Free, Serum: 3.30–19.40 mg/L Kappa/Lambda Ratio: 0.26–1.65 MPA Result: No M protein is identified Immunofixation Screen, Serum: Refer to report</p> <p>Days Performed: Monday–Friday</p> <p>Reported: 1–4 days</p> <p>CPT: 82784 x 3, 83883 x 2, 86334 x 1</p> <p>Price: \$204.00</p>	11/27/18

New Tests (Cont.)

Test Name	Order Code	Change	Effective Date
Mycobacterium tuberculosis (MTB) and Rifampin Resistance Detection by PCR	MTBRIF	<p>Specimen Requirement: 5 mL sputum in a clean, leak-proof container; 2 mL of sputum digest/concentrate for acid fast culture is also accepted; Refrigerated</p> <p>Stability: Ambient: Sputum specimens can be stored at a maximum of 35 °C for up to 3 days Refrigerated: Sputum can be stored at 2–8 °C for up to 7 days; Sputum concentrates can be stored at 2–8 °C for up to 7 days</p> <p>Methodology: Culture Probe and Pyrosequencing for Identification Real-Time Polymerase Chain Reaction (RT-PCR) Stain</p> <p>Reference Range: Mycobacterium tuberculosis: Not detected Rifampin Resistance: Not detected</p> <p>Days Performed: 7 days per week</p> <p>Reported: 1–2 days</p> <p>CPT: 87015 x 1, 87116 x 1, 87206 x 1, 87556 x 1, 87798 x 1</p>	10/18/18

Fee Increases

Test Name	Order Code	List Fee	CPT Code	Effective Date
Allergen, Cow Milk Components IgE	MILKE	\$55.00	86008 x 3	11/27/18
Methodone & Metabolite	MMTAB	\$140.00 (non-discountable)	80358, (G0480, if appropriate)	12/11/18

Fee Reductions

Test Name	Order Code	List Fee	CPT Code	Effective Date
Allergen, Peanut Components IgE	PNUTCP	\$160.00	86008 x 5	11/27/18
Familial Mediterranean Fever (MEFV) Sequencing	FAMMED	\$707.00 (non-discountable)	81404	12/11/18

Discontinued Tests

Test Name	Order Code	Test Information	Effective Date
Allergen, Alpha Lactalbumin IgE	LACALB	This test will no longer be available. Suggest ordering Allergen, Cow Milk Components IgE (MILKE).	11/27/18
Allergen, Beta Lactoglobulin IgE	BLACGL	This test will no longer be available. Suggest ordering Allergen, Cow Milk Components IgE (MILKE).	11/27/18
Allergen, Casein IgE	MCASIN	This test will no longer be available. Suggest ordering Allergen, Cow Milk Components IgE (MILKE).	11/27/18
Carnitine Free & Total, Urine	UCARN1	This test will no longer be available. Suggest ordering Carnitine, Free and Total, Urine by Tandem Mass Spectrometry (UCARFT).	11/29/18
Cystic Fibrosis Screen139 Variant Assay	CFNGS	This test will no longer be available. Suggest ordering Cystic Fibrosis Pathogenic Variant Analysis (CFMDX).	11/27/18
Enterovirus, Miscellaneous Sites, PCR	ENTMS	This test will no longer be available. Suggest ordering Enterovirus by PCR (ENTNAS).	12/4/18
Enterovirus PCR Plasma	ENTPLA	This test will no longer be available. Suggest ordering Enterovirus by PCR (ENTNAS).	12/4/18
Herpesvirus 6 PCR, Quant, CSF	HV6QNT	This test will no longer be available. Suggest ordering Human Herpesvirus 6 (HHV-6A and HHV-6B) by Quantitative PCR (HHV6QT).	12/6/18
Herpesvirus 6 PCR, Quant, Plasma	HV6PLS	This test will no longer be available. Suggest ordering Human Herpesvirus 6 (HHV-6A and HHV-6B) by Quantitative PCR (HHV6QT).	12/6/18
HLA-B27	HLAB27	This test will no longer be available. Suggest ordering HLA-B27 PCR (B27PCR).	11/28/18
Lindane	LIND	This test will no longer be available.	11/29/18
Methazolamide	METHAZ	This test will no longer be available.	11/27/18
Monoclonal Protein, Blood	MPASRM	This test will no longer be available. Suggest ordering Monoclonal Protein with Immunoglobulins and Free Light Chains, serum (SERMPA).	11/27/18
Peroxisomal Panel	PEROXI	This test will no longer be available. Suggest ordering Very Long-Chain and Branched-Chain Fatty Acids Profile (FATLON).	12/6/18
Phenelzine	PHENEL	This test will no longer be available.	11/29/18
Phenylpropanolamine	PHENYL	This test will no longer be available.	11/29/18
Tier 2 B-Cell Clonality Using BIOMED2 Primers	T2BPCR	This test will no longer be available. Suggest ordering B-Cell Clonality Using BIOMED-2 PCR Primers (BCBMD).	11/27/18
TP53 Sequencing (Exons 5-8)		This test will no longer be available.	11/1/18