

OU MEDICAL CENTER Laboratory offers a listing of the clinical tests, as well as information regarding turn-around times, specimen requirements, reference ranges, patient requirements, etc in this test catalog. Microbiology testing follows the clinical listing. The test catalog is fully searchable via Adobe Reader's search functions (Adobe 5 or higher required). To search online for a test, click on the Search icon in the Adobe Reader Toolbar area....it looks like a pair of binoculars. Type the word or portion of the word that you would like to find and press the Enter key. Contact the Laboratory at (405)271-3260 to obtain further information.

**[11BPGD2U] Ur 11 beta-Prostaglandin F2 alpha**

SPECIMEN REQUIRED: Refrigerated or frozen urine (24-hour collection)  
TUBE OR CONTAINER: Plastic urine container  
SPECIAL HANDLING: Collect 24-hour urine in "D" container (6N HCl)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-7 days  
REFERENCE RANGE: < 1382 pg/mg creatinine  
METHODOLOGY: Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS) AACT: Enzymatic Colorimetric Assay  
CPT: 84150

**[17HYD] 17-Hydroxyprogesterone**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)  
PEDIATRIC TEST INFO: Order PED17HYD for pediatric testing to be performed by Esoterix  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Age-specific  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)  
CLINICAL USE: Markedly elevated in patients with congenital adrenal hyperplasia (adrenogenital syndrome) due to 21-hydroxylase deficiency; evaluate hirsutism and/or infertility; assess certain adrenal or ovarian tumors with endocrine activity  
CPT: 83498

**[17OHPREG] 17-Hydroxy-Pregnenolone**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
PEDIATRIC TEST INFO: Order PED17OHP for pediatric testing to be performed by Esoterix  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Male: 10-100 ng/dL  
Female: 10-250 ng/dL  
METHODOLOGY: Radioimmunoassay (RIA)  
CPT: 84143

**[1P19QFISH] 1p & 19q IN SITU HYBRIDIZATION**

SPECIMEN REQUIRED: Formalin-fixed, paraffin-embedded (FFPE) tissue biopsy at room temperature or Unstained slides and H&E  
TUBE OR CONTAINER: Slides or blocks  
SPECIMEN VOLUME: 6 unstained slides and 1 H&E stained side at 10 uM or tissue block  
TEST AVAILABILITY: Daily  
METHODOLOGY: In situ hybridization  
CPT: 88368 x 4

**[21HYDAB] 21-Hydroxylase Antibody**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIAL HANDLING: Separate serum or plasma from cells within 1 hour of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
METHODOLOGY: Radioimmunoassay Immunoprecipitation  
CLINICAL USE: Investigation of adrenal insufficiency; Aid in the detection of those at risk of developing autoimmune adrenal failure in the future  
CPT: 83519

**[23DINOR] 11 beta-Prostaglandin F2 alpha**

**[5FLUOR] 5-Fluorocytosine Level**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red (no gel) or Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-10 days  
OTHER NAMES: 5FC; 5-Fluorouracil; 5-Fluorocytosine Ancobon Flucytosine  
METHODOLOGY: High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS)

CPT: 80299

**[A1ASTL] Stool Alpha-1-Antitrypsin**

SPECIMEN REQUIRED: Frozen stool  
TUBE OR CONTAINER: Screw-cap container  
SPECIMEN VOLUME: 5 gram  
MINIMUM VOLUME: 1 gram  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: < 0.62 mg/g  
METHODOLOGY: Radial Immunodiffusion  
CPT: 82103

**[A1GLY] Alpha-1-Acid Glycoprotein**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or gold  
CAUSE FOR REJECTION: Gross lipemia that cannot be cleared by ultracentrifugation  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: 18 years and older: 50-120 mg/dL  
METHODOLOGY: Immunologic  
CLINICAL USE: Decreased serum levels may be found in association with malnutrition, severe liver damage, and in women using estrogen-related oral contraceptives. Increased levels have been reported in conditions of acute and chronic inflammation, including myocardial infarction, rheumatoid arthritis, systemic lupus erythematosus, and malignancy  
CPT: 82985

**[ACCEL] Accelerate Pheno Test**

**[ACE] Angiotensin Converting Enzyme**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
icteric sample  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 48 hours  
REFERENCE RANGE: 0-2 years: 18-95 units/L  
3-14 years: 22-108 units/L  
15 years or older: 14-82 units/L  
METHODOLOGY: Kinetic  
CLINICAL USE: High in sarcoidosis, more often when the disease is active; assessment of the response of sarcoidosis to corticosteroid therapy

CPT: 82164

**[ACECSF] CSF Angiotensin Converting Enzyme**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile conical/capped tube  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-7 days  
REFERENCE RANGE: 0.0-2.5 U/L  
METHODOLOGY: Spectrophotometry  
CLINICAL USE: May be used to support the diagnosis of sarcoidosis or neurosarcoidosis  
CPT: 82164

**[ACET] Acetaminophen Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: When evaluating for possible toxicity, a 4 to 6 post-ingestion sample should be drawn  
Collect a second sample 3 to 4 hours later  
Specimen Stability: 24 hours-room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Therapeutic: 9-16.8 ug/mL  
Potentially toxic: >50 ug/mL  
OTHER NAMES: Datril; Excedrin; Liquiprin; Paracetamol; Tempra; Tylenol  
METHODOLOGY: HOMOGENEOUS ENZYME IMMUNOASSAY  
CLINICAL USE: Monitor therapeutic drug levels; evaluate toxicity  
CPT: 80329

**[ACETAB] Acetylcholine Receptor Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: No isotopes administered 24 hours prior to venipuncture  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 Days  
REFERENCE RANGE: Negative: 0.00-0.24 nmol/L  
Borderline: 0.25-0.40 nmol/L  
Positive: >0.40 nmol/L  
OTHER NAMES: Acetylcholine Receptor Binding Antibody; AChR-Binding Antibodies; Myasthenia Gravis Antibody  
METHODOLOGY: Radioimmunoassay (RIA)

CLINICAL USE: Aid in the diagnosis of myasthenia gravis  
CPT: 83519

**[ACETN] Acetone, Quantitative**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: OTHER NAMES: Propanone; Dimethyl ketone  
METHODOLOGY: Gas chromatography (GC)  
CLINICAL USE: Primary use is to rule out Isopropanol or Acetone  
CPT: 82010

**[ACHROM] ACHROMATOPSIA/CONE-ROD PANEL**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Sequencing of 36 genes associated with  
Achromatopsia, Cone and Cone-Rod Dystrophy  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 12 weeks  
METHODOLOGY: Next Generation Sequencing (NGS)  
CPT: 81404; 81406; 81408

**[ACIDLAB] Acid Labile Subunit IGF Bind Prot**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Gold or Red  
SPECIAL HANDLING: Separate within 45 minutes of collection  
SPECIMEN VOLUME: 1 ml  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-19 days  
METHODOLOGY: Double antibody Radioimmunoassay (RIA)  
CPT: 83519

**[ACP] Total Acid Phosphatase**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or gold  
SPECIAL HANDLING: Allow specimen to clot completely at room  
temperature. Transfer 1.5mL serum to an ARUP  
Standard Transport Tube (min 0.5mL)  
SPECIMEN VOLUME: 1.5 mL  
MINIMUM VOLUME: 0.8 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 days  
REFERENCE RANGE: 0.0-4.3 units/L  
METHODOLOGY: Quantitative Enzymatic

CLINICAL USE: Total acid phosphatase (AP) may be useful when evaluating for prostate cancer, Paget's disease, hyperparathyroidism with skeletal involvement, and Gaucher's disease since elevations in AP activity occur in these conditions.  
CPT: 84060

**[ACPHOS] Leukocyte Acid Phosphatase Stain**

**[ACTH] Adrenocorticotropic Hormone**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Collect into iced tube and immerse in ice immediately after collection; plasma should be separated and frozen as soon as possible following collection; Specimen WILL be rejected if not submitted on ice  
CAUSE FOR REJECTION: Not received on ice  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-3 Days  
REFERENCE RANGE: 7.2 - 63.3 pg/mL (Note: For samples collected between 7am and 10am)  
OTHER NAMES: ACTH; Adrenal Corticotropin; Corticotropin  
METHODOLOGY: Electrochemiluminescence immunoassay (ECLIA)  
CLINICAL USE: Pituitary function test useful in the differential diagnosis of Cushing's syndrome, ectopic ACTH syndrome (eg, carcinoma of lung, islet cell tumors, carcinoid tumors, medullary carcinoma of thyroid), Addison's disease, hypopituitarism, and ACTH-producing pituitary tumors  
CPT: 82024

**[ACYCL] Acyclovir Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.7 ml  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-9 days  
OTHER NAMES: Zovirax  
METHODOLOGY: High-Pressure Liquid Chromatography (HPLC)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[ADACSF] CSF Adenosine Deaminase**

SPECIMEN REQUIRED: Frozen Cerebrospinal fluid  
TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 0.3 mL  
MINIMUM VOLUME: 0.1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: 0.0 - 1.5 U/L  
METHODOLOGY: Spectrophotometry  
CPT: 84311

**[ADAMTS13AB] ADAMTS13 Antibody**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER : Blue (Citrate)  
SPECIAL HANDLING: Draw 2 FULL citrate tubes; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 2 full tubes  
1 ml plasma  
MINIMUM VOLUME: 1 full tube  
0.5 ml plasma  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-8 days  
REFERENCE RANGE:  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA) using microtiter plates coated with a recombinant form of ADAMTS13 protease  
CLINICAL USE: Differentiating congenital from autoimmune ADAMTS13 deficiency

**[ADAPL] Pleural Fluid Adenosine Deaminase**

SPECIMEN REQUIRED: Frozen pleural fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 0.3 mL  
MINIMUM VOLUME: 0.1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
METHODOLOGY: Spectrophotometry  
CPT: 84311

**[ADAPT] Peritoneal Fluid Adenosine Deaminase**

SPECIMEN REQUIRED: Frozen peritoneal fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 0.3 mL  
MINIMUM VOLUME: 0.1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
METHODOLOGY: Spectrophotometry  
CPT: 84311

**[ADAWB] Adenosine Deaminase**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA), Pink (K2EDTA) or Dark Green (heparin)  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: 400-900 mU/g Hgb  
METHODOLOGY: Kinetic Spectrophotometry (KS)  
REFLEX TEST INFORMATION:  
CPT: 84311

**[ADB] Anti-DNase-B (Streptococcal)**

SPECIMEN REQUIRED: Refrigerated or room temperature serum  
TUBE OR CONTAINER: Red or Gold  
CAUSE FOR REJECTION: Gross lipemia that cannot be clarified by ultracentrifugation; severe hemolysis  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: 1-6 years: 7-17 years: 18 years and older: OTHER NAMES: ADB; Streptodornase  
METHODOLOGY: Immunonephelometry  
CLINICAL USE: Document recent streptococcal infection  
CPT: 86215

**[ADCL1-2] CUTIS LAXA AUTO DOMIN (ADCL1/2)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST INCLUDES: DNA sequencing for genes FBLN5 and ELN  
TEST AVAILABILITY: Daily  
OTHER NAMES: Cutis laxa, autosomal dominant 1/2 (ADCL1/ADCL2)  
METHODOLOGY: Sanger sequencing  
CPT: 81479 x 2

**[ADE] AUTOIMMUNE DYSAUTONIMIA EVAL**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 4 mL  
MINIMUM VOLUME: 2 mL  
TEST INCLUDES: Interpretation, Anti-Neuronal Nuclear Ab Type 1, Striation (Striated Muscle) Ab, N-Type Calcium Channel Ab, ACh Receptor (Muscle) Binding Ab, AChR Ganglionic Neuronal Ab, Neuronal (V-G) K<sup>+</sup> Channel Ab, GAD65 Ab, P/Q-Type Calcium Channel Ab  
TEST AVAILABILITY: Daily



TURNAROUND TIME: 8-12 days

METHODOLOGY: Immunofluorescence antibody (IFA); Radioimmunoassay (RIA); Enzyme Immunoassay (EIA); Western Blot (WB); Cell Binding Assay (CBA)

REFLEX TEST INFORMATION: Additional tests may be reflexed with added charges

CLINICAL USE: Investigating neurological symptoms that appear in the course of, or after, cancer therapy, and are not explainable by metastasis

CPT: 83519 x 7; 83520; 86256

#### **[ADENCSF] CSF Adenovirus Antibody**

SPECIMEN REQUIRED: Refrigerated CSF

TUBE OR CONTAINER: Sterile CSF container

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-6 days

REFERENCE RANGE: < 1:1

METHODOLOGY: Complement fixation (CF)

CPT: 86603

#### **[ADENOAB] Adenovirus Antibody**

SPECIMEN REQUIRED: Room temperature serum

TUBE OR CONTAINER: Red or Gold

SPECIAL HANDLING: Acute and convalescent specimens must be submitted on separate test forms

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3 Days

REFERENCE RANGE: Negative: < 1:8

METHODOLOGY: Complement fixation (CF)

CLINICAL USE: Serologic diagnosis of adenovirus infection

CPT: 86603

#### **[ADENOVIRUS] ADENOVIRUS/ROTAVIRUS EIA PANEL**

SPECIMEN REQUIRED: Stool

TUBE OR CONTAINER: Sterile screw-cap container

SPECIMEN VOLUME: 4mL LIQUID STOOL OR 2g SEMIFORMED STOOL

MINIMUM VOLUME:

TEST INCLUDES: ADENOVIRUS (40/41) AG, ROTAVIRUS AG

TEST AVAILABILITIES: Varies

TURNAROUND TIME: 2-3 Days

OTHER NAMES: LC187013

METHODOLOGY: Immunoassay

CLINICAL USE: Rapid detection of adenovirus (type 40/41) and rotavirus from stool specimens of patient suspected of having viral gastroenteritis.

CPT:87301,87425

**[ADENPCRQNT] Adenovirus, Quantitative (PCR)**

**SPECIMEN REQUIRED:** Plasma or whole blood, urine, bronchial lavage/wash, bone marrow, nasal wash, aspirate or swab, NP swab or aspirate, throat gargle or tracheal aspirate/wash at room temperature/frozen  
Frozen tissue, CSF, Fecal material, pericardial fluid or pleural fluid  
**TUBE OR CONTAINER:** Lavender (EDTA) or Yellow (ACD), Sterile container, screw top tube or swab  
**SPECIAL HANDLING:** Please specify source of specimen.  
Specimens at room temperature must be received at performing lab within 4 days of collection; Freeze if time exceeds 4 days  
**SPECIMEN VOLUME:** 5 mL (whole blood)  
2 mL plasma, CSF, urine, bone marrow, liquid stool, pleural/pericardial fluid or respiratory specimens  
5 mg tissue  
Pea sized formed stool  
**MINIMUM VOLUME:** 4 mL (whole blood)  
2 mL plasma  
0.5 mL CSF, urine, bone marrow, liquid stool, pleural, pericardial or respiratory specimens  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 2-3 days  
**REFERENCE RANGE:** Not detected  
**METHODOLOGY:** Reverse Transcription/Polymerase Chain Reaction (PCR-RT)  
**CPT:** 87799

**[ADH] Anti-Diuretic Hormone**

**SPECIMEN REQUIRED:** Frozen plasma  
**TUBE OR CONTAINER:** Lavender (EDTA)  
**SPECIAL HANDLING:** Plasma must be separated and frozen within 45 minutes of collection.  
**SPECIMEN VOLUME:** 2 mL  
**MINIMUM VOLUME:** 1 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 2-8 days  
**REFERENCE RANGE:** 1.0 - 13.3 pg/mL  
**OTHER NAMES:** Vasopressin; Arginine Vasopressin  
**METHODOLOGY:** Radioimmunoassay (RIA)  
**CLINICAL USE:** Aid in the diagnosis of urine concentration disorders, especially diabetes insipidus, syndrome of inappropriate ADH (SIADH), psychogenic water intoxication, and syndromes of ectopic ADH production

CPT: 84588

**[ADIP] Adiponectin**

SPECIMEN REQUIRED: Refrigeratd serum plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIAL HANDLING: Centrifuge and separate immediately  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
REFERENCE RANGE: Age-specific  
METHODOLOGY: Enzyme linked immunosorbent assay (ELISA)  
CPT: 83520

**[ADRENALAB] Anti-Adrenal Antibody**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 days  
REFERENCE RANGE: Negative: OTHER NAMES: Antiadrenal Cortex Antibodies  
METHODOLOGY: Indirect fluorescent antibody (IFA)  
CLINICAL USE: Evaluate for adrenal insufficiency and Addison disease  
CPT: 86256

**[AEA] ANTI-ENTEROCYTE ANTIBODY**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST INCLUDES: IgG, IgM and IgA antibody  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-8 weeks  
REFERENCE RANGE: Negative  
METHODOLOGY: Indirect Immunofluorescence (IFA)  
CPT: 83520 x 3

**[AFBCFREF] AFB Culture CF Referred to NJ**

**[AFBSENS] AFB SENSITIVITY TESTING ONLY**

**[AFBSEQ] AFB Identification**

SPECIMEN REQUIRED: Pure culture: plate, slant or blood culture bottle (pure) at room temperature  
TUBE OR CONTAINER: Plate or slant  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days

METHODOLOGY: RNA Sequencing  
CPT: 87153

**[AFBSMREFCF] AFB Smear CF Referred to NJ**

**[AFPAMNIO] AFP AMNIOTIC FLUID**

SPECIMEN REQUIRED: Amniotic fluid at room temperature  
TUBE OR CONTAINER: Sterile screw-top tube  
SPECIAL HANDLING: Information must include weeks of gestation  
SPECIMEN VOLUME: 2.5 mL  
MINIMUM VOLUME: 1.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-5 days  
METHODOLOGY: Chemiluminescent enzyme immunometric  
REFLEX TEST INFORMATION: If AFP is elevated,  
Acetylcholinesterase will be added at  
an additional cost  
CPT: 82106, (if reflexed, 82013 & 83033)

**[AFPCSF] CSF Tumor Marker Alpha Fetoprotein**

SPECIMEN REQUIRED: Refrigerated or frozen CSF  
TUBE OR CONTAINER: Sterile tube  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: < 0.5 ng/mL  
METHODOLOGY: Immunochemiluminometric Assay (ICMA)  
CLINICAL USE:  
CPT: 86316

**[AFPTM] Tumor Marker Alpha Fetoprotein**

SPECIMEN REQUIRED: Refrigerated plasma/ serum  
TUBE OR CONTAINER: Lt Green, Gold or Red  
SPECIAL HANDLING: Avoid Hemolysis, Stable 5 days Room Temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 1-3 days  
REFERENCE RANGE: < 8.3 ng/mL  
METHODOLOGY: Electrochemiluminescence (ECLIA)  
CLINICAL USE: Diagnosis of hepatocellular carcinoma  
CPT: 82105

**[AFPTMFLD] Fluid Tumor Mark Alpha Fetoprotein**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: Sterile tube  
SPECIAL HANDLING: Specify source of fluid (peritoneal, pleura  
or pericardial only, amniotic fluid is not  
acceptable); Fluid is not preferred sample

type and will be ran with a disclaimer

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
METHODOLOGY: Quantitative Chemiluminescent Immunoassay  
CPT: 83520

**[AGNATHIAOTO] AGNATHIA-OTOCEPHALY COMPLEX**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 weeks  
OTHER NAMES: Includes OTX2 and PRRX1  
METHODOLOGY: Bi-directional Sanger Sequencing  
CLINICAL USE:

Agnathia-otocephaly complex is a lethal malformation disorder that probably occurs early in embryogenesis (Schiffer et al. 2002). Mandibular hypoplasia or agnathia and abnormal ear position or ear fusion are the hallmark findings. Other findings include cleft palate, hypotelorism, microstomia, and the tongue can be small or absent. Variable findings include pulmonary hypoplasia and genitourinary and cardiovascular anomalies. Holoprosencephaly and situs inversus are commonly found in affected infants. Prenatal ultrasound has detected an affected fetus with polyhydramnios, micrognathia, low-set ears, and malformed feet (Akiyama et al. 2013). Affected babies have been reported to die in utero or shortly after birth.

CPT: 81479

**[AGPAT2] LIPODYSTROPHY TYPE 1 (AGPAT2)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Congenital Generalized Lipodystrophy (CGL) type 1 via the AGPAT2 gene  
METHODOLOGY: Bi-directional Sanger Sequencing  
CLINICAL USE: Confirmation of clinical diagnosis  
CPT: 81479

**[AL] Aluminum Level**

SPECIMEN REQUIRED: Plasma from Royal Blue or Lavender at room temperature (submit original unopened tube)

TUBE OR CONTAINER: Royal Blue (EDTA)

Red (no gel) will no longer be accepted  
after 10/1/13

SPECIAL HANDLING: Please contact laboratory for correct tube;

Submit original unopened tube or serum or  
plasma removed from a royal blue-top tube,  
and transfer to a certified metal-free  
plastic transport tube

SPECIMEN VOLUME: 7 mL

MINIMUM VOLUME: 0.6 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: Environmental exposure: 0-9 ug/L

Dialysis patients: Potentially toxic: >60 ug/L

METHODOLOGY: Atomic absorption spectrometry (AAS)

CLINICAL USE: Monitor exposure to aluminum

CPT: 82108

#### **[ALAD] AMINOLEVULINIC ACID DEHYDRATAS**

SPECIMEN REQUIRED: Refrigerated whole blood

TUBE OR CONTAINER: Dark green (heparin) or Lavender (EDTA)

SPECIAL HANDLING:

SPECIMEN VOLUME: 6 mL

MINIMUM VOLUME: 3 mL

TEST AVAILABILITY: Monday-Thursday only

TURNAROUND TIME: 4-6 days

REFERENCE RANGE: Reference ranges have not been established for  
patients who are > or =4.0 nmol/L/sec

3.5-3.9 nmol/L/sec (indeterminate)

OTHER NAMES: ALAD (Aminolevulinic Acid Dehydratase) Deficiency  
Porphyria (ADP); Porphobilinogen (PBG) Synthase

METHODOLOGY: Enzymatic End point/Spectrofluorometric

CLINICAL USE: Confirmation of a diagnosis of aminolevulinic  
acid dehydratase deficiency porphyria

CPT: 82657

#### **[ALAG1SEQ] ALAGILLE SEQUENCING (JAG1)**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-4 weeks

OTHER NAMES: JAG1 Gene sequencing

METHODOLOGY: Bi-directional Sanger sequencing

CPT: 81407

#### **[ALARAN] Urine Delta Aminolevulinic Acid**

SPECIMEN REQUIRED: Urine (random), frozen and protected from  
light

TUBE OR CONTAINER: Urine container

SPECIAL HANDLING: Acidify w/ 33% glacial acetic acid and protect from light; pH < 6  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.0-5.4 mg/L  
OTHER NAMES: ALA, Random Urine; Aminolevulinic Acid, Random; Delta-ALA, Random; Delta Aminolevulinic Acid, Random  
METHODOLOGY: Column chromatography; Ehrlich's reagent -  
CLINICAL USE: Diagnose porphyrias  
CPT: 82135

#### **[ALB] Albumin**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0 day - 1 month: 2.9 - 3.6 g/dL  
1 month - 9 years: 3.7-5.1 g/dL  
10 years + : 3.7 - 5.0 g/dL  
METHODOLOGY: DYE BINDING (BCG)  
CLINICAL USE: Aid in diagnosis and treatment of numerous diseases primarily involving the liver and/or kidneys  
CPT: 82040

#### **[ALBFL] Body Fluid Albumin**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: DYE BINDING (BCG)  
CPT: 82042

#### **[ALBPL] Pleural Fluid Albumin**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: DYE BINDING (BCG)

CPT: 82042

**[ALBPT] Peritoneal Fluid Albumin**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: DYE BINDING (BCG)  
CPT: 82042

**[ALBSF] CSF Albumin**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: Sterile container  
days  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 days  
METHODOLOGY: Immunologic  
CLINICAL USE: Evaluate the degree of permeability of the  
blood-brain barrier  
CPT: 82042

**[ALC] Plasma/Serum Blood Alcohol**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Prepare draw site with betadine, not alcohol;  
collect specimen in SST tube and do NOT open  
after centrifuging  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 hours  
REFERENCE RANGE: < 10 mg/dL  
OTHER NAMES: Blood Alcohol Level; Blood Ethanol Level; Ethyl  
Alcohol, Blood; EtOH  
METHODOLOGY: Enzymatic rate  
CLINICAL USE: Diagnose alcohol intoxication and determine  
appropriate therapy  
CPT: 80320

**[ALCI] Isopropyl Alcohol Level, Quant**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Clean venipuncture site well with Betadine  
(NOT alcohol) prior to collection. Mix tube



well after collection  
Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: < 10 mg/dL  
OTHER NAMES: Isopropyl alcohol; Isopropanol  
METHODOLOGY: Gas chromatography (GC)  
CPT: 84600

#### **[ALCM] Methyl Alcohol Level, Quant**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: < 10 mg/dL = Not detected  
OTHER NAMES: Methanol; Methyl Alcohol; Wood Alcohol; MEOH  
METHODOLOGY: Gas chromatography (GC)  
CPT: 84600

#### **[ALDO] Aldolase**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold, Green (heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Separate serum or plasma immediately after coagulation (30 minutes); not removing refrigerated specimens from the clot results in aldolase levels 12% to 46% higher  
CAUSE FOR REJECTION: Hemolysis (red cells contain aldolase)  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 Days  
REFERENCE RANGE: 0-30 days: Not established  
31 days-1 year: 5.0-11.7 units/L  
>1 year: 3.3-10.3 units/L  
METHODOLOGY: Kinetic - 340 nm at 37 C  
CLINICAL USE: Evaluate muscle wasting process  
CPT: 82085

#### **[ALDOS] Aldosterone**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIAL HANDLING: Patient preparation: No isotopes administered 24 hours prior to venipuncture. Patient should be in either supine or upright position 4 hours before and during blood drawing. If

patient is on diuretics, antihypertensive drugs, cyclic progesterone, estrogens, or licorice, results for aldosterone may not be interpretable. Patient should be on a normal sodium diet 2-4 weeks (135 nmol or 3gm/sodium/day).

SPECIMEN VOLUME: 0.8 mL

MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)

PEDIATRIC TEST INFO: Order PEDALDOS for pediatric testing to be performed by Esoterix

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2 Days

REFERENCE RANGE: Adult: Average sodium diet:

Recumbent: 1.0-16.0 ng/dL

Standing: 4.0-31.0 ng/dL

Adrenal Vein: 200.0-800.0 ng/dL

Pediatric: 1-3 years: 5.0-60.0 ng/dL

4-7 years: 4.0-76.0 ng/dL

8-11 years: 3.0-28.0 ng/dL

12-16 years: 1.0-18.0 ng/dL

METHODOLOGY: Radioimmunoassay (RIA)

CLINICAL USE: Evaluate patients with hypertension and possible hyperaldosteronism

CPT: 82088

#### **[ALKGENE] HEREDITARY NEUROBLASTOMA (ALK)**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-4 weeks

METHODOLOGY: Bi-directional Sanger Sequencing

CPT: 81479

#### **[ALKP] Total Alkaline Phosphatase**

SPECIMEN REQUIRED: Refrigerated plasma or serum

TUBE OR CONTAINER: Light Green (heparin) or Gold

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours

REFERENCE RANGE: Age specific

METHODOLOGY: COLORIMETRIC

CLINICAL USE: Aid in the diagnosis and treatment of liver, bone, parathyroid and intestinal diseases

CPT: 84075

#### **[ALKPB] Bone Specific Alkaline Phosphatase**

**SPECIMEN REQUIRED:** Frozen serum  
**TUBE OR CONTAINER:** Red or gold  
**SPECIMEN VOLUME:** 1 mL  
**MINIMUM VOLUME:** 0.5 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 2-4 days  
**REFERENCE RANGE:** Age and gender specific  
**OTHER NAMES:** Bone Alkaline Phosphatase (BAP); Ostase; Skeletal Alkaline Phosphatase (SALP)  
**METHODOLOGY:** Immunoradiometric assay (IRMA)  
**CLINICAL USE:** Aid in the management of patients with Paget disease and osteoporosis  
**CPT:** 84080

#### **[ALKPISO] ALKALINE PHOSPHATASE ISOENZYME**

**SPECIMEN REQUIRED:** Refrigerated serum  
**TUBE OR CONTAINER:** Red or Gold  
**SPECIAL HANDLING:** Refrigerate specimen as soon as possible after collection; for extended storage-freeze  
Collect from a fasting patient  
Submit 2-0.25 mL Aliquots (frozen)  
**SPECIMEN VOLUME:** 2 mL  
**MINIMUM VOLUME:** 2x 0.25 mL aliquots  
**TEST INCLUDES:** Interpretation of alkaline phosphatase isoenzymes and total alkaline phosphatase  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 2-3 days  
**REFERENCE RANGE:** Age & gender specific  
**OTHER NAMES:** Alk Phos Isoenzymes; ALP Isoenzymes; Fractionated Alkaline Phosphatase; Kasahara Isoenzymes; Nag Ao Isoenzymes; Regan Isoenzymes  
**METHODOLOGY:** Electrophoresis  
**CLINICAL USE:** Evaluate the contribution of the isoforms of Alkaline phos from the liver, bone, and bowel to total ALKP; investigate elevations of ALKP to determine the tissue of origin  
**CPT:** 84075, 84080

#### **[ALLALPHGAL] Galactose-alpha-1,3-Galactose IgE**

**SPECIMEN REQUIRED:** Refrigerated, frozen or room temperature serum  
**TUBE OR CONTAINER:** Red or Gold  
**SPECIMEN VOLUME:** 1.5 mL  
**MINIMUM VOLUME:** 1 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 2-3 days  
**REFERENCE RANGE:** < 0.35 kU/L  
**METHODOLOGY:** Quantitative allergen-specific IgE test  
**CLINICAL USE:** Defines the etiology of allergic responses to meat allergens in patients with a delayed onset of symptoms (3 to 6 hours after meal). IgE to

Alpha-Gal is the likely cause of anaphylactic reactions in individuals who develop hypersensitivities to beef, pork and/or lamb as adults  
CPT: 86003

**[ALLANCH] Anchovy Allergen IgE Antibody**

**[ALLAPP] Apple Allergen IgE Antibody**

SPECIMEN REQUIRED: Room Temp serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.2 mL  
MINIMUM VOLUME: 0.1 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE:  
METHODOLOGY: Quantitative allergen-specific IgE test  
CPT: 86003

**[ALLAV] Avocado Allergen IgE Antibody**

**[ALLBEK] Kidney Bean Allergen**

**[ALLBEL] Lima Bean Allergen**

**[ALLBEP] Pinto Bean Allergen**

**[ALLCAR] Carrot Allergen**

**[ALLCHICKP] Chickpea Allergen IgE Antibody**

**[ALLCOCO] Coconut Allergen IgE Antibody**

**[ALLEGGWHIGG] Egg White Allergen IgG Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
CPT: 86001

**[ALLEGGYIGE] Egg Yolk Allergen IgE Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
CPT: 86003

**[ALLGREENBEAN] Green Bean Allergen IgE Antibody**

**[ALLKIWI] Kiwi Allergen IgE Antibody**

**[ALLENT] Lentil Allergen IgE Antibody**

**[ALLMANG] Mango Allergen IgE Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE:  
METHODOLOGY: Thermo Fisher ImmunoCAP  
CPT: 86003

**[ALLMILKCIGG] Cow's Milk Allergen IgG4 Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
CPT: 86001

**[ALLOATIGG] Oat Allergen IgG Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
CPT: 86001

**[ALLPEANIGG] Peanut Allergen IgG Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
CPT: 86001

**[ALLPEAR] Pear Allergen**

**[ALLPIN] Pineapple Allergen IgE Antibody**

SPECIMEN REQUIRED: Refrigerated serum

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE:  
METHODOLOGY: Quantitative allergen-specific IgE test  
CPT: 86003

**[ALLPOTSW] Sweet Potato Allergen IgE Antibody**

**[ALLSAL] Salmon Allergen IgE Antibody**

**[ALLSOYIGG] Soybean Allergen IgG Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
CPT: 86001

**[ALLSTAPHE] Allergen Specific IgE Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE:  
METHODOLOGY: Quantitative allergen-specific IgE test  
CPT: 86003

**[ALLSULF] Sulfamethoxazole Allergen IgE Ab**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE:  
METHODOLOGY: Quantitative allergen-specific IgE test  
CPT: 86003

**[ALLWAT] Watermelon Allergen**

**[ALPH1TR] Alpha-1-Antitrypsin**

SPECIMEN REQUIRED: Refrigerated serum or plasma; overnight

fasting is preferred

TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 1-2 days

REFERENCE RANGE: 90-200 mg/dL

OTHER NAMES: A1-Antitrypsin; A1AT; AAT; Acute Phase Proteins;

Alpha1-Protease Inhibitor

METHODOLOGY: Immunological

CLINICAL USE: Detection of hereditary decreases in the production of alpha1-antitrypsin (AAT)

CPT: 82103

#### **[ALPH2PL] Alpha-2-Anti-Plasmin**

SPECIMEN REQUIRED: Frozen plasma

TUBE OR CONTAINER: Blue (citrate)

CAUSES FOR REJECTION: Severe hemolysis; improper labeling;

clotted specimen; specimen diluted with

IV fluids; samples thawed in transit;

improper sample type

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

METHODOLOGY: Chromogenic

CPT: 85410

#### **[ALPHA] Alpha Subunit Tumor Marker**

SPECIMEN REQUIRED: Frozen serum (preferred) or plasma

TUBE OR CONTAINER: Red, Gold, Green(heparin), or Lavender (EDTA)

SPECIAL HANDLING: Separate and freeze immediately

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.3 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-9 days

REFERENCE RANGE: Males: 20 - 44 years: 45 - 54 years: 55 - 64 years: 65 - 94 years:

Females:

20 - 44 years premenopausal: 45 - 59 years perimenopausal: 60 - 99 years

postmenopausal: OTHER NAMES: Pituitary Glycoproteins, Alpha Subunit

METHODOLOGY: Immunochemiluminometric assay (ICMA)

CLINICAL USE: Tumor marker

CPT: 83519

#### **[ALPHAGAL] ALPHA GAL PANEL**

#### **[ALPHAL] ALPHA-L-IDURONIDASE (HURLER)**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTOA or Yellow (ACD)

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 14 days  
REFERENCE RANGE: > or = 1.0 nmol/h/mL  
METHODOLOGY: Fluorometric Enzyme analysis  
CLINICAL USE: Screen for Hurler Syndrome  
CPT: 82657

**[ALPHGLUC] Alpha-Glucosidase**

SPECIMEN REQUIRED: Fibroblasts at room temperature  
TUBE OR CONTAINER: T-25 flasks  
SPECIMEN VOLUME: 2 flasks  
TEST AVAILABILITY: Daily  
CPT: 82963

**[ALPSFL] ALPS BY FLOW CYTOMETRY**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Must be shipped same day as collected.  
Must be received in laboratory by 1:30 PM  
Monday-Thursday only  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Monday-Thursday  
OTHER NAMES: Autoimmune Lymphoproliferative Syndrome  
METHODOLOGY: Flow Cytometry  
CPT: 88184; 88185 x 6

**[ALT] Alanine Aminotransferase (ALT/SGPT)**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 12 - 47 U/L  
OTHER NAMES: ALT; Glutamic Pyruvate Transaminase; GPT; SGPT  
METHODOLOGY: ENZYMATIC IFCC MODIFIED WITHOUT PSP  
CLINICAL USE: Aid in the treatment and diagnosis of certain  
liver and heart diseases  
CPT: 84460

**[ALTABA] Alternaria tenuis Allergen**

SPECIMEN REQUIRED: Refrigerated or room temperature serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-8 days  
REFERENCE RANGE: < 1 mg/L  
METHODOLOGY: Enzyme immunoassay (FEIA)



disorders in conjunction with other clinical findings  
CPT: 83520

#### **[AMA] Anti-Mitochondrial Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 1-2 days  
REFERENCE RANGE: Negative OTHER NAMES: AMA; M2; Mitochondrial Antibody  
METHODOLOGY: Indirect Fluorescent Antibody (IFA)  
REFLEX TEST INFORMATION: If initial AMA screen is positive, a semiquantitative titer will be performed at an additional charge  
CLINICAL USE: Differential diagnosis of chronic liver disease and to provide confirmatory evidence for a diagnosis of primary biliary cirrhosis  
CPT: 86256

#### **[AMANT] Amantadine (Symmetrel) Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, or Dark Green (heparin)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-7 days  
REFERENCE RANGE: 200 - 1000 ng/mL  
OTHER NAMES: Symmetrel  
METHODOLOGY: Gas Chromatography/Nitrogen Phosphorus Detection (GC-NPD)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

#### **[AMIKL] Random Amikacin Level**

SPECIMEN REQUIRED: Serum/plasma at room temp or refrigerated  
Stable 8 hrs Room Temp, 48 hrs refrigerated  
TUBE OR CONTAINER: Gold, Red, Lt Green, Lavender (EDTA)  
Microtainer is acceptable  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 ml  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: None Established  
Potentially Toxic: >35.0 ug/mL  
OTHER NAMES: Amikin  
METHODOLOGY: Spectrophotometrics KIMS  
CLINICAL USE: Therapeutic drug monitoring

CPT: 80150

**[AMIKP] Amikacin Level Peak**

SPECIMEN REQUIRED: Serum/plasma at room temp or refrigerated  
Stable 8 hrs Room Temp, 48 hrs refrigerated  
TUBE OR CONTAINER: Gold, Red, Lt Green, Lavender (EDTA)  
Microtainer is acceptable  
SPECIAL HANDLING: Peak samples should be drawn 60 minutes after  
an IM injection, 30 minutes after the end of a  
30 minute IV infusion, or immediately after a  
60 minute infusion  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Therapeutic Peak: 20.0-25.0 ug/mL  
Potentially toxic: peak: >35.0 ug/mL  
OTHER NAMES: Amikin  
METHODOLOGY: Spectrophotometrics KIMS  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80150

**[AMIKT] Amikacin Level Trough**

SPECIMEN REQUIRED: Serum/plasma at room temp 8 hrs  
or refrigerated 48 hrs  
TUBE OR CONTAINER: Gold, Red, Lt Green, Lavender (EDTA)  
Microtainer is acceptable  
SPECIAL HANDLING: Trough (valley) levels should be collected  
just prior to the administration of the next  
dose of Amikacin  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Therapeutic trough; 5.0-10.0 ug/mL  
Potentially toxic: trough: >10.0 ug/mL  
OTHER NAMES: Amikin  
METHODOLOGY: Spectrophotometrics KIMS  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80150

**[AMM] Ammonia**

SPECIMEN REQUIRED: Plasma on ice  
TUBE OR CONTAINER: LAVENDER (EDTA)  
SPECIAL HANDLING: Place specimen on ice immediately after  
collection.  
Reject if not received on ice.  
STABILITY: 30 minutes on ice  
3 days when plasma is separated and frozen  
SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0 days-1 month: 103-174 umol/L  
1 month-13 years: 31- 80 umol/L  
14 years +: 15- 50 umol/L  
OTHER NAMES: Blood Ammonia; Blood NH<sub>3</sub>; NH<sub>3</sub>; NH<sub>4</sub>  
METHODOLOGY: ENZYMATIC WITH GLUTAMATE DEHYDROGENASE  
CLINICAL USE: Aid in the diagnosis of hepatic encephalopathy  
and hepatic coma in the terminal stages of liver  
cirrhosis, hepatic failure, acute and subacute  
necrosis, and Reye's syndrome  
CPT: 82140

#### **[AMOXAP] AMOXAPINE (ASENDIN) PANEL**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark green (heparin)  
SPECIAL HANDLING: Do NOT use gel barrier tubes  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: Amoxapine and its metabolite  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 days  
REFERENCE RANGE: 200 - 400 ng/mL

OTHER NAMES: Asendin  
METHODOLOGY: High Performance Liquid Chromatography with  
Ultraviolet Detection (HPLC-UV)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

#### **[AMPARABCSF] CSF AMPA-Receptor Antibody**

SPECIMEN REQUIRED: Refrigerated (preferred) or frozen CSF  
TUBE OR CONTAINER: Sterile CSF tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: Negative  
OTHER NAMES: a-Amino-3-Hydroxyl-5-Methyl-4-Isoxazole-Propionate  
Receptor Antibody  
METHODOLOGY: Indirect Fluorescent Antibody (IFA)  
CLINICAL USE: Serological marker of autoimmune encephalopathy  
and of a patient's immune response to cancer.  
This autoantibody is usually accompanied by sub-  
acute neurological symptoms and signs, and is not  
found in healthy subjects.  
CPT: 86255

#### **[AMPHAB] AMPHIPHYSIN ANTIBODY**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 weeks  
REFERENCE RANGE: Negative  
METHODOLOGY: ImmunoBlot  
CPT: 84181

**[AMPHOB] Amphotericin B Level**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
OTHER NAMES: Fungilin; Fungizone; Abelcet; Amphocil  
METHODOLOGY: High-Pressure Liquid Chromatography (HPLC)  
CPT: 80299

**[AMPR] HIV Amprenavir Resistance**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: High-Pressure Liquid Chromatography (HPLC)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[AMY] Amylase Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIMEN VOLUME: Adult: 2 mL  
Pediatric: 0.6 mL  
MINIMUM VOLUME: Adult: 1 mL  
Pediatric: 0.5 mL or 1/2 microtainer  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 26 - 93 U/L  
METHODOLOGY: Enzymatic Colorimetric  
CLINICAL USE: Diagnosis and treatment of pancreatitis  
CPT: 82150

**[AMYAS] Body Fluid Amylase**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic Colorimetric  
CPT: 82150

**[AMYFL] Body Fluid Amylase**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic Colorimetric  
CPT: 82150

**[AMYLPR] Amyloid Beta-Protein**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Separate and freeze plasma as soon as possible  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 20 - 80 pg/mL  
METHODOLOGY: Radioimmunoassay (RIA)  
CLINICAL USE: Detection of Amyloid B-Protein which causes vascular and cerebral plaque formation  
CPT: 83519

**[AMYPL] Pleural Fluid Amylase**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic Colorimetric  
CPT: 82150

**[AMYPT] Peritoneal Fluid Amylase**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours

REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic Colorimetric  
CPT: 82150

#### **[AMYU] Urine Random Amylase**

SPECIMEN REQUIRED: Refrigerated random urine  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic Colorimetric  
CLINICAL USE: Work-up for abdominal pain, epigastric tenderness, nausea, and vomiting  
CPT: 82150

#### **[ANA] Anti-Nuclear Antibody Screen**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 24-48 hours  
REFERENCE RANGE: Negative  
OTHER NAMES: Anti-Centromere B; ANA  
METHODOLOGY: Enzyme-linked immunoassay (ELISA)  
REFLEX TEST INFORMATION: A positive ANA screen will reflex an ANA titer at an additional charge  
CLINICAL USE: Screening test for lupus and other rheumatic autoimmune diseases, including autoimmune thyroid and liver diseases  
CPT: 86038

#### **[ANAFI] Body Fluid Anti-Nuclear Antibody**

SPECIMEN REQUIRED: Frozen body fluid (CSF, pleural, joint or pericardial fluid)  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Indirect Immunofluorescence (IFA)  
REFLEX TEST INFORMATION: A positive result reflexes titer test  
CPT: 86038

#### **[ANAOMR] Anti-Nuclear Antibody Screen**

SPECIMEN REQUIRED: Refrigerated serum

TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday-Friday  
REFERENCE RANGE: Negative or < 40  
METHODOLOGY: Indirect fluorescent antibody (IFA)  
REFLEX TEST INFORMATION: A positive ANA screen will reflex an ANA titer at an additional charge  
CLINICAL USE: Screening test for lupus and other rheumatic autoimmune diseases, including autoimmune thyroid and liver diseases  
CPT: 86038

**[ANAPAT] Anti-Nuclear Antibody Pattern**

**[ANAPL] Pleural Fluid Anti-Nuclear Antibody**

SPECIMEN REQUIRED: Frozen fluid  
TUBE OR CONTAINER: Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 days  
REFERENCE RANGE: Negative: < or = 1:40  
METHODOLOGY: Enzyme-linked immunoassay (ELISA)  
REFLEX TEST INFORMATION: A positive ANA will reflex an ANA titer at an additional charge  
CLINICAL USE: Detect antibodies to nuclear antigens  
CPT: 86038

**[ANASY] Body Fluid Anti-Nuclear Antibody**

SPECIMEN REQUIRED: Refrigerated synovial fluid  
TUBE OR CONTAINER: Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 days  
REFERENCE RANGE: Negative: < or = 1:40  
METHODOLOGY: Enzyme-linked immunoassay (ELISA)  
CLINICAL USE: Detect antibodies to nuclear antigens  
CPT: 86038

**[AND] 3A Androstanediol Glucuronide**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIAL HANDLING: Separate and freeze within one hour of collection  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.7 mL  
TEST INCLUDES:  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-14 days  
REFERENCE RANGE: 0 - 10 years: Not established  
Adults: Male: 112 - 1046 ng/dL  
Female: 11 - 249 ng/dL  
METHODOLOGY: High-pressure liquid chromatography tandem mass spectrometry(HPLC/MS-MS)  
CPT: 82154

#### **[ANDR] Androstenedione**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: No isotopes should be administered 24 hours prior to venipuncture  
Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)  
PEDIATRIC TEST INFO: Order PEDANDRO for pediatric testing to be performed by Esoterix  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 Days  
REFERENCE RANGE: Age and gender specific  
OTHER NAMES: Delta4-Androstene,3,17-dione  
METHODOLOGY: High pressure liquid chromatography/tandem mass spectrometry (HPLC/MS-MS)  
CLINICAL USE: Evaluation of androgen production in hirsute females; less useful in evaluation of other aspects of virilization  
CPT: 82157

#### **[ANGIO] Angiotensin II**

SPECIMEN REQUIRED: Frozen plasma with Trasylol  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Collect specimen in chilled EDTA (lavender) tube. Add 0.25 mL Trasylol (to be performed in lab); separate and freeze plasma  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1.5 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Radioimmunoassay (RIA)  
CPT: 82163

#### **[ANKH] ANKH GENE SEQUENCING**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
OTHER NAMES: Craniometaphyseal dysplasia, autosomal dominant



(CMDD) or Chondrocalcinosis 2 (CCAL2) via ANKH  
gene sequencing  
METHODOLOGY: Sanger sequencing

**[ANT] Antimony**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Royal blue (EDTA)  
SPECIMEN VOLUME: 7 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: 0-6 ug/L  
METHODOLOGY: Inductively Coupled Plasma/Mass Spectrometry (ICP/MS)  
CLINICAL USE: Exposure monitoring  
CPT: 83018

**[ANTICHROM] Chromatin Antibody**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
OTHER NAMES: Antibodies to LE Cell Phenomenon  
METHODOLOGY: Multiplex flow immunoassay  
CLINICAL USE: Help diagnose drug-induced lupus (DIL) and systemic lupus erythematosus (SLE)  
CPT: 83516

**[AOS] ADAMS-OLIVER SYNDROME PANEL**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST INCLUDES: DNA sequencing for ARHGAP31, DOCK6, EOGT, NOTCH1 and RBPJ genes  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 weeks  
METHODOLOGY: Sanger sequencing  
CPT: 81407; 81479 x 4

**[APOA] Apolipoprotein A-1**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Serum is stable for 72 hours refrigerated. If longer storage is required, freeze specimen;  
patient must be fasting 12-14 hours  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 2 days  
REFERENCE RANGE: Male: 0 - 14 days: 62-91 mg/dL  
15 days - 11 months: 53-175 mg/dL  
1 - 5 years: 80-164 mg/dL  
6 to 12 years: 107-175 mg/dL  
> 12 years: 101-178 mg/dL  
Female: 0 to 14 days: 71-97 mg/dL  
15 days to 11 months: 53-175 mg/dL  
1 to 5 years: 80-164 mg/dL  
6 to 80 years: 116-209 mg/dL  
> 80 years: 114-214 mg/dL  
OTHER NAMES: A-1 Apolipoprotein; Alpha Apolipoprotein; Apo A-1  
METHODOLOGY: Immunologic  
CLINICAL USE: Comprises 60% to 70% of the protein content of HDL  
Apo A-I serves as an activator of LCAT which is  
involved in the transport of cholesterol from  
peripheral tissues to the liver where it is  
degraded  
CPT: 82172

### **[APOB] Apolipoprotein B**

SPECIMEN REQUIRED: Frozen Serum (preferred) or plasma  
TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)  
SPECIAL HANDLING: Stable up to 72 hours refrigerated. Freeze if  
storage for more than 3 days is expected;  
patient must be fasting for 12-14 hours  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: 0 days - 14 days: 9-67 mg/dL  
15 days to 11 months: 19-123 mg/dL  
1 - 5 years: 41-93 mg/dL  
>5 years: Male: 52-135 mg/dL  
Female: 54-133 mg/dL  
METHODOLOGY: Immunologic  
OTHER NAMES: Apo B; Apo B100; Beta Apolipoprotein  
CLINICAL USE: LDL and its major protein, apolipoprotein B, play  
an essential role in lipid transport and  
metabolism  
CPT: 82172

### **[APOL1] Apolipoprotein L1 Risk Variants**

SPECIMEN REQUIRED: Plasma (EDTA) at Room Temperature  
TUBE OR CONTAINER: Lavender top (EDTA)  
SPECIMEN VOLUME: 0.5mL  
MINIMUM VOLUME: 0.3mL  
TEST INCLUDES: APOL1  
TEST AVAILABILITY: Varies, not stated.  
TURNAROUND TIME: 6-9 days

REFERENCE RANGE: Detailed report will be provided stating

Normal/Abnormal depending on the  
absence/presence of APOL1 gene risk variants.

OTHER NAMES: APOL1 / LC167570

METHODOLOGY: Liquid Chromatography: Tandem mass spectrometry  
(MS/MS).

CLINICAL USE: Recently, the association of the apolipoprotein L1  
(APOL1) variants (G1 and G2) has been reported as  
a possible mechanism for the increased presence of  
end stage renal disease (ESRD) in the African /  
American (AA) population. Identification of  
prospective donors of AA heritage that have only  
a single copy or do not carry either APOL1 variant  
(i.e. G1:G1, G1:G2, G2:G2) could increase the  
number of available donors for patients that are  
waiting for a kidney.

CPT: 82542

#### **[AQP2] NEPRHOGEN DIAB INSIP(NDI) AQP2**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-4 weeks

OTHER NAMES: Nephrogenic Diabetes Insipidus (NDI) via the AQP2  
Gene

METHODOLOGY: Bi-directional Sanger Sequencing

CLINICAL USE: Confirmation of clinical diagnosis

CPT: 81404

#### **[ARG] Arginase Deficiency**

SPECIMEN REQUIRED: Refrigerated whole blood (ship on wet ice)

TUBE OR CONTAINER: Yellow (ACD)

SPECIAL HANDLING: Specimen must be received in laboratory by  
1:30 pm, Monday through Thursday only;

Specimen must arrive at performing lab within  
48 hours of collection

SPECIMEN VOLUME: 10 mL

MINIMUM VOLUME: 7 mL

TEST AVAILABILITY: Monday-Thursday

TURNAROUND TIME: 2 weeks

REFERENCE RANGE: 2.0 - 7.0 umol/hr/mg Hgb

METHODOLOGY: Spectrophotometry

CPT: 82657

#### **[ARHGAP31] ADAMS-OLIVER TYPE 1 (ARHGAP31)**

SPECIMEN REQUIRED: Whole blood room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-6 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81479

**[ARIP] Aripiprazole (Abilify) Level**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Lavender (EDTA) or Dark green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-9 days  
OTHER NAMES: Abilify  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 82542

**[ARS] Arsenic**

SPECIMEN REQUIRED: Whole blood at room temperature (submit original unopened tube)  
TUBE OR CONTAINER: Royal Blue (EDTA) or Lav (EDTA) Lavender (EDTA) temporarily accepted with possible disclaimer per Lab Corp  
SPECIAL HANDLING: Please contact laboratory for correct tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.6 mL  
TURNAROUND TIME: 3 Days  
REFERENCE RANGE: 2-23 ug/L  
METHODOLOGY: Inductively coupled plasma-mass spectrometry (ICP-MS)  
CLINICAL USE: Monitor recent or acute exposure to arsenic  
CPT: 82175

**[ARSA] ARYLSULFATASE A SEQUENCING**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks  
OTHER NAMES: Metachromatic Leukodystrophy via ARSA Gene Sequencing  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81405

**[ARSEGENE] CHONDRODYSPL PUNCTATA 1 (ARSE)**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Chondrodysplasia Punctata 1, X-Linked Recessive (CDPX1) via the ARSE Gene  
METHODOLOGY: Bi-directional Sanger Sequencing  
CLINICAL USE: Confirmation of clinical diagnosis  
CPT: 81479

#### **[ARSH] Hair Arsenic**

SPECIMEN REQUIRED: Bundle of hair  
TUBE OR CONTAINER: Plastic container  
SPECIAL HANDLING: Bundle, cut at roots, wrap with twist tie at root end  
SPECIMEN VOLUME: 500 mg Hair (pencil-thick segment)  
MINIMUM VOLUME: 100 mg  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-12 days  
METHODOLOGY: Inductively Coupled Plasma/Mass Spectrometry (ICP/MS)  
CLINICAL USE: Exposure monitoring  
CPT: 82175

#### **[ARYLA] Urine Arylsulfatase A**

SPECIMEN REQUIRED: Refrigerated aliquot from a 24-hour urine collection  
TUBE OR CONTAINER: Plastic urine container  
SPECIAL HANDLING: Collect urine in 24 hour container with no preservative; refrigerate during collection  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 days  
REFERENCE RANGE:  $\geq 19$  nmol/h/mL  
METHODOLOGY: Colorimetric, Kinetic  
CLINICAL USE: Aid in diagnosis of Lysosomal Storage Disease  
CPT: 82657

#### **[ASAH1] FARBER LIPOGRANULOMATOS-ASAH1**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Farber Lipogranulomatosis via ASAH1 gene  
METHODOLOGY: Bi-directional Sanger Sequencing  
CLINICAL USE: Confirmation of clinical diagnosis

CPT: 81479

**[ASO] Anti-Streptolysin O Antibody**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Gold, Red or Light Green (heparin)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: 0-4 years: < 117 IU/mL  
5-17 years: < 229 IU/mL  
> 18 years: < 234 IU/mL  
OTHER NAMES: ASO  
METHODOLOGY: Immunoturbidimetric  
CLINICAL USE: Document exposure to streptococcal streptolysin O  
CPT: 86060

**[ASPAB] ASPERGILLUS AB PANEL**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: Aspergillus fumigatus, flavus, and niger  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-5 days  
METHODOLOGY: Double immunodiffusion (DID)  
CLINICAL USE: Confirm the presence of precipitation antibodies  
to Aspergillus  
CPT: 86606 x 3

**[ASPAG] ASPERGILLUS GALACTOMANNAN AG**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme Immunoassay (EIA)  
CLINICAL USE: Aid in the diagnosis of Invasive Aspergillosis  
CPT: 87305

**[ASPAGCSF] CSF Aspergillus Antigen (EIA)**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: Negative

METHODOLOGY: Enzyme Immunoassay (EIA)  
CLINICAL USE: Aid in the diagnosis of Invasive Aspergillosis  
CPT: 87305

**[ASPAMINWBC] Aspartylglucosamine Aminohydrolase**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark Green (heparin)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Daily  
CPT: 82657

**[AST] Aspartate Amino Transf (AST/SGOT)**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0 day - 30 days: 45-175 U/L  
31 day - 10 year: 19 - 72 U/L  
11 Year + : 19 - 46 U/L  
OTHER NAMES: AST; GOT; Serum Glutamic Oxaloacetic Transaminase;  
SGOT  
METHODOLOGY: IFCC, Enzymatic  
CLINICAL USE: Liver function test  
CPT: 84450

**[ASXL1] ASXL1 MUTATION ANALYSIS**

SPECIMEN REQUIRED: Refrigerated whole blood or bone marrow  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Use cold pack for transport, making sure cold  
pack is not in direct contact with specimen.  
Ship same day as drawn whenever possible;  
specimens SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST INCLUDES: sequencing of the majority of exons 13 and 14 of  
ASXL1, corresponding to amino acids 406-1396  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 2 weeks  
METHODOLOGY: Bi-directional Sequencing  
CPT: 81479

**[AT1R] ANTI-ANGIOTENSIN II TYPE 1 AB**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Must arrive at performing lab within 10 days  
of collection  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme linked immunosorbent assay (ELISA)  
CLINICAL USE: Solid organ post transplant  
CPT: 83516

### **[AT3FUN] Functional Antithrombin III**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 2 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 2 full tubes  
Testing specimen: 2 transport tubes with 1 ml plasma each  
MINIMUM VOLUME: 1 full tube  
Testing specimen: 2 transport tubes with 0.5 ml plasma each  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-7 days  
REFERENCE RANGE: 80-125%  
OTHER NAMES: Antithrombin III Activity; AT3 Activity; AT III Activity; Factor Xa Inhibitor; Heparin Cofactor Activity; Serine Protease Inhibitor  
REFLEX TEST INFORMATION: If result is below normal, Antithrombin 3 Antigen will be reflexed at an additional charge  
CLINICAL USE: Confirmation and characterization of congenital AT deficiency  
CPT: 85300

### **[ATAZ] HIV Atazanavir Resistance**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Serum must be separated within 45 minutes  
Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
REFERENCE RANGE: 0.05 - 10.00 mcg/mL  
OTHER NAMES: Reyataz  
METHODOLOGY: High-Pressure Liquid Chromatography (HPLC)  
CLINICAL USE: HIV monitor  
CPT: 80299



**[ATEN] Atenolol Level**

SPECIMEN REQUIRED: Room temperature serum or plasma  
TUBE OR CONTAINER: Red or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 days  
METHODOLOGY: High Performance Liquid Chromatography/Mass Spectrometry (LC/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT:

**[AZA] Azathioprine (Imuran) Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark Green (Heparin)  
SPECIAL HANDLING: The use of serum separator tubes is not recommended  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-9 days  
REFERENCE RANGE: < 1000 ng/mL  
OTHER NAMES: Imuran; 6-mercaptopurine metabolite  
METHODOLOGY: High Performance Liquid Chromatography with Ultraviolet Detection (HPLC-UV)  
CLINICAL USE: Antineoplastic drug therapy  
CPT: 80299

**[B2GLYIGA] Anti-beta-2-Glycoprotein I IgA Ab**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME:  
REFERENCE RANGE: < 20 units  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA) to detect antibodies binding to a microtiter plate coated with purified 2-glycoprotein 1 antigen  
CLINICAL USE: Assess the risk of thrombosis in patients who may be at risk for antiphospholipid syndrome (APS).  
This test should be used in conjunction with current traditional anticardiolipin and anticoagulant tests  
CPT: 86146

**[B2MIC] Beta-2-Microglobulin**

SPECIMEN REQUIRED: serum or plasma(Heparin)  
TUBE OR CONTAINER: Red, Gold or Light Green

CAUSE FOR REJECTION: Specimens other than serum or plasma  
Do not use for Body Fluid testing.  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: 0.5 - 2.5 mg/L  
METHODOLOGY: Immunoturbidimetric  
CLINICAL USE: Evaluate renal disease; tumor marker for certain types of malignancies  
CPT: 82232

#### **[B2MICCSF] CSF Beta-2-Microglobulin**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: CSF tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
METHODOLOGY: Radioimmunoassay (RIA)  
CLINICAL USE: Elevated concentrations of CSF B2M correlate with clinical involvement (tumor cells, increased protein or both) of CNS in patients with lymphoma and leukemia  
CPT: 82232

#### **[BAC] Baclofen Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, or Dark Green (heparin)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-7 days  
REFERENCE RANGE: 100 - 400 ng/mL  
OTHER NAMES: Lioresal  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

#### **[BARTAB] AB BARTONELLA**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST INCLUDES: IgG and IgM to B. henselae & B. quintana  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 days

REFERENCE RANGE: Negative  
OTHER NAMES: Cat Scratch Disease Antibody (CSD); Rochalimaea  
METHODOLOGY: Indirect Fluorescent antibodies (IFA)  
CLINICAL USE: Aid in diagnosis of Cat Scratch Disease  
CPT: 86611 x 4

**[BARTH] BARTH SYNDROME (TAZ G4.5)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks  
REFERENCE RANGE: No mutation detected  
METHODOLOGY: Bi-directional sequence analysis  
CLINICAL USE: Identify mutations in the G4.5 gene  
CPT: 81406

**[BBS6MKKS] BARDET-BIEDL-BBS6/MKKS**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
OTHER NAMES: McKusick Kaufman syndrome (MKKS) or Bardet Biedl syndrome type 6 (BBS6)  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81479

**[BCDGP] CDG: N-GLYCAN & CDT PANEL**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red (no gel) or Dark Green (heparin)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 2 weeks  
REFERENCE RANGE:  
OTHER NAMES: Carbohydrate Deficient Glycoprotein syndrome; Congenital Disorders of Glycosylation (CDG)  
METHODOLOGY: Matrix-Assisted Laser Desorption/Ionization-Time of flight/Time of flight (MALDI-TOF/TOF) and Mass Spectrometry (MS)  
CPT: 82373 x 2; 83789; 84375

**[BCELLIMM] B-CELL IMMUNODEFICIENCY**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark green (Heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Specimen must be analyzed within 48 hours (heparin) or 30 hours (EDTA) of collection

SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL (pediatric)  
TEST INCLUDES: Total Immunoglobulins; % IgA, IgD, IgG, IgM, CD19 and HLA-DR  
TEST AVAILABILITY: Monday-Thursday (must arrive in the lab before 2:30 pm)  
TURNAROUND TIME: 2 days  
METHODOLOGY: Flow Cytometry  
CLINICAL USE: Measures circulating B-cells (CD19), their surface immunoglobulins (Total Ig, IgG, IgD, IgM and IgA), and a common HLA class II antigen  
CPT: 86356 x 7

### **[BCELLPCR] B-CELL GENE REARRANGEMENTS PCR**

SPECIMEN REQUIRED: Whole blood or bone marrow at room temperature  
(Other acceptable specimens: Fresh frozen tissue or paraffin-embedded tissue at room temperature)  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 5 mL (whole blood)  
3 mL (bone marrow)  
MINIMUM VOLUME: 1 mL (whole blood)  
1 mL (bone marrow)  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 6-8 days  
OTHER NAMES: Immunoglobulin (IgH & IgK) Gene Rearrangement; Immunoglobulin (IgH & IgK) Clonality  
METHODOLOGY: Polymerase Chain Reaction (PCR)/Capillary Electrophoresis  
CPT: 81261; 81264

### **[BCRKIN] BCR/ABL KINASE DOMAIN MUTATION**

SPECIMEN REQUIRED: Refrigerated whole blood or bone marrow  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIAL HANDLING: Must be received in the lab by 1:30 pm Monday through Friday; must be shipped same day as collected  
SPECIMEN VOLUME: 5 mL (whole blood)  
3 mL (bone marrow)  
MINIMUM VOLUME: 1 mL (whole blood)  
1 mL (bone marrow)  
TEST INCLUDES: Detection of all common mutations, including T315I  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 10-14 days  
REFERENCE RANGE: No mutation detected  
OTHER NAMES: ABL1 Mutation Analysis for Resistance to Imatinib Mesylate; Gleevec Resistance Mutation Analysis; Imatinib Mesylate Resistance Analysis

METHODOLOGY: Massively Parallel sequencing (NextGen)  
CPT: 81403

**[BCRQNTMAJ] BCR/abl Major (Quant PCR)**

SPECIMEN REQUIRED: Refrigerated whole blood or bone marrow  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Must be received in the lab within 24 hours of collection  
SPECIMEN VOLUME: 5 mL (whole blood)  
3 mL (bone marrow)  
MINIMUM VOLUME: 1 mL  
TEST INCLUDES: Quantification of BCR-ABL1 transcript levels of (p210) fusion transcripts  
TURNAROUND TIME: 5-8 days  
REFERENCE RANGE: No mutation detected  
METHODOLOGY: Quantitative Reverse Transcriptase Polymerase chain reaction (PCR)  
CLINICAL USE: Used to quantify BCR-ABL1 transcript levels of (p210) fusion transcripts. This BCR-ABL1 fusion transcripts is found in patients with CML  
CPT: 81206

**[BCRQNTMIN] BCR/abl Minor (Quant PCR)**

SPECIMEN REQUIRED: Refrigerated whole blood or bone marrow  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Must be received in the lab within 24 hours of collection  
Ship direct to ARUP; must be received within 48 hours (refrigerated)  
Same Day shipout required- must be received in lab by 1300.  
SPECIMEN VOLUME: 5 mL (whole blood)  
3 mL (bone marrow)  
MINIMUM VOLUME: 1 mL  
TEST INCLUDES: Quantification of BCR-ABL1 transcript levels of (p190) fusion transcripts  
TURNAROUND TIME: 5-8 days  
REFERENCE RANGE: No mutation detected  
METHODOLOGY: Quantitative Reverse Transcriptase Polymerase chain reaction (PCR)  
CLINICAL USE: Used to quantify BCR-ABL1 transcript levels of (p190) fusion transcripts. This BCR-ABL1 fusion transcript is found in patients with Philadelphia-positive ALL  
CPT: 81207

**[BCTPCR] Bacterial Detection (PCR)(LAB)**

SPECIMEN REQUIRED: Fresh frozen tissue, paraffin embedded tissue, lower respiratory or sterile body fluid

TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 87801

**[BCTSEQ] Organism ID (Sequencing)**

SPECIMEN REQUIRED: Pure culture: plate, slant or blood culture  
bottle (pure) at room temperature  
TUBE OR CONTAINER: Plate or slant  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
METHODOLOGY: RNA Sequencing  
CPT: 87153

**[BCUB] Biofire Blood Culture ID**

**[BCUCDIFF] C. difficile GDH AG and Toxins**

**[BCUE] Ebola Zaire Virus RT-PCR**

**[BCWKUP] BC Culture Workup**

**[BENZ] Benzene**

SPECIMEN REQUIRED: Refrigerated or frozen whole blood  
TUBE OR CONTAINER: Dark green (heparin-preferred)  
SPECIMEN VOLUME: 20 mL  
MINIMUM VOLUME: 7 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: Environmental exposure: none detected  
METHODOLOGY: Headspace Gas Chromatography/Flame Ionization  
Detection (GC-FID)  
CLINICAL USE: Monitor exposure to benzene  
CPT: 84600

**[BENZOD] Benzodiazepines**

SPECIMEN REQUIRED: Refrigerated or frozen whole blood  
TUBE OR CONTAINER: Lavender (EDTA), Gray (NA fluoride) or Dark  
green (heparin)  
SPECIMEN VOLUME: 7 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
METHODOLOGY: Immunoassay (screen); Liquid chromatography/tandem  
mass spectrometry (LC/MS-MS); Gas chromatography/

Electron Capture Detection (GC-EC)

REFLEX TEST INFORMATION: If detected, reflexed confirmation

CPT: 80301

**[BENZT] Benztropine Level**

SPECIMEN REQUIRED: Frozen serum or plasma

TUBE OR CONTAINER: Red or Dark green (heparin)

SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-5 days

REFERENCE RANGE: 5.0 - 25.0 ng/ml

OTHER NAMES: Cogentin

Methodology: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)

CLINICAL USE: Therapeutic drug monitoring

CPT: 80299

**[BETGLU] GLUCOCEREBROSIDASE/WBC**

SPECIMEN REQUIRED: Refrigerated whole blood

TUBE OR CONTAINER: Lavender (EDTA)

SPECIAL HANDLING: Collect specimen Monday-Thursday only; must arrive at performing lab within 4 days

SPECIMEN VOLUME: 10 mL

MINIMUM VOLUME: 4 mL

TEST AVAILABILITY: Monday-Thursday

TURNAROUND TIME: 9-15 days

REFERENCE RANGE: 7.5-14.5 nanomoles/hr/mg protein

METHODOLOGY: Fluorometric

CLINICAL USE: Aid in diagnosis of Gaucher disease

CPT: 82963

**[BETHYD] B-Hydroxybutyrate**

SPECIMEN REQUIRED: Refrigerated serum or plasma

TUBE OR CONTAINER: Red, Gold, or Lt Green(heparin)

SPECIAL HANDLING: Separate serum/plasma from cells within 2 hours of collection. Stable 7 days at 2-8 degrees C.

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 24 hours

REFERENCE RANGE: 0.02 - 0.27 mmol/L

METHODOLOGY: Enzymatic

CLINICAL USE: Monitor the presence and degree of ketosis

CPT: 82010

**[BETTRAN] Beta-2-Transferrin**

SPECIMEN REQUIRED: Refrigerated body fluid (nasal, otic....)

TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL fluid  
TEST AVAILABILITY: Monday-Thursday only  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Immunofixation Electrophoresis  
CLINICAL USE: Detection of spinal fluid in body fluids such as ear or nasal fluid  
CPT: 86335

**[BFTCC] Body Fluid Total Cells Counted**

**[BH4NCSF] TETRAHYDROBIOPTERIN/NEOPTERIN**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Special collection containers; contact Lab  
SPECIAL HANDLING: Must be in Lab Monday-Thursday by 2:00 pm  
SPECIMEN VOLUME: 0.5 mL each tube  
TEST INCLUDES: Tetrahydrobiopterin (BH4) and Neopterin  
TEST AVAILABILITY: Monday-Thursday only  
TURNAROUND TIME: 1 week  
OTHER NAMES: Tetrahydrobiopterin/neopterin  
CPT: 82542 x 2

**[BHENDNA] Bartonella henselae DNA (PCR)**

SPECIMEN REQUIRED: Whole blood at room temperature or Refrigerated CSF  
TUBE OR CONTAINER: Lavender (EDTA), Yellow (ACD) or Sterile container  
SPECIMEN VOLUME: 5 mL (whole blood)  
0.5 mL (CSF)  
MINIMUM VOLUME: 0.5 mL (whole blood)  
0.2 mL (CSF)  
TEST AVAILABILITY: Daily  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CLINICAL USE: Detects the presence of Bartonella sp. DNA  
CPT: 87471

**[BILAF] Amniotic Fld Bilirubin OD 450 Scan**

SPECIMEN REQUIRED: Amniotic fluid (refrigerated, frozen or room temperature)  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Centrifuge and transport immediately; Protect specimen from exposure to light  
Include weeks of gestation  
SPECIMEN VOLUME: 4 mL  
MINIMUM VOLUME: 3.5 mL  
TEST INCLUDES: Delta OD value at 450 nm  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 8 hours



REFERENCE RANGE: Varies with gestational age  
OTHER NAMES: Amniotic Fluid Bilirubin; Delta OD, Amniotic Scan;  
Liley Scan ; OD 450  
METHODOLOGY: Spectrophotometry  
CLINICAL USE: Evaluate cases of suspected maternal-fetal blood  
incompatibility, hemolytic disease of the newborn  
CPT: 82143

#### **[BILEACT] Total Bile Acids**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Patient should be fasting (8 hours)  
CAUSES FOR REJECTION: Plasma sample  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: Male: 0-1 year: Not established  
2-12 years: 5.6-27.6 umol/L  
>12 years: 3.8-20.9 umol/L  
Female: 0 days-1 year: Not established  
2-5 years: 7.5-40.4 umol/L  
6-50 years: 4.7-24.5 umol/L  
>50 years: 4.1-23.9 umol/L  
Pregnant female: 15-45 years: 3.7-14.5 umol/L  
OTHER NAMES: Glyco and Taurochenodeoxycholic Acid; Cholyglycine  
Bile salts  
METHODOLOGY: Enzymatic  
CLINICAL USE: Evaluate the enterohepatic cycle consisting of  
the biliary system, intestine, portal circulation,  
and hepatocytes  
CPT: 82239

#### **[BILEACTU] Urine Bile Acid**

SPECIMEN REQUIRED: Frozen urine (random)  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIMEN VOLUME: 4 tubes (24 mL)  
MINIMUM VOLUME: 1 tube (2 mL)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 weeks  
OTHER NAMES: Bile Salts urine  
METHODOLOGY: Mass Spectrometry (MS)  
CPT: 82239

#### **[BILEFR] BILE ACIDS FRACTIONATED**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)  
SPECIAL HANDLING: Patient should be fasting (8 hours); Separate  
serum & freeze within 2 hours of collection  
SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.3 mL

TEST INCLUDES: Cholic acid, Chenodeoxycholic acid, Ceoxycholic acid, Ursodeoxycholic acid and total bile acids

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-10 days

METHODOLOGY: High-pressure liquid chromatography/tandem mass spectrometry (HPLC/MS-MS)

CLINICAL USE: May be measured to investigate obstructive cholestasis in pregnancy; bile acids are required for cholesterol absorption, fat-soluble vitamin absorption, and to provide resistance to overgrowth of intestinal bacteria. Bile acid levels may be reduced or elevated due to various genetic defects.

CPT: 82542

### **[BILT] Total Bilirubin**

SPECIMEN REQUIRED: Refrigerated serum or plasma

TUBE OR CONTAINER: Light Green (Li heparin), Gold or Red

SPECIAL HANDLING: Protect specimen from light

Specimen Stability: 1 day-room temp

SPECIMEN VOLUME: Adult: 1.0 mL

Pediatric: 0.6 mL

MINIMUM VOLUME: Adult: 0.5 mL

Pediatric: 0.5 mL or 1/2 microtainer

TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours

REFERENCE RANGE: 0-30 day: 0.9 - 8.8 mg/dL

1 month-adult: 0.3 - 1.1 mg/dL

METHODOLOGY: Colorimetric Diazo

CLINICAL USE: Evaluate liver and biliary disease

CPT: 82247

### **[BILTC] Cord Blood Total Bilirubin**

### **[BIO] Biotin Level**

SPECIMEN REQUIRED: Frozen serum or plasma

TUBE OR CONTAINER: Red or Lavender (EDTA)

SPECIAL HANDLING: Do not collect in gel barrier tube

ORDERING MODULE: LAB

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-5 days

REFERENCE RANGE: 0.00 - 0.83 ng/mL

METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)

CPT: 84591

### **[BIOP] Urine Pterins**

SPECIMEN REQUIRED: Urine (random) or urine spot on PKU card  
TUBE OR CONTAINER: Sterile Urine container  
SPECIAL HANDLING: add 5mcg of Ascorbic acid as preservative.  
Protect from Light  
SPECIMEN VOLUME: 5ml  
MINIMUM VOLUME:  
TEST AVAILABILITY: Monday - Friday 0800-1700  
TURNAROUND TIME:  
REFERENCE RANGE:  
METHODOLOGY:  
CLINICAL USE:  
CPT: 82542

### **[BIOT] BIOTINIDASE DEFICIENCY**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate within 30 minutes of venipuncture;  
Do NOT use this test for biotin (vitamin B7)  
testing  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
OTHER NAMES: Biotinidase Deficiency; Multiple Carboxylase  
Deficiency, Late Onset  
METHODOLOGY: Determination of enzyme activity with  
biotin-4-aminobenzoic acid  
CLINICAL USE: Diagnosis of biotinidase deficiency. This test is  
appropriate for the confirmation of newborn  
screening positive biotinidase deficiency results  
CPT: 82261

### **[BIS] Bismuth Level**

SPECIMEN REQUIRED: Whole blood at room temperature (submit  
original unopened tube  
TUBE OR CONTAINER: Royal Blue (EDTA)  
Lavender (EDTA) will be temporarily accepted  
with a possible disclaimer due to shortage  
SPECIAL HANDLING: Please contact laboratory for correct tube  
SPECIMEN VOLUME: 7 mL  
MINIMUM VOLUME: 1.1 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Normal: METHODOLOGY: Inductively coupled plasma-mass  
spectrometry  
(ICP-MS)  
CLINICAL USE: Monitor exposure to bismuth  
CPT: 83018

### **[BISU] Urine Bismuth**

SPECIMEN REQUIRED: Urine (random or 24-hour) at room  
temperature

TUBE OR CONTAINER: Urine container  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1.1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Environmental exposure: 0.3-4.6 g/L  
METHODOLOGY: Inductively coupled plasma-mass spectrometry (ICP-MS)  
CLINICAL USE: Monitor exposure to bismuth  
CPT: 83018

**[BKVPCRB] BK Virus DNA Quantitative (PCR)**

SPECIMEN REQUIRED: Plasma or whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIAL HANDLING: Specimens at room temperature must be received at performing lab within 4 days of collection; Freeze if time exceeds 4 days  
SPECIMEN VOLUME: 5 mL (whole blood)  
2 mL (plasma)  
MINIMUM VOLUME: 3 mL (whole blood)  
1 mL (plasma)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Not Detected  
OTHER NAMES: Polyoma virus-blood  
METHODOLOGY: Reverse Transcription/Polymerase Chain Reaction (PCR-RT)  
CPT: 87799

**[BKVPCRUR] BK Virus DNA Quantitative (PCR)**

SPECIMEN REQUIRED: Urine at room temperature or frozen  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIAL HANDLING: Specimens at room temperature must be received at performing lab within 4 days of collection; Freeze if time exceeds 4 days  
SPECIMEN VOLUME: 1 tube (2 mL)  
MINIMUM VOLUME: 1 tube (1 mL)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Not Detected  
OTHER NAMES: Polyoma virus-urine  
METHODOLOGY: Reverse Transcription/Polymerase Chain Reaction (PCR-RT)  
CPT: 87799

**[BL] BETA-LACTAMASE TEST**

**[BLASTAB] AB BLASTOMYCES DERMATITIDIS**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-5 days  
METHODOLOGY: Complement Fixation (CF) & Immunodiffusion  
CPT: 86612 x 2

#### **[BMEPCR] BM ENGRAFTMENT BY PCR**

SPECIMEN REQUIRED: Whole blood or bone marrow at room temperature or refrigerated  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Refrigerate if > 1 day delay  
SPECIMEN VOLUME: 20 mL  
MINIMUM VOLUME: 10 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 2 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR) and Capillary Electrophoresis  
CPT: 81265 (1st time monitoring)

#### **[BMEXYFISH] BONE MARROW ENGRAFT-XY FISH**

SPECIMEN REQUIRED: Whole blood or bone marrow at room temperature or refrigerated  
TUBE OR CONTAINER: Dark Green (heparin)  
SPECIAL HANDLING: Refrigerate if > 1 day delay  
SPECIMEN VOLUME: 3-5 mL If WBC count is low additional volume may be necessary  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 5-7 days  
METHODOLOGY: Fluorescent in situ hybridization (FISH)  
CLINICAL USE: Determines percentages of male and female cells in peripheral blood or bone marrow of individuals transplanted with opposite-sex donor bone marrow  
CPT: 88377

#### **[BMFAILNGS] BONE MARROW FAIL SYNDROME NGS**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Gene sequencing of 59 genes associated with the most common genetics causes of bone marrow failure  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
METHODOLOGY: Next Generation (NextGen) Sequencing (NGS)  
CPT: 81216; 81405; 81406 x 4; 81408; 81479 x 52

#### **[BMP] Basic Metabolic Panel**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIMEN VOLUME: Adult: 2 mL  
Pediatric: 1 mL  
MINIMUM VOLUME: Adult: 1 mL  
Pediatric: 0.5 mL or 1/2 microtainer  
TEST INCLUDES: Sodium, potassium, chloride, carbon dioxide, calcium, BUN, creatinine, and glucose  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: See individual tests  
METHODOLOGY: See individual tests  
CPT: 80048

**[BMPR1A] JUVENILE POLYPOSIS (BMPR1A)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Juvenile Polyposis syndrome (JPS) via BMPR1A gene  
METHODOLOGY: Polymerase Chain Reaction (PCR)/Sequencing  
CPT: 81479

**[BOGLY] CDG: O-GLYCAN PROFILE & QUANT**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Dark Green (heparin)  
SPECIAL HANDLING: Refrigerate until time of shipment; Send within 24 hours of collection; If unable to ship whole blood within 24 hours, send frozen plasma  
SPECIMEN VOLUME: 5 mL (whole blood)  
2 mL (plasma)  
MINIMUM VOLUME: 1 mL (whole blood)  
1 mL (plasma)  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 10-14 days  
REFERENCE RANGE: T antigen: Sialyl T antigen:  $\geq 13$  umol  
T antigen/Sialyl T ratio:  $\geq 0.06$   
OTHER NAMES: Congenital Disorders of Glycosylation (CDG);  
METHODOLOGY: Matrix-Assisted Laser Desorption/Ionization-Time of flight/Time of flight (MALDI-TOF/TOF) and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
CPT: 82542; 83789; 84378

**[BOTTOX] Botulism Toxin Testing (CDC)**

**[BRAFTHY] BRAF V600E MUTATION**

SPECIMEN REQUIRED: Paraffin-embedded, formalin-fixed tissue block at room temperature  
TUBE OR CONTAINER: Paraffin block  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 10-14 days  
METHODOLOGY: Polymerase chain reaction (PCR)/Fluorescence Monitoring analysis  
CPT: 81210

#### **[BROM] Bromide Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Lavender (EDTA or Dark green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 days  
METHODOLOGY: Inductively coupled plasma mass spectrometry. (ICF)  
CLINICAL USE: Exposure monitoring  
CPT:

#### **[BRUCAGG] Brucella Agglutinins**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 Days  
REFERENCE RANGE: Negative < 1:20  
METHODOLOGY: Semi-quantitative Agglutination  
CPT: 86622

#### **[BRUCELG] Brucella IgG Antibody**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.4 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 Days  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Detection of IgG antibodies to *B. abortus*, *B. melitensis*, *B. canis* and *B. suis*  
CPT: 86622

#### **[BRUCELM] Brucella IgM Antibody**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.4 mL  
MINIMUM VOLUME: 0.2 mL

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Detection of IgM antibodies to Brucella abortus  
in human sera  
CPT: 86622

**[BSCL2] SEIPIN-RELATED DISORDER(BSCL2)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Seipin-related disorders via the BSCL2 gene  
METHODOLOGY: Bi-directional Sanger Sequencing  
CLINICAL USE: Confirmation of clinical diagnosis  
CPT: 81406

**[BTAAG] Bladder Tumor Associated Antigen**

SPECIMEN REQUIRED: Frozen urine  
TUBE OR CONTAINER: Urine container  
SPECIMEN VOLUME: 4 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-6 days  
REFERENCE RANGE: Negative: Antigen not detected  
METHODOLOGY: Qualitative immunoassay  
CLINICAL USE: Aid in the management of bladder cancer patients  
in conjunction with cystoscopy. Qualitative assay  
detects bladder tumor associated antigen in urine  
of persons diagnosed with bladder cancer.  
CPT: 86294

**[BTHAL] BETA-THALASSEMIA (HBB)**

SPECIMEN REQUIRED: Whole blood, amniotic fluid, CVS or buccal  
swab at room temperature  
TUBE OR CONTAINER: Lavender (EDTA), Yellow (ACD), sterile  
conical tube, T-25 flasks or buccal swab kit  
SPECIMEN VOLUME: 7 mL (whole blood)  
10 mL (amniotic fluid)  
20 mg CSF  
2 buccal swabs  
MINIMUM VOLUME: 3 mL (whole blood)  
5 mL (amniotic fluid)  
10 mg CSF  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 weeks  
OTHER NAMES: Cooley's Anemia; B-Thal



METHODOLOGY: Polymerase chain reaction (PCR)  
CLINICAL USE: Carrier testing, prenatal diagnosis, and prognosis to predict clinical severity for proper treatment of B-thalassemia  
CPT: 81404

**[BUFFY] Buffy Coat Smear**

SPECIMEN REQUIRED:  
TUBE OR CONTAINER:  
SPECIAL HANDLING:  
SPECIMEN VOLUME:  
MINIMUM VOLUME:  
PEDIATRIC TEST INFO:  
TEST INCLUDES:  
TEST AVAILABILITY:  
TURNAROUND TIME:  
REFERENCE RANGE:  
METHODOLOGY:  
REFLEX TEST INFORMATION:  
CLINICAL USE:  
CPT:

**[BUN] Blood Urea Nitrogen**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0-30 days: 2-19 mg/dL  
1 month-59 years: 7-18 mg/dL  
> 60 years: 8-22 mg/dL  
METHODOLOGY: Kinetic with Urease/Glutamate dehydrogenase  
CLINICAL USE: Aid in diagnosis and treatment of certain renal and metabolic diseases  
CPT:84520

**[BUNFL] Body Fluid Urea Nitrogen**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Kinetic with Urease/Glutamate dehydrogenase  
CPT: 84520

**[BUPIV] Bupivacaine Level**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark green (heparin)  
SPECIAL HANDLING: The use of serum separator is not recommended  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-9 days  
REFERENCE RANGE: 0.1 - 4.0 ug/mL  
OTHER NAMES: Levobupivacaine Marcaine; Sensorcaine  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

### **[BUPREN] BUPRENORPHINE & METABOLITE**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Do NOT collect in gel barrier tubes  
SPECIMEN VOLUME: 0.3 mL  
MINIMUM VOLUME: 0.1 mL  
TEST INCLUDES: Buprenorphine and metabolite, norbuprenorphine  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
OTHER NAMES: Buprenex, Free Buprenorphine, Subutex  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)  
CLINICAL USE: Monitor therapeutic levels and evaluate toxicity  
CPT: 80299

### **[BUSUL] Busulfan Level**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Dark Green (Sodium heparin)  
SPECIAL HANDLING: Specimens must be drawn as described below:  
1st specimen: immediately after termination of a 2-hour IV infusion of busulfan  
2nd specimen: 1 hour after the infusion is terminated  
3rd specimen: 2 hours after the infusion is terminated  
4th specimen: 4 hours after the infusion is terminated  
Place specimen on ice immediately after collection; Label each tube with exact collection time  
Send Mayo Information sheet with specimens

SPECIMEN VOLUME: 1 mL (each collection)  
MINIMUM VOLUME: 0.5 mL (each collection)  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: AREA UNDER THE CURVE  
900-1,500 mcmol\*minute  
CLEARANCE

2.1-3.5 (mL/minute)/kg

OTHER NAMES: Myleran; Bulsulfex

METHODOLOGY: Gas chromatography-Mass Spectrometry (GC-MS)

CLINICAL USE: Useful for guiding dosage adjustments to achieve complete bone marrow ablation while minimizing dose-dependent toxicity

CPT: 80299 (each collection)

#### **[BWS] BECKWITH-WIEDEMANN METHYLATION**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)

SPECIAL HANDLING: Must arrive at performing lab within 3 days of collection;

SPECIMEN VOLUME: 3 mL

MINIMUM VOLUME: 1 mL

TEST INCLUDES: Methylation of H19 gene (DMR1) and LIT1 gene (DMR2)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-3 weeks

METHODOLOGY: Methylation-Sensitive Multiplex Ligation-Dependent Probe Amplification (MLPA)

CLINICAL USE: Confirmation of a clinical diagnosis of BWS;

Assessment of prenatal cases

CPT: 81401 x 2

#### **[C1EFUNC] Functional C1 Esterase Inhibitor**

SPECIMEN REQUIRED: Frozen serum or plasma

TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)

SPECIMEN VOLUME: 0.5 mL

MINIMUM VOLUME: 0.1 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4 days

REFERENCE RANGE: % of mean normal activity

Abnormal: < 41%

Equivocal: 41% - 67%

Normal: > 67%

OTHER NAMES: C1 Esterase Inhibitor; C1 Inactivator; C1 Inhibitor; Hereditary Angioneurotic Edema Test

METHODOLOGY: Enzyme immunoassay (EIA)

CPT: 86161

#### **[C1EST] C1 Esterase Inhibitor**

SPECIMEN REQUIRED: Serum at room temperature

TUBE OR CONTAINER: Red or Gold

SPECIAL HANDLING: Separate serum from cells within 1 hour of collection

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: 21-39 mg/dL  
OTHER NAMES: C1 Esterase Inhibitor; C1 Inactivator; C1 Inhibitor; Hereditary Angioneurotic Edema Test  
METHODOLOGY: Immunologic, quantitative  
CLINICAL USE: C1 esterase inhibitor is decreased in hereditary angioneurotic edema; decrease may be functional or quantitative  
CPT: 86160

#### **[C1Q] C1q Binding Immune Complex Detect**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 days  
REFERENCE RANGE: < 4.4 ug Eq/mL  
OTHER NAMES: C1q Binding; C1q Immune Complexes; Circulating Immune Complexes  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Monitor immune complex diseases and progress of some malignancies  
CPT: 86332

#### **[C3FLD] Fluid Complement C3**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: Plastic transport tube  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Not established  
OTHER NAMES: C3 Body Fluid  
METHODOLOGY: Immunologic  
CLINICAL USE: Detect individuals with inborn deficiency of this factor or those with immunologic disease in whom complement is consumed at an increased rate  
CPT: 86160

#### **[C3NEFS] COMPL C3 NEPHRITIC FACTORS**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red-no gel  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 weeks  
METHODOLOGY: Immunoelectrophoresis (IFE) and Enzyme analysis

#### **[C4FLD] Fluid Complement C4**

SPECIMEN REQUIRED: Refrigerated body fluid

TUBE OR CONTAINER: Plastic transport tube  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Not established  
OTHER NAMES: C4 Body Fluid  
METHODOLOGY: Immunologic  
CLINICAL USE: Detect individuals with inborn deficiency of this factor or those with immunologic disease in whom complement is consumed at an increased rate  
CPT: 86160

#### **[C9ORF72] ALS VIA C9orf72 REPEAT EXPANS**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Amyotrophic Lateral Sclerosis via the C9orf72 gene hexanucleotide repeat expansion  
METHODOLOGY: Combination Of Repeat-Primed PCR and Fluorescent Fragment-Length Assay  
CPT: 81479

#### **[CA] Calcium Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0-9 days: 7.7-10.5 mg/dL  
10 days-1 year: 9.1-11.1 mg/dL  
2-11 years: 8.9-10.9 mg/dL  
12-18 years: 8.5-10.3 mg/dL  
> 18 years: 8.7-10.1 mg/dL  
METHODOLOGY: NM-BAPTA  
CLINICAL USE: Aid in diagnosis and treatment of parathyroid disease, a variety of bone diseases, chronic renal disease and tetany  
CPT: 82310

#### **[CA125] CA 125 Antigen**

SPECIMEN REQUIRED: Refrigerated serum/plasma  
TUBE OR CONTAINER: Gold, Red or Lt Green  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 1 day  
REFERENCE RANGE: < 38.1 U/mL  
OTHER NAMES: Cancer Antigen (CA) 125  
METHODOLOGY: Chemiluminescent  
CLINICAL USE: Tumor marker for monitoring disease progression in nonmucinous epithelial neoplasms of the ovary  
CPT: 86304

**[CA125FLD] Body Fluid CA 125 Antigen**

SPECIMEN REQUIRED: Frozen body fluid  
TUBE OR CONTAINER: Sterile tube  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: None established  
OTHER NAMES: Cancer Antigen (CA) 125, Body Fluid  
METHODOLOGY: Electrochemiluminescent Immunoassay  
CPT: 86304

**[CA15] CA 15-3 Antigen**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold or Light Green (heparin)  
SPECIAL HANDLING: Stable Room Temp 48 hrs, Refrigerated 5 days  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.8 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: < 25.0 U/mL  
OTHER NAMES: Cancer Antigen (CA) 15-3  
METHODOLOGY: Chemiluminescent  
CLINICAL USE: Monitor patients with systemic recurrence of breast carcinoma after diagnosis and initial therapy  
CPT: 86300

**[CA19] CA 19-9 Antigen**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold or Light Green (heparin)  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.8 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: < 25.0 U/mL  
OTHER NAMES: Cancer Antigen (CA) 19-9  
METHODOLOGY: Chemiluminescence  
CLINICAL USE: Monitor gastrointestinal, pancreatic, liver and colorectal malignancies  
CPT: 86301

**[CA19FLD] Body Fluid CA 19-9 Antigen**

SPECIMEN REQUIRED: Frozen body fluid  
TUBE OR CONTAINER: Sterile tube  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: None established  
OTHER NAMES: Cancer Antigen (CA) 19-9, Body Fluid  
METHODOLOGY: Chemiluminescence  
CPT: 86301

**[CA27] CA 27.29**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red, Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.8 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-3 days  
REFERENCE RANGE: < 3.5-38.6 U/mL  
OTHER NAMES: Cancer Antigen (CA) 27.29; Truquant BR  
METHODOLOGY: Immunochemiluminescence assay  
CLINICAL USE: Manage patients with metastatic carcinoma of the breast  
CPT: 86300

**[CAD] Cadmium**

SPECIMEN REQUIRED: Whole blood at room temperature (submit original unopened tube)  
TUBE OR CONTAINER: Royal Blue (EDTA)  
Lavender (EDTA) will temporarily be accepted due to shortage, but may result with a result disclaimer  
SPECIAL HANDLING: Please contact laboratory for correct tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Environmental exposure:  
nonsmoker: 0.3-1.2 g/L  
smoker: 0.6-3.9 g/L  
Occupational exposure:  
OSHA Cadmium Standard: 5.0 g/L; BEI  
(timing not critical): 5.0 g/L  
METHODOLOGY: Inductively coupled plasma-mass spectrometry (IPC-MS)  
CLINICAL USE: Monitor recent or acute exposure to cadmium  
CPT: 82300

**[CADDNA] CADASIL DNA (NOTCH3)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 weeks  
REFERENCE RANGE: No mutation detected  
METHODOLOGY: Bi-directional DNA Sanger sequencing  
CLINICAL USE: Detects mutation in the Notch3 gene  
CPT: 81479

#### **[CADU] CADMIUM URINE**

SPECIMEN REQUIRED: Urine at room temperature (random or 24 hour)  
TUBE OR CONTAINER: Plastic urine container  
SPECIAL HANDLING: Collect 24 hour urine in a "P" container (no preservative)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2.5 mL  
TEST INCLUDES: Cadmium, urine; creatinine, urine; cadmium:creatinine ratio  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Environmental exposure: Occupational exposure: OSHA Cadmium Standard:  
3.0 ug/g creatinine  
BEI: 5.0 ug/g creatinine  
METHODOLOGY: Inductively coupled plasma-mass spectrometry (ICP-MS)  
CLINICAL INFORMATION: Monitor exposure to cadmium  
CPT: 82300; 82570

#### **[CAF] Caffeine Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Lavender (EDTA) or Dark Green (heparin)  
SPECIAL HANDLING: Do not collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-3 days  
REFERENCE RANGE: Therapeutic: 3.0-15.0 ug/mL  
Neonatal apnea: 8-14 ug/mL  
Infant ( Potentially toxic: > 50.0 ug/mL  
OTHER NAMES: Cafcit Injection (Caffeine Citrate); Durvitan  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)  
CLINICAL USE: Monitor caffeine concentration in newborns receiving theophylline or caffeine  
CPT: 80155

#### **[CAFLD] Body Fluid Calcium**

SPECIMEN REQUIRED: Refrigerated body fluid



TUBE OR CONTAINER: Sterile tube  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: NM-BAPTA  
CPT: 82310

### **[CAION] Ionized Calcium**

SPECIMEN REQUIRED: Whole blood on ice  
TUBE OR CONTAINER: Unopened Light Green (heparin)  
SPECIAL HANDLING: Do NOT open tube  
Specimen WILL be rejected if specimen is not  
not received anaerobically  
Do not draw EDTA (will be rejected)  
MUST BE RAN WITHIN 30 MINUTES  
collection time  
SPECIMEN VOLUME: Adult: 2 mL  
Pediatric: 1 mL or 1 full microtainer  
MINIMUM VOLUME: Adult: 1 mL  
Pediatric: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 1.12-1.32 mmol/L  
OTHER NAMES: Calcium Free; Calcium Unbound  
METHODOLOGY: Ion-selective electrode (ISE)  
CLINICAL USE: Evaluate nonbound calcium, calcium metabolism,  
physiologically active calcium fraction, hyper-  
parathyroidism, ectopic hyperparathyroidism  
CPT: 82330

### **[CALC] Calcitonin Level**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Collect specimen from a fasting patient;  
Spin in refrigerated centrifuge; separate  
and freeze immediately  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL (this volume does not allow for repeat  
testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Male: 0.0 - 8.4 pg/mL  
Female: 0.0 - 5.0 pg/mL  
OTHER NAMES: Thyrocalcitonin  
METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: Detection and confirmation of C-cell hyperplasia  
as well as tumor marker for diagnosis & management  
of medullary carcinoma of the thyroid gland

CPT: 82308

### **[CALCO] Calcofluor Prep**

SPECIMEN REQUIRED: Clinical specimen at room temperature  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Indicate source of specimen  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
CLINICAL USE: Determine the presence or absence of fungal forms  
CPT: 87205

### **[CALPRO] Stool Calprotectin**

SPECIMEN REQUIRED: Frozen stool  
TUBE OR CONTAINER: Plastic container  
SPECIAL HANDLING: Can remain refrigerated for up to 4 days  
SPECIMEN VOLUME: 1 gram  
MINIMUM VOLUME: 0.5 gram  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-6 days  
REFERENCE RANGE: >50-120 ug/g = Borderline  
Re-evaluate in 4 to 6 weeks  
>120 ug/g = Abnormal  
Repeat as clinically indicated  
METHODOLOGY: Enzyme-linked Immunosorbent Assay (ELISA)  
CLINICAL USE: Aid in diagnosis of inflammatory bowel disease (IBD)  
CPT: 83993

### **[CALR] CALRETICULIN (CALR) MUTATION**

SPECIMEN REQUIRED: Refrigerated whole blood or bone marrow  
Use cold pack to transport  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Ship same day as collected whenever possible; specimens < 72 hours old is preferred  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 6-8 days  
METHODOLOGY: Bi-directional sequencing of exon 9 of the CALR (calreticulin) gene with fragment length analysis for enhanced detection of low levels of insertion/deletion mutations.  
CPT: 81479

### **[CAMPYAB] Campylobacter jejuni IgG Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
REFERENCE RANGE: < 0.90  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Markedly elevated levels of antibodies recognizing *C. jejuni* typically indicate recent or ongoing infection, even though stool cultures may be negative  
CPT: 86625

#### **[CANCERPAN] HEREDITARY CANCER PANEL**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Sequencing of ALK, APC, ATM, BMPR1A, BRCA1, BRCA2, BRIP1, CDC73, CDH1, CDKN1C, CDKN2A, CHEK2, EPCAM, FH, FLCN, GPC3, MAX, MEN1, MET, MLH1, MSH2, MSH6, MUTYH, NBN, NF2, PALB2, PHOX2B, PMS2, PRKAR1A, PTCH1, PTEN, RAD51C, RAD51D, RET, SDHAF2, SDHB, SDHC, SDHD, SMAD4, STK11, SUFU, TMMEM127, TP53, VHL, WT1  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 12 weeks  
METHODOLOGY: Next Generation sequencing (NextGen)  
CPT: 81201; 81204; 81216; 81292; 81295; 81298; 81317; 81321; 81403; 81404; 81405; 81406; 81408

#### **[CANDAB] Candida albicans Antibody**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Negative  
METHODOLOGY: Double immunodiffusion (DID)  
CLINICAL USE: Diagnose systemic candidiasis  
CPT: 86628

#### **[CARB] Carbamazepine (Tegretol) Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Indicate whether level is random, peak, or trough  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 3.9-11.8 ug/mL  
OTHER NAMES: Carbatrol; Tegretol

METHODOLOGY: KIMS

CLINICAL USE: Monitor for compliance, efficiency and toxicity

CPT: 80156

### **[CARBEPO] Carbamazepine-10,11-Epoxyde**

SPECIMEN REQUIRED: Serum or plasma at room temperature

TUBE OR CONTAINER: Red or Dark Green (heparin)

SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.6 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: Suggested range: 0.4-4.0 ug/mL

OTHER NAMES: Tegretol metabolite

METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)

CLINICAL USE: Therapeutic drug monitoring

CPT: 80299

### **[CARBU] Urine Carbohydrate**

SPECIMEN REQUIRED: Frozen urine (random)

TUBE OR CONTAINER: Urine container

SPECIAL HANDLING: Early morning specimen preferred

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-3 days

REFERENCE RANGE: Negative

If positive, carbohydrate is identified

METHODOLOGY: Thin-Layer Chromatography, Qualitative

CLINICAL USE: Screen disorders with increased excretion of fructose, glucose, galactose, disaccharides, and oligosaccharides, as well as succinylpurines

CPT: 84377

### **[CARDGAM] ANTICARDIOLIPIN PROFILE G,A,M**

SPECIMEN REQUIRED: Refrigerated serum

TUBE OR CONTAINER: Red or Gold

SPECIAL HANDLING: Specimens referred to OMRF by physician request only

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST INCLUDES: IgG, IgA, and IgM anticardiolipin antibodies

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-3 days

REFERENCE RANGE: Normal: 0-12 APL

0-10 GPL

0-9 MPL

OTHER NAMES: Antiphospholipids; APL; Cardiolipin Ab; ACA

METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)

CLINICAL USE: Aid in diagnosis of antiphospholipid antibody

syndrome  
CPT: 86147 x 3

**[CARNCARD] Carnitine**

SPECIMEN REQUIRED: Dried blood spots at room temperature  
TUBE OR CONTAINER: Filter paper card  
SPECIMEN VOLUME: 3 dried blood spots  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
METHODOLOGY: Mass Spectrometry  
CPT: 82379

**[CARO] Carotene**

SPECIMEN REQUIRED: Room temperature serum, protected from light  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Patient should be fasting (12 hours) and receive no vitamin supplement or foods containing vitamin A or carotene for 24 hrs before testing in patient ages 0-6 months, 48 hrs for older groups (6 months or older)  
Protect specimen from light  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 3-91 ug/dL  
OTHER NAMES: Beta-carotene  
METHODOLOGY: High-pressure liquid chromatography (HPLC)  
CLINICAL USE: Confirm the diagnosis of carotenoderma; detect fat malabsorption; depressed carotene levels may be found in cases of steatorrhea  
CPT: 82380

**[CASPR2] CONTACTIN-ASSOC PROT-2 IGG**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Centrifuge and separate within 2 hours of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-8 days  
REFERENCE RANGE: < 1:10 Negative  
METHODOLOGY: Semi-Quantitative Indirect Fluorescent Antibody  
REFLEX TEST INFORMATION: If CASPR2 antibody IgG is positive, CASPR2 antibody IgG titer will be added at an additional charge  
CLINICAL USE: Aids in diagnosis of Contactin Associated Protein 2 (CASPR2) Antibody disorders associated with acquired neuromyotonia, limbic encephalitis, painful neuropathy, and Morvan syndrome

CPT: 86255

**[CATALDIS] CATALASE DISTRIBUTION FIBROBL**

SPECIMEN REQUIRED: Fibroblasts at room temperature  
TUBE OR CONTAINER: T-25 flasks  
SPECIMEN VOLUME: 2 flasks  
MINIMUM VOLUME: 1 flask  
TEST AVAILABILITY: Daily  
CPT: 82657

**[CATM] UR CALCIUM TIMED**

SPECIMEN REQUIRED: Refrigerated aliquot of 24-hour urine  
TUBE OR CONTAINER: Plastic urine container  
SPECIAL HANDLING: Collect 24-hour urine in "P" or "D" Jug  
Urine collected in P Jug may require  
adjustment by lab  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE:  
100-300 mg/24hrs based on Average Calcium intake  
METHODOLOGY: NM-BAPTA  
CLINICAL USE: Reflects intake rates of intestinal calcium  
absorption, bone resorption, and renal loss  
CPT: 82340

**[CAUR] Urine Random Calcium**

SPECIMEN REQUIRED: Refrigerated random urine  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIAL HANDLING: Adjust pH to < 2 with 6N HCl  
SPECIMEN VOLUME: 1 tube (3 mL)  
MINIMUM VOLUME: 1 tube (1 mL)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: NM-BAPTA  
CPT: 82310

**[CBC] Complete Blood Count**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Mix immediately to avoid platelet clumping  
Refrigerate if specimen is held past 24 hours  
Specimen must not be hemolyzed, clotted, or  
diluted with IV fluid  
Clotted specimens WILL be rejected  
4.5 mL tubes requires at least 2.0 mL blood  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 2 mL

EDTA MICROTAINER Minimum: 250 uL  
TEST INCLUDES: Hematocrit; hemoglobin; MCV; MCH; MCHC; RDW;  
percentage and absolute differential counts;  
platelet count; red and white blood cell counts  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-4 hours  
METHODOLOGY: Automated cell counter  
CLINICAL USE: Evaluate anemia, leukemia, reaction to inflam-  
mation and infections, peripheral blood cellular  
characteristics, state of hydration & dehydration,  
polycythemia, hemolytic disease of the newborn,  
inherited disorders of red cells, white cells, and  
platelets; manage chemotherapy decisions;  
determine qualitative and quantitative variations  
in white cell numbers and morphology, morphology  
of red cells and platelet evaluation.  
CPT: 85027

**[CCP] Cyclic Citrullinated Peptide IgG Ab**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-7 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Aids in the diagnosis of rheumatoid arthritis when  
considered in conjunction with other laboratory  
and clinical findings  
CPT: 86200

**[CD46] CD46**

**[CD4RTE] CD4 T-CELL RECENT THYMIC EMIG**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Specimen must be received in Laboratory by  
1:30 pm, Monday through Thursday only;  
Must be received at performing lab within 24  
hours of collection  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 3-5 days  
OTHER NAMES:  
METHODOLOGY: Flow Cytometry  
CPT: 86356

**[CDG] CARBOHYD DEF TRANSFERRIN-CDG**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: Mono-oligosaccharide/di-oligosaccharide, a-oligosaccharide/di-oligosaccharide, Transferrin Tri-sialo/Di-oligo Ratio, Apo CIII-1/Apo CIII-2 Ratio and Apo CIII-0/Apo CIII-2 Ratio  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-11 days  
REFERENCE RANGE: Transferrin Mono-oligo/Di-oligo: < or =0.06  
Transferrin A-oligo/Di-oligo: < or =0.011  
Transferrin Tri-sialo/Di-oligo: < or =0.05  
Apo CIII-1/Apo CIII-2 Ratio: < or =2.91  
Apo CIII-0/Apo CIII-2 Ratio: < or =0.48  
OTHER NAMES: Congenital Disorders of Glycosylation (CDG); Transferrin Isoforms  
METHODOLOGY: Affinity Chromatography/Mass Spectrometry (MS)  
CLINICAL USE: Screening for congenital disorders of glycosylation  
CPT: 82373

#### **[CDIFF] Clostridium Difficile Toxins**

SPECIMEN REQUIRED: Loose stool in a leakproof specimen cup without transport media or preservatives. If unable to submit immediately to the OUMC Lab, refrigerate (4 degrees C) for no more than 72 hours. Rectal swabs and formed stool specimens will be rejected.

TUBE OR CONTAINER: Screw cap container.

SPECIAL HANDLING: Test will not be performed on formed stool or swabs, on patients less than 1 year of age, or on patients with a previous positive Toxin B assay in the last 30 days.

TEST AVAILABILITY: Daily

METHODOLOGY: PCR (Polymerase Chain Reaction)

CLINICAL INFORMATION: Aid in diagnosis of antibiotic related colitis. The C. difficile PCR has a reported negative predictive value of greater than 98%. Therefore, the test will only be performed once every 7 days when C. difficile-associated colitis is strongly suspected. Otherwise, alternate causes of diarrhea should be sought.

#### **[CDKN1C] BWS VIA CDKN1C SEQUENCING**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 3 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-6 weeks

OTHER NAMES: Beckwith-Wiedemann Syndrome (BWS) via CDKN1C gene



METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81479

**[CEA] Carcinoembryonic Antigen**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Lt Green (heparin), Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: < 5 U/mL  
OTHER NAMES: CEA  
METHODOLOGY: Chemiluminescence  
CLINICAL USE: Tumor marker which is most useful as a chemical  
chemical monitor of recurrence and therapy in  
patients with gastrointestinal carcinomas  
CPT: 82378

**[CEAFLD] Body Fluid Carcinoembryonic Antigen**

SPECIMEN REQUIRED: Unspun body fluid at room temperature  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Specify type of fluid

SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: None established  
METHODOLOGY: Chemiluminescence  
CPT: 82378

**[CEBPA] CEBPA MUTATION ANALYSIS**

SPECIMEN REQUIRED: Whole blood or bone marrow at room  
temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Dark green (heparin)  
SPECIMEN VOLUME: 5 mL whole blood  
2 mL bone marrow  
MINIMUM VOLUME: 3 mL whole blood  
1 mL bone marrow  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 10-12 days  
METHODOLOGY: Polymerase chain reaction (PCR); direct  
sequencing; capillary electrophoresis  
CPT: 81403

**[CEFT] Ceftriaxone Level**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Collect within 15 minutes of next dose for the  
TROUGH level; Collect within 15-30 minutes

after the end of IV infusion or 45-60 minutes  
after an IM injection or 90 minutes after oral  
intake for the PEAK level  
Do NOT use gel barrier tubes  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-7 days  
OTHER NAMES: Rocephin  
METHODOLOGY: Bioassay (BA)  
CLINICAL USE: Monitor therapeutic drug level  
CPT: 80299

#### **[CEFTA] Ceftazidime Level**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red-no gel  
SPECIAL HANDLING: Aseptically remove 2 mL serum to a sterile  
tube (ARUP supply #43115) and freeze.  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 Days  
METHODOLOGY: Bioassay  
CLINICAL USE: Monitor levels of antimicrobial drug, ceftazidime.  
CPT: 80299

#### **[CELIAC] CELIAC PANEL**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 2.5 mL  
TEST INCLUDES: Deamidated gliadin Peptide IgG/IgA; Anti-  
endomysial IgA; Anti-tissue transglutaminase  
IgG/IgA; total IgA  
TURNAROUND TIME: 2-5 days  
METHODOLOGY: Enzyme immunoassay (EIA); Indirect  
Immunofluorescence  
CLINICAL USE: Helps to identify patients with celiac disease  
(gluten sensitivity) and aid in treatment  
monitoring  
CPT: 83520 x 2; 86255; 82784

#### **[CENTRAB] Anti-Centromere Antibody**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
METHODOLOGY: Multiplex bead flow cytometry

CLINICAL USE: Aid in the assessment of scleroderma  
CPT: 86039

### **[CEPHAL] Cephalexin Level**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Collect within 15 minutes of next dose for the TROUGH level; Collect within 15-30 minutes after the end of IV infusion or 45-60 minutes after an IM injection or 90 minutes after oral intake for the PEAK level  
Do NOT use gel barrier tubes  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: Peak: 0.5-18 ug/mL  
No trough therapeutic range established  
OTHER NAMES: Biocef; Keflex; Keftab; Panixine; Zartan  
METHODOLOGY: BioAssay  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

### **[CER] Ceruloplasmin**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red, Gold or Green (heparin)  
SPECIAL HANDLING: Keep specimen on ice while clotting unless it can be separated within 45 minutes of collection. Prolonged storage at room temperature decreases level  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: Male: 0 - 30 days Not established  
1 - 6 month 11.0-31.0 mg/dL  
7 month - 12 year 18.0-35.0 mg/dL  
>12 year 16.0-31.0 mg/dL  
Female: 0 - 30 days Not established  
1 - 6 month 11.0-31.0 mg/dL  
>6 month 19.0-39.0 mg/dL  
METHODOLOGY: Immunologic  
CLINICAL USE: Evaluation of chronic active hepatitis, cirrhosis and other liver diseases  
CPT: 82390

### **[CFHR1-3MLPA] MLPA SCREEN (CFHR1-CFHR3)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 4 mL

MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 months  
METHODOLOGY: Multiplex Ligation-Dependent Probe Amplification  
CLINICAL USE: Used to detect presence of NHAR event that results  
in deletion of CFHR3-CFHR1  
CPT: 81405

#### **[CFMUT] CYSTIC FIBROSIS MUTATION SCRIN**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL (adults)  
1 mL (pediatrics)  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 7-10 days  
REFERENCE RANGE: By report  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81220

#### **[CFTDNGS] CONG FIBER TYPE DISPROPOR-CFTD**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 2 mL  
TEST INCLUDES: Sequencing of ACTA1, MYH7, RYR1, SEPN1, TPM2 and  
TPM3 genes  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 months  
METHODOLOGY: Next Generation Sequencing (NGS)  
CPT: 81407; 81408; 81479 x 4

#### **[CFTRSEQ] PANCREATITIS (CFTR) SEQUENCING**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
METHODOLOGY: Sequencing analysis of entire coding region  
CPT: 81223

#### **[CH] CONGENITAL HYPERINSULINISM**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Gene sequencing of ABCC8, GCK, GLUD1, HADH,  
HNF1A, HNF4A, KCNJ11, SLC16A1 and UCP2,  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-7 weeks  
OTHER NAMES: Familial Hyperinsulinism  
METHODOLOGY: Next-Generation (NextGen) sequencing (NGS)  
CPT: 81403; 81405; 81406 x 3; 81407; 81479 x 3

#### **[CH50] Total Complement (CH50)**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-7 days  
REFERENCE RANGE: 40 - 70 U/mL  
OTHER NAMES: Total Hemolytic Complement  
METHODOLOGY: Quantitative functional hemolysis by spectrophotometry  
CLINICAL USE: Evaluate and follow up SLE patient's response to therapy; may predict disease flare in SLE; screen for complement component deficiency; evaluate complement activity in cases of immune complex disease, glomerulonephritis, rheumatoid arthritis, SBE, cryoglobulinemia. The CH50 assay mainly evaluates the classical pathway  
CPT: 86162

#### **[CH50FLD] Body Fluid Total Complement**

SPECIMEN REQUIRED: Frozen body fluid  
TUBE OR CONTAINER: Plastic transfer tube  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.8 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-8 days  
REFERENCE RANGE: None established  
METHODOLOGY: Microparticle enzyme immunoassay (MEIA)  
CPT: 86162

#### **[CHARCOT] Charcot-Leyden Crystals**

SPECIMEN REQUIRED: Submit raw stool or feces preserved for O&P exam  
TEST AVAILABILITY: Monday-Friday  
NORMAL TEST VALUES: None detected  
METHODOLOGY: Microscopic exam

#### **[CHARGE] CHARGE SYNDROME (CHD7 GENE)**

SPECIMEN REQUIRED: Whole blood or buccal swab at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or swab  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-6 weeks  
METHODOLOGY: Sequencing of entire coding region  
CPT: 81407

**[CHIKPCR] Chikungunya Virus (PCR)**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Not Detected  
METHODOLOGY: Real-Time Polymerase Chain Reaction (RT-PCR)  
CPT: 87798

**[CHITOT] Chitotriosidase**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or gold  
SPECIAL HANDLING: Time-sensitive; specimens must be received within 4 days of specimen collection. In warm weather, ship with cold packs.  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8-14 days  
METHODOLOGY: Fluorometric Enzyme Assay  
CLINICAL USE: Useful in monitoring treatment of Gaucher disease  
CPT: 84999

**[CHLOR] Random Chloramphenicol Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube;  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: 10.0 - 20.0 ug/mL  
OTHER NAMES: Chloromycetin  
METHODOLOGY: High Performance Liquid Chromatography with Ultraviolet Detection (HPLC-UV)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 82415

**[CHLPPCR] Chlamydia pneumoniae DNA (PCR)**

SPECIMEN REQUIRED: Throat or nasopharyngeal (NP) swab, bronchial washings or bronchoalveolar lavage (BAL), or NP wash/aspirate at room temperature  
TUBE OR CONTAINER: Universal transport media (swab) or sterile

container

SPECIMEN VOLUME: One swab or 1 mL bronchial washings, BAL, or NP wash/aspirate

MINIMUM VOLUME: One swab or 0.2 mL bronchial washings, BAL, or NP wash/aspirate

TEST AVAILABILITY: Daily

TURNAROUND TIME:

METHODOLOGY: Real-time polymerase chain reaction (PCR)

CLINICAL USE: Aid in diagnosis of Chlamydia (Chlamydoiphilia) pneumoniae infection

CPT: 87486

### **[CHOL] Cholesterol Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum

TUBE OR CONTAINER: Light Green (heparin) or Gold

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours

REFERENCE RANGE: 3-17 years: < 170 mg/dL

> 18 years: < 200 mg/dL

METHODOLOGY: Enzymatic Colorimetric

CLINICAL USE: Evaluate risk of coronary arterial occlusion and arterosclerosis

CPT: 82465

### **[CHOL8-9] 8(9)-CHOLESTEROL**

SPECIMEN REQUIRED: Whole blood at room temperature

Other acceptable specimen: Frozen plasma

TUBE OR CONTAINER: Lavender (EDTA) or Green (heparin)

SPECIMEN VOLUME: 5 mL (whole blood)

1 mL (plasma)

MINIMUM VOLUME: 2 mL (whole blood)

0.5 mL (plasma)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 5-8 days

METHODOLOGY: Gas Chromatography/Mass Spectrometry (GC/MS)

CPT: 82542

### **[CHOLEST] Cholestanol**

SPECIMEN REQUIRED: Whole blood at room temperature

Other acceptable specimen: Frozen plasma

TUBE OR CONTAINER: Lavender (EDTA) or Green (heparin)

SPECIMEN VOLUME: 5 mL (whole blood)

1 mL (plasma)

MINIMUM VOLUME: 2 mL (whole blood)

0.5 mL (plasma)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 5-8 days

METHODOLOGY: Gas Chromatography/Mass Spectrometry (GC/MS)

CPT: 82542

**[CHOLIN] Serum Cholinesterase**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate serum from red cells immediately after clotting (30 minutes)  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Age specific  
METHODOLOGY: Spectrophotometry (Ellman) - kinetic  
CLINICAL USE: Evaluate pre-operative patients for succinylcholine anesthetic sensitivity, genetic or secondary to insecticide exposure  
CPT: 82480

**[CHOLINR] RBC Cholinesterase**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Refrigerate entire sample; do not separate. Stable in whole blood for at least 48 hours when refrigerated at 2 C to 8 C  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: 5300-10,000 IU/L  
OTHER NAMES: Acetylcholinesterase, RBC; Cholinesterase I; True Cholinesterase  
METHODOLOGY: Spectrophotometry (Ellman) - kinetic  
CLINICAL USE: Diagnosis of organophosphate & carbamate toxicity and to detect atypical forms of the enzyme  
CPT: 82482

**[CHOLPC] Pericardial Fluid Cholesterol**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: A fasting specimen (12-14 hours or fasting after last meal) is recommended. Random specimens are acceptable  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic, colorimetric  
CPT: 84311



**[CHOLPL] Pleural Fluid Cholesterol**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: A fasting specimen (12-14 hours or fasting after last meal) is recommended. Random specimens are acceptable  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Timed endpoint  
CPT: 84311

**[CHOLPT] Peritoneal Fluid Cholesterol**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: A fasting specimen (12-14 hours or fasting after last meal) is recommended. Random specimens are acceptable  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Timed endpoint  
CPT: 84311

**[CHOLSY] Synovial Fluid Cholesterol**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: A fasting specimen (12-14 hours or fasting after last meal) is recommended. Random specimens are acceptable  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Timed endpoint  
CPT: 84311

**[CHROM] Chromium Level**

SPECIMEN REQUIRED: Plasma at room temperature in a certified metal-free plastic transport tube  
TUBE OR CONTAINER: Royal Blue (EDTA)  
Lavender (EDTA) will temporarily be accepted due to shortage, but may result with a result disclaimer

SPECIAL HANDLING: Please contact laboratory for correct tube;  
Spin and separate immediately after  
collection into a metal free transfer tube  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 days  
REFERENCE RANGE: Environmental exposure: 0.1-2.1 g/L  
METHODOLOGY: Inductively coupled plasma-mass spectrometry  
(ICP-MS)  
CLINICAL USE: Monitor industrial exposure  
CPT: 82495

#### **[CHROMBLD] CHROMOSOME BLOOD (KARYOTYPE)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark green (heparin)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL (adults)  
1.5 mL (pediatrics)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 weeks  
REFERENCE RANGE: By report  
METHODOLOGY: Chromosome analysis of 20 metaphases with  
preparation and analysis of multiple karyotypes  
CLINICAL USE: Evaluate congenital malformations and suspected  
chromosomal disorders  
CPT: 88262; 88230

#### **[CHROMBM] CHROMOSOME BONE MAR (KAROTYPE)**

SPECIMEN REQUIRED: Bone marrow at room temperature  
TUBE OR CONTAINER: Dark green (heparin)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL (adults)  
1.5 mL (pediatrics)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 weeks  
REFERENCE RANGE: By report  
CLINICAL USE: Identify specific chromosomal abnormalities  
associated with myelodysplasia, chronic and acute  
leukemia and lymphoma  
CPT: 88237; 88264

#### **[CHROMBREAK] CHROM ANALYSIS BREAKAGE STUDY**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark green (heparin)  
SPECIAL HANDLING: Must arrive in laboratory by 1:30 p.m.  
Monday-Thursday only (specimen must arrive at  
performing lab within 24 hours of collection)  
Ship same day as collected

SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 3-4 weeks  
REFERENCE RANGE: By report  
OTHER NAMES: Fanconi's Anemia; Mitomycin C  
CLINICAL USE: Aid in differential diagnosis between idiopathic aplastic anemia and Fanconi anemia  
CPT: 88230; 88249

#### **[CHROMFISH] CHROMOSOME ANALYSIS-FISH**

SPECIMEN REQUIRED: Whole blood, amniotic fluid, tissue or slides at room temperature  
TUBE OR CONTAINER: Dark green (heparin) or sterile container  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 weeks  
REFERENCE RANGE: By report  
METHODOLOGY: Fluorescent in Situ Hybridization (FISH)  
CPT: 88271; 88275

#### **[CHROMOG] Chromogranin A**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red, Gold, Lavender(EDTA) or Green (heparin)  
CAUSES FOR REJECTION: ANY SAMPLE OTHER THAN FROZEN SERUM

SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: 0.0-101.8 ng/mL  
METHODOLOGY: Thermofisher/GRAHMS KRYPTOR assay employs Time Resolved Amplified Cryptase Emission Cryptate Emission (TRACE) technology based on a non-radioactive energy transfer between a donor and an acceptor.

CLINICAL USE: Aid in the detection and monitoring of neuroendocrine cancers including pheochromocytomas, medullary thyroid carcinomas, functioning and nonfunctioning islet cell and gastrointestinal amine precursor uptake and decarboxylation tumors, and pituitary adenomas. A possible adjunct in outcome prediction and follow-up in advanced prostate cancer.  
CPT: 86316

#### **[CHROMTUM] CHROM SOLID TUMOR (KARYOTYPE)**

SPECIMEN REQUIRED: Refrigerated tissue specimen

TUBE OR CONTAINER: Sterile container  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 weeks  
REFERENCE RANGE: By report  
METHODOLOGY: Chromosome analysis of 20 metaphases with preparation and analysis of multiple karyotypes  
CPT: 88264; 88239

**[CHST3] LARSEN SYND AUTO REC (CHST3)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST AVAILABILITY: Daily  
OTHER NAMES: Larsen Syndrome, Autosomal recessive via CHST3 gene  
METHODOLOGY: DNA Sequencing  
CPT: 81479

**[CHYLOBF] Body Fluid Chylomicrons**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: Plastic transfer tube  
SPECIAL HANDLING: Specify type of body fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-10 days  
REFERENCE RANGE: Absent  
METHODOLOGY: Qualitative Electrophoresis  
CPT: 82664

**[CIPRO] Ciprofloxacin Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red (no gel) or Dark green (heparin)  
SPECIAL HANDLING: Collect within 15 minutes of next dose for the TROUGH level; Collect within 15-30 minutes after the end of IV infusion or 45-60 minutes after an IM injection or 90 minutes after oral intake for the PEAK level  
Do NOT use gel barrier tubes  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
METHODOLOGY: High-Performance Liquid Chromatography (HPLC) with Fluorescence Detection (HPLC-FL)  
CLINICAL USE: Monitor therapeutic drug level  
CPT: 80299

**[CK] Creatine Kinase**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE:  
0-9 years: Female: 58-353 U/L; Male: 58-362 U/L  
10-19 years: Female: 43-285 U/L; Male: 53-357 U/L  
20 + years: Female: 19-135 U/L  
20-65 years: Male: 28-135 U/L  
66 + years: Male: 28-135 U/L  
OTHER NAMES: Creatine Phosphokinase; CPK  
METHODOLOGY: UV  
CLINICAL USE: Aid in diagnosis of myocardial infarction (MI) and skeletal muscular damage  
CPT: 82550

**[CKMB.INDEX] CKMB WITH INDEX**

**[CK-MBSTDY] Creatine Kinase MB**

**[CL] Chloride Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIMEN VOLUME: 1.0 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: >3 months: 98-111 mmol/L  
METHODOLOGY: Ion-Selective Electrode  
CLINICAL USE: Evaluate electrolytes, acid-base balance, H<sub>2</sub>O balance  
CPT: 82435

**[CLARITH] Clarithromycin Sensitivity**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Collect within 15 minutes of next dose for the TROUGH level; Collect within 15-30 minutes after the end of IV infusion or 45-60 minutes after an IM injection or 90 minutes after oral intake for the PEAK level  
Do NOT use gel barrier tubes  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-7 days  
OTHER NAMES: Biaxin  
METHODOLOGY: Bioassay

CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[CLBF] Body Fluid Chloride**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Ion-Selective Electrode  
CPT: 82438

**[CLCN5] CLCN5 GENE IN DENT DISEASE**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 weeks  
METHODOLOGY: Bi-directional sequence analysis  
CPT: 81479

**[CLIN] Clindamycin (Cleocin) Level**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-7 days  
OTHER NAMES: Cleocin  
METHODOLOGY: Bioassay (BA)  
CPT: 80299

**[CLO] Clotest for H.pylori**

SPECIMEN REQUIRED: Biopsy specimen  
COLLECTION: Allow urea medium to come to room temperature before use. Insert the biopsy specimen into the semisolid medium. Push the specimen into the agar with a sterile cotton swab so that the biopsy is surrounded by media. Label tube with one of the small Mediatech labels. Record time of inoculation on the media and on the large label  
TUBE OR CONTAINER: Urea media (obtain from Micro lab in advance)  
SPECIAL HANDLING: Transport to the Microbiology Laboratory as soon as possible; Leave at room temperature if unable to transport immediately  
Order CLO when order is for CLOTEST for H.

pylori  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: No growth  
CLINICAL USE: Detection of Helicobacter pylori  
CPT: 87081

**[CLON] Clonidine Level**

SPECIMEN REQUIRED: Frozen or refrigerated serum or plasma  
TUBE OR CONTAINER: Red or Dark Green (heparin)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 days  
REFERENCE RANGE: 1.0-2.0 ng/mL  
METHODOLOGY: Liquid chromatography/Tandem Mass spectrometry (LC/MS/MS)  
CLINICAL USE: Monitor therapeutic drug level  
CPT: 80299

**[CLOTK] Kaolin Activated Coagulation Time**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-6 days  
REFERENCE RANGE: 50-130 units  
METHODOLOGY: Clot detection  
CPT: 85347

**[CLOZ] CLOZAPINE (CLOZARIL)**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Dark Green (heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME : 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST INCLUDES: Clozapine and Norclozapine  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Therapeutic: average steady-state serum

concentrations following 100 mg twice daily:  
Peak (2.5 hours after last dose): 102-771 ng/mL  
Trough (just before dose): 41-343 ng/mL  
OTHER NAMES: Clozaril  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry  
(LC/MS-MS)  
CLINICAL USE: Evaluate toxicity; monitor therapeutic levels  
CPT: 80159

#### **[CLSTL] Stool Chloride**

SPECIMEN REQUIRED: Liquid stool  
TUBE OR CONTAINER: Plastic container  
SPECIAL HANDLING: Stool must be in liquid form for analysis  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: No established range  
METHODOLOGY: Ion-Selective Electrode  
CPT: 82438

#### **[CLU] Urine Chloride**

SPECIMEN REQUIRED: Refrigerated random urine  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIMEN VOLUME: 1 tube (2 mL)  
MINIMUM VOLUME: 1 tube (1 mL)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Ion-Selective Electrode  
CLINICAL USE: Evaluate electrolyte composition of urine, acid-base balance studies  
CPT: 82436

#### **[CMA] CHROMOSOMAL MICROARRAY ANALYSIS**

SPECIMEN REQUIRED: Whole blood, bone marrow, amniotic fluid or tissue at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or sterile container  
SPECIAL HANDLING: Send within 24-48 hours of collection  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
REFERENCE RANGE: By report  
METHODOLOGY: Array-based comparative genomic hybridization  
CPT: 81228

#### **[CMP] Complete Metabolic Panel (Group)**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold



SPECIMEN VOLUME: Adult: 2 mL  
Pediatric: 1 mL or 1 full microtainer  
MINIMUM VOLUME: Adult: 1 mL  
Pediatric Min: 0.8 mL or 3/4 microtainer  
TEST INCLUDES: Na, K, Cl, CO2, BUN, Creat, Glucose, Ca, TP, Alb,  
T Bili, Alk Phos, ALT, AST  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: See individual tests  
METHODOLOGY: See individual tests  
CPT: 80053

#### **[CMVAVR] CMV ANTIVIRAL RESISTANCE**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Specimen must be received at performing lab  
within 96 hours of collection  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Resistant/None detected  
METHODOLOGY: Polymerase Chain Reaction (PCR) followed by gene  
sequencing  
CPT: 87910

#### **[CMVCSF] AB CMV PROFILE-CSF**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: CMV IgG and IgM  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Negative: 0.89 or less  
Equivocal: 0.90-1.10 IV  
Positive: 1.11 or greater  
OTHER NAMES: Cytomegalovirus antibody, CSF  
METHODOLOGY: IgG: Chemiluminescent Immunoassay  
IgM: Enzyme-linked immunoassay (ELISA)  
CPT: 86644 x 2

#### **[CMVGAV] CYTOMEGALOVIR(CMV) IGG AVIDITY**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.25 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
REFERENCE RANGE: 0.50 Index or less: Low Avidity

0.51-0.59 Index: Intermediate Avidity

0.60 Index or greater: High Avidity

METHODOLOGY: Semi-Quantitative Enzyme-Linked Immunosorbent Assay (ELISA)

CPT: 86644

### **[CMVIGG] Cytomegalovirus IgG Antibody**

SPECIMEN REQUIRED: Serum room temp

TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 0.5 mL

MINIMUM VOLUME: 0.2 mL

TEST AVAILABILITY: Monday-Friday

TURNAROUND TIME: 3-5 days

REFERENCE RANGE: NEGATIVE

OTHER NAMES: Cytomegalovirus antibody IgG

METHODOLOGY: ELFA

CLINICAL USE: Aid in diagnosis of CMV infection

CPT: 86317

### **[CMVIGGAVID] Cytomegalovirus Avidity**

Specimen Required:

Draw blood in plain, red top tube (s). Serum gel tube is acceptable. Spin down and send 1ml of serum refrigerated in plastic vial.

Specimen Minimum Volume:

0.5mL

### **[CMVM] Cytomegalovirus IgM Antibody**

SPECIMEN REQUIRED: Frozen serum

TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-3 days

REFERENCE RANGE: Negative: < 30.0 AU/mL

OTHER NAMES: Cytomegalovirus antibody IgM

METHODOLOGY: Chemiluminescent immunoassay (CLIA)

CLINICAL USE: Aid in the diagnosis of acute primary infection

CPT: 86317

### **[CMVPCRQNT] Cytomegalovirus DNA Quant (PCR)**

SPECIMEN REQUIRED: Urine, bronchial lavage/wash, bone marrow, amniotic fluid, pleural/pericardial fluid, eye swab, tracheal aspirate/wash at room temperature or frozen

Frozen tissue, CSF, Fecal material, Aqueous or vitreous fluid

TUBE OR CONTAINER: Sterile container, screw top tube or swab

SPECIAL HANDLING: Please specify source of specimen.

Specimens at room temperature must be

received at performing lab within 4 days of collection; Freeze if time exceeds 4 days  
SPECIMEN VOLUME: 2 mL CSF, urine, bone marrow, liquid stool, pleural/pericardial fluid or respiratory specimens  
5 mg tissue  
Pea sized formed stool  
1 swab  
MINIMUM VOLUME: 0.5 mL CSF, urine, bone marrow, liquid stool, pleural/pericardial fluid or respiratory specimens  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Reverse Transcription/Polymerase Chain Reaction (PCR-RT)  
CPT: 87497

**[CMVPCRQUALMISC] Cytomegalovirus DNA Qual (PCR)**

SPECIMEN REQUIRED:

TUBE OR CONTAINER: Appropriate container as specified by LAB for  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: Not detected  
OTHER NAMES: Cytomegalovirus DNA  
METHODOLOGY: Polymerase Chain Reaction (PCR)

**[CMVQLT] Cytomegalovirus DNA Qual (PCR)**

SPECIMEN REQUIRED: Slides from paraffin embedded tissue at room temperature  
TUBE OR CONTAINER: Slides  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: Not detected  
OTHER NAMES: Cytomegalovirus DNA  
METHODOLOGY: Polymerase Chain Reaction (PCR)

**[CO] Carbon Monoxide, Quantitative**

SPECIMEN REQUIRED: Whole blood on ice  
TUBE OR CONTAINER: Light Green (heparin) or Heparinized syringe  
SPECIAL HANDLING: Transport on ice to lab immediately; do NOT open. Perform testing within 2 hours  
REASON FOR REJECTION: Specimen at room temp >20 minutes or on ice longer than 2 hours  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 hour  
REFERENCE RANGE: Normal: 0.0-2.0%

Life threatening: >15%

OTHER NAMES: Carboxyhemoglobin

METHODOLOGY: Spectrophotometry

CLINICAL USE: Determine extent of CO toxicity in individuals exposed to exhausts or indoor combustion including heating

CPT: 82375

### **[CO2] Carbon Dioxide Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum

TUBE OR CONTAINER: Light Green (heparin) or Gold

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours

REFERENCE RANGE: 0 days-30 days: 17-28 mmol/L

1 month-adult: 19-29 mmol/L

METHODOLOGY: PEPC

CLINICAL USE: Evaluate the total carbonate buffering system and acid-base balance

CPT: 82374

### **[COB] Cobalt**

SPECIMEN REQUIRED: Plasma at room temperature in a certified metal-free plastic transport tube

TUBE OR CONTAINER: Royal Blue (EDTA)

Lavender (EDTA) will be temporarily accepted due to royal blue tube shortage, but may result with a disclaimer.

SPECIAL HANDLING: Please contact laboratory for correct tube;

Spin and separate immediately after collection

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 0.6 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: Environmental exposure: occupational exposure: BEI (sampling time is

end of shift at end of work week): 1.0 ug/L

METHODOLOGY: Inductively coupled plasma-mass spectrometry (ICP-MS)

CLINICAL USE: Monitor industrial exposure to cobalt

CPT: 83018

### **[COCCIABCF] Coccidioides Antibody (Comp Fix)**

SPECIMEN REQUIRED: Refrigerated serum

TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 7 days

REFERENCE RANGE: Negative  
METHODOLOGY: Complement Fixation (CF)  
CLINICAL USE: Diagnose coccidioidomycosis  
CPT: 86635

**[COCCIABCSF] CSF Coccidioides Antibody**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile capped container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 days  
REFERENCE RANGE: < 1:2  
METHODOLOGY: Complement Fixation (CF)  
CPT: 86635

**[COCCIAGU] Coccidioides Antigen, Quant**

SPECIMEN REQUIRED: Room temperature urine  
TUBE OR CONTAINER: Plastic tube or cup (urine)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-7 days  
REFERENCE RANGE: None Detected  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Aid in diagnosis of Coccidioides  
CPT: 87999

**[COCCIPCR] Coccidioides immitis DNA**

SPECIMEN REQUIRED: Refrigerated or frozen body fluid, CSF, respiratory specimen or tissue; Fixed tissue (paraffin block) at room temperature  
TUBE OR CONTAINER: Sterile capped container  
SPECIAL HANDLING: Must arrive at performing lab within 6 days of collection  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-8 days  
REFERENCE RANGE: Negative  
OTHER NAMES: Coccidioides immitis/posadasii, Molecular Detection, PCR  
METHODOLOGY: Real-Time Polymerase Chain Reaction (PCR)  
CLINICAL USE: Rapid detection of Coccidioides DNA; aid in diagnosing coccidioidomycosis  
CPT: 87798

**[COL11A2] STICKLER III (COL11A2 GENE)**

SPECIMEN REQUIRED: Whole blood or fibroblasts at room temperature

TUBE OR CONTAINER: Lavender (EDTA) or T25 flasks  
SPECIMEN VOLUME: 10 mL or 4 flasks  
MINIMUM VOLUME: 6 mL or 2 flasks  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 weeks  
OTHER NAMES: type III Stickler syndrome, otospondylomega  
epiphyseal dysplasia (OSMED syndrome),  
Weissenbacher-Zweymuller syndrome, and autosomal  
dominant nonsyndromic sensorineural 13 deafness  
via COL11A2 gene sequencing  
METHODOLOGY: Sanger sequencing  
CPT: 81479

#### **[COL1A1-2] COL1A1/COL1A2 (OI)**

SPECIMEN REQUIRED: Whole blood or Cultured fibroblasts at room  
temperature  
TUBE OR CONTAINER: Lavender (EDTA) or T25 tissue culture flasks  
SPECIMEN VOLUME: 5 mL whole blood or 2 flasks  
MINIMUM VOLUME: 3 mL whole blood  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-3 weeks  
METHODOLOGY: DNA Sanger Sequencing  
CPT: 81408 x 2

#### **[COL2A1] COL2A1 GENE SEQUENCING**

SPECIMEN REQUIRED: Whole blood or fibroblasts at room  
temperature  
TUBE OR CONTAINER: Lavender (EDTA) or T25 flasks  
SPECIMEN VOLUME: 10 mL or 4 flasks  
MINIMUM VOLUME: 6 mL or 2 flasks  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 weeks  
OTHER NAMES: Achondrogenesis, Chondrodysplasia, early onset  
familial osteoarthritis, SED congenita, Langer  
-Saldino achondrogenesis, Kniest dysplasia,  
Stickler syndrome type I, and  
spondyloepimetaphyseal dysplasia Strudwick type  
via COL2A1 gene sequencing  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81479 (Sequencing)

#### **[COL4A5] ALPORT SYNDROME (COL4A5)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Sanger sequencing  
CPT: 81408 (Sequencing)

**[COL9A123] STICKLER AUTO REC (COL9A1/2/3)**

SPECIMEN REQUIRED: Whole blood or fibroblasts at room temperature

TUBE OR CONTAINER: Lavender (EDTA) or T25 flasks

SPECIMEN VOLUME: 8 mL or 4 flasks

MINIMUM VOLUME: 4 mL or 2 flasks

TEST AVAILABILITY: Daily

TURNAROUND TIME: 1-2 weeks

OTHER NAMES: Stickler Syndrome, Autosomal recessive, COL9A1, COL9A2, COL9A3 gene sequencing

METHODOLOGY: Polymerase Chain Reaction (PCR)

CPT: 81479 x 3

**[COLD] Cold Agglutinins**

SPECIMEN REQUIRED: Refrigerated serum

TUBE OR CONTAINER: Red or Gold

SPECIAL HANDLING: Incubate at 37 C and allow to clot at 37 C;

Do NOT refrigerate prior to separation of serum from cells. If there is not a 37 C incubator, allow to clot at room temperature & separate serum from cells immediately after clotting

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-7 days

REFERENCE RANGE: Negative: < 1:32

METHODOLOGY: Hemagglutination

CLINICAL USE: Detection of the presence of cold agglutinins in patients with suspected cold agglutinin disease

CPT: 86157

**[COMPB] Complement Factor B**

SPECIMEN REQUIRED: Frozen plasma

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.3 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4 weeks

REFERENCE RANGE: 127.6 - 278.5 mcg/mL

METHODOLOGY: Radial Immunodiffusion (RID)

CPT: 86160

**[COMPBb] Complement Factor B**

SPECIMEN REQUIRED: Frozen plasma

TUBE OR CONTAINER: Lavender (EDTA)

SPECIAL HANDLING: Separate and freeze immediately

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily  
TURNAROUND TIME: Up to 4 weeks  
REFERENCE RANGE: 0.41-1.49 ug/mL  
METHODOLOGY: ELISA  
CPT: 86160

**[COMPBF] Complement Factor B**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIAL HANDLING: Separate from cells immediately after clot has formed  
Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 days - 4 weeks  
REFERENCE RANGE: 123-426 Units/mL  
METHODOLOGY: Hemolytic Assay  
CPT: 86161

**[COMPC1Q] Complement C1q Component**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: EDTA (lavender)  
VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
REFERENCE RANGE: 83-125 ug/mL  
TURN AROUND TIME: 8-10 days  
METHODOLOGY: Radial Immunodiffusion (RID)

**[COMPC1QAB] Complement C1q Component**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIAL HANDLING: Separate from cells immediately after clot has formed  
Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 days - 4 weeks  
REFERENCE RANGE: < 4.2 % of STD  
METHODOLOGY: ELISA  
CPT: 83520

**[COMPC1R] Complement C1r Component**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-10 days



REFERENCE RANGE: 61-162 % of standard  
METHODOLOGY: Radial immunodiffusion (RID)  
CPT: 86160

### **[COMPC1S] Complement C1s Component**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-10 days  
REFERENCE RANGE: 59-297 % of standard  
METHODOLOGY: Radial Immunodiffusion (RID)  
CPT: 86160

### **[COMPC2] Complement C2**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Place tube on ice immediately following collection; Separate and freeze  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: 1.6-4.0 mg/dL  
METHODOLOGY: Immunologic quantitation by radial immunodiffusion (RID)  
CLINICAL USE: Assess patients with hereditary deficiency of C2 acquired decrease in its level which may be seen due to hypercatabolism in hereditary angio-neurotic edema, or consumption or loss as in vasculitides, glomerulonephritides, immune complex diseases  
CPT: 86160

### **[COMPC3] Complement C3**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Gold or Light Green (Heparin)  
SPECIAL HANDLING: Stable 4 days Room Temp  
8 days 2-8 degrees  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: 91-172 mg/dL  
OTHER NAMES: C3  
METHODOLOGY: Immunoturbidimetric  
CLINICAL USE: Detect individuals with inborn deficiency of this factor or those with immunologic disease in whom complement is consumed at an increased rate; these

include lupus erythematosus, chronic active hepatitis, certain chronic infections, post-streptococcal and membranoproliferative glomerulonephritis, and others  
CPT: 86160

#### **[COMPC3NEPH] C3 Nephritic Factor**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-14 days  
REFERENCE RANGE: 0.00-0.30  
METHODOLOGY: Semi-Quantitative Immunofixation electrophoresis (IFE)  
CPT: 86320

#### **[COMPC4] Complement C4**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Gold or Light Green (Heparin)  
SPECIAL HANDLING: Stable 2 days room temp  
8 days 2-8 degrees  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: 16-43 mg/dL  
OTHER NAMES: C4  
METHODOLOGY: Immunoturbidimetric  
CLINICAL USE: Detect individuals with inborn deficiency of this factor or those with immunologic disease in whom hypercatabolism of complement causes reduced levels; these diseases include lupus erythematosus, serum sickness, certain glomerulonephritis, chronic active hepatitis, and others  
CPT: 86160

#### **[COMPC4BP] Complement C4 Binding Protein**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Na citrate)  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 0.5 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-8 days  
REFERENCE RANGE: 50-130%  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)

CLINICAL USE: Confirmation and characterization of protein S deficiency  
CPT: 83520

**[COMPC4D] Complement C4d Fragment**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Plasma must be separated from cells w/in 45 minutes of venipuncture. If more than one hour is expected to pass between draw time and separation, place tube in wet ice and centrifuge cold.

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
CPT: 86160

**[COMPC5] Complement C5**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Allow specimen to clot for one hour at room temperature. Separate serum from cells ASAP or within 2 hours of collection and freeze  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-4 weeks  
REFERENCE RANGE: 7-20 mg/dL  
METHODOLOGY: Quantitative Radial Immunodiffusion  
CPT: 86160

**[COMPC5A] Complement C5a**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: EDTA (lavender) Do NOT use serum for this test  
SPECIAL HANDLING: Plasma must be separated from cells w/in 45 minutes of venipuncture. If more than one hour is expected to pass between draw time and separation, place tube in wet ice and centrifuge cold.  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 days - 4 weeks  
REFERENCE RANGE: 4.7-9.5 ng/mL  
METHODOLOGY: Radioimmunoassay (RIA)  
CPT: 86160

**[COMPC5F] Complement C5**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 13700 - 37900 units/mL  
CPT: 86161

**[COMPC6] Complement C6**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: EDTA (lavender)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Immunologic  
CPT: 86160

**[COMPC6F] Complement C6**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 14363 - 38940 units/mL  
CPT: 86161

**[COMPC7] Complement C7**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Immunologic  
CPT: 86160

**[COMPC7F] Complement C7**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 12327 - 33836 units/mL  
CPT: 86161

**[COMPC8] Complement C8**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)

SPECIAL HANDLING: Separate from cells immediately after clot has formed and transfer to plastic tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 2.7-6.0 mg/dL  
METHODOLOGY: Immunologic  
CPT: 86160

**[COMPC8F] Complement C8**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 18532 - 53364 units/mL  
CPT: 86161

**[COMPC9F] Complement C9**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 8310 - 42320 units/mL  
METHODOLOGY: Hemolytic assay  
CPT: 86161

**[COMPFD] COMPLEMENT FACTOR D FUNCTION**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIAL HANDLING: Separate from cells immediately after clot has formed  
Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 days - 4 weeks  
REFERENCE RANGE: 127-306 Units/mL  
METHODOLOGY: Hemolytic Assay  
CPT: 86161

**[COMPH] Complement Factor H**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-10 days

REFERENCE RANGE: 160-412 ug/mL  
METHODOLOGY: Radial Immunodiffusion (RID)  
CPT: 86160

#### **[COMPI] Complement C1**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 1 ml  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-10 days  
REFERENCE RANGE: 29.3-58.5 ug/mL  
OTHER NAMES: C3B/C4B inactivator  
METHODOLOGY: Radial Immunodiffusion (RID)  
CPT: 86160

#### **[COMPSC5b9] Complement C5**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Separate and freeze immediately  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: Up to 4 weeks  
REFERENCE RANGE: Male: 72-244 ng/mL  
Female: 27-244 ng/mL  
METHODOLOGY: ELISA  
CPT: 86160

#### **[COP] Copper Level**

SPECIMEN REQUIRED: Plasma at room temperature in a certified metal-free plastic transport tube  
TUBE OR CONTAINER: Royal Blue (EDTA)  
Lavender will be temporarily accepted due to royal blue tube shortage, but result may be affected  
SPECIAL HANDLING: Please contact laboratory for correct tube; Plasma must be separated from cells within 45 minutes of collection and transferred to a plastic transport tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 days  
REFERENCE RANGE: Environmental exposure: 70-155 ug/dL  
Levels may be somewhat higher in pregnant women and children and in patients receiving estrogen therapy  
METHODOLOGY: Inductively coupled plasma-mass spectrometry (ICP-MS)

CLINICAL USE: Along with serum ceruloplasmin and urine copper to test for Wilson disease and more often, in monitoring the nutritional adequacy of parenteral or enteral nutrition  
CPT: 82525

#### **[COPRBC] COPPER PLASMA & RBC**

SPECIMEN REQUIRED: Refrigerated red blood cells (RBCs) AND Plasma  
TUBE OR CONTAINER: Royal Blue (EDTA)  
SPECIAL HANDLING: Please contact laboratory for correct tube; Plasma should be separated from cells within 45 minutes of collection  
Specimen must be received at performing lab within 5 days of collection  
SPECIMEN VOLUME: 3 mL each (plasma and RBCs)  
MINIMUM VOLUME: 2 mL each (plasma and RBCs)  
TEST AVAILABILITY: Daily  
METHODOLOGY: Inductively coupled plasma-mass spectrometry (ICP-MS)  
CLINICAL USE: Evaluate copper stores and accumulation  
CPT: 82525 x 2

#### **[COQ10] Coenzyme Q10 Level**

SPECIMEN REQUIRED: Frozen and light protected serum  
TUBE OR CONTAINER: Lt Protected Gold/RNG Serum  
SPECIAL HANDLING: Protect from light in amber tube or wrap completely in aluminum foil  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME:  
OTHER NAMES: CoQ10; Total Coenzyme Q10; Ubiquinone  
METHODOLOGY: High-performance liquid chromatography (HPLC) with electrochemical detection  
CPT: 82542

#### **[COQ10WBC] Coenzyme Q10 Level**

SPECIMEN REQUIRED: Whole blood (leukocytes) at room temperature  
TUBE OR CONTAINER: Yellow (ACD)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 14 days  
OTHER NAMES: CoQ10; Total Coenzyme Q10; Ubiquinone  
METHODOLOGY: High-performance liquid chromatography (HPLC) with electrochemical detection  
CPT: 82542

#### **[CORTBG] Transcortin (Cortisol Binding Glob)**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate within 1 hour of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-10 days  
OTHER NAMES: CBG; Corticosteroid Binding Globulin (CBG)  
Transcortin  
METHODOLOGY: Direct RIA in dilute serum  
CPT: 84449

#### **[CORTR] Cortisol**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Gold or Light Green (heparin)  
SPECIAL HANDLING: Stable 24 hours room temp  
4 days 2-8 degrees  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: ADULTS: AM: 4.4-16.6 ug/dL  
PM: 2.5-10.3 ug/dL  
Pediatrics/Children: Age dependent  
OTHER NAMES: Compound F; Hydrocortisone  
METHODOLOGY: ECLIA Competition Principle  
CLINICAL USE: Aid in diagnosis of adrenocortical insufficiency,  
Addison's disease, adrenocortical hypersecretion,  
Cushing's syndrome  
CPT: 82533

#### **[CORTRH] Corticotropin Release Hormone Stimu**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Patient should not be on any corticosteroid or  
ACTH medications, if possible, for at least 48  
hours prior to sample collection. Centrifuge  
and separate with 45 minutes of collection  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-9 days  
CPT: 83519

#### **[CORTST] Corticosterone**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate from cells within 1 hour  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL



TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-7 days  
METHODOLOGY: Liquid Chromatography Tandem Mass Spectrometry  
(LC/MS/MS)  
CPT: 82528

**[COVID19] Coronavirus (COVID-19)(PCR)**

SPECIMEN REQUIRED: nasopharyngeal (NP) swab  
TUBE OR CONTAINER: Nasopharyngeal  
in UTM or VTM (viral transport medium)  
SPECIAL HANDLING: Refrigerate specimen within 4 hours of  
collection.  
Sample may be stored at 2-8 C for up to 48 hours of collection.  
Ship immediately to lab at 2-8 C (ice pack). If collection to  
receipt in the lab will exceed 48 hours freeze at -10 C or  
colder and ship on dry ice. Do not freeze/thaw.  
REFERENCE RANGE: None-Detected  
METHODOLOGY: PCR  
CPT: 87798

**[COVID19 OUM] SARS-CoV-2 PCR**

**[COVID19REF] Coronavirus (COVID-19)(PCR)**

SPECIMEN REQUIRED: nasopharyngeal (NP) swab  
TUBE OR CONTAINER: Nasopharyngeal  
in UTM or VTM (viral transport medium)  
SPECIAL HANDLING: Refrigerate specimen within 4 hours of  
collection.  
Sample may be stored at 2-8 C for up to 48 hours of collection.  
Ship immediately to lab at 2-8 C (ice pack). If collection to  
receipt in the lab will exceed 48 hours freeze at -10 C or  
colder and ship on dry ice. Do not freeze/thaw.  
REFERENCE RANGE: None-Detected  
METHODOLOGY: PCR  
CPT: 87798

**[COVID19UW] COVID-19 PCR UNIV WASHINGTON**

**[COVIDIGGAB] SARS-CoV-2 IgG Antibody (CMIA)**

SPECIMEN REQUIRED: SERUM OR EDTA PLASMA  
TUBE OR CONTAINER: GOLD OR EDTA  
SPECIMEN VOLUME: 1.0mL SERUM/EDTA PLASMA  
MINIMUM VOLUME: 0.5mL SERUM/EDTA PLASMA  
TEST INCLUDES: COVID 19 IGG  
TEST AVAILABILITY: MON-FRI  
TURNAROUND TIME: MON-FRI  
REFERENCE RANGE: NEGATIVE  
METHODOLOGY: CMIA  
CPT: 86769

**[COXBPCR] Coxiella burnetii Interpretation**

SPECIMEN REQUIRED: Frozen serum (CBSRP) or plasma (CBBRP)  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Real-Time Polymerase chain reaction (PCR)  
CLINICAL USE: Diagnosing Coxiella burnetii infection (ie, Q fever)  
CPT: 87798

**[CPEP] C-Peptide**

SPECIMEN REQUIRED: Serum  
TUBE OR CONTAINER: Gold or Red No Gel  
SPECIAL HANDLING: Draw at room temp. Separate and freeze within 48 Hours.

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday and Thursday  
TURNAROUND TIME: 4-7 days  
REFERENCE RANGE: 0.9 - 7.1 ng/mL  
OTHER NAMES: Connecting Peptide; Insulin C-Peptide; Proinsulin C-Peptide  
METHODOLOGY: Chemiluminescence  
CLINICAL USE: Principal use is in the evaluation of hypoglycemia  
CPT: 84681

**[CPEPUR] Urine C-Peptide**

SPECIMEN REQUIRED: Frozen urine aliquot (24 hour collection)  
TUBE OR CONTAINER: Urine transport tube  
SPECIAL HANDLING: Collect specimen in a "P" container (no preservative)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 17.2 - 181.0 ug/24 hours  
METHODOLOGY: Roche ECLIA  
CPT: 84681

**[CPSA] Complexed Prostate Specific Antigen**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME:  
REFERENCE RANGE: 0.0-3.6 ng/mL

METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: Useful for determining residual disease and early recurrence after therapy  
CPT: 84152

#### **[CREAGUAN] CREATINE/GUANIDINOACETATE**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Green (heparin)  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST INCLUDES: Creatine and Guanidinoacetate  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 10-12 days  
REFERENCE RANGE: Creatine:  
0-2 yr: 28 - 102 micromoles/L  
> 3 yr: 20 - 110 micromoles/L  
Guanidinoacetate:  
0-2 yr: 0.3 - 1.6 micromoles/L  
> 3 yr: 0.3 - 2.1 micromoles/L  
METHODOLOGY: Isotope dilution tandem mass spectroscopy  
CLINICAL USE: Assess abnormalities in the synthesis of creatine  
CPT: 82540; 83789

#### **[CREAT] Creatinine**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Stable 7 days room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0-1 year: 0.20-0.41 mg/dL  
2-11 years: 0.20-0.74 mg/dL  
12 years + (Female): 0.78-1.23 mg/dL  
12 years + (Male): 0.78-1.34 mg/dL  
METHODOLOGY: Jaffe rate  
CLINICAL USE: Aid in diagnosis and treatment of renal diseases, in monitoring renal dialysis, and as a calculation basis for measuring other urine analytes  
CPT: 82565

#### **[CREATINE] Creatine**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Male: 0.2 - 0.7 mg/dL  
Female: 0.3 - 0.9 mg/dL  
METHODOLOGY: Enzymatic (creatinase)/spectrophotometry

CLINICAL USE: Serum creatine levels may be significantly increased in amyotrophic lateral sclerosis, dermatomyositis, myasthenia gravis, starvation, muscular dystrophies, and trauma  
CPT: 82540

#### **[CREATU] Urine Random Creatinine**

SPECIMEN REQUIRED: Refrigerated random urine  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIMEN VOLUME: 1 tube (6 mL)  
MINIMUM VOLUME: 1 tube (2 mL)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Jaffe rate  
CLINICAL USE: Renal function test  
CPT: 82570

#### **[CREFLD] Body Fluid Creatinine**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Jaffe rate  
CPT: 82570

#### **[CREGUANU] UR CREATINE/GUANIDINOACETATE**

SPECIMEN REQUIRED: Frozen urine  
TUBE OR CONTAINER: Plastic urine container  
SPECIMEN VOLUME: 1 mL  
TEST INCLUDES: Creatine and Guanidinoacetate  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-8 days  
REFERENCE RANGE: Creatine:  
0-6 yr: 20 - 900 micromoles/mole creatinine  
> 6 yr: 12 - 500 micromoles/mole creatinine  
Guanidinoacetate:  
0-6 yr: 22 - 123 micromoles/mole creatinine  
> 6 yr: 24 - 112 micromoles/mole creatinine  
METHODOLOGY: Isotope dilution tandem mass spectroscopy  
CLINICAL USE: Assess abnormalities in the synthesis of creatine  
CPT: 82540; 82570; 83789

#### **[CREUTZ] Creutzfeldt-Jakob Disease**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Screw-capped, sterile vial

SPECIAL HANDLING: CJD patient history form must accompany specimen  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: < 2.0 ng/mL Normal  
2.0 - 3.9 ng/mL Indeterminate  
> or = 4.0 ng/mL Elevated  
METHODOLOGY: Immunochemiluminometric Assay (ICMA)  
CPT: 84182

### **[CRP] C-Reactive Protein**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Gold or Light Green (heparin)  
SPECIAL HANDLING: Testing cannot be performed on lipemic samples; it is best to collect specimen from a fasting patient  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: As a marker to assess medical events resulting in tissue injury, infections, or inflammation:  
< 5.0 mg/L  
METHODOLOGY: Particle enhanced immunoturbidimetric  
CLINICAL USE: CRP is an acute phase reactant, which can be used as a test for inflammatory diseases, infections, and neoplastic diseases  
CPT: 86140

### **[CRPQ] C-Reactive Protein High Sensitivity**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Gold or Light Green (heparin)  
SPECIAL HANDLING: Testing cannot be performed on lipemic samples; it is best to collect specimen from a fasting patient  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: As a marker to assess medical events resulting in tissue injury, infections, or inflammation:  
0.0 - 8.0 mg/L  
As a marker for relative risk of future cardiovascular event in the absence of tissue injury, infections, or inflammation:  
Low < 1.0 mg/L  
Average 1.0 - 3.0 mg/L  
High > 3.0 mg/L

METHODOLOGY: Turbidimetric

CLINICAL USE: CRP is an acute phase reactant, which can be used as a test for inflammatory diseases, infections, and neoplastic diseases

CPT: 86140

#### **[CRSPANT] Cryptosporidium Antigen**

SPECIMEN REQUIRED: Submit 5 mL raw stool in Para-Pak Formalin (pink top) transport media.

TUBE OR CONTAINER: Para-Pak Formalin (pink top)

TEST AVAILABILITY: Monday-Friday

TURNAROUND TIME: 72 hours

VOLUME OF SPECIMEN: 5 mL

NORMAL TEST VALUES: Negative

METHODOLOGY: Enzyme immunoassay (EIA)

CLINICAL INFORMATION: Cryptosporidium antigen is more sensitive than O&P exam for the identification of Cryptosporidium.

#### **[CRYANTLFA] Cryptococcal Antigen LFA**

SPECIMEN REQUIRED: Refrigerated serum or cerebrospinal fluid

TUBE OR CONTAINER: Red, Gold or sterile container

ORDERING MODULE: MIC

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 24 hours

REFERENCE RANGE: Negative

METHODOLOGY: Lateral Flow Immunochromatographic Assay

REFLEX TEST INFORMATION: Positive specimens will be reflexed to a cryptococcal antigen titer at an additional charge

CLINICAL USE: Aid in establishing the presence of Cryptococcus neoformans infection

CPT: 87899

#### **[CRYFL] Body Fluid Crystals**

SPECIMEN REQUIRED: Refrigerated body fluid

TUBE OR CONTAINER: Gold or Red; sterile tube or syringe

SPECIAL HANDLING: Specify source of fluid

SPECIMEN VOLUME: 20 mL

MINIMUM VOLUME: 5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours

REFERENCE RANGE: Negative

METHODOLOGY: Polarized light

CLINICAL USE: Determine the cause of inflammation

CPT: 89060

#### **[CRYO] Cryoglobulin**

SPECIMEN REQUIRED: Refrigerated serum

TUBE OR CONTAINER: Red (no gel)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube; Send to lab immediately  
Incubate specimen at 37 degrees C for 2 hours while clotting  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Precipitation of cryoglobulin at 4 degrees C  
REFLEX TEST INFORMATION: If positive, quantitative cryoglobulin will be reflexed at an additional charge  
CLINICAL USE: May be present in macroglobulinemia of Waldenstrom myeloma, chronic lymphocytic leukemia, lupus, chronic active hepatitis, and other viral infections  
CPT: 82595

#### **[CRYOF] Cryofibrinogen**

SPECIMEN REQUIRED: Room temperature plasma  
TUBE OR CONTAINER: Lavender (EDTA); Blue (citrate) or Gray (Sodium fluoride)  
SPECIAL HANDLING: Specimen must be drawn in a prewarmed tube and kept at 37 C. Separate immediately  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: None detected  
METHODOLOGY: Precipitation  
CLINICAL USE: Detect cold precipitable fibrinogen  
CPT: 82585

#### **[CRYPAB] Cryptococcus Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.6 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 days  
REFERENCE RANGE: Negative: < 1:2  
METHODOLOGY: Cell agglutination  
CLINICAL USE: Aid in the diagnosis of cryptococcus  
CPT: 86641

#### **[CRYPTU] Urine Cryptococcus Antigen**

SPECIMEN REQUIRED: Frozen or refrigerated urine (random)  
TUBE OR CONTAINER: Plastic urine container  
SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Latex Agglutination  
CPT: 86403

#### **[CRYSY] Synovial Fluid Crystals**

SPECIMEN REQUIRED: Refrigerated synovial fluid  
TUBE OR CONTAINER: Lavender (EDTA), Green (heparin), Red, Gold or sterile tube  
SPECIAL HANDLING: Specimens submitted with attached needle will be rejected  
SPECIMEN VOLUME: 20 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Negative  
METHODOLOGY: Polarized light  
CLINICAL USE: Determine cause of inflammation  
CPT: 89060

#### **[CRYTITLFA] Cryptococcal Antigen Titer LFA**

#### **[CSF3RMUT] CSF3R MUTATION**

SPECIMEN REQUIRED: Room temperature whole blood or bone marrow  
Use cold pack to transport  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Ship same day as collected whenever possible; specimens < 72 hours old is preferred  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 8-10 days  
METHODOLOGY: Bi-directional sequencing of exons 14 and 17 of the CSF3R gene which includes detection of the common mutation T618I (also known as T595I).  
CPT: 81479

#### **[CSFC] CSF Culture**

#### **[CSFGQ1B] GQ1b Antibodies**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 ml  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CPT: 83520



**[CSFVANC] CSF Vancomycin**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile CSF tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 ml  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 Days  
REFERENCE RANGE: None established  
METHODOLOGY: Immunoassay  
CPT: 80202

**[CTC1] Blood Chromosome Analysis****[CTCP] CIRCULATING TUMOR CELL-PROSTAT**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: CellSave tube (call lab to obtain)  
SPECIAL HANDLING: Specimen must arrive at performing lab within 96 hours of collection; Ship within 24 hours  
Monday-Thursday only; Do NOT freeze or refrigerate; Must be collected in special tube  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 7.5 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 1 week  
METHODOLOGY: Immunomagnetic selection, identification and enumeration of CTC in peripheral blood sample enrichment  
CLINICAL USE: Provides enumeration of circulating tumor cells (CTC) of epithelial origin in whole blood  
CPT: 86152

**[CTELO] C-Telopeptide**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate serum from cells within 45 minutes of venipuncture  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 week - 1 month  
REFERENCE RANGE: Male: 115-748 pg/mL  
Female:  
premenopausal 112-738 pg/mL  
postmenopausal 142-1351 pg/mL  
OTHER NAMES: CTX  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)

CLINICAL USE: Used as an indicator of human bone resorption

CPT: 82523

**[CTSK] PYCNODYSOSTOSIS VIA CTSK GENE**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
OTHER NAMES: Cathepsin K (CTSK)  
METHODOLOGY: Sanger sequencing  
CPT: 81479

**[CUIND] Chronic Urticaria Index**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: If specimen held more than 7 days; store and ship frozen  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: 1-50  
OTHER NAMES: Autoimmune chronic urticaria; FC Epsilon, Hives  
Anti-FceR auto antibody, CD203c  
METHODOLOGY: Quantitative enzyme immunoassay  
CPT: 86352

**[CULABS] Abscess Cult & Gram Stain**

SPECIMEN REQUIRED: Collect specimen with a sterile syringe and needle when possible. REMOVE NEEDLE. Express air bubbles from syringe and stopper securely with syringe cap or luer tip cap  
TUBE OR CONTAINER: Syringe  
SPECIAL HANDLING: Do not expose specimen to air; Indicate exact source of abscess  
NOTE: Anaerobic culture should also be ordered on abscess material submitted for culture  
ORDERING MODULE: MIC  
TEST INCLUDES: Gram stain and aerobic culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 120 hours for final  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070

**[CULABSAA] Abscess A/An Cult & Gram Stain**

SPECIMEN REQUIRED: Collect specimen with a sterile syringe and needle when possible. REMOVE NEEDLE. Express

air bubbles from syringe and stopper securely  
with syringe cap or luer tip cap  
TUBE OR CONTAINER: Syringe  
SPECIAL HANDLING: Do not expose specimen to air; Indicate exact  
source of abscess  
ORDERING MODULE: MIC  
TEST INCLUDES: Aerobic culture, gram stain, anaerobic culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 120 hours for final  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070; 87075

#### **[CULACA] Acanthamoeba Culture**

SPECIMEN REQUIRED: Special fresh acanthamoeba media  
TUBE OR CONTAINER: Acanthamoeba media  
SPECIAL HANDLING: Please contact the microbiology lab at 271-  
4006 for special media  
Indicate source of specimen  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Aerobic culture on selective media  
CLINICAL USE: Detect bacterial pathogenic organisms  
CPT: 87081

#### **[CULAEROM] Aeromonas Stool Culture**

SPECIMEN REQUIRED: Fresh stool at room temperature  
TUBE OR CONTAINER: Para-Pak C&S orange transport media  
Hospital: Clean container with a tight lid  
SPECIAL HANDLING: In-patient specimens should be submitted  
in a clean container with a tight lid  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 72 hours  
REFERENCE RANGE: No growth  
METHODOLOGY: Aerobic culture on selective media  
CLINICAL USE: Detect bacterial pathogenic organisms  
CPT: 87046

#### **[CULAFB] AFB Culture & Smear**

SPECIMEN REQUIRED: Refrigerated specimen  
Source:  
BLOOD: Aseptically draw 10 mL blood in an isolator tube.  
Refer to test CULBLDISO-Culture, blood isolator  
  
BONE MARROW: 1.5 mL of aspirate in a pediatric isolator tube;  
Also submit a biopsy specimen in a sterile

capped container

BRONCHIAL WASHING, BRUSHING, OR LAVAGE: 10 mL in a tightly sealed container

CSF: 3 mL in a sterile screw-cap tube

BODY FLUIDS: 10 mL in a tightly sealed sterile tube or syringe with the needle removed

SPUTUM: Minimum of 10 mL of the first morning specimen, produced by a deep cough, in a tightly sealed sterile container. Avoid contamination by saliva by first rinsing mouth with tap water

TISSUE: Specimen in sterile screw-cap container with a small amount of sterile saline to prevent drying

URINE: 50 mL of first morning void in tightly sealed sterile container

SPECIAL HANDLING: Transport without delay to the laboratory; Do NOT add Cyto Lyt or formalin to any AFB culture specimen

An order of "AFBx3" means specimens collected on three consecutive mornings; Indicate date, time and source on specimens

Swab specimens are NOT acceptable

ORDERING MODULE: MIC

TEST INCLUDES: AFB smear and AFB culture

TEST AVAILABILITY: Daily

TURNAROUND TIME: AFB smear: 24 hours

Final negative culture results: 6-8 weeks

REFERENCE RANGE: No growth

TEST AVAILABILITY: Daily

METHODOLOGY: Automated BACTEC, conventional tube culture and fluorescent smear

CLINICAL USE: Isolate and identify mycobacteria

**[CULAFBCFREF] AFB Culture & Smr CF Ref NJ**

**[CULAFBREF] AFB Cult & Smr Stl Ref LabCorp**

**[CULANA] Anaerobic Cult & Gram Stain**

SPECIMEN REQUIRED: Specimens are best collected by aspiration or biopsy. Collection by swab only may limit the recovery of anaerobes. Collect the specimen in an anaerobe transport tube or container and transport to the Micro Lab as soon as possible.

Source:

ABCESS/BODY FLUID: Aspirate with sterile needle and syringe. Express all air bubbles from the syringe, remove needle and cap syringe tightly

PERCUTANEOUS TRANSTRACHEAL ASPIRATION OR BIOPSY: Submit in appropriate anaerobic transport container

TISSUE: Place in appropriate anaerobic transport container

URINE, BLADDER/SUPRAPUBIC: Submit in syringe with all air bubbles expressed. Remove needle and cap syringe tightly

WOUND: Cleanse wound with sterile water or saline and sterile gauze to remove excess exudate. Use an anaerobic culturette to SWAB DEEPLY. Re-insert swab into plastic sleeve

SPECIAL HANDLING: To assure anaerobic conditions, carefully follow directions provided on anaerobic transport system.

TEST INCLUDES: If raw specimen is submitted, gram stain is performed

TEST AVAILABILITY: Set up daily

TURNAROUND TIME: 120 hours

CLINICAL INFORMATION: The following specimens are not suitable for anaerobic culture: fecal specimens, throat & nasopharyngeal specimens, sputum and bronchoscopic specimens, vaginal and cervical swabs, voided or catheterized urines.

CPT: 87205; 87075

### **[CULBAL] BAL Quant Cult & Gram Stain**

SPECIMEN REQUIRED: Bronchoalveolar lavage specimen

TUBE OR CONTAINER: Sterile container

SPECIAL HANDLING: Additional fluid, up to 30 ml, may be required if other tests are also ordered

ORDERING MODULE: MIC

SPECIMEN VOLUME: 30 mL

MINIMUM VOLUME: 10 mL

TEST INCLUDES: BAL quantitative culture and gram stain

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3 days

REFERENCE RANGE: No growth

METHODOLOGY: Culture

CLINICAL USE: Isolate and identify pathogenic organisms

CPT: 87070; 87205

### **[CULBALBLIN] BAL Quant Cult (NBS) & Gram St**

SPECIMEN REQUIRED: Bronchoalveolar lavage specimen

TUBE OR CONTAINER: Sterile container

SPECIAL HANDLING: Additional fluid, up to 30 ml, may be required if other tests are also ordered

ORDERING MODULE: MIC

SPECIMEN VOLUME: 30 mL

MINIMUM VOLUME: 10 mL

TEST INCLUDES: BAL quantitative culture and gram stain

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3 days

REFERENCE RANGE: No growth

METHODOLOGY: Culture

CLINICAL USE: Isolate and identify pathogenic organisms

CPT: 87070; 87205

### **[CULBALIMM] BAL Protocol-Immunocompromised**

SPECIMEN REQUIRED: Bronchoalveolar lavage specimen

TUBE OR CONTAINER: Sterile container

SPECIAL HANDLING: For immunocompromised patients ONLY

Notify the Micro lab in advance at 271-4006

If Cytology is required, submit an additional  
30 ml of specimen

ORDERING MODULE: MIC

SPECIMEN VOLUME: 25 mL

TEST INCLUDES: Cultures for BAL quantitative, Fungus, AFB,  
Legionella CMV shell vial and Respiratory virus;

Smears for AFB, Pneumocystis DFA, Gram Stain,  
Calcofluor white prep (for fungi), & Nomarski Prep

TEST AVAILABILITY: Daily

TURNAROUND TIME: See individual tests

REFERENCE RANGE: No growth

METHODOLOGY: Culture

CLINICAL USE: Isolate and identify pathogenic organisms

CPT: 87205 x 2; 87070; 87081; 87281; 87210; 87102; 87254; 87252

### **[CULBART] Bartonella Culture**

SPECIMEN REQUIRED: Tissue from lymph node or organ, such as  
spleen or liver or Bone marrow

TUBE OR CONTAINER: Tissue - Sterile, sealed container

Bone marrow - 1.5 mL Isolator

SPECIAL HANDLING: Refer to CULBLDBAR for collection of  
Bartonella blood cultures

Send to the Microbiology Lab in a timely  
manner with ALL of the culture labels

Call Micro at 271-4006 for further information

ORDERING MODULE: MIC

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3 weeks

REFERENCE RANGE: No growth

METHODOLOGY: Culture

CLINICAL USE: Isolate and identify Bartonella

CPT: 87081

### **[CULBLD] Blood Culture: Routine**

SPECIMEN REQUIRED:

Blood culture set at room temperature or 37 degrees C;

Refer to OUMC Blood Culture guidelines posted on the intranet  
under "Laboratory".

Amount to be drawn based on patient's weight.

One set = one venipuncture site.

If collecting more than one set of bottles, draw blood from  
separate venipuncture site and include the exact time of  
collection of each set of blood cultures collected and the  
site of each draw, and the initials of person collecting.

COLLECTION INSTRUCTIONS:

- Prepare venipuncture site using a Medi-Flex prep kit (or similar product including chlorhexidine gluconate or iodine for skin disinfection).

Follow instructions on package.

- Use a needle and sterile syringe to aseptically draw the amount of blood specified in the guideline, based on patient's weight.

- Remove the needle from the syringe and cleanse the rubber tops of the correct blood culture bottle(s) with an alcohol prep.

- Transfer blood from syringe to the Bactec bottles by inserting the syringe needle through the rubber tops of the bottles. A vacuum will pull the blood from the syringe into the bottle. Control the flow of blood from the syringe to deliver the correct amount based on the Blood Culture Guidelines chart.

- 7-10mL into the grey bottle

- 3-10mL into the yellow bottle

- or if weight is - Gently invert bottles to prevent clotting (do not shake).

TUBE OR CONTAINER: Bactec Grey & Yellow or Pink for Pediatrics

SPECIAL HANDLING: Do NOT refrigerate blood cultures; Specimens

should be transported to the lab as soon as

possible and within 24 hours of collection

NOTE: Bactec Plus Resin bottle effectively

removes antimicrobials for patients on therapy

BUBBLE WRAP GLASS BOTTLES IF TRANSPORTING BY

TUBE SYSTEM

DO NOT COVER BOTTLE BAR CODE WITH PATIENT

LABEL!

ORDERING MODULE: MIC

SPECIMEN VOLUME: 20 mL total optimal for one set or

3 mL total fo patients TEST INCLUDES: Aerobic and Anaerobic cultures for 20 mL draw

or

Aerobic for 3 mL draw

TEST AVAILABILITY: Daily

TURNAROUND TIME: 5 Days

REFERENCE RANGE: No growth

METHODOLOGY: Automated, BACTEC FX

CLINICAL USE: To isolate and identify pathogenic organisms

All positive cultures are called to the doctor or

facility. A minimum of two sets of blood cultures

is recommended; a maximum of three sets should be

drawn within a 24-hour period.

CPT: 87040

### **[CULBLDISO] Blood Cultures: Isolator**

SPECIMEN REQUIRED: Aseptically drawn whole blood at room temperature;

TUBE OR CONTAINER: Isolator tube - 10 MI

SPECIAL HANDLING: Do NOT refrigerate or incubate Isolator;

Deliver to lab for processing within 8 hours;

Order only on immunocompromised patients  
ORDERING MODULE: MIC  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: AFB, Bartonella and fungus culture of blood  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 weeks; all positive cultures are called to nursing or referring physician  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87040

**[CULBLDISOL] Blood Culture: Isolator**

SPECIMEN REQUIRED: Aseptically drawn whole blood at room temperature;  
Invert several times to prevent clotting  
TUBE OR CONTAINER: Isolator tube, 10 ML  
SPECIMEN HANDLING: Do NOT refrigerate or incubate Isolator;  
Deliver to lab for processing within 8 hours;  
Isolator blood cultures are ordered to detect fastidious organisms (bacteria, AFB, and fungus);  
Order for immunocompromised patients  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 weeks  
REFERENCE RANGE: No growth  
All positive cultures are called to physician  
METHODOLOGY: Manual Culture  
CLINICAL USE: Isolate and identify fastidious organisms such as Bartonella, filamentous fungi, Malassezia spp., and Mycobacteria.  
CPT: 87040

**[CULBLDOTH] Blood Culture:Other System**

**[CULBLDPED] Blood Culture Ped Isolator**

SPECIMEN REQUIRED: Whole blood at room temperature; use aseptic technique for specimen collection  
TUBE OR CONTAINER: One Isolator 1.5 tube  
SPECIAL HANDLING: Transport within 8 hours of collection  
Do NOT refrigerate  
Gently mix tube to prevent clotting  
ORDERING MODULE: MIC  
SPECIMEN VOLUME: optimal 1.5 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days



REFERENCE RANGE: No growth  
METHODOLOGY: Manually read culture plates  
CLINICAL USE: Isolate and identify pathogenic organisms such as  
Malassezia spp., or filamentous fungi  
CPT: 87040

**[CULBLDTRX] Blood Culture: Transfusion Rx**

**[CULBM] Bone Marrow Cult & Gram Stain**

SPECIMEN REQUIRED: Room temperature aspirate and biopsy specimen  
TUBE OR CONTAINER: Pedi isolator (aspirate; biopsy (sterile container))  
SPECIAL HANDLING: For reference, submit slide made directly from aspirate with the aspirate and biopsy  
If Brucella is suspected, please order CULBRU  
ORDERING MODULE: MIC  
SPECIMEN VOLUME: 1.5 mL  
TEST INCLUDES: Bone marrow culture and gram stain  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87081

**[CULBRO] Bronchial Cult & Gram Stain**

SPECIMEN REQUIRED: Bronchial washings, brushings, or lavage  
TUBE OR CONTAINER: Sterile screw cap  
SPECIAL HANDLING: Do NOT add CytoLyt. Submit cytology specimen in separate container if ordered.  
Indicate if specimen is washing or brushing; indicate laterality (e.g. right lobe, left lobe).  
Protected brushes submitted in 1 mL sterile saline - will be processed for quantitation when requested.  
ORDERING MODULE: MIC  
SPECIMEN VOLUME: 1 mL  
TEST INCLUDES: Bronchial culture and gram stain  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070

**[CULBRU] Brucella Cult & Gram Stain**

SPECIMEN REQUIRED: Blood culture or bone marrow. Tissue, synovial fluid, CSF, or urine is also acceptable.  
TUBE OR CONATINER: Bactec bottle (aerobic)

SPECIAL HANDLING: Notify microbiology laboratory (271-4006) prior to submission of specimen if possible.  
TURNAROUND TIME: 28 days  
METHODOLOGY: Automated BACTEC if fluid  
CPT: 87205; 87081

#### **[CULCAM] Campylobacter Stool Culture**

SPECIMEN REQUIRED; submit fresh stool in Para-Pak C&S (orange top transport media. Do not refrigerate.  
HOSPITAL COMMENT: a clean container with a tight lid is the preferred container for hospital in-patients.  
TUBE OR CONTAINER; Para-Pak C&S orange  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 48 hours

#### **[CULCFRESP] Cystic Fibrosis Resp Cult/Gram**

SPECIMEN REQUIRED: Sputum or swab  
COLLECTION:  
1. Have patient rinse and gargle with water prior to sputum collection; Collect a deeply coughed sputum in a sterile screw cap container or  
2. Collect a deep throat swab in a culture swab  
TUBE OR CONTAINER: Sterile container or culture swab  
SPECIAL HANDLING: CF patients require a specialized set of culture media and workup for identification of pathogens common to their population  
ORDERING MODULE: MIC  
TEST INCLUDES: Culture and gram stain  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070

#### **[CULCSF] CSF Cult & Gram Stain**

SPECIMEN REQUIRED: Cerebrospinal fluid (CSF) at room temperature  
TUBE OR CONTAINER: Sterile tube  
SPECIAL HANDLING: Do NOT refrigerate  
Deliver to lab immediately  
ORDERING MODULE: MIC  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST INCLUDES: Gram stain and culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CPT: 87205; 87070

### **[CULCVP] CVP Catheter Tip Culture**

**SPECIMEN REQUIRED:** Central line catheter tip

**TUBE OR CONTAINER:** Sterile container

**SPECIAL HANDLING:** Foley catheter specimens are not acceptable and will be rejected; Other non-vascular catheters may be submitted as a "Culture, Device"

Not acceptable for anaerobic culture

Indicate source (body site or type of catheter)

**ORDERING MODULE:** MIC

**SPECIMEN VOLUME:** Last two inches of catheter tip

**TEST AVAILABILITY:** Daily

**TURNAROUND TIME:** 3 days

**REFERENCE RANGE:** No growth

**METHODOLOGY:** Semiquantitative roll-tip method is performed

**CLINICAL USE:** Isolate and identify pathogenic organisms

**CPT:** 87070

### **[CULDEV] Device Culture**

**SPECIMEN REQUIRED:**

Non-vascular catheters: Submit two inches of non-vascular catheter tip in a sterile container.

Note: Culture of different parts of a device require different containers for each portion to be cultured.

(Foley catheter specimens are NOT acceptable & will be rejected. Central line catheters may be submitted as a "Culture,Cath Tip" CULCVP)

Other devices: Submit only the portion of the device that needs to be cultured. A screw-cap sterile container is generally an acceptable container.

**TUBE OR CONTAINER:** Sterile container

(Swabs are inappropriate collection devices for this test.)

**TEST AVAILABILITY:** Daily

**TURNAROUND TIME:** 72 hours

**METHODOLOGY:** Culture

**CLINICAL INFORMATION:** Indicate source (type of device part or catheter) on requisition.

**REFERENCE RANGE:** No growth after 3 days

### **[CULDIAL] Dialysate Culture Protocol**

**SPECIMEN REQUIRED:** Body fluid

**TUBE OR CONTAINER:** Isolator AND Red

**SPECIAL HANDLING:** Collect body fluid with sterile needle and syringe. Aseptically deliver into a 10 mL isolator tube. Submit remaining 10 mL body fluid in a red-stopper 10 mL vacutainer tube.

**ORDERING MODULE:** MIC

**SPECIMEN VOLUME:** 20 mL

MINIMUM VOLUME: 10 mL  
TEST INCLUDES: Gram stain, aerobic culture, KOH prep, and fungal culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days for final (including fungal culture)  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87070; 87205; 87102; 87220

#### **[CULDRA] Drainage Cult & Gram Stain**

SPECIMEN REQUIRED: Refrigerated drainage fluid or swab  
TUBE OR CONTAINER: Sterile syringe or Culture Swab Plus  
SPECIAL HANDLING: State source of specimen  
Remove needle, express air bubbles, cap syringe tightly  
ORDERING MODULE: MIC  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1 mL  
TEST INCLUDES: Gram stain and aerobic culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070

#### **[CULDRAAA] Drainage Cult A/An & Gram Stn**

SPECIMEN REQUIRED: Refrigerated drainage fluid or swab  
TUBE OR CONTAINER: Sterile syringe or Culture Swab Plus  
SPECIAL HANDLING: State source of specimen  
Remove needle, express air bubbles, cap syringe tightly  
Deliver to lab immediately  
ORDERING MODULE: MIC  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1 mL  
TEST INCLUDES: Gram stain, aerobic and anaerobic culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070; 87075

#### **[CULDUO] Duodenoscope Culture**

#### **[CULEAR] Ear Cult & Gram Stain**

SPECIMEN REQUIRED: Swab from internal or external ear  
EXTERNAL EAR: Collect with Culture Swab Plus

INTERNAL EAR: Cleanse external ear with alcohol, collect drainage from inner ear with NP swab  
TUBE OR CONTAINER: Culture Swab Plus  
SPECIAL HANDLING: State source and laterality  
Distinguish external and internal sources  
ORDERING MODULE: MIC  
TEST INCLUDES: Gram stain and culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070

#### **[CULEC157] E.coli O:157 Culture**

SPECIMEN REQUIRED: Submit fresh stool specimen in stool C&S transport container (Para-Pak orange top).  
TUBE OR CONTAINER: Para-Pak C&S  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 48 hours

#### **[CULENV] Environmental Culture**

SPECIMEN REQUIRED:

Source:

FLUIDS: 10 mL fluid; submit in sterile screw-cap container

SURFACES: Swab area with Culture Swab Plus

WATER: Submit 10 mL water in sterile screw-cap container

Food cultures are not performed at OU MEDICAL CENTER LABORATORY.

HOSPITAL COMMENT: Environmental cultures must be approved by the Infection Prevention Department before the lab will perform test

TUBE OR CONTAINER: Culture Swab Plus or sterile container

SPECIAL HANDLING: When surface swabs are submitted, specify the potential pathogen under investigation. Specimens received that do not identify a specific pathogen will not be accepted.

TEST AVAILABILITY: Daily

TURNAROUND TIME: 48 hours

CLINICAL INFORMATION: For sterilizer check, order "Sterilizer Function Check, CULSTER"

The Environmental Culture is intended to identify specific pathogens in the local facility under Epidemiological investigation. This test is not appropriate as a general screen for sterility of an object or surface.

#### **[CULEYE] Eye Cult & Gram Stain**

SPECIMEN REQUIRED: Swab or plated specimen

COLLECTION OF SPECIMEN:

CONJUNCTIVA OR LIDS: Collect with culturette or with Dacron wire swab, if inoculating directly onto plated media

(chocolate and blood agar plate)

CORNEAL SCRAPINGS: Inoculate directly onto plated media

(chocolate, blood agar plate, and thio broth)

INTERNAL EYE (VITREOUS/AQUEOUS): Inoculate directly onto plated media (chocolate, blood agar plate and thio broth) and slides. If eye washings are collected, submit cassette container.

TUBE OR CONTAINER: Specified media

SPECIAL HANDLING: Specify source and laterality; Deliver to lab immediately; Inclusion of patient clinical history and differential diagnostic considerations is very helpful

ORDERING MODULE: MIC

TEST INCLUDES: Culture and gram stain

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3 days to 2 weeks (depending on exact specimen type)

REFERENCE RANGE: No growth

METHODOLOGY: Culture

CLINICAL USE: Isolate and identify pathogenic organisms

CPT: 87205; 87070

#### **[CULFLU] Body Fluid Cult & Gram Stain**

SPECIMEN REQUIRED: Body fluid collected aseptically

TUBE OR CONTAINER: Sterile syringe

SPECIAL HANDLING: State source of specimen; If source is peritoneal dialysate fluid (PD fluid), please see Culture Body Fluid (Dialysate)-CULDIAL, for collection instructions.

Remove needle, express air bubbles, cap syringe tightly

ORDERING MODULE: MIC

SPECIMEN VOLUME: 10 mL

MINIMUM VOLUME: 3 mL

TEST INCLUDES: Gram stain and culture

TEST AVAILABILITY: Daily

TURNAROUND TIME: 5 days

REFERENCE RANGE: No growth

METHODOLOGY: Culture

CLINICAL USE: Isolate and identify pathogenic organisms

CPT: 87205; 87070

#### **[CULFLUAA] Body Fluid A/An Cult & Gram St**

SPECIMEN REQUIRED: Body fluid collected aseptically

TUBE OR CONTAINER: Sterile syringe or Culture Swab Plus

SPECIAL HANDLING: State source of specimen

Remove needle, express air bubbles, cap syringe tightly

Do NOT submit swabs or plated material

ORDERING MODULE: MIC

SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Gram stain, aerobic and anaerobic culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070; 87075

### **[CULFUN] Fungus Culture**

SPECIMEN REQUIRED: Refrigerated specimen

Source:

BODY FLUIDS: Submit 5 mL or more in a sterile, tightly capped container

BRONCHIAL WASHING, BRUSHING, OR LAVAGE: Submit in tightly sealed sterile container; do not add CytoLyt

CSF: Collect aseptically; Submit to lab ASAP in tightly sealed container at room temperature.

1 ml optimum

0.5 ml minimum

SPUTUM: Have the patient rinse mouth with tap water just prior to collection. Submit 5 mL (or more) deeply coughed sputum in a sterile, tightly sealed container.

TISSUE: Submit specimen in a tightly sealed sterile container. Add a small amount of sterile saline to prevent the tissue from drying. Do not add CytoLyt or formalin.

URINE: Submit 50 mL catheterized specimen in a tightly sealed sterile container

TUBE OR CONTAINER: Tightly sealed sterile container

SPECIAL HANDLING: Indicate specimen source and laterality

ORDERING MODULE: MIC

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4 weeks

REFERENCE RANGE: No growth

METHODOLOGY: Culture

CLINICAL USE: Establish the diagnosis of fungal infections

CPT: 87102

### **[CULFUNSK] Fungus Culture Skin/Nail/Hair**

SPECIMEN REQUIRED: Skin or nail scrapings

Collection: Cleanse area with 70% alcohol

SKIN: With a sterile blade, scrape the skin at the border of the active lesion and normal tissue

NAILS: Use a sterile blade and take deep scrapings of the nail

TUBE OR CONTAINER: Sterile container or Mycosel plate

SPECIAL HANDLING: Indicate specimen source and laterality

ORDERING MODULE: MIC

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Establish diagnosis of fungal infection  
CPT: 87101

### **[CULGC] GC Culture**

**SPECIMEN REQUIRED:** Swab of appropriate site or fluid from joint or other appropriate sites.

**TUBE OR CONTAINER:** For this specific order, a culture packet is obtained from the Microbiology Lab (ext. 14006), consisting of one Modified Thayer Martin plate, a special zippered bag and CO2 ampule, instructions, and a specimen bag.

**SPECIAL HANDLING:** Indicate specimen source during order process.

1. Allow culture plate to reach ROOM TEMP before use.
2. Label plate with patient or Meditech label on the side that shows the name of the media.
3. Collect specimen with swab, open plate, and rub swab on media surface in an "M" or "Z" pattern. Replace lid and discard swab.
4. Place plate in special zip bag that contains the CO2 ampule
5. Securely zip close the bag, then squeeze the ampule in the center such that it is crushed. This will allow CO2 to be produced. Do NOT reopen the bag.
6. Place the bag inside a specimen bag and add the remaining Meditech labels to the pouch on the specimen bag.
7. Send to the Laboratory.

**ORDERING MODULE:** MIC

**TEST AVAILABILITY:** Daily

**TURNAROUND TIME:** 3 days

**REFERENCE RANGE:** Negative for Neisseria gonorrhoeae

**METHODOLOGY:** Culture

**CLINICAL USE:** Isolate and identify N. gonorrhoeae; establish the diagnosis of gonorrhea

**CPT:** 87081

### **[CULGEN] Genital Cult & Gram Stain**

**SPECIMEN REQUIRED:** Culture Swab Plus at room temperature

**TUBE OR CONTAINER:** Culture Swab Plus

**SPECIAL HANDLING:** Indicate source; Do NOT refrigerate; Vagina are unacceptable for anaerobic cultures;

Deliver to lab immediately; If specimen is vaginal for Group B Strep only, order CULSTRB; if for vaginal source, order CULVAG

**ORDERING MODULE:** MIC

**TEST INCLUDES:** Gram stain, aerobic and anaerobic culture

**TEST AVAILABILITY:** Daily

**TURNAROUND TIME:** 3 days



REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070

**[CULGENAA] Genital A/AN Cult & Gram Stain**

SPECIMEN REQUIRED: Culture Swab Plus at room temperature  
TUBE OR CONTAINER: Culture Swab Plus  
SPECIAL HANDLING: Indicate source; Do NOT refrigerate; Vaginal are unacceptable for anaerobic cultures;  
Deliver to lab immediately

ORDERING MODULE: MIC  
TEST INCLUDES: Gram stain, aerobic and anaerobic culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070; 87075

**[CULHPC] HPC Culture**

**[CULJOI] Joint Fluid Cult & Gram Stain**

SPECIMEN REQUIRED: Joint fluid at room temperature  
COLLECTION: Collect joint fluid with sterile needle and syringe; remove needle, express air bubbles, cap syringe tightly  
TUBE OR CONTAINER: Sterile syringe  
SPECIAL HANDLING: Indicate specimen source and laterality; Do not submit swabs. Specimens received with needle attached will not be accepted  
Deliver to lab immediately  
ORDERING MODULE: MIC  
SPECIMEN VOLUME: 10 mL  
TEST INCLUDES: Gram stain and culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070

**[CULJOIAA] Joint Fld A/An Cult & Gram Stn**

SPECIMEN REQUIRED: Joint fluid at room temperature  
COLLECTION: Collect joint fluid with sterile needle and syringe; remove needle, express air bubbles, cap syringe tightly  
TUBE OR CONTAINER: Sterile syringe  
SPECIAL HANDLING: Indicate specimen source and laterality; Do

not submit swabs. Specimens received with  
needle attached will not be accepted  
Deliver to lab immediately  
ORDERING MODULE: MIC  
SPECIMEN VOLUME: 10 mL  
TEST INCLUDES: Gram stain, aerobic, and anaerobic culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070; 87075

**[CULLEG] Legionella Culture**

SPECIMEN REQUIRED: Refrigerated respiratory specimen or lung  
tissue  
TUBE OR CONTAINER: Tightly sealed sterile container  
SPECIAL HANDLING: Do NOT add CytoLyt or formalin; if cytology is  
ordered in addition to culture, submit  
separate specimen marked "for cytology"  
Indicate specimen source  
ORDERING MODULE: MIC  
SPECIMEN VOLUME: 10 mL (respiratory specimen)  
1 gram (lung tissue)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 14 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify Legionella species  
CPT: 87081

**[CULMYP] Mycoplasma pneumoniae culture**

SPECIMEN REQUIRED: Refrigerated respiratory, joint fluid, or CSF  
TUBE OR CONTAINER: Multi-microbe media (M-4)  
SPECIAL HANDLING: Indicate specimen source; Order UREAPL for  
Ureaplasma/ genital mycoplasmas  
on non-respiratory specimens;  
Inclusion of patient clinical history and  
differential diagnostic considerations is very  
helpful  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify Mycoplasma species of  
respiratory origin  
CPT: 87109

**[CULORTHO] Orthoped A/An Cult & Gr stain**

**SPECIMEN REQUIRED:** Refrigerated piece of tissue  
**TUBE OR CONTAINER:** Sterile container sent STAT or E Swab  
**SPECIAL HANDLING:** Indicate specimen source and laterality  
**HOSPITAL COMMENT:** Deliver to lab immediately  
Do NOT add formalin or CytoLyt. Record time of collection on container  
**ORDERING MODULE:** MIC  
**TEST INCLUDES:** Gram stain, aerobic, and anaerobic culture that will be held 14 days.  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 15 days  
**REFERENCE RANGE:** No growth  
**METHODOLOGY:** Culture  
**CLINICAL USE:** Isolate and identify fastidious pathogenic organisms that are slow growing (up to 14 days)  
**CPT:** 87205; 87070; 87075

#### **[CULQTI] Quant Tissue Cult & Gram Stain**

**SPECIMEN REQUIRED:** Tissue  
**TUBE OR CONTAINER:** Sterile container  
**SPECIAL HANDLING:** Indicate source and laterality of specimen  
**ORDERING MODULE:** MIC  
**TEST INCLUDES:** Gram stain and culture  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 5 days  
**REFERENCE RANGE:** No growth  
**METHODOLOGY:** Culture  
**CPT:** 87071; 87205; 87176

#### **[CULSIN] Sinus Cult & Gram Stain**

**SPECIMEN REQUIRED:** Refrigerated swab  
**COLLECTION:** Collect specimen with NP wire swab, avoiding contact with internal nares. Place the swab in the tube of a Culture Swab Plus.  
**TUBE OR CONTAINER:** Culture Swab Plus  
**SPECIAL HANDLING:** Indicate source and specimen laterality  
**ORDERING MODULE:** MIC  
**TEST INCLUDES:** Gram stain and culture  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 3 days for final  
**REFERENCE RANGE:** No growth  
**METHODOLOGY:** Culture  
**CLINICAL USE:** Isolate and identify pathogenic organisms  
**CPT:** 87205; 87070

#### **[CULSINAA] Sinus A/An Cult & Gram Stain**

**SPECIMEN REQUIRED:** Refrigerated nasal fluid  
**COLLECTION:** Collect specimen with sterile needle and syringe; Remove needle; Express air bubbles and cap tightly  
**TUBE OR CONTAINER:** Syringe

SPECIAL HANDLING: Indicate specimen laterality  
Do NOT submit swabs  
ORDERING MODULE: MIC  
TEST INCLUDES: Gram stain, aerobic and anaerobic culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 days for final  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070; 87075

### **[CULSPU] Sputum Cult & Gram Stain**

SPECIMEN REQUIRED: Sputum

EXPECTORATED SPUTUM:

1. Have the patient rinse and gargle with water prior to specimen collection. Instruct the patient not to expectorate saliva or post-nasal discharge. Early morning, freshly expectorated sputum is preferred
2. Collect specimen resulting from a deep cough in a sterile screw-capped container

INDUCED SPUTUM (performed by respiratory therapy personnel)

1. Using an ultrasonic nebulizer, have the patient inhale approximately 20 to 30 ml of 3 to 10% 0.85% NaCl.
2. Collect induced sputum in sterile screw-capped cup

TUBE OR CONTAINER: Sterile container

SPECIAL HANDLING: Indicate if sputum is induced or not induced.

If specimen is from tracheal aspirate, please order CULTRA (Culture, trach sputum)

Specimens with >10 squamous epithelial cells/  
LPF are considered heavily contaminated with  
saliva and are unsatisfactory for culture.

Recollection will be requested

ORDERING MODULE: MIC

TEST INCLUDES: Sputum culture and gram stain

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3 days

REFERENCE RANGE: No growth

METHODOLOGY: Culture

CLINICAL USE: Isolate and identify pathogenic organisms

CPT: 87205; 87070

### **[CULSTER] Sterilizer Function Check**

SPECIMEN REQUIRED: Submit sterilizer check vial. For each new log, submit two un-sterilized, unbroken vials for negative and positive controls. Refer to specific manufacturer's instructions in use at your facility.

SPECIAL HANDLING; Submit to laboratory within 36 hours of collection

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-7 days

### **[CULSTL] Stool Culture**

### **[CULSTRB] Strep B Culture**

SPECIMEN REQUIRED: Swab  
TUBE OR CONTAINER: Culture Swab Plus  
SPECIAL HANDLING: Indicate source of specimen; This test is a screen for colonization by Group B strep only; Sensitivities are not routinely performed; however, if patient is Pen allergic, susceptibility will be performed.  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify Streptococcus group B  
CPT: 87081

### **[CULTH] Throat Culture**

SPECIMEN REQUIRED: Swab of tonsillar area, posterior pharynx, and area of inflammation with swab  
Avoid contact with tongue and cheek  
TUBE OR CONTAINER: BBL Culture Swab (with liquid Stuart's)  
SPECIAL HANDLING: If an initial Rapid Strep Screen is desired, order STRAANT. If it is negative it will reflex to this test.  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: No growth or Normal oral flora  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
Culture will be observed for any bacterial agents of pharyngitis  
CPT: 87070

### **[CULTIS] Tissue (Surg) Cult & Gram Stn**

SPECIMEN REQUIRED: Refrigerated tissue in a small amount of non-bacteriostatic sterile saline  
TUBE OR CONTAINER: Sterile screw-top container  
SPECIAL HANDLING: Indicate specimen source and laterality; Deliver to lab immediately  
Do NOT add formalin or CytoLyt; submit specimen for pathology in a separate container  
ORDERING MODULE: MIC  
TEST INCLUDES: Gram stain and culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: No growth

METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070; 87176

**[CULTISAA] Tissue (Surg) A/An Cult & Gram**

SPECIMEN REQUIRED: Refrigerated piece of tissue  
TUBE OR CONTAINER: Anaerobic transport container  
SPECIAL HANDLING: Indicate specimen source and laterality  
HOSPITAL COMMENT: Deliver to lab immediately  
Do NOT add formalin or CytoLyt. Record time of collection on container  
ORDERING MODULE: MIC  
TEST INCLUDES: Gram stain, aerobic, and anaerobic culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070; 87075

**[CULTISANA] Tissue Anaerobic Culture**

**[CULTISSW] Tissue Swab Cult & Gram Stain**

SPECIMEN REQUIRED: Specimen on Culture Swab Plus  
TUBE OR CONTAINER: Culture Swab Plus  
SPECIAL HANDLING: Indicate specimen source and laterality  
Preferred specimen is biopsy material; order CULTIS, Culture Surgical Tissue  
Swabs are considered poor specimens  
ORDERING MODULE: MIC  
TEST INCLUDES: Gram stain and culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070

**[CULTISSWAA] Tissue Swab A/An Cult & Gram**

SPECIMEN REQUIRED: Aerobic and anaerobic swabs  
TUBE OR CONTAINER: Culture swab  
SPECIAL HANDLING: Indicate specimen source and laterality  
Preferred specimen is biopsy material; order CULTISAA, Culture Tissue (Aerobe/Anaerobe);  
Swabs are considered poor specimens  
Deliver to lab immediately  
ORDERING MODULE: MIC  
TEST INCLUDES: Gram stain, aerobic, and anaerobic culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days

REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070; 87075

#### **[CULTRA] Trach Asp Cult & Gram Stain**

SPECIMEN REQUIRED: Refrigerated aspirated specimen  
TUBE OR CONTAINER: Trach trap tightly sealed  
ORDERING MODULE: MIC  
TEST INCLUDES: Sputum culture and gram stain  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070

#### **[CULTUL] Tularemia Culture**

SPECIMEN REQUIRED: Blood, Tissue (often lymph node) or throat swab  
TUBE OR CONTAINER: Isolator tube (blood); Sterile container (tissue); Culturette device (throat)  
SPECIAL HANDLING: Order CULTUL if order is for Tularemia Culture  
This is in addition to other routine cultures  
Notify the Micro Lab in advance at 271-4006  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 weeks  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify Tularemia  
CPT: 87081

#### **[CULUR] Urine Culture**

SPECIMEN REQUIRED: Refrigerated urine  
COLLECTION INSTRUCTIONS:  
CLEAN CATCH: Use a urine collection kit and follow the instructions on patient preparation to avoid contaminating specimen with skin/vaginal flora. Collect a tube. Indicate type of urine specimen (i.e., clean catch, catheter, etc.).  
CATHETER SPECIMENS:  
I/O catheter: Collect a mid-stream specimen from the open end of the catheter into a sterile container. Transfer a minimum of 3 mL collected urine into a B-D urine transport tube.  
Foley catheter: Disinfect catheter port with alcohol swab and use a sterile needle and syringe to collect 5-10 mL of urine. Inject a minimum of 3 mL collected urine into a B-D urine transport tube.  
BLADDER, SUPRAPUBIC, OR KIDNEY: Aseptically collect specimen with sterile needle and syringe; transfer a minimum of 3 mL to

a B-D urine transport tube.

HOSPITAL COMMENT: B-D urine transport tube is not needed if specimen is immediately placed on ice and delivered to lab

SPECIAL HANDLING: Never collect urine from the catheter drainage tube or collection bag. Foley specimens growing multiple species are generally the result of poor collection technique.

Recollection will be requested.

Urine frequently supports the proliferation of bacteria, which may multiply at the same rate as in nutrient broth. Therefore, a urine delayed in transit and left at room temp for extended period of time may give erroneous results

Urine must be processed in the Lab within 2 hours of collection if not refrigerated

ORDERING MODULE: MIC

SPECIMEN VOLUME: 2 urine gray (8 mL)

MINIMUM VOLUME: 1 urine gray (4 mL)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2 days

REFERENCE RANGE: No growth

METHODOLOGY: Culture

CLINICAL USE: Isolate and identify pathogenic organisms

CPT: 87088

### **[CULVAG] Vaginal Cult & Gram Stain**

SPECIMEN REQUIRED: Swab of vaginal canal

COLLECTION: Remove excess secretions with sterile gauze before collection. Use a Culture Swab Plus to swab mucosa high in the vaginal canal. Vaginal secretions are inappropriate for anaerobic culture and will be rejected.

TUBE OR CONTAINER: Culture Swab Plus

SPECIAL HANDLING: If specimen is for group B Strep only, order

CULSTRB, Culture, Strep B. If culture for GC

is indicated, order GCDNA and submit in Amplicor transport tube

ORDERING MODULE: MIC

TEST INCLUDES: Gram stain and culture

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3 days

REFERENCE RANGE: No growth OR Normal vaginal flora

METHODOLOGY: Culture

CLINICAL USE: Isolate and identify pathogenic organisms

CPT: 87205; 87070

### **[CULVRE] VRE Screen Culture**

SPECIMEN REQUIRED: Fresh stool, rectal swab, or vaginal swab

TUBE OR CONTAINER: Sterile, screw-cap container or CultureSwab



ORDERING MODULE: MIC  
SPECIMEN VOLUME: Pea-size portion of fresh stool  
TEST INCLUDES: Culture screen for vancomycin resistant strains  
of Enterococcus species  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 48 hours  
REFERENCE RANGE: Negative for VRE  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify vancomycin resistant  
organisms in order to identify carriers and  
institute precautions to avoid spread of  
nosocomially acquired infections  
CPT: 87081

#### **[CULWOU] Wound Cult & Gram Stain**

SPECIMEN REQUIRED: Refrigerated swab from wound  
COLLECTION: Clean surface of wound with sterile water and  
sterile gauze to remove excess surface exudates. Swab deeply  
with a Culture Swab Plus  
TUBE OR CONTAINER: Culture Swab Plus  
SPECIAL HANDLING: Indicate specimen source and laterality  
ORDERING MODULE: MIC  
TEST INCLUDES: Gram stain and culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87205; 87070

#### **[CULWOUAA] Wound Cult A/An & Gram Stain**

SPECIMEN REQUIRED: Refrigerated swab from wound  
COLLECTION: Clean surface of wound with sterile water and  
sterile gauze to remove excess surface exudates. Swab deeply  
with a Culture Swab Plus  
TUBE OR CONTAINER: Culture Swab Plus  
SPECIAL HANDLING: Indicate specimen source and laterality  
ORDERING MODULE: MIC  
TEST INCLUDES: Gram stain and aerobic and anaerobic culture  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture  
CLINICAL USE: Isolate and identify pathogenic organisms  
CPT: 87070; 87075; 87205

#### **[CURVABA] Curvularia lunata Allergen**

SPECIMEN REQUIRED: Refrigerated or room temperature serum  
TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-8 days  
REFERENCE RANGE: < 1 mg/L  
METHODOLOGY: Enzyme immunoassay (FEIA)  
disorders in conjunction with other clinical  
findings  
CPT: 83520

#### **[CV2AB] CV2 AUTO-ANTIBODY**

SPECIMEN REQUIRED: Frozen or refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-14 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Western blot  
CPT: 84182

#### **[CXCR4] WHIM SYNDROME VIA CXCR4**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Warts, Hypogammaglobulinemia, infections, and  
Myelokathexis (WHIM) Syndrome via the CXCR4 gene  
METHODOLOGY: Bi-directional Sanger Sequencing  
CLINICAL USE: Confirmation of clinical diagnosis  
CPT: 81479

#### **[CYAN] Cyanide**

SPECIMEN REQUIRED: Refrigerated or frozen whole blood  
TUBE OR CONTAINER: Gray (Fluoride oxalate); Lavender (EDTA) or  
Dark Green (Heparin)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-10 days  
METHODOLOGY: High Performance Liquid Chromatography with  
Fluorescence Detection; (HPLC-FL)  
CLINICAL USE: Monitor exposure to cyanide  
CPT: 82600

#### **[CYCAMP] Cyclic AMP**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)

SPECIAL HANDLING: Separate and freeze as soon as possible  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-9 days  
REFERENCE RANGE: 12-22 pmol/mL  
METHODOLOGY: Radioimmunoassay  
CLINICAL USE: Useful in the clinical assessment of  
parathyroid function  
CPT: 82030

#### **[CYCLO] Cyclosporine Level**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 1-3 days  
REFERENCE RANGE: 50-500 ng/mL  
OTHER NAMES: Neoral, CSA  
METHODOLOGY: Chemiluminescent microparticle immunoassay (CMIA)  
CLINICAL USE: Monitor levels in management of immuno-supression  
for organ transplant recipients  
CPT: 80158

#### **[CYCLO2HR] Cyclosporine 2 Hour Post Dose Level**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Draw two hours after dose.  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: DAILY  
TURNAROUND TIME: 4 HOURS  
REFERENCE RANGE: Not established  
OTHER NAMES: Neoral, CSA  
METHODOLOGY: Chemiluminescent microparticle immunoassay (CMIA)  
CLINICAL USE: Monitor levels in management of immuno-supression  
for organ transplant recipients  
CPT: 80158

#### **[CYFRA] Cytokeratin Antibody**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-10 days  
REFERENCE RANGE: 0.0 - 2.3 ng/mL  
OTHER NAMES: Soluble Cytokeratin 19 Fragment; CYFRA 21-1  
METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)

CPT: 86316

**[CYP2D6] CYTOCHROME P450 2D6 GENOTYPING**

SPECIMEN REQUIRED: Whole blood or buccal swab at room temperature

TUBE OR CONTAINER: Lavender (EDTA), Yellow (ACD) or Buccal swab

SPECIMEN VOLUME: 7 mL whole blood

Buccal swab kit

MINIMUM VOLUME: 3 mL whole blood

2 buccal swabs

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-6 days

OTHER NAMES: DME Genotyping

METHODOLOGY: Polymerase Chain Reaction (PCR)

CLINICAL USE: Measures metabolism of certain drugs

CPT: 81226

**[CYP3A4] Cytochrome P450 3A4 Genotype**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 3 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-9 days

METHODOLOGY: Polymerase Chain Reaction (PCR)

CLINICAL USE: An aid to clinicians in determining therapeutic strategies for drugs that are metabolized by

CYP3A4, including atorvastatin, simvastatin and lovastatin

CPT: 81401

**[CYSTABCSF] CSF Cysticercosis Antibody**

SPECIMEN REQUIRED: Frozen CSF

TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-6 days

REFERENCE RANGE: Negative: 0.34 O.D. or less

Equivocal: 0.35-0.50 O.D.

Positive: 0.51 O.D. or greater

METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)

REFLEX TEST INFORMATION:

CLINICAL USE: Detection of intrathecally-produced organism-specific antibodies in CSF indicates

central nervous system infection

CPT: 86682

**[CYSTC] Cystatin C**

SPECIMEN REQUIRED: Serum or plasma at room temperature

TUBE OR CONTAINER: Red, Gold or Green (heparin)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.53 - 0.95 mg/L  
METHODOLOGY: Immunologic  
CLINICAL USE: A good marker of renal function  
CPT: 82610

### **[CYSTUP] UR CYSTINE PROFILE**

SPECIMEN REQUIRED: Frozen aliquot of 24 urine collection

TUBE OR CONTAINER: Plastic urine container  
SPECIAL HANDLING: 24 hour collection of urine in "P" container  
(no preservative)  
Testing can be performed on random collection  
(no reference range established)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 10-100 mg/24 hours  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry  
(LC/MS-MS)  
CLINICAL USE: Detect cystinuria and other diseases related to  
sulfur-containing amino acids; work up  
nephrolithiasis  
CPT: 82131

### **[CYSTWBC] WBC Intracellular Cystine**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Yellow (ACD)  
SPECIAL HANDLING: Specimen must arrive in laboratory by 1:30 pm  
Monday through Thursday only  
(must arrive at Baylor w/in 36 hrs of  
collection)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 2-9 days  
REFERENCE RANGE: < 0.2 nmoles half cystine/mg protein  
CLINICAL USE: Aid in the diagnosis and management of cystinosis  
CPT: 82131

### **[DANTROLENE] Dantrolene Level**

SPECIMEN REQUIRED: Serum or Plasma, Frozen  
TUBE OR CONTAINER: RED or LAVENDER  
SPECIAL HANDLING: Protect from light, separate serum or plasma  
SPECIMEN VOLUME: 1mL  
MINIMUM VOLUME: 0.3mL  
TEST INCLUDES: Dantrolene level

TEST AVAILABILITY: Daily  
REFERENCE RANGE: No Normals  
METHODOLOGY: Spectrofluorometry  
CPT:80369

**[DARS2] LEUKOENCEPH VIA DARS2 GENE**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Leukoencephalopathy via DARS2 sequencing  
METHODOLOGY: Sequence analysis is performed in both forward and reverse directions  
CPT: 81479

**[DARUN] DARUNAVIR (PREZISTA) LEVEL**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
OTHER NAMES: Prezista  
METHODOLOGY: High performance liquid chromatography (HPLC)  
CPT: 82542

**[DATNEG] DAT NEGATIVE HEMOLYTIC ANEMIA**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA) & Red (no gel)  
SPECIMEN VOLUME: 20 mL (Red)  
5 mL (Lavender)  
MINIMUM VOLUME: 15 mL (Red)  
3 mL (Lavender)  
TEST INCLUDES: ABO/Rh, Direct Antiglobulin Tests (routine and enhanced), Elution, and one routine and two enhanced antibody detection tests  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 days  
METHODOLOGY: Serological  
CPT: 86850 x 5; 86860; 86870; 83880 x 7; 86900; 86901

**[DBQD] DESBUQUOIS DYSPLASIA (CANT1)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST AVAILABILITY: Daily

OTHER NAMES: Desbuquois Dysplasia (DBQD) via CANT1 Gene

METHODOLOGY: Sanger sequencing

CPT: 81479 (full gene sequencing)

#### **[DCX] DCX (XLIS) SEQUENCING**

SPECIMEN REQUIRED: Whole blood at room temperature;

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-4 weeks

OTHER NAMES: Classic Lissencephaly; X-linked lissencephaly

METHODOLOGY: Bi-directional sequence analysis

CPT: 83890; 83891, 83894; 83898 x 8, 83904 x 8, 83912

#### **[DDQNT] D-Dimer, Quantitative**

SPECIMEN REQUIRED: Frozen plasma

TUBE OR CONTAINER: Blue (Citrate)

SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting

Send to lab immediately or centrifuge and freeze plasma

SPECIMEN VOLUME: 1 full tube

Testing volume: 2 mL of PLASMA

MINIMUM VOLUME: 1 full tube

Testing volume: 1 mL of PLASMA

TEST AVAILABILITY: Daily

TURNAROUND TIME: 1-4 hours

REFERENCE RANGE: < 243 ng/mL (DDU)

METHODOLOGY: Turbidimetric Immunoassay

CLINICAL USE: Detection of deep vein thrombosis (DVT); evaluate acute myocardial infarction, unstable angina, and disseminated intravascular coagulation (DIC).

With this method, the cut-off level recommended for the exclusion of pulmonary embolism (PE) or deep vein thrombosis (DVT) is 500ng/mL (FEU).

CPT: 85379

#### **[DEOX11T] Deoxycorticosterone**

SPECIMEN REQUIRED: Frozen serum (preferred) or plasma

TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)

SPECIAL HANDLING: Separate within 1 hour of collection

SPECIMEN VOLUME: 3 mL

MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-6 days

OTHER NAMES: DOC

METHODOLOGY: High Performance Liquid Chromatography/Tandem

Mass Spectrometry (LC-MS/MS)

CPT: 82633

**[DES] Desipramine (Norpramine) Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature

TUBE OR CONTAINER: Red, Lavender(EDTA) or Dark green (heparin)

SPECIAL HANDLING: Do NOT collect in gel barrier tube

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.3 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: Therapeutic: 150-250 ng/mL

Potentially toxic: >500 ng/mL

OTHER NAMES: Norpramin; Pertofrane

METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS)

CLINICAL USE: Monitor therapeutic drug level

CPT: 80335

**[DESMOG] DESMOGLEIN 1 & 3**

SPECIMEN REQUIRED: Serum at room temperature

TUBE OR CONTAINER: Red or Gold

SPECIAL HANDLING: Separate within 2 hours of collection

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: Desmoglein 1: < 14.0 U - Negative

Desmoglein 3: < 9.0 U - Negative

METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)

CLINICAL USE: Aid in the diagnosis of pemphigus or monitor treatment response in patients with a confirmed diagnosis of pemphigus

CPT: 83516 x 2

**[DEX] Dexamethasone Level**

SPECIMEN REQUIRED: Frozen serum (preferred) or plasma

TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)

SPECIAL HANDLING: Separate from cells within 1 hour

SPECIMEN VOLUME: 3 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-10 days

OTHER NAMES: Decadron

METHODOLOGY: Mass Spectrometry (MS)

CLINICAL USE: Therapeutic drug monitor

CPT: 80299

**[DEXT] Dextromethorphan Level**

SPECIMEN REQUIRED: Frozen serum or plasma



TUBE OR CONTAINER: Red or Dark Green (Heparin)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-8 days  
REFERENCE RANGE: 2.0-6.0 ng/mL  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
CLINICAL USE: Therapeutic Drug Monitoring  
CPT: 82542

#### **[DHEA] Dehydroepiandrosterone (DHEA)**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)  
PEDIATRIC TEST INFO: Order PEDDHEA for pediatric testing to be performed by Esoterix  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: Age specific  
OTHER NAMES: DHEA; Unconjugated DHEA  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)  
CLINICAL USE: Evaluate adrenal carcinomas which frequently secrete large amounts of DHEA  
CPT: 82626

#### **[DHEAS] Dehydroepiandrosterone Sulfate**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.7 mL (this volume does not allow for repeat testing)  
PEDIATRIC TEST INFO: Order PEDDHEAS for pediatric testing to be performed by Esoterix  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Age specific  
OTHER NAMES: DHEA-S; DHEA-SO<sub>4</sub>; DHEA Sulfate  
METHODOLOGY: Electrochemiluminescence Immunoassay (ECLIA)  
CLINICAL USE: Work up women with infertility, amenorrhea, or hirsutism, to identify the source of excessive androgen; aid in the evaluation of androgen excess (hirsutism and/or virilization)  
CPT: 82627

#### **[DHEAU] Urine Dehydroepiandrosterone (DHEA)**

**SPECIMEN REQUIRED:** Frozen urine aliquot (24-hour or random)  
**TUBE OR CONTAINER:** Plastic urine container  
**SPECIMEN VOLUME:** 5 mL  
**MINIMUM VOLUME:** 1 mL  
**TEST AVAILABILITY:** Daily  
**METHODOLOGY:** Radioimmunoassay (RIA) or GC/MS  
**CPT:** 82626

#### **[DHPR] Dihydropteridine Reductase Deficien**

**SPECIMEN REQUIRED:** PKU card or filter paper  
**TUBE OR CONTAINER:** PKU card or Filter paper with blood spot  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 2 weeks  
**REFERENCE RANGE:** > 0.7 nmol/min/mg Hgb  
**CPT:** 82657

#### **[DHT] Dihydrotestosterone**

**SPECIMEN REQUIRED:** Frozen serum (preferred) or plasma  
**TUBE OR CONTAINER:** Red, Gold, Lavender (EDTA) or Green (heparin)  
**SPECIAL HANDLING:** Serum must be separated within 1 hour of collection  
**SPECIMEN VOLUME:** 1 mL  
**MINIMUM VOLUME:** 0.5 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 3-8 days  
**REFERENCE RANGE:** Age specific  
**OTHER NAMES:** Androstaner-3-one; 17-(Beta); DHT; Hydroxy-5 Alpha  
**METHODOLOGY:** Radioimmunoassay (RIA) after solvent extraction  
**CPT:** 80327

#### **[DIB] Dibucaine Number**

**SPECIMEN REQUIRED:** Serum or plasma at room temperature  
**TUBE OR CONTAINER:** Red, Gold or Lavender (EDTA)  
**SPECIAL HANDLING:** Do not collect within 24 hrs of administration of muscle relaxant; Separate from cells and transfer to plastic tube indicating on tube "serum" or "plasma".  
**SPECIMEN VOLUME:** 0.5 mL  
**MINIMUM VOLUME:** 0.2 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 2 days  
**REFERENCE RANGE:** Normal: 70% to 90% inhibition  
Heterozygotes: 30% to 70% inhibition  
Homozygotes: 0% to 30% inhibition  
**METHODOLOGY:** Cholinesterase by spectrophotometry (Ellman) with dibucaine inhibition  
**CLINICAL USE:** Assess the presence of homozygous or heterozygous "atypical" cholinesterase variant, in patients who have low result of serum or plasma cholinesterase assay, and may be at risk of apnea

when given succinylcholine muscle relaxant  
CPT: 82638

#### **[DIG] Digoxin Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Trough: Draw immediately prior to next dose  
Peak: Draw 45-60 minutes after IV injection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 ml  
TEST AVAILABILITY: Daily  
TURNAROUND TIMES: 8 hours  
REFERENCE RANGE: 0.70 - 1.74 ng/mL  
OTHER NAMES: Lanoxin; Digitalis  
METHODOLOGY: CIMA  
CLINICAL USE: Diagnose and prevent toxicity, prevent underdosage  
monitor therapeutic level; prevention and therapy  
of cardiac arrhythmias  
CPT: 80162

#### **[DIGITX] Digitoxin Level**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Red, Lavender (EDTA) or Gray(Sodium Fluoride)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube;  
Serum/plasma should be separated within 2  
hours of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 days  
METHODOLOGY: Chemiluminescent  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

#### **[DIPHTHC] Diphtheria Culture**

SPECIMEN REQUIRED: Throat swab embedded in Loeffler media slant  
TUBE OR CONTAINER: Loeffler media  
SPECIAL HANDLING: Obtain a Loeffler's media tube from the Micro  
lab (refrigerated until 15 minutes before collection  
Nasopharyngeal swab or throat swab (skin lesions occasionally do  
occur and may be swabbed)  
Swab must be placed in Loeffler's media tube and transported at  
room temperature  
TEST AVAILABILITY: Daily  
TURN-AROUND-TIME: 5 days  
CLINICAL INFORMATION: Corynebacterium diphtheriae is the  
causative agent of diphtheria. If isolated, the organism will  
be sent to the State Health Lab for confirmation and  
toxigenicity testing, and client will be notified

**[DIPTHAB] Diphtheria Antitoxoid**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-7 days  
REFERENCE RANGE: Nonprotective: Protective:  $\geq 0.1$  IU/mL  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Assess immunity against diphtheria by determining levels of circulating antibodies to diphtheria toxin or to measure immune response  
CPT: 86317

**[DISOP] Disopyramide (Norpace) Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Dark Green (heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: Therapeutic: 2.0-5.0 ug/dL  
Potentially toxic:  $>5.0$  ug/mL  
OTHER NAMES: Norpace  
METHODOLOGY: Immunoassay  
CLINICAL USE: Evaluate toxicity; monitor therapeutic levels  
CPT: 80299

**[DIURETIC] THIAZIDE DIURETIC PANEL**

SPECIMEN REQUIRED: Refrigerated urine (random)  
TUBE OR CONTAINER: Plastic urine container  
CAUSES OF REJECTION: Urine from a preservative tube  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1.5 mL  
TEST INCLUDES: Benzthiazide; Chlorothiazide; Chlorthalidone; Furosemide; Hydrochlorothiazide; Hydroflumethiazide; Metolazone and Bumetanide  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-10 days  
METHODOLOGY: High Performance Liquid Chromatography with Ultraviolet Detection; (HPLC-UV)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 82542

**[DMDDD] DUCHENNE MUSC DYSTR DEL/DUP**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 14 days  
METHODOLOGY: Multiplex Ligation-dependent Probe Amplification (MLPA)  
CLINICAL USE: Appropriate first-tier genetic test for Duchenne and Becker muscular dystrophy  
CPT: 81161

**[DMDSEQ] DUCHENNE MUSC DYSTR SEQUENCING**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
METHODOLOGY: Massive Parallel Sequencing  
CLINICAL USE: Order ONLY if previous DMD gene deletion/duplication testing did not identify a causative mutation. Not recommended as initial test for Duchenne or Becker muscular dystrophy. Recommended first-tier tests are DMD Deletion/Duplication  
CPT: 81408

**[DNADAB] Anti-Double Strand DNA Antibody**

SPECIMEN REQUIRED: Room temperature serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Negative: < 5  
Equivocal: 5 - 9  
Positive: > 9  
OTHER NAMES: Anti-N-DNA; Antinative DNA  
METHODOLOGY: Multiplex bead flow cytometry  
CLINICAL USE: Specific assay for confirming diagnosis of systemic lupus erythematosus (SLE)  
CPT: 86225

**[DNADSOMRF] Anti-Double Strand DNA Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-10 days  
REFERENCE RANGE: Negative: < 10  
METHODOLOGY: Crithidia  
CLINICAL USE: Specific assay for confirming the diagnosis of systemic lupus erythematosus (SLE)  
CPT: 86225

**[DNMT3A] DNA METHYLTRANSFERASE 3A**

SPECIMEN REQUIRED: Whole blood or bone marrow at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIAL HANDLING: Refrigerate if > 1 day delay  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 ml  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 5-7 days  
METHODOLOGY: Polymerase Chain Reaction (PCR) and Pyrosequencing  
CPT: 81403

**[DOCK6] ADAMS-OLIVER TYPE 2 (DOCK6)**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-6 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81479

**[DRUGDEPAB] DRUG-DEPENDENT PLATELET AB**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: List each drug that is being tested; Freeze specimen if > 5 days old  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 4-5 days  
REFERENCE RANGE: No drug-dependent platelet antibodies detected  
METHODOLOGY: Flow cytometry  
CLINICAL USE: Evaluation of patients who develop thrombocytopenia after exposure to certain drugs  
CPT: 86022

**[DRUGDEPNEUT] DRUG-DEPENDENT NEUTROPHIL AB**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: List each drug that is being tested; Freeze specimen if > 5 days old  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 2-8 days  
METHODOLOGY: Flow cytometry  
CPT: 86021 (1st 3 drugs)

**[DRUGMT] URINE DRUG SCREEN-MEDTOX**

SPECIMEN REQUIRED: Refrigerated urine (random)  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIMEN VOLUME: 2 tube (12 mL)  
MINIMUM VOLUME: 1 tube (5 mL)  
TEST INCLUDES: Qualitative determination of the presence of the major metabolites of Amphetamines, Barbiturates, Benzodiazepines, Cannabinoid (THC), Phencyclidine, Cocaine metabolite, Opiates & Tricyclics antidepressants  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 hours  
METHODOLOGY: Immunoassay  
CLINICAL USE: Medical purposes only; not appropriate for DOT or employment-related drug screening  
CPT: G0478

**[DRUGMTADD] URINE DRUG SCREEN-MEDTOX EXT**

SPECIMEN REQUIRED: Refrigerated urine (random)  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIMEN VOLUME: 2 tube (12 mL)  
MINIMUM VOLUME: 1 tube (5 mL)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
METHODOLOGY: Gas Chromatography-Mass Spectrometry (GCMS)  
CLINICAL USE: Medical purposes only; not appropriate for DOT or employment-related drug screening  
CPT: 80303

**[DRUGSCRNH] HAIR DRUG SCREEN**

SPECIMEN REQUIRED: Hair  
TUBE OR CONTAINER: Special collection kit or wrapped in foil  
SPECIAL HANDLING: Contact laboratory for special collection kit  
SPECIMEN VOLUME: 100 mg  
MINIMUM VOLUME: 10 mg  
TEST INCLUDES: Screen for Amphetamines, cocaine, Marijuana, Opiates, and Phencyclidine  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-4 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Immunoassay screen  
CPT: 80105 x 5

**[DRUGSUDS] SERUM & URINE DRUG SCREEN**

SPECIMEN REQUIRED: Serum AND urine  
TUBE OR CONTAINER: Red AND Clear/Red Urine tube (no additive)  
SPECIAL HANDLING: Serum must be collected in a non-gel tube  
SPECIMEN VOLUME: 3 mL serum  
1 urine tube (6 mL)  
MINIMUM VOLUME: 2 mL serum

1 urine tube (2 mL)

TEST INCLUDES: Quantitative Serum Drug Screen (Tricyclics, Ethanol, Acetaminophen & Salicylate); Amine group, Barbiturate group, Benzodiazepine, (qualitative), Cannabinoid (THC), Phencyclidine, Cocaine metabolite, Opiates (qualitative)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours

METHODOLOGY: Immunoassay

CPT: G0431 x 2; 80320; 80329; G6038

**[DSETOH] Urine Ethyl Alcohol Screen**

**[DSPCP] Urine Phencyclidine Screen**

**[DSRCT] DESMOPLASTIC SM ROUND CELL PCR**

SPECIMEN REQUIRED: Formalin-fixed, paraffin-embedded (FFPE) at room temperature or unstained slides

TUBE OR CONTAINER: Slides or block

SPECIMEN VOLUME: 10 unstained slides 4-5 micron thick or tissue block

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-10 days

OTHER NAMES: Desmoplastic Small Round-Cell Tumor (DSRCT) by Reverse Transcriptase PCR (RT-PCR)

METHODOLOGY: Reverse Transcriptase PCR (RT-PCR)

CLINICAL USE: Supporting the diagnosis of desmoplastic small round-cell tumor

CPT: 81401

**[DYPH] Dyphylline Level**

SPECIMEN REQUIRED: Refrigerated serum or plasma

TUBE OR CONTAINER: Red, Dark green (heparin) or Lavender (EDTA)

SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.4 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-5 days

OTHER NAMES: Lufyllin; Neothylline; Dilor

METHODOLOGY: High performance liquid chromatography (HPLC)

CLINICAL USE: Therapeutic drug monitoring

CPT: 80198

**[EBNGS] EPIDERMOLYSIS BULLOSA NGS**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 8 mL

MINIMUM VOLUME: 4 mL

TEST INCLUDES: Sequencing of 17 genes: COL17A1, DSP, DST, EXPH5, FERMT1, ITGA3, ITGA6, ITGB4, JUP, KRT5, KRT14,



LAMA3, LAMB3, LAMC2, PKP1, PLEC1, TGM5  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: NextGen Sequencing (NGS)  
CPT: 81406 x 2; 81479 x 15 (sequencing)  
81479 (deletion/duplication)

#### **[EBP] EBP Gene**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: X-linked dominant CDP (CDPX2); Conradi-Hunermann syndrome via EBP gene  
METHODOLOGY: Bi-directional Sanger Sequencing  
CLINICAL USE: Confirmation of clinical diagnosis  
CPT: 81479

#### **[EBVAB] AB EPSTEIN BARR VIRUS PROFILE**

SPECIMEN REQUIRED: Room Temp  
TUBE OR CONTAINER: Gold or Red  
SPECIAL HANDLING: Specimen is stable for 14 days at room temp  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: EBV-AB to early antigen, nuclear antigen, viral capsid (IgG & IgM)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-7 days  
REFERENCE RANGE: Negative: METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Differentiation of acute from chronic or reactivated infection of EBV  
CPT: 86663, 86664, 86665 x 2

#### **[EBVEAB] Epstein-Barr Early Antigen**

#### **[EBVEACSF] Epstein-Barr Early Antigen IgG Ab**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: Sterile CSF container  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: 0.90 IV or less: Negative  
0.91-0.99 IV: Equivocal  
1.00 IV or greater: Positive  
OTHER NAMES: Epstein-Barr early antigen antibody, CSF  
METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)

CPT: 86663

**[EBVISH] Epstein-Barr Virus Tissue**

SPECIMEN REQUIRED: Formalin-fixed, paraffin-embedded (FFPE) tissue biopsy at room temperature or Unstained slides and H&E  
TUBE OR CONTAINER: Paraffin block or fresh tissue in a sterile container in 10% neutral-buffered formalin  
SPECIMEN VOLUME: 5 slides & 1 H&E  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Not detected  
METHODOLOGY: In situ hybridization  
CLINICAL USE: Detect EBV DNA sequences in tissue sections; adjunct to histopathology  
CPT: 88365

**[EBVNAAB] Epstein-Barr Virus Nuclear Ag Ab**

**[EBVNACSF] Epstein-Barr Nuclear Assoc Ag IgG**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: Sterile CSF container  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Negative: 0.90 or less  
Equivocal: 0.91-0.99  
Positive: 1.00 or greater  
METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)  
CPT: 86664

**[EBVPCRQNT] Epstein-Barr Virus DNA, Quant**

SPECIMEN REQUIRED: Plasma, bronchial lavage/wash, bone marrow, tracheal aspirate/wash at room temperature or frozen  
Frozen tissue, CSF or Fecal material  
Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD), Sterile container, screw top tube or swab  
SPECIAL HANDLING: Please specify source of specimen.  
Specimens at room temperature must be received at performing lab within 4 days of collection; Freeze if time exceeds 4 days  
SPECIMEN VOLUME: 5 mL (whole blood)  
2 mL plasma, CSF, bone marrow, liquid stool, or respiratory specimens  
5 mg tissue  
Pea sized formed stool  
MINIMUM VOLUME: 2 mL (whole blood)  
0.5 mL plasma, CSF, bone marrow, liquid stool

or respiratory specimens

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-3 days

REFERENCE RANGE: Not detected

METHODOLOGY: Reverse Transcription/Polymerase Chain Reaction (PCR-RT)

CPT: 87799

**[EBVVC GCSF] Epstein-Barr Virus Capsid Ag IgG Ab**

SPECIMEN REQUIRED: Refrigerated or frozen CSF

TUBE OR CONTAINER: Sterile CSF container

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-4 days

METHODOLOGY: Semi-Quantitative Chemiluminescent Immunoassay

CPT: 86665

**[EBVVC M CSF] Epstein-Barr Virus Capsid Ag IgM Ab**

SPECIMEN REQUIRED: Refrigerated or frozen CSF

TUBE OR CONTAINER: Sterile CSF container

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-4 days

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-4 days

METHODOLOGY: Semi-Quantitative Chemiluminescent Immunoassay

CPT: 86665

**[ECH I AB] Echinococcus Antibody**

SPECIMEN REQUIRED: Frozen serum

TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

METHODOLOGY: Enzyme immunoassay (EIA)

CPT: 86682

**[ECMOP FH] Plasma Free Hemoglobin**

SPECIMEN REQUIRED: Refrigerated serum

TUBE OR CONTAINER: Light Green (Lithium Heparin)

SPECIAL HANDLING: Specimen should be collected without introducing hemolysis and centrifuged and separated from red cells immediately

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.3 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: Values obtained between 10-30 mg/dL should be

interpreted with caution since such variables  
as suboptimal venipuncture may increase result  
OTHER NAMES: Free Hemoglobin; Hgb Solubility  
METHODOLOGY: Spectrophotometry  
CLINICAL USE: Evaluate hemolytic anemia, especially  
intravascular hemolysis  
CPT: 83051

**[EDS4] EDS TYPE 4 (COL3A1)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 6 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81479

**[EDS6UR] Ehlers-Danlos Syndrome Type IV**

SPECIMEN REQUIRED: Frozen urine (First-morning void)  
TUBE OR CONTAINER: Urine transport container  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-15 days  
METHODOLOGY: High performance liquid chromatography (HPLC)  
CPT: 82523

**[EDSI-II] EDS TYPE I/II (COL5A1/A2)**

SPECIMEN REQUIRED: Whole blood or fibroblasts at room  
temperature  
TUBE OR CONTAINER: Lavender (EDTA) or flasks  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Next-Generation sequencing (NGS)

**[EDSNGS] EHLERS-DANLOS SYNDROME NGS**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST INCLUDES: Sequencing of 12 genes: ADAMTS2, ATP7A, CHST14,  
COL1A1, COL1A2, COL3A1, COL5A1, COL5A2, FKBP14,  
FLNA, PLOD1 and SLC39A13  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: NextGen Sequencing (NGS)  
CPT: 81408 x 2; 81479 x 10 (sequencing)  
81479 x 10 (deletion/duplication)

**[EFAV] HIV Efavirenz Resistance**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Do NOT collect specimen in gel tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1.5 mL  
TEST AVAILABILITY: Daily  
OTHER NAMES: Sustiva  
METHODOLOGY: High-Pressure Liquid Chromatography (HPLC)  
CPT: 80299

**[EGFR790M] Cell-Free Fetal DNA**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Cell-Free DNA (cfDNA) BCT Tubes  
SPECIAL HANDLING: Call laboratory to obtain specimen collection tubes  
SPECIMEN VOLUME: 2-10 mL tubes (20 mLs)  
MINIMUM VOLUME: 2-10 mL tubes (16 mLs)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 11-14 days  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CLINICAL USE: Monitor for the development of EGFR T790M drug-resistant mutation in patients administered tyrosine kinase inhibitor (TKI) therapy for EGFR-mutant NSCLC. Monitor response to therapy and disease progression in patients treated with EGFR T790M-targeted drugs  
CPT: 82135

**[EHISAB] Entamoeba histolytica Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Ratio: Negative: Equivocal: 0.9-1.1 OD  
Positive: >1.1 OD  
OTHER NAMES: E. histolytica, Amebic Antibodies; Amebiasis Antibodies  
METHODOLOGY: Enzyme immunoassay (EIA)  
CPT: 86753

**[EHIST] Entamoeba histolytica Antigen**

SPECIMEN REQUIRED: Frozen stool  
TUBE OR CONTAINER: Leak-proof plastic container  
SPECIMEN VOLUME: 5 grams  
MINIMUM VOLUME: 1 gram  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Not detected

METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Confirmation of an intestinal amebiasis  
CPT: 87337

**[ENCCSFABG] AB ENCEPHALITIS CSF IGG**

SPECIMEN REQUIRED: Refrigerated or frozen CSF  
TUBE OR CONTAINER: Sterile screw-cap tube  
SPECIMEN VOLUME: 4 mL  
MINIMUM VOLUME: 1.5 mL  
TEST INCLUDES: Eastern & Western Equine Encephalitis IgG Ab;  
St. Louis Encephalitis IgG Ab; Calif-La Crosse  
Enceph IgG Ab and West Nile Virus IgG Ab  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-7 days  
REFERENCE RANGE: < 1:1  
OTHER NAMES: Arboviral Encephalitis Antibodies IgG  
METHODOLOGY: Immunofluorescence assay (IFA)  
CLINICAL USE: Aid in the diagnosis of arboviral infection  
CPT: 86651; 86652; 86653; 86654; 86789

**[ENCCSFABM] AB ENCEPHALITIS CSF IGM**

SPECIMEN REQUIRED: Refrigerated or frozen CSF  
TUBE OR CONTAINER: Sterile screw-cap tube  
SPECIMEN VOLUME: 4 mL  
MINIMUM VOLUME: 1.5 mL  
TEST INCLUDES: Eastern & Western Equine Encephalitis IgM Ab;  
St. Louis Encephalitis IgM Ab; Calif-La Crosse  
Enceph IgM Ab and West Nile Virus IgM Ab  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-7 days  
REFERENCE RANGE: < 1:1  
OTHER NAMES: Arboviral Encephalitis Antibodies IgM  
METHODOLOGY: Immunofluorescence assay (IFA)  
CLINICAL USE: Aid in the diagnosis of suspected arboviral  
encephalitis  
CPT: 86651; 86652; 86653; 86654; 86788

**[ENOLCSF] CSF Neuron Specific Enolase**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Plastic sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
REFERENCE RANGE: 1.0 - 7.0 ug/L  
METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)  
CLINICAL USE: Elevated serum concentrations of NSE are detected  
in patients with medullary carcinoma of the  
thyroid, pancreatic islet cell tumor, pheochromo-  
cytoma, carcinoid, neuroblastoma and small-cell

lung carcinoma (SCLC)

CPT: 83616

**[ENTPCRQNT] Enterovirus RNA (RT-PCR)**

SPECIMEN REQUIRED: Plasma, bronchial lavage/wash, tracheal aspirate/wash at room temperature or frozen

Frozen tissue, CSF or Fecal material

TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD), Sterile container or screw top tube

SPECIAL HANDLING: Please specify source of specimen.

Specimens at room temperature must be received at performing lab within 4 days of collection; Freeze if time exceeds 4 days

SPECIMEN VOLUME: 5 mL (whole blood)  
2 mL plasma, CSF, liquid stool, or respiratory specimens

5 mg tissue

Pea sized formed stool

MINIMUM VOLUME: 3 mL (whole blood)

2 mL plasma

0.5 mL CSF, liquid stool or respiratory specimens

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-3 days

REFERENCE RANGE: Not detected

METHODOLOGY: Reverse Transcription/Polymerase Chain Reaction (PCR-RT)

CLINICAL USE: Detection of Enterovirus

CPT: 87799

**[ENTTYP] ENTEROVIRUS TYPING**

**[EOGT] ADAMS-OLIVER TYPE 4 (EOGT)**

SPECIMEN REQUIRED: Whole blood room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 3 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 5-6 weeks

METHODOLOGY: Polymerase Chain Reaction (PCR)

CPT: 81479

**[EOSBL] Bronchoalveolar Lavage Eosinophils**

**[EOSMRU] Urine Eosinophil Smear**

SPECIMEN REQUIRED: Random urine

TUBE OR CONTAINER: Sterile container or slides

TEST AVAILABILITY: Monday-Friday

TURNAROUND TIME: 1-3 days

REFERENCE RANGE: None

METHODOLOGY: Microscopic  
CLINICAL USE: Investigate allergic, asthmatic disorders, and  
parasitic infestations  
CPT: 87205

**[EPCAM] HNPCC Interpretation**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-6 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81479

**[EPILEPSY] EPILEPSY GENE PANEL**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Sequence Analysis of 109 genes  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 12 weeks  
REFERENCE RANGE: No mutation detected  
METHODOLOGY: NextGeneration Sequencing  
CPT: 81404; 81405; 81406

**[ERCPEWCX] ERCP ELEVATOR WIRE CULTURE**

SPECIMEN REQUIRED:  
Duodenoscope brush sample submitted by endoscopy personnel in  
phosphate buffered saline (PBS) with 0.02% Tween-80

**[ERCPICCX] ERCP INSTRUMENT CHANNEL**

SPECIMEN REQUIRED:  
Duodenoscope Instrument Channel Flush with sterile water  
submitted by endoscopy personnel.

**[ERY] Erythropoietin**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Age specific  
OTHER NAMES: EPO; Hematopoietin  
METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: Investigate obscure anemias and the anemia of end  
stage renal disease  
CPT: 82668



**[ESTER] Esterase Stain****[ESTRA] Estradiol (E2) Level**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Gold/Red or Light Green  
SPECIAL HANDLING: Stable 24 hrs Room Temp, 2 days refrigerated  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.6 mL  
PEDIATRIC TEST INFO: Order PEDESTRA for pediatric testing.  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 Day  
REFERENCE RANGE: Male: 21-44  
Normally Menstruating Female  
Follicular Phase 30 - 143  
Mid-cycle peak 42 - 363  
Luteal Phase 45 - 162  
Post Menopausal OTHER NAMES: E2; Estradiol-17 Beta  
METHODOLOGY: ECLIA  
CLINICAL USE: Assess hypothalamic and pituitary function; assess ovarian failure and follicular maturation. In males, E2 measurements may be helpful in the assessment of unexplained gynecomastia  
CPT: 82670

**[ESTRI] Estriol Level**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: State weeks of gestation  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Dependent on week of gestation  
OTHER NAMES: E3, Serum; Pregnancy, Estriol; Unconjugated Estriol  
METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: Evaluate fetal distress and placental function in the management of patients facing complications  
CPT: 82677

**[ESTRN] Estrone (E1)**

SPECIMEN REQUIRED: Frozen serum (preferred) or plasma  
TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)  
SPECIAL HANDLING: Patient must avoid having radioisotope scan prior to collection of specimen;  
Nonpregnant females only  
Separate within 1 hour of collection  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 5-8 days  
REFERENCE RANGE: Age and gender specific  
METHODOLOGY: Liquid Chromatography tandem mass spectrometry (LC/MS/MS)  
CLINICAL USE: Evaluate postmenopausal vaginal bleeding due to peripheral conversion of androgenic steroids  
CPT: 82679

#### **[ESTRO] Estrogen**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Green (heparin)  
SPECIAL HANDLING: Patient must avoid having radioisotope scan prior to collection of specimen  
SPECIMEN VOLUME: 2.8 mL  
MINIMUM VOLUME: 1.1 mL (this volume does not allow for repeat testing)  
PEDIATRIC TEST INFO: Order PEDESTRO for pediatric testing to be performed by Esoterix  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: Age and gender specific  
METHODOLOGY: Radioimmunoassay (RIA)  
CLINICAL USE: Evaluate for ovarian estrogen producing tumor in premenarcheal and post- menopausal female; evaluate estrogen excess in males; Estrogen analysis may be helpful in establishing time of ovulation and optimal time for conception  
CPT: 82672

#### **[ETGEM] E-TEST MIC, Gemella**

#### **[ETH] Ethambutol Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-9 days  
OTHER NAMES: Myambutol  
METHODOLOGY: Gas Chromatography/Mass Spectrometry (GC-MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

#### **[ETHGLY] Ethylene Glycol**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red NO GEL  
SPECIMEN VOLUME: 7 mL  
MINIMUM VOLUME: 1.1 mL  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 72 HOURS  
REFERENCE RANGE: None detected < 10 mg/dL  
OTHER NAMES: Anti-freeze  
METHODOLOGY: Gas chromatography  
CLINICAL USE: Detect and quantitate ingestion of ethylene glycol  
CPT: 82693

**[ETLAC] E-TEST MIC, Lactobacillus**

**[ETLEUC] E-TEST MIC, Leuconostoc**

**[ETMISC] E-TEST MIC, MISC**

**[ETSAVAN] E-TEST MIC, S.AUREUS VANCO**

**[EVER] Everolimus Level**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Protect from light.  
Stable 3 days Refrigerated  
Draw just prior to dose (trough)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 3-8 ng/mL  
OTHER NAMES: Zortress, Certican, Afinitor  
METHODOLOGY: Turbidimetric immunoassay  
CLINICAL USE: Monitor immunosuppressive therapy following organ transplant  
CPT: 80169

**[EVR1245] EXUDAT VITREORETINOP 1,2,4,5**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST INCLUDES: Gene sequencing of FZD4, NDP, LRP5 and TSPAN12  
TEST AVAILABILITY: Daily  
OTHER NAMES: Familial Exudative Vitreoretinopathy (FEVR)  
METHODOLOGY: Sanger sequencing  
CPT: 81479 x 4

**[FAC10] Coagulation Factor X**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4

times to prevent clotting  
Send to lab immediately or centrifuge and  
freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 1-3 days  
REFERENCE RANGE: 70-120%  
METHODOLOGY: Clot  
CLINICAL USE: Document specific factor deficiency  
CPT: 85260

### **[FAC10CHROM] Factor X Chromogenic**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Citrated plasma samples should be collected by double centrifugation. Blood should be collected in a blue-top tube containing 3.2% buffered sodium citrate.<sup>1</sup> Evacuated collection tubes must be filled to completion to ensure a proper blood to anticoagulant ratio.<sup>2,3</sup> The sample should be mixed immediately by gentle inversion at least six times to ensure adequate mixing of the anticoagulant with the blood. A discard tube is not required prior to collection of coagulation samples, except when using a winged blood collection device (ie, "butterfly"), in which case a discard tube should be used.<sup>4,5</sup> When noncitrate tubes are collected for other tests, collect sterile and nonadditive (red-top) tubes prior to citrate (blue-top) tubes. Any tube containing an alternate anticoagulant should be collected after the blue-top tube. Gel-barrier tubes and serum tubes with clot initiators should also be collected after the citrate tubes. Centrifuge for 10 minutes and carefully remove 2/3 of the plasma using a plastic transfer pipette, being careful not to disturb the cells. Deliver to a plastic transport tube, cap, and recentrifuge for 10 minutes. Use a second plastic pipette to remove the plasma, staying clear of the platelets at the bottom of the tube. Transfer the plasma into a LabCorp PP transpak frozen purple tube with screw cap (LabCorp N 49482). Freeze immediately and maintain frozen until tested.  
SPECIMEN VOLUME: 1mL plasma, frozen

TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 1-3 days  
METHODOLOGY: Factor X is activated by Russell viper venom which, in turn, hydrolyzes a chromogenic substrate to produce color.  
CLINICAL USE: The chromogenic factor X activity test can be useful in monitoring patients on vitamin K antagonist therapy where baseline PT is prolonged.  
CPT: 85260

### **[FAC11] Coagulation Factor XI**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 1-3 days  
REFERENCE RANGE: 50-150%  
METHODOLOGY: Clot  
CLINICAL USE: Document specific factor deficiency  
CPT: 85270

### **[FAC11INH] Coagulation Factor XI Inhibitor**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 1.5 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 0.8 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-7 days  
REFERENCE RANGE:  
CPT: 85335

### **[FAC12] Coagulation Factor XII**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA

MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 1-3 days  
REFERENCE RANGE: 50-150%  
OTHER NAMES: Hageman factor; Surface factor  
METHODOLOGY: Clot  
CLINICAL USE: Document specific factor deficiency  
CPT: 85280

### **[FAC13] Coagulation Factor XIII**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TURNAROUND TIME: 3-5 days  
METHODOLOGY: Chromogenic  
CLINICAL USE: Detect homozygous and heterozygous as well as acquired factor XIII deficiency  
CPT: 85290

### **[FAC2] Coagulation Factor II**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 1-3 days  
REFERENCE RANGE: 70-130%  
METHODOLOGY: Clot  
CLINICAL USE: Document specific factor deficiency  
CPT: 85210

### **[FAC2INH] Coagulation Factor II Inhibitor**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-7 days  
REFERENCE RANGE: 0.0-0.6 BU  
CPT: 85335

#### **[FAC5] Coagulation Factor V**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 1-3 days  
REFERENCE RANGE: 50-150%  
METHODOLOGY: Clot  
CLINICAL USE: Document specific factor deficiency  
CPT: 85210

#### **[FAC5INH] Coagulation Factor V Inhibitor**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 1-7 days  
REFERENCE RANGE: 0.0-0.6 BU  
CPT: 85335

#### **[FAC5MUT] FACTOR V MUTATION (LEIDEN)**

SPECIMEN REQUIRED: Whole blood at room temperature or refrigerated

TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)

SPECIAL HANDLING: Refrigerate if > 1 day delay

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Monday-Friday

TURNAROUND TIME: 5-7 days

REFERENCE RANGE: Normal

OTHER NAMES: Factor V Leiden DNA; Leiden factor

METHODOLOGY: Polymerase Chain Reaction (PCR) followed by restriction enzyme digestion and gel electrophoresis

CLINICAL USE: Detects Leiden mutation in factor V gene, causing increased risk of thrombosis

CPT: 81241

#### **[FAC7] Coagulation Factor VII**

SPECIMEN REQUIRED: Frozen plasma

TUBE OR CONTAINER: Blue (Citrate)

SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting

Send to lab immediately or centrifuge and freeze plasma

SPECIMEN VOLUME: 1 full tube

Testing volume: 2 mL of PLASMA

MINIMUM VOLUME: 1 full tube

Testing volume: 1 mL of PLASMA

TEST AVAILABILITY: Monday-Friday

TURNAROUND TIME: 1-3 days

REFERENCE RANGE: 70-120%

METHODOLOGY: Clot

CLINICAL USE: Document specific factor deficiency

CPT: 85230

#### **[FAC7INH] Coagulation Factor VII Inhibitor**

SPECIMEN REQUIRED: Frozen plasma

TUBE OR CONTAINER: Blue (Citrate)

SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting



Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 1.5 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 0.8 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-7 days  
REFERENCE RANGE: 0.0-0.3 BU  
CPT: 85335

#### **[FAC8] Coagulation Factor VIII**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 50-150%  
METHODOLOGY: Clot detection  
CLINICAL USE: Document specific factor deficiency  
CPT: 85240

#### **[FAC8INH] Coagulation Factor VIII Inhibitor**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-7 days  
REFERENCE RANGE: 0.0 - 3.0 Bethesda Unit  
CPT: 85335

#### **[FAC8P] Coagulation Factor VIII**

**SPECIMEN REQUIRED:** Frozen plasma  
**TUBE OR CONTAINER:** Blue (Citrate)  
**SPECIAL HANDLING:** Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
Identify specimen as "PEAK"  
**SPECIMEN VOLUME:** 1 full tube  
**Testing volume:** 2 mL of PLASMA  
**MINIMUM VOLUME:** 1 full tube  
**Testing volume:** 1 mL of PLASMA  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 24 hours  
**REFERENCE RANGE:** 70-120%  
**METHODOLOGY:** Clot detection  
**CLINICAL USE:** Document specific factor deficiency  
**CPT:** 85240

#### **[FAC8T] Coagulation Factor VIII**

**SPECIMEN REQUIRED:** Frozen plasma  
**TUBE OR CONTAINER:** Blue (Citrate)  
**SPECIAL HANDLING:** Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
Identify specimen as "TROUGH"  
**SPECIMEN VOLUME:** 1 full tube  
**Testing volume:** 2 mL of PLASMA  
**MINIMUM VOLUME:** 1 full tube  
**Testing volume:** 1 mL of PLASMA  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 24 hours  
**REFERENCE RANGE:** > 30%  
**METHODOLOGY:** Clot detection  
**CLINICAL USE:** Document specific factor deficiency  
**CPT:** 85240

#### **[FAC9] Coagulation Factor IX**

**SPECIMEN REQUIRED:** Frozen plasma  
**TUBE OR CONTAINER:** Blue (Citrate)  
**SPECIAL HANDLING:** Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
**SPECIMEN VOLUME:** 1 full tube

Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 50-150%  
METHODOLOGY: Clot detection  
CLINICAL USE: Document specific factor deficiency  
CPT: 85250

**[FAC9INH] Coagulation Factor IX Inhibitor**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-7 days  
REFERENCE RANGE: 0.0 - 0.81%  
CPT: 85335

**[FACIIPOLYM] PT 20210 (FAC II POLYMORPHISM)**

SPECIMEN REQUIRED: Whole blood at room temperature or refrigerated  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIAL HANDLING: Refrigerate if > 1 day delay  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 ml  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 5-7 days  
OTHER NAMES: Prothrombin DNA; PT20210; Prothrombin Gene Mutation; Factor II Polymorphism  
METHODOLOGY: Polymerase Chain Reaction (PCR) and Restriction enzyme digestion  
CLINICAL USE: Detects mutation in factor II gene, causing increased risk of thrombosis  
  
CPT: 81240

**[FACVIIAG] Coagulation Factor VII Antigen**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 days  
REFERENCE RANGE: 50-150%  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CPT: 85230

**[FADSNGS] FADS/LETHAL MULT PTERYGIUM NGS**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 6 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Gene sequencing for CHRNA1, CHRND, CHRNG, CNTN1, DOK7, GLE1, KLHL40 and RAPSN  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Fetal Akinesia Deformation sequence/Lethal Multiple Pterygium Syndrome NextGen sequencing (NGS) panel  
METHODOLOGY: Next Generation Sequencing (NGS) and Sanger sequencing  
CPT: 81479 x 8

**[FAM111A] KENNY-CAFFEY TYPE 2 (FAM111A)**

SPECIMEN REQUIRED: Whole blood or Cultured fibroblasts at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or T25 tissue culture flasks  
SPECIMEN VOLUME: 8 mL whole blood or 2 flasks  
MINIMUM VOLUME: 3 mL whole blood  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-3 weeks  
OTHER NAMES: Kenny-Caffey syndrome, type 2 (KCS2) via FAM111A  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81479

**[FAM126A] HYPOMYELIN LEUKODYST 5(FAM126A)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
OTHER NAMES: Hypomyelination & Congenital Cataract; Hypomyelinating Leukodystrophy 5 via FAM126A gene  
METHODOLOGY: Bi-directional Sanger Sequencing  
CLINICAL USE: Confirmation of clinical diagnosis  
CPT: 81479

**[FAOFIB] Fatty Acid Oxidation**

SPECIMEN REQUIRED: Cultured fibroblasts at room temperature  
TUBE OR CONTAINER: Sterile flasks

SPECIMEN VOLUME: 2-T25 flasks  
TEST AVAILABILITY: Daily  
METHODOLOGY: Tandem Mass Spectrometry (MS-MS) for  
Acylcarnitines  
CPT: 82017

**[FBN2] FBN2 GENE (CCA-BEALS SYNDROME)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 weeks  
OTHER NAMES: Congenital Contractural Arachnodactyly (Beals  
Syndrome) via FBN2 Gene Sequencing  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81479

**[FD] FAMILIAL DYSAUTONOMIA (FD)**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 7 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Detection of two mutations: IVS20+6T>C and R696P  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 weeks  
OTHER NAMES: IKBKAP gene sequencing  
METHODOLOGY: Polymerase Chain Reaction (PCR); primer extension;  
flow-sorted bead array analysis  
CLINICAL USE: Confirmation of clinical diagnosis  
CPT: 81260

**[FELB] Felbamate Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Dark green (heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Therapeutic: 25-104 ug/mL  
OTHER NAMES: Felbatol  
METHODOLOGY: High-Pressure liquid chromatography (HPLC)  
CLINICAL USE: Evaluate toxicity and monitor therapeutic level  
CPT: 80299

**[FER] Ferritin**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold/Red  
SPECIAL HANDLING: Stable at Room Temp 48 hours

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: Males: 30-400 ng/mL  
Females: 13-150 ng/mL  
METHODOLOGY: ECLIA  
CLINICAL USE: Useful in the differential diagnosis of hypochromic, microcytic anemias  
CPT: 82728

#### **[FFA] Free Fatty Acids**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Collect specimen following a 12 hour fast;  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 days  
REFERENCE RANGE: 0.1-0.6 mEq/L  
OTHER NAMES: NEFA; Nonesterified Free Fatty Acids  
METHODOLOGY: Spectrophotometric  
CLINICAL USE: Helpful in the diagnosis and management of certain diseases and disorders of metabolism and in the evaluation of prospective causes of hyperlipoproteinemia  
CPT: 82725

#### **[FGF23] Fibroblast Growth Factor 23**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA) or Green (heparin)  
SPECIAL HANDLING: Separate plasma from cells within 1 hour of collection  
A 12-hour fasting sample is recommended, but not required  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Aid in diagnosing and monitoring oncogenic osteomalacia  
CPT: 83520

#### **[FGFR1] FIBROBLAST GROWTH FACTOR 1**

#### **[FGFR2SEQ] CRANIOSYNOSTOSIS/FGFR2 GENE**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: Bi-directional Sanger sequencing  
CPT: 81479

**[FGFR3PRO250] MUECKE-FGFR3 (PRO250ARG)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8-10 days  
OTHER NAMES: Muenke Syndrome via FGFR3 gene (PRO250ARG)  
METHODOLOGY: Detection of a P250R (c.749C>G) mutation by PCR and restriction enzyme digestion  
CLINICAL USE: To determine whether Muenke Syndrome is responsible for the craniosynostosis in an affected individual  
CPT: 81400

**[FHAB] Complement Factor H**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 month  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme Linked Immuno-Sorbent Assay (ELISA)  
CPT: 83516

**[FHLP] FAM HEMOPHAGOCYTTIC LYMPHOHIST**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 5 mL  
TEST INCLUDES: Gene sequencing for RAB27A, STXBP2, PRF1, STX11, UNC13D (MUNC13-4), AP3B1, BLOC1S6, CD27, ITK, LYST, MAGT1, SH2D1A, SLC7A7 and XIAP (BIRC4)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: STAT: 48 HOURS (send M-W); 1 week routine  
OTHER NAMES: Familial Hemophagocytic Lymphohistiocytosis Panel  
METHODOLOGY: Next Generation (NextGen) Sequencing (NGS)  
CPT: 81404; 81479 x 13

**[FIB] Fibrinogen**

SPECIMEN REQUIRED:  
TUBE OR CONTAINER: Blue (Citrate)

**SPECIAL HANDLING:** Draw 1 FULL citrate tube; tube MUST be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
Patient should not receive heparin within 1 hour of collection  
PT, PTT & Fibrinogen may be performed on one full tube  
**SPECIMEN VOLUME:** 1 full tube  
Testing volume: 2 mL of PLASMA  
**MINIMUM VOLUME:** 1 full tube  
Testing volume: 1 mL of PLASMA  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 1-4 hours  
**REFERENCE RANGE:** 150-450 mg/dL  
Anticoagulants including vitamin K antagonists, unfractionated and low molecular weight heparins, direct oral anticoagulants, and direct thrombin inhibitors can interfere with routine and specialized coagulation testing. Great care should be taken in interpretation of results when patients are anticoagulated during testing.  
**OTHER NAMES:** Clottable Fibrinogen; Factor I Activity  
**METHODOLOGY:** Clot detection  
**CLINICAL USE:** Identify congenital afibrinogenemia, disseminated intravascular coagulation, and fibrinolytic activity  
**CPT:** 85384

### **[FIBAG] Fibrinogen Antigen**

**SPECIMEN REQUIRED:** Frozen plasma  
**TUBE OR CONTAINER:** Blue (Citrate)  
**SPECIAL HANDLING:** Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
**SPECIMEN VOLUME:** 1 full tube  
Testing volume: 1 mL of PLASMA  
**MINIMUM VOLUME:** 1 full tube  
Testing volume: 0.5 mL of PLASMA  
**TEST AVAILABILITY:** Daily  
**REFERENCE RANGE:** 180-350 mg/dL  
**METHODOLOGY:** Immunonephelometry  
**CLINICAL USE:** Diagnosis of homozygous and heterozygous fibrinogen deficiency as well as dysfibrinogenemia  
Used in the diagnosis of disseminated intravascular coagulation  
**CPT:** 85385



**[FILARIAIGG] Filaria IgG Antibody**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 ml  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
REFERENCE RANGE: 0.8 IV or less: Negative  
0.9-1.0 IV: Equivocal  
1.1 IV or greater: Positive  
METHODOLOGY: Enzyme-linked Immunosorbent Assay (ELISA)  
CPT: 86682

**[FIT] Stool Occult Blood Immunoassay**

SPECIMEN REQUIRED: Fresh stool at room temperature  
TUBE OR CONTAINER: OC-auto sampling bottle  
SPECIAL HANDLING: Deliver fresh stool to Micro for transfer  
into special collection kit  
SPECIMEN VOLUME: 5 grams  
MINIMUM VOLUME: 1 gram  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-6 days  
REFERENCE RANGE:  
METHODOLOGY: Immunoassay  
CLINICAL USE: Qualitative detection of fecal occult blood  
CPT: 82274

**[FLDBIL] Body Fluid Total Bilirubin**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: RED NO GEL, GOLD, LT GREEN CUP OR SYRINGE  
NO EDTA  
SPECIAL HANDLING: Specify source of fluid and protect from light  
SPECIMEN VOLUME: Adult: 1.0 mL  
Pediatric: 0.6 mL  
MINIMUM VOLUME: Adult: 0.5 mL  
Pediatric: 0.5 mL or 1/2 microtainer  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Colorimetric Diazo  
CPT: 82247

**[FLT3] FLT3 INTERNAL TANDEM DUP**

SPECIMEN REQUIRED: Whole blood at room temperature or bone  
marrow or isolated DNA  
TUBE OR CONTAINER: Lavender (EDTA); sterile container  
SPECIMEN VOLUME: 5 mL (whole blood)  
1 mL (bone marrow)  
0.3 mL isolated DNA

MINIMUM VOLUME: 2 mL (whole blood)  
1 mL (bone marrow)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-7 days  
METHODOLOGY: Polymerase Chain Reaction (PCR)/capillary electrophoresis  
CPT: 81245; 81246

#### **[FLUOR] Fluoride Level**

SPECIMEN REQUIRED: Whole blood at room temperature (submit original unopened tube)  
TUBE OR CONTAINER: Royal Blue (EDTA)  
Lavender will be temporarily accepted due to royal blue shortage, but result may be reported with a disclaimer.  
SPECIAL HANDLING: Please contact laboratory for correct tube; Submit original unopened tube. Tube does not need to be spun down and plasma taken off.  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1.1 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Environmental exposure: < 0.2 mg/L  
METHODOLOGY: Ion-selective electrode (ISE) potentiometry  
CLINICAL USE: Monitor chronic exposure to fluoride  
CPT: 82735

#### **[FLUP] Fluphenazine Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Dark green (heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube; Separate within 45 minutes of collection  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: 0.3-4.0 ng/mL  
OTHER NAMES: Prolixin; Permitil  
METHODOLOGY: Liquid chromatography/Mass spectrometry (LC/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80342

#### **[FMF] FAMILIAL MEDITERRANEAN FEVER**

SPECIMEN REQUIRED: Whole blood at room temperature (ship on ice (pack during hot weather) or buccal swab)  
TUBE OR CONTAINER: Lavender (EDTA) or Buccal swabs  
SPECIMEN VOLUME: 5 mL or 2 swabs  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-5 weeks  
OTHER NAMES: MEFV Gene Sequencing

METHODOLOGY: Bi-directional sequence analysis  
CPT: 81402

**[FND-CFNS] FND 1/2/3 & CFNS**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 6 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Gene sequencing of ALX1, ALX3, ALX4 and EFN1B  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 weeks  
OTHER NAMES: Frontonasal dysplasia (FND) types 1, 2 & 3 via ALX3, ALX4 and ALX1 genes and Craniofrontonasal syndrome (CFNS) via EFN1B gene  
METHODOLOGY: Sanger Sequencing  
CPT: 81479 x 4

**[FOL] Folate**

SPECIMEN REQUIRED: Serum only  
TUBE OR CONTAINER: Gold or Red  
SPECIAL HANDLING: Avoid hemolysis and protect from light  
Stable 2 hours room temperature  
48 hours 2-8 degrees  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 4.6 - 24.8 ng/mL  
METHODOLOGY: ECLIA  
CLINICAL USE: Detect folate deficiency; monitor therapy with folate; evaluate megaloblastic & macrocytic anemia  
CPT: 82746

**[FORM] Formic Acid Level**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red or Dark Green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-9 days  
OTHER NAMES: Methanoic acid; Formate  
METHODOLOGY: Ion chromatography (IC)  
CLINICAL USE: Exposure monitoring  
CPT: 83921

**[FOSPHEM] Fosphenytoin (Cerebyx) Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark Green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: 10.0 - 20.0 ug/mL  
OTHER NAMES: Cerebyx  
METHODOLOGY: Immunoassay  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80185

**[FOXP3] FOXP3 GENE SEQUENCING (IPEX)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 month  
REFERENCE RANGE: No mutation detected  
OTHER NAMES: X-linked immunodysregulation, polyendocrinopathy, enteropathy syndrome (IPEX)  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81479

**[FRANCAB] Francisella tularensis Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 days  
REFERENCE RANGE: Negative: METHODOLOGY: Direct Agglutination  
CLINICAL USE: Serological aid for the diagnosis of tularemia  
CPT: 86000

**[FRUC] Fructosamine**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold, Green (heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Separate from clot within 45 minutes  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 days  
METHODOLOGY: Colorimetric  
CLINICAL USE: Evaluate diabetic control, reflecting diabetic control over a shorter time period (2-3 weeks) than that represented by hemoglobin A1C  
CPT: 82985

**[FRUCLIV] Liver Biopsy Fructose**

SPECIMEN REQUIRED: Frozen liver tissue

TUBE OR CONTAINER: Sterile container  
TEST INCLUDES: Fructose-1-Phosphatase, Fructose 1,6 diphosphatase, Fructose 1-Phosphate Aldolase B  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
METHODOLOGY: Enzymatic  
CLINICAL USE: Definitive diagnosis of both fructose aldolase B and fructose-1,6 diphosphatase deficiencies  
CPT: 82657

### **[FSH] Follicle Stimulating Hormone**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin), Gold or Red  
SPECIAL HANDLING: Stable 5 days at room temp  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.6 mL  
PEDIATRIC TEST INFO: Order PEDFSH for pediatric reference range  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: Females:  
Follicular phase: 2.1 - 8.0  
Mid-cycle peak: 2.7 - 13.5  
Luteal phase: 0.8 - 7.9  
Postmenopausal: 13.0 - 90.0  
Males: 0.8 - 4.7  
OTHER NAMES: Pituitary Gonadotropin  
METHODOLOGY: ECLIA  
CLINICAL USE: Useful to distinguish primary gonadal failure from secondary (hypothalamic/pituitary) causes of gonadal failure, menstrual disturbances and amenorrhea. Useful in defining menstrual cycle phases in infertility evaluation of women and testicular dysfunction in men  
CPT: 83001

### **[FSDH] FACIOSCAPULOHUMERAL DYS (FSDH)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Refrigerate if not shipped Monday-Thursday  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 14-21 days  
OTHER NAMES: Facioscapulohumeral muscular dystrophy (FSDH)  
METHODOLOGY: Southern blot  
CLINICAL USE: Detects deletions on chromosome 4q35 associated with FSDH  
CPT: 81404

### **[FTA] Treponema pallidum Ab (FTA-ABS)**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: Nonreactive  
OTHER NAMES: Fluorescent Treponemal Antibody Test; FTA-Ab  
METHODOLOGY: Indirect fluorescent antibody (IFA)  
CLINICAL USE: Confirm syphilis  
CPT: 86780

**[FTACSF] CSF Treponema pallidum Ab (FTA-ABS)**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 ml  
MINIMUM VOLUME: 0.5 ml  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: Nonreactive  
METHODOLOGY: Indirect fluorescent antibody (IFA)  
CLINICAL USE: Confirm presence of antibody and establish diagnosis of neurosyphilis  
CPT: 86780

**[FUNGITELL] Beta-(1,3)-D-Glucan**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Gold  
SPECIAL HANDLING: Do NOT transfer; send in original tube  
SPECIMEN VOLUME: 1 ml  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Negative: < 60 pg/mL  
Indeterminate: 60 - < 79 pg/mL  
Positive: >= 80 pg/mL  
OTHER NAMES: Beta-(1,3)-D-Glucan  
METHODOLOGY: Limulus amoebocyte Lysate (LAL) pathway  
CLINICAL USE: Aids in the presumptive diagnosis of invasive fungal disease through detection of elevated levels of (1,3)-B-D-glucan  
CPT: 85130

**[FUNGITELLCSF] CSF (1-3)-B-D-glucan Assay**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: CSF TUBE  
SPECIAL HANDLING: Do NOT transfer; send in original tube  
SPECIMEN VOLUME: 2 ml  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Negative: < 60 pg/mL  
Indeterminate: 60 - < 79 pg/mL  
Positive: >= 80 pg/mL  
OTHER NAMES: Beta-(1,3)-D-Glucan  
METHODOLOGY: Limulus amoebocyte Lysate (LAL) pathway  
CLINICAL USE: Aids in the presumptive diagnosis of invasive fungal disease through detection of elevated levels of (1,3)-B-D-glucan  
CPT: 87449

**[FUNID] FUNGUS IDENTIFICATION**

**[FUNMIC:MOLD] SUSCEPTIBILITY TEST: MOLD**

This test may be ordered only by special request. The physician must call the Microbiology Lab and discuss the request with a senior technologist or supervisor. Call 1-4006 for further information.

Each anti-fungal requested will be billed separately.

**[FUNPCR] 16s rRNA (PCR)**

SPECIMEN REQUIRED: Fresh frozen tissue, paraffin embedded tissue, lower respiratory or sterile body fluid

TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-5 days

REFERENCE RANGE: Not detected

METHODOLOGY: Polymerase Chain Reaction (PCR)

CPT: 87801

**[FUNSENS] FUNGUS SENSITIVITY TEST ONLY**

**[FUNSYNREF] Synergy Fungal Susc- Referred**

**[FYAFYB] DUFFY (FYA/FYB) RED CELL AG**

SPECIMEN REQUIRED: Whole blood from mother & father and amniotic fluid at room temperature

TUBE OR CONTAINER: Lavender (EDTA) and sterile container

SPECIMEN VOLUME: 5 mL (whole blood-each parent)  
15 mL (amniotic fluid)

MINIMUM VOLUME: 3 mL (whole blood-each parent)  
7 mL (amniotic fluid)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 7-9 days

METHODOLOGY: Allele-specific PCR

CPT: 81479; 86905 x 2 (Parental)

CPT: 81479 x 2; 86905 x 2 (Prenatal)

### **[GABA] Gabapentin Level**

SPECIMEN REQUIRED: Room temperature serum or plasma  
TUBE OR CONTAINER: Red, Dark green (heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7 days  
REFERENCE RANGE: 4.0-16.0 ug/mL  
OTHER NAMES: Neurontin  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)  
CLINICAL USE: Monitor dosage adjustment and toxicity  
CPT: 80171

### **[GADAB] Glutamic Acid Decarboxylate Ab**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.4 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.0-5.0 units/mL  
OTHER NAMES: Anti-GAD; GAD65; GADAb

METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Aid in the diagnosis of type 1 diabetes mellitus (autoimmune mediated diabetes)  
CPT: 83519

### **[GADCSF] Glutamic Acid Decarboxylate Ab**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: 0.0-5.0 IU/mL  
OTHER NAMES: Beta-Cell Autoantibody to GAD 65; GAD Antibody; GAD-65 (Glutamic Acid Decarboxylase Antibody)

METHODOLOGY: Quantitative Enzyme-Linked Immunosorbent Assay (ELISA)  
CLINICAL USE: Used in evaluating patients with stiff-man syndrome, autoimmune cerebellitis and other acquired central nervous system disorders affecting gabaminergic neurotransmission  
CPT: 83516



**[GADOL] Gadolinium Level**

SPECIMEN REQUIRED: Refrigerated, frozen or room temperature serum  
TUBE OR CONTAINER: Royal Blue (plain-no additive)  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-8 Days  
REFERENCE RANGE: METHODOLOGY: Inductively coupled plasma-mass spectrometry (ICP-MS)  
CLINICAL USE: Monitor exposure to gadolinium-containing chelates  
CPT: 83018

**[GAGSU] Urine Glycosaminoglycans**

SPECIMEN REQUIRED: Frozen urine (random)  
TUBE OR CONTAINER: Plastic urine container  
SPECIAL HANDLING: Early morning specimens are preferred  
SPECIMEN VOLUME: 20 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 10-14 days  
CLINICAL USE: Use to MONITOR glycosaminoglycans (GAGs) in patients previously diagnosed with a mucopolysaccharidosis (MPS).  
CPT: 83864

**[GAGSUP] URINE GLYCOSAMINOGLYCANS SCRIN**

SPECIMEN REQUIRED: Frozen urine (random)  
TUBE OR CONTAINER: Plastic urine container  
SPECIAL HANDLING: First morning void preferred  
SPECIMEN VOLUME: 20 mL  
MINIMUM VOLUME: 10 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-15 days  
OTHER NAMES: Mucopolysaccharides Screen  
METHODOLOGY: Electrophoresis and Spectrophotometry  
CLINICAL USE: Evaluate symptomatic patients for mucopolysaccharidoses (MPS)  
CPT: 82664; 83864

**[GAL1PRBC] GALACTOSE-1-PHOSPHATE RBC**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA) or Dark green (heparin)  
SPECIAL HANDLING: Place tube on wet ice immediately after collection; Must ship same day as collected if sending whole blood; Must arrive in lab Monday-Friday only before noon  
SPECIMEN VOLUME: 5 mL (whole blood)

MINIMUM VOLUME: 2 mL (whole blood)  
TEST AVAILABILITY: Monday-Thursday (whole blood)  
TURNAROUND TIME: 3-10 days  
REFERENCE RANGE: Galactose-1-phosphate: 0.0-1.0 mg/dL  
Galactose-1-phosphate (ug/g Hb): 0-53 ug/g Hb  
Galact-1-phosph(umol/g Hb): 0.00-0.20 umol/g Hb  
METHODOLOGY: Gas Chromatography-Mass Spectrometry  
CLINICAL USE: Monitoring the dietary management of  
galactosemics  
CPT: 82775

#### **[GALACT] GALACTOKINASE**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Dark green (heparin)  
SPECIAL HANDLING: Specimen must arrive at performing lab within  
48 hours of collection  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 2-8 days  
REFERENCE RANGE: < 2 years: 20.1 - 79.8 mU/g of hemoglobin  
> 2 years: 12.1 - 39.7 mU/g of hemoglobin  
METHODOLOGY: Radioisotopic  
CPT: 82759

#### **[GALACTOSE] Galactose Total**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Light green (heparin)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: 1-7 days: 8-14 days: >14 days: METHODOLOGY:  
Spectrophotometry  
CPT: 82760

#### **[GALACTU] Urine Galactose**

SPECIMEN REQUIRED: Frozen urine (random)  
TUBE OR CONTAINER: Plastic urine container  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: METHODOLOGY: Spectrophotometric, Kinetic  
CPT: 82542

#### **[GALACU] Urine Galactitol**

SPECIMEN REQUIRED: Frozen urine (random)  
TUBE OR CONTAINER: Plastic urine container  
SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-10 days  
REFERENCE RANGE: Values are expressed as mmol/mol creatinine  
Normal Galactosemia  
1-6 years: 0-45.3 (n=34) 194-620 (n=38)  
>6 years: 0-18.4 (n=30) 98-282 (n=32)  
METHODOLOGY: Gas chromatography/Mass Spectrometry (GCMS)  
CLINICAL USE: Diagnosis and monitoring of galactosemia  
CPT: 84378

#### **[GALCWBC] GALACTOCEREBROSIDASE WBC**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Yellow (ACD)  
SPECIAL HANDLING: Do NOT transfer specimen to other containers  
Collect Monday-Thursday only; must arrive at  
performing lab within 48 hours of collection  
SPECIMEN VOLUME: 7 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 9-16 days  
REFERENCE RANGE: > or =1.20 nmol/h/mg protein  
METHODOLOGY: Radioisotopic  
CLINICAL USE: Diagnosis of Krabbe disease  
CPT: 82658

#### **[GALE] EPIMERASE DEF GALACTOSEM(GALE)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 weeks  
OTHER NAMES: Epimerase Deficiency Galactosemia via the GALE gene  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81479

#### **[GALECT3] Galectin-3**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.1 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Aid in assessing the prognosis of patients with  
chronic heart failure  
CPT: 82777

#### **[GANCIC] Ganciclovir Level**

SPECIMEN REQUIRED: Frozen serum or plasma

TUBE OR CONTAINER: Red or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-8 days  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[GAST] Gastrin**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
specimen not received frozen; gross  
lipemia; plasma specimen  
SPECIAL HANDLING: Patient must fast 12-14 hours or overnight;  
separate & freeze immediately  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat  
testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: Age specific  
METHODOLOGY: Immunochemiluminometric Assay (ICMA)  
CLINICAL USE: Diagnose Zollinger-Ellison syndrome and gastrinoma  
CPT: 82491

**[GDF6] KLIPPEL-FEIL SYND (GDF6 GENE)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
METHODOLOGY: Bi-directional sequencing  
CPT: 81479

**[GENBCFP] GenMark BCFP Nucleic Acid Test**

**[GENBCGN] GenMark BCGN Nucleic Acid Test**

**[GENBCGP] GenMark BCGP Nucleic Acid Test**

**[GENBCGP2] GenMark BCGP Nucleic Acid #2**

**[GENT] Random Gentamicin Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING:  
SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
OTHER NAMES: Garamycin  
METHODOLOGY: Turbidimetric inhibition immunoassay  
CLINICAL USE: Monitor therapeutic drug level and assess toxicity  
CPT: 80170

**[GENTP] Gentamicin Level Peak**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Draw 45-60 minutes after IV injection, 30 minutes after the end of 30 minute IV infusion or immediately after 60 minute IV infusion  
Stable 1 week 2-8 degrees separated from cells  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 5.0 - 12.5 ug/mL  
OTHER NAMES: Garamycin  
METHODOLOGY: Turbidimetric inhibition immunoassay  
CLINICAL USE: Monitor therapeutic drug level and assess toxicity  
CPT: 80170

**[GENTT] Gentamicin Level Trough**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Draw immediately prior to next dose  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: < 2.1 ug/mL  
OTHER NAMES: Garamycin  
METHODOLOGY: Turbidimetric inhibition immunoassay  
CLINICAL USE: Monitor therapeutic drug level and assess toxicity  
CPT: 80170

**[GGT] Gamma Glutamyl Transpeptidase**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Stable 7 days at 15-25 degrees  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Female: 12-81 U/L  
Male: 6-65 U/L

METHODOLOGY: Enzymatic colorimetric  
CLINICAL USE: Biliary enzyme that is useful in the diagnosis of obstructive jaundice, intrahepatic cholestasis, and pancreatitis  
CPT: 82977

### **[GH] Human Growth Hormone**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Patient must be fasting and at complete rest 30 minutes before drawing. No isotopes administered 24 hours prior to collection  
Specimen must be free from hemolysis and lipemia  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-3 days  
REFERENCE RANGE: 0.0 - 10.0 ng/mL  
OTHER NAMES: HGH; Human Growth Hormone; Somatotrophic Hormone; Somatotropin  
METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: Pituitary function test useful in the diagnosis of hypothalamic disorder, hypopituitarism, acromegaly, and ectopic growth hormone production by neoplasm  
CPT: 83003

### **[GHAB] Growth Hormone Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate serum from cells within one hour of collection  
SPECIMEN VOLUME: 2 ml  
MINIMUM VOLUME: 0.5 ml  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-10 days  
METHODOLOGY: HGH-I125 binding capacity  
CPT: 86277

### **[GHBP] Growth Hormone Binding Protein**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-18 days  
METHODOLOGY: Ligand binding immunoprecipitation assay (LIA)  
CPT: 83519

**[GHRGENE] LARON SYND/DWARFISM VIA GHR**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 weeks  
OTHER NAMES: Laron Syndrome/Pituitary Dwarfism II (Growth Hormone Insensitivity) via the GHR gene  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81405

**[GIAANT] Giardia Antigen**

SPECIMEN REQUIRED: Raw stool  
TUBE OR CONTAINER: Para-Pak Formalin vial (pink top)  
ORDERING MODULE: MIC  
SPECIMEN VOLUME: 5 mL or walnut-size portion (minimum)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Diagnosis of infection with Giardia; Giardia antigen is 50% more sensitive than O&P exam  
CPT: 87329

**[GILB] GILBERT/CRIGLER-NAJJAR-UGT1A1**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: DNA sequence analysis of all 5 exons of the UGT1A1 gene  
TEST AVAILABILITY: Daily  
  
TURNAROUND TIME: 2-3 weeks  
OTHER NAMES: UDP- Glucuronosyl Transferase 1A1 (UGT1A1) full gene sequencing, Gilbert Syndrome or Crigler-Najjar Syndrome  
  
METHODOLOGY: Bi-directional Sanger sequencing  
CPT: 81479

**[GLA] FABRY DISEASE via GLA GENE**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks

OTHER NAMES: GLA Gene Sequencing  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81405

### **[GLI3] GLI3 MUTATION**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 2-3 weeks  
OTHER NAMES: Pallister-Hall Syndrome (PHS)  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81479

### **[GLOMAB] Anti-Glomerular Basement Memb Ab**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.6 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.0 - 3.0 units/mL  
OTHER NAMES: Anti-GBM; Goodpasture Syndrome  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Detect the presence of circulating glomerular basement membrane-specific antibodies in Goodpasture's syndrome  
CPT: 83520

### **[GLU] Glucose Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin), Gold or Gray  
SPECIAL HANDLING: Fasting sample recommended. Centrifuge and separate from cells promptly.  
Stable 8 hours at room temp if serpated from cells  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0-30 days: 43-116 mg/dL  
1 month +: 68-116 mg/dL  
METHODOLOGY: Hexokinase with G6PD  
CLINICAL USE: Evaluate carbohydrate metabolism, acidosis and ketoacidosis, dehydration, work-up alcoholism, or apparent alcoholism, work-up coma, or neuroglycopenia  
CPT: 82947

### **[GLU1] Glucose 1 Hour**



SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin), Gold or Gray  
SPECIAL HANDLING: Separate serum from cells promptly  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0-30 days: 40-110 mg/dL  
1 month +: 65-110 mg/dL  
METHODOLOGY: Oxygen rate electrode  
CPT: 82950

#### **[GLU2PP] Glucose 2 Hour Postprandial**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Gray, Light Green (heparin) or Gold  
SPECIAL HANDLING: Centrifuge and remove serum/plasma from cells promptly; indicate time of last meal or post-prescribed dosage of glucola  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
METHODOLOGY: Oxygen rate electrode  
may be used along with FBS to follow patients with impaired glucose tolerance  
CPT: 82947

#### **[GLU30] Glucose 1/2 Hour**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin), Gold or Gray  
SPECIAL HANDLING: Separate serum from cells promptly  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
METHODOLOGY: Oxygen rate electrode

#### **[GLUC] Glucagon Level**

SPECIMEN REQUIRED: Frozen plasma with Trasylol  
TUBE OR CONTAINER: Chilled Lavender (EDTA)  
SPECIAL HANDLING: Overnight fast recommended for basal level.  
No isotopes administered 24 hours prior to collection. Patient should not be in a stress state at time of drawing. If diabetic, patient should be in good control  
Collect one full chilled tube. Transfer to a red-top tube containing 0.25 mL Trasylol  
Mix well, centrifuge and freeze  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat

testing)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-4 days

REFERENCE RANGE: 50-150 pg/mL

OTHER NAMES: Pancreatic glucagon

METHODOLOGY: Radioimmunoassay (RIA)

CLINICAL USE: Aid in diagnosis of glucagonoma

CPT: 82943

#### **[GLUCSF] CSF Glucose**

SPECIMEN REQUIRED: Refrigerated cerebrospinal fluid (CSF)

TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours

REFERENCE RANGE: 0-12 years: 64-86 mg/dL

13 years+: 43-75 mg/dL

METHODOLOGY: Hexokinase with G6PD

CLINICAL USE: Evaluate meningitis, neoplastic involvement of meninges, other neurological disorders;

CPT: 82945

#### **[GLUF] Fasting Glucose**

SPECIMEN REQUIRED: Refrigerated plasma or serum

TUBE OR CONTAINER: Gray, Gold, or Light Green (heparin)

SPECIAL HANDLING: Separate serum from cells promptly

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours

REFERENCE RANGE: 68-116 mg/dL

METHODOLOGY: Hexokinase with G6PD

CPT: 82947

#### **[GLUFL] Body Fluid Glucose**

SPECIMEN REQUIRED: Refrigerated body fluid (except for amniotic fluid)

TUBE OR CONTAINER: Sterile container

SPECIAL HANDLING: Specify source of fluid

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours

REFERENCE RANGE: None established

METHODOLOGY: Hexokinase with G6PD

CPT: 82945

#### **[GLU-INS] Insulin Response to Glucose**

SPECIMEN REQUIRED: Refrigerated plasma and serum

TUBE OR CONTAINER: Gray or Light Green (heparin) and Gold  
SPECIAL HANDLING: For valid results, the patient must be fasting for at least eight hours, abstain from all food and liquids (even water) during testing period, no smoking and should refrain from walking or other activity as much as possible. Collect a baseline (fasting), 1 & 2 hour post-dose; Label each with appropriate time interval (i.e., fasting, two hours, etc). Centrifuge and remove from cells promptly  
SPECIMEN VOLUME: 1 mL each specimen  
MINIMUM VOLUME: 0.5 mL each specimen  
TEST INCLUDES: Fasting glucose & insulin, one hour glucose & insulin, two hour glucose & insulin  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
METHODOLOGY: Oxygen rate electrode and Competitive Immunoassay  
CPT: 82951

#### **[GLUPC] Pericardial Fluid Glucose**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Hexokinase with G6PD  
CPT: 82945

#### **[GLUPL] Pleural Fluid Glucose**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Hexokinase with G6PD  
CLINICAL USE: Decreased fluid glucose concentration is usually associated with septic or inflammatory processes  
CPT: 82945

#### **[GLUPT] Peritoneal Fluid Glucose**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours

REFERENCE RANGE: None established  
METHODOLOGY: Hexokinase with G6PD  
CPT: 82945

#### **[GLUR] Urine Random Glucose**

SPECIMEN REQUIRED: Refrigerated random urine  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIMEN VOLUME: 2 tube (10 mL)  
MINIMUM VOLUME: 1 tube (1 mL)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: No range established  
METHODOLOGY: Hexokinase with G6PD  
CLINICAL USE: Aid in the evaluation of glucosuria, renal tubular defects; manage diabetes mellitus  
CPT: 82945

#### **[GLUSY] Synovial Fluid Glucose**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Hexokinase with G6PD  
CPT: 82945

#### **[GLUTAC] GLUTARIC ACID**

SPECIMEN REQUIRED: Refrigerated or Frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Centrifuge and separate within 45 minutes of collection  
SPECIMEN VOLUME: 0.1 mL  
MINIMUM VOLUME: 0.02 mL  
TEST INCLUDES: Glutaric Acid, 3-Hydroxyglutaric acid, 2-Hydroxyglutaric acid, Ethylmalonic acid, and Methylsuccinic acid  
TEST AVAILABILITY: Monday and Wednesday  
TURNAROUND TIME: 10 days  
METHODOLOGY: Liquid Chromatography-Tandem mass spectrometry (LC-MS/MS)  
CLINICAL USE: Diagnosis and treatment of glutaric acidemia types I and II  
CPT: 83921

#### **[GLUTCSF] CSF Glutamine**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: CSF transport tube  
SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
METHODOLOGY: High-pressure liquid chromatography (HPLC)  
CPT: 82131

#### **[GLYC] Glycine Level**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Light Green or Dark green (heparin)  
SPECIAL HANDLING: Separate and freeze within 1 hour of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-6 days  
METHODOLOGY: Ion exchange chromatography  
CPT: 82131

#### **[GLYCCSF] CSF Glycine**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: CSF transport tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-6 days  
METHODOLOGY: Ion exchange chromatography  
CPT: 82131

#### **[GLYCO] 1,5-Anhydroglucitol (1,5-AG)**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.75 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE:  
< 18 years: no range established  
Adult males: 10.7-32.0 g/mL  
Adult females: 6.8-29.3 g/mL  
Glycemic control goal for diabetic patients: >10  
OTHER NAMES: 1,5-Anhydroglucitol (1,5-AG)  
METHODOLOGY: Enzymatic, Colorimetric assay  
CLINICAL USE: Reflective of Mealtime Spikes and thus is a complement to A1C testing for those who are seeking a lower treatment target  
CPT: 84378

#### **[GLYSDIA] GLYCOGEN STORAGE DIS TYPE Ia**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)

SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 weeks  
OTHER NAMES: von Gierke Disease, G6PC Exon sequencing  
METHODOLOGY: Bi-directional Sanger Sequencing  
CLINICAL USE: Confirm diagnosis; Carrier testing and prenatal diagnosis  
CPT: 81479

#### **[GM1AB] Ganglioside (GM1) Antibodies**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST INCLUDES: IgG and IgM antibodies  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-14 days  
REFERENCE RANGE: IgG: IgM: OTHER NAMES: Ganglioside Monosialic Ab  
METHODOLOGY: Enzyme-linked Immunosorbent assay (ELISA)  
CPT: 83520 x 2

#### **[GM-CSF] Granulocyte-Macrophage CSF Antibody**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 days  
REFERENCE RANGE: < 0.5 pg/mL  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CPT: 83520

#### **[GQ1BAB] GQ1b Antibodies**

SPECIMEN REQUIRED: Refrigerated or room temperature serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-14 days  
REFERENCE RANGE: < 1:100  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CPT: 83520

#### **[GRAB] Anti-Granulocyte Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: Negative  
OTHER NAMES: Neutrophil Antibody  
METHODOLOGY: Flow Cytometry  
CLINICAL USE: Detect presence of neutrophil antibody that has  
has been implicated in causing neutropenia of  
various autoimmune disorders including Felty's  
syndrome, SLE and drug-induced neutropenia  
CPT: 86021

**[GRAMCSF] Gram Stain**

CPT: 87205

**[GRAMSP] Gram Stain Sputum Screen**

**[GRAMST] Gram Stain**

SPECIMEN REQUIRED: Material or swab from infected area

TUBE OR CONTAINER: Sterile container, Swab or slide

SPECIAL HANDLING: Indicate source of specimen

Gram stains are routinely performed with many cultures; in those cases, it is not necessary to order gram stain separately. Refer to the specific culture to determine if gram stain is included; Sources that are usually excluded and must be ordered separately include URINE & STOOL. It is usually more appropriate to order a Fecal WBC smear on Stool

Call Micro Lab at 271-4006 with questions

Instructions for sending slide: Carefully select material from infected area with a sterile swab. Gently roll swab onto a clean glass slide to make a thin smear. Air dry the slide. Do not fix. Maintain at room temperature.

Submit in slide holder (cardboard or plastic). Label the slide and the slide holder with the patient's name.

ORDERING MODULE: MIC

SPECIMEN VOLUME: Smear (air-dried) made at bedside or immediately after collection is preferred or one made in lab from swab or clinical material

TEST AVAILABILITY: Daily

TURNAROUND TIME: 24 hours

CLINICAL USE: Determine the presence of microorganisms and to evaluate type of specimen by type of cells seen

CPT: 87205

**[GSD1B] GLYCOGEN STORAGE 1b (SLC37A4)**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-4 weeks  
REFERENCE RANGE: No mutation detected  
OTHER NAMES: Glycogen Storage Disease type 1b via SLC37A4 gene  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81406

### **[GSD3] GLYCOGEN STORAGE TYPE 3 (AGL)**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
OTHER NAMES: AGL Gene Sequencing  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81407

### **[GSD6TX] Glycogen Storage Disease Screen**

SPECIMEN REQUIRED: Liver tissue  
TUBE OR CONTAINER:  
SPECIMEN VOLUME:  
MINIMUM VOLUME:  
TEST AVAILABILITY: Daily  
TURNAROUND TIME:  
OTHER NAMES: Liver Phosphorylase Deficiency; GSD Type VI; Hers Disease  
CLINICAL USE: Provide definitive diagnosis  
CPT: 82657

### **[GSD7] GLYCOGEN STORAGE 7 (PFKM)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
REFERENCE RANGE: No mutation detected  
OTHER NAMES: Tarui Disease; PFKM gene sequencing  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81479

### **[GSD9ENZ] Glycogen Storage Disease Screen**

SPECIMEN REQUIRED: Whole blood refrigerated (patient and non-related control) or Liver, Heart or Muscle tissue frozen  
TUBE OR CONTAINER: Lavender (EDTA) or sterile container  
SPECIAL HANDLING: Blood samples must arrive in Lab Monday-Thursday only by 1:00 pm; must be shipped same day as collected along with a control sample from a non-family member



SPECIMEN VOLUME: 10 mL (blood)  
MINIMUM VOLUME: 3 mL (blood)  
TEST AVAILABILITY: Monday-Thursday  
OTHER NAMES: Phosphorylase b Kinase (PhK) Deficiency; GSD Type IX  
CLINICAL USE: Provide definitive diagnosis  
CPT: 82657

### **[GTS] Gestational Glucose Tolerance Test**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Gray, Light Green (heparin) or Gold  
SPECIAL HANDLING: Collect a one hour post administration of 50 gram (half-bottle) glucola;  
Centrifuge and remove serum or plasma from cells promptly; No urine specimens need to be collected  
This procedure for pregnant females only  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
METHODOLOGY: Oxygen rate electrode  
CLINICAL USE: Test on pregnant women only; recommended by the American College of Obstetrics and Gynecologists to determine maternal diabetic state  
A positive screen should be followed by a 3-hour glucose tolerance test for confirmation on a subsequent day  
CPT: 82950

### **[GTT2] Glucose Tolerance Test**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Gray, Light Green (heparin) or Gold  
SPECIAL HANDLING: For valid results, the patient must be fasting for at least eight hours, abstain from all food and liquids (even water) during testing period, no smoking and should refrain from walking or other activity as much as possible. Collect a baseline (fasting) and two hours post-dose; Label each with appropriate time interval (i.e., fasting, two hours, etc).  
Centrifuge and remove from cells promptly; no urine specimens need to be collected  
SPECIMEN VOLUME: 1 mL each specimen  
MINIMUM VOLUME: 0.5 mL each specimen  
TEST INCLUDES: Fasting glucose, two-hour glucose  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
METHODOLOGY: Oxygen rate electrode  
CPT: 82950

**[GTT3] Glucose Tolerance Test**

**SPECIMEN REQUIRED:** Refrigerated plasma or serum  
**TUBE OR CONTAINER:** Gray, Light Green (heparin) or Gold  
**SPECIAL HANDLING:** For valid results, the patient must be fasting for at least eight hours, abstain from all food and liquids (even water) during testing period, no smoking and should refrain from walking or other activity as much as possible. Collect a baseline (fasting), 1, 2, & 3 hour post-dose; Label each with appropriate time interval (i.e., fasting, two hours, etc). Centrifuge and remove from cells promptly; no urine specimens need to be collected  
**SPECIMEN VOLUME:** 1 mL each specimen  
**MINIMUM VOLUME:** 0.5 mL each specimen  
**TEST INCLUDES:** Fasting glucose, one hour glucose, two hour glucose, and three hour glucose  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 8 hours  
**METHODOLOGY:** Hexokinase with G6PD  
**CPT:** 82951

**[GTT5] Glucose Tolerance Test**

**SPECIMEN REQUIRED:** Refrigerated plasma or serum  
**TUBE OR CONTAINER:** Gray, Light Green (heparin) or Gold  
**SPECIAL HANDLING:** For valid results, the patient must be fasting for at least eight hours, abstain from all food and liquids (even water) during testing period, no smoking and should refrain from walking or other activity as much as possible. Collect a fasting, 1, 2, 3, 4 and 5 hour post-dose; Label each with appropriate time interval (i.e., fasting, two hours, etc). Centrifuge and remove from cells promptly; no urine specimens need to be collected  
**SPECIMEN VOLUME:** 1 mL each specimen  
**MINIMUM VOLUME:** 0.5 mL each specimen  
**TEST INCLUDES:** Fasting glucose, one, two, three, four and five hour glucose  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 8 hours  
**METHODOLOGY:** Oxygen rate electrode

**[H1N12009] 2009 Influenza A (H1N1)****[HADHB] TRIFUNCTIONAL PROTEIN (HADHB)**

**SPECIMEN REQUIRED:** Whole blood at room temperature  
**TUBE OR CONTAINER:** Lavender (EDTA)  
**SPECIMEN VOLUME:** 5 mL

MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks  
OTHER NAMES: Trifunctional Protein Deficiency; HADHB gene sequencing  
METHODOLOGY: Polymerase chain reaction (PCR)  
CPT: 81406

#### **[HAMA] Human Anti-Mouse Antibodies**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL (This volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0-188 ng/mL  
METHODOLOGY: Enzyme immunoassay (EIA)

#### **[HAPQNT] Haptoglobin**

SPECIMEN REQUIRED: Serum or heparin plasma  
TUBE OR CONTAINER: Gold, Red or Light Green (heparin)  
SPECIAL HANDLING: Stable 3 months at 15-25 degrees  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 42-217 mg/dL  
METHODOLOGY: Immunoturbidimetric  
CLINICAL USE: Work-up for hemolytic state  
CPT: 83010

#### **[HARMONY] HARMONY PRENATAL TEST**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Black & Tan (special collection kit)  
SPECIMEN VOLUME: 20 mL (2 tubes-10 mL each)  
MINIMUM VOLUME: 10 mL (2 tubes-5 mL each)  
TEST INCLUDES: Risk determination for trisomy 13 (Patau syndrome), trisomy 18 (Edwards syndrome), and trisomy 21 (Down syndrome)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 9-12 days  
REFERENCE RANGE: By report  
CLINICAL USE: Detection of fetal trisomies 13, 18, and 21 in pregnancies (single fetus) of 10 weeks or more  
CPT: 83891; 83900; 83901; 83904; 83914; 83912

#### **[HAVAB] Hepatitis A Antibody Total**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Lavender (EDTA), Red or Gold  
SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: Measurement of both IgG and IgM forms of the antibody; reported as the total antibody  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Non-Reactive  
METHODOLOGY: Electrochemiluminescence (ECLIA)  
CLINICAL USE: Differential diagnosis of hepatitis; in conjunction with anti-HAV, IgM to confirm immunity to hepatitis A  
CPT: 86708

**[HAVMAB] Hepatitis A IgM Antibody**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Lavender (EDTA), Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Non-Reactive  
METHODOLOGY: Electrochemiluminescence (ECLIA)  
CLINICAL USE: Differential diagnosis of hepatitis; the presence of IgM antibody to hepatitis A is good evidence for acute hepatitis A  
CPT: 86709

**[HBCAB] Hepatitis B Core Total Antibody**

SPECIMEN REQUIRED: Refrigerated EDTA plasma or serum  
TUBE OR CONTAINER: Lavender (EDTA), Red or Gold serum  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: Daily - Weekdays  
REFERENCE RANGE: Non-Reactive  
METHODOLOGY: Electrochemiluminescence (ECLIA)  
CLINICAL USE: Differential diagnosis of hepatitis  
CPT: 86704

**[HBCMAB] Hepatitis B Core IgM Antibody**

SPECIMEN REQUIRED: Refrigerated EDTA plasma or serum  
TUBE OR CONTAINER: Lavender (EDTA), Red or Gold serum  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: Daily - Weekdays  
REFERENCE RANGE: Non-Reactive  
METHODOLOGY: Electrochemiluminescence (ECLIA)  
CLINICAL USE: Reliable marker for acute disease for a hepatitis B viral infection; at times this marker is the only one demonstrated for diagnosis. Not

recommended outside Acute Hepatitis Profile.  
CPT: 86705

**[HBEAB] Hepatitis Be Antibody**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL (this volume does not allow for repeat testing)  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Differential diagnosis, staging, and prognosis of hepatitis B infection  
CPT: 86707

**[HBEAG] Hepatitis Be Antigen**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1.5 mL  
MINIMUM VOLUME: 0.6 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Differential diagnosis, staging, and prognosis of hepatitis B infection  
CPT: 87350

**[HBSAB] Hepatitis B Surface Antibody**

SPECIMEN REQUIRED: Refrigerated EDTA plasma or serum  
TUBE OR CONTAINER: Lavender (EDTA), Red or Gold serum  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: Daily - Weekdays  
REFERENCE RANGE: Non-Reactive  
METHODOLOGY: Electrochemiluminescence (ECLIA)  
CLINICAL USE: Presence of Hepatitis B Surface Ab is an indicator of clinical recovery and subsequent immunity  
CPT: 86706

**[HBSAG] Hepatitis B Surface Antigen**

SPECIMEN REQUIRED: Refrigerated EDTA plasma or serum  
TUBE OR CONTAINER: Lav (EDTA), Red or Gold serum  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: Daily - weekdays

REFERENCE RANGE: Non Reactive  
METHODOLOGY: Electrochemiluminescence (ECLIA)  
REFLEX TEST INFORMATION: All positives, will reflex a viral neutralization test for confirmation  
CLINICAL USE: Earliest indicator of the presence of acute infection; useful for the differential diagnosis of hepatitis  
CPT: 87340

**[HBSQNT] Hepatitis B Surface Antibody, Quant**

SPECIMEN REQUIRED: Refrigerated EDTA plasma or serum  
TUBE OR CONTAINER: Lavender(EDTA), Red or Gold serum  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Negative: Inconsistent with immunity < 8.5  
Indeterminate: 8.5 - 11.5  
Positive: Consistent with Immunity > 11.5  
METHODOLOGY: Chemiluminescence  
CLINICAL USE: Evaluation of possible immunity  
CPT: 86317

**[HBSVIR] Hepatitis B Surface Ag Neutralizatn**

**[HBVDNAQNT] HBV DNA PCR QUANTITATIVE**

SPECIMEN REQUIRED: Frozen plasma or serum  
TUBE OR CONTAINER: Lavender (EDTA), Red or Gold  
SPECIAL HANDLING: Separate and freeze within 6 hours of collection  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
0.7 mL (pediatric minimum)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
METHODOLOGY: COBAS; TaqMan  
CLINICAL USE: Detect mutations in viral polymerase of hepatitis B virus genome; detect mutations associated with resistance to nucleoside analogues such as lamivudine (Epivir)  
CPT: 87517

**[HBVGENDR] HBV GENOTYPE & DRUG RESISTANCE**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA), Yellow (ACD)  
SPECIAL HANDLING: Separate and freeze within 6 hours of collection  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1.5 mL  
TEST INCLUDES: HBV Genotype and Drug Resistance

TEST AVAILABILITY: Daily  
METHODOLOGY: Polymerase chain reaction (PCR) amplification and DNA sequencing  
CLINICAL USE: Data generated in the genotyping assay is subsequently analyzed for mutations in the reverse transcriptase gene of HBV associated with resistance to therapeutic agents  
CPT: 87900; 87912

#### **[HBVGENO] HBV GENOTYPE**

SPECIMEN REQUIRED: Frozen plasma or serum  
TUBE OR CONTAINER: Lavender (EDTA), Yellow (ACD) or Gold  
SPECIAL HANDLING: Separate and freeze within 6 hours of collection  
SPECIMEN VOLUME: 1.5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Polymerase chain reaction (PCR) amplification and DNA probe  
CLINICAL USE: Classifies the virus present in the sample into one of eight recognized genotypes (A-H) via sequence analysis of the DNA polymerase gene. Disease progression and response to therapy may be influenced by genotype. In addition, the HBV genotype assay identifies and reports sequence polymorphisms in the basal core promotor (BCP) and coding regions of the HBV precore gene that result in either decreased levels, or complete absence, of HBeAg expression in chronically infected patients type-specific sequences in the HBV polymerase  
CPT: 87912

#### **[HCGCSF] CSF Tumor Marker HCG**

SPECIMEN REQUIRED: Refrigerated or frozen CSF  
TUBE OR CONTAINER: Sterile, plastic tube  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: 0-3 mIU/L  
METHODOLOGY: Immunochemiluminometric Assay (ICMA)  
CLINICAL USE: Aid in following treatment response and tumor recurrence in non-seminomatous testicular cancer  
CPT: 84702

#### **[HCGQL] Serum Pregnancy Test, Qualitative**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Negative  
METHODOLOGY: Immunoassay  
CLINICAL USE: Provides sensitive and specific test for detection of early pregnancy, diagnose ectopic pregnancy, or threatened abortion  
CPT: 84703

#### **[HCGQLU] Urine Pregnancy Test**

SPECIMEN REQUIRED: Refrigerated urine (random)  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIAL HANDLING: First-morning urine is the preferred sample as it usually contains the highest concentration of Beta-hCG  
SPECIMEN VOLUME: 1 tube (2 mL)  
MINIMUM VOLUME: 1 tube (1 mL)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Negative  
METHODOLOGY: Immunoassay  
CLINICAL USE: Provides a sensitive and specific test for the detection of early pregnancy  
CPT: 81025

#### **[HCGQNT] Human Chorionic Gonadotropin, Quant**

SPECIMEN REQUIRED: Serum or Plasma  
TUBE OR CONTAINER: Gold, Red or Lt Green  
SPECIAL HANDLING: Stable 5 days at 20-25 degrees  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Female:  $\geq 30.0$  mIU/mL - Positive  
OTHER NAMES: Serum; hCG Quantitative, Quantitative pregnancy test

METHODOLOGY: ECLIA  
CLINICAL USE: Determine presence of HCG in patients with gestational trophoblastic disease; and follow-up on molar pregnancies

CPT: 84702

#### **[HCO3U] Urine Bicarbonate**

SPECIMEN REQUIRED: Frozen urine (random)  
TUBE OR CONTAINER: Plastic urine container  
SPECIMEN VOLUME: 4.5 mL  
MINIMUM VOLUME: 1 mL



TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
METHODOLOGY: Enzymatic Assay (EZA)  
CPT: 82374

#### **[HCT] Hematocrit**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 1.5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Age specific  
METHODOLOGY: Automated cell counter  
CLINICAL USE: Evaluate anemia, blood loss, hemolytic anemia, polycythemia, and state of hydration  
CPT: 85014

#### **[HCTFL] Body Fluid Hematocrit**

SPECIMEN REQUIRED: Body fluid at room temperature (state source of fluid)  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1.5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Not established  
CPT: 85013

#### **[HCVAB] Hepatitis C Antibody**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Lavender (EDTA), Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Negative  
METHODOLOGY: Electrochemiluminescence (ECLIA)  
CLINICAL USE: Assess exposure to hepatitis C infection; test blood units for transfusion safety  
CPT: 86803

#### **[HDAB] Hepatitis Delta Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-8 days  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)

CLINICAL USE: Aid in the diagnosis of delta hepatitis virus infections (hepatitis D)  
CPT: 86692

**[HDABM] Hepatitis D IgM Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-10 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Aid in the diagnosis of delta hepatitis virus infections (hepatitis D)  
CPT: 86692

**[HDAC8] CORNELIA de LANGE 5 VIA HDAC8**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Cornelia de Lange syndrome (CdLS) type 5 via HDAC8 gene  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81479

**[HDAG] Hepatitis D Antigen**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-9 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CPT: 87380

**[HDL] HDL Cholesterol**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Stable 72 hours at 15-25 degrees  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 37 - 54 mg/dL  
METHODOLOGY: Homogenous enzymatic colorimetric

CLINICAL USE: Evaluate risk of developing coronary artery disease  
CPT: 83718

**[HE4] HE4 Ovarian Cancer Marker**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-7 days  
OTHER NAMES: Ovarian Cancer Monitor  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Tumor marker test  
CPT: 86305

**[HEAVY] HEAVY METALS SCREEN BLOOD**

SPECIMEN REQUIRED: Whole blood at room temperature (submit original unopened tube)  
TUBE OR CONTAINER: Royal Blue (EDTA) or Lavender (EDTA)  
Lavender (EDTA) will be temporarily accepted due to nationwide Royal Blue shortage  
SPECIAL HANDLING: Please contact laboratory for correct tube; Submit original unopened tube.  
Patient should avoid seafood and red wine 72 hours prior to collection  
SPECIMEN VOLUME: 7 mL  
MINIMUM VOLUME: 1.1 mL  
TEST INCLUDES: Arsenic, Lead and Mercury  
TURNAROUND TIME: 4 days  
REFERENCE RANGE: See individual tests  
METHODOLOGY: Atomic absorption spectrometry (AAS); inductively coupled plasma-mass spectrometry (ICP-MS)  
CLINICAL USE: Monitor exposure to arsenic, lead, and mercury  
CPT: 82175, 83655, 83825

**[HELICSTL] Stool Helicobacter pylori Antigen**

SPECIMEN REQUIRED: Frozen stool  
TUBE OR CONTAINER: Screw-cap container  
SPECIMEN VOLUME: 2 grams solid  
2 mL liquid stool  
MINIMUM VOLUME: 1 gram solid  
1 mL liquid stool  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
METHODOLOGY: Immunoassay  
CLINICAL USE: Establish the presence and possible etiologic role of Helicobacter pylori in cases of chronic gastric ulcer, gastritis, duodenal ulcer, dyspepsia, etc

CPT: 87338

**[HEMASS] HEMOLYTIC ASSAY**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 month  
REFERENCE RANGE: Negative  
CPT: 86161

**[HEMAV] HEMAVISION-LEUKEMIA-SPEC CHROM**

SPECIMEN REQUIRED: Refrigerated whole blood or bone marrow  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIAL HANDLING: Must be received in the lab within 72 hours of collection  
Please include WBC results for performing lab  
SPECIMEN VOLUME: 3-5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 5-7 days  
METHODOLOGY: Reverse transcriptase-Polymerase Chain Reaction (RT-PCR)  
CPT: 81401

**[HEMGAB] Haemophilus influenzae B IgG Ab**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-7 days  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Detection of specific IgG antibodies against H. influenzae which can cause conditions including meningitis, septicemia, cellulitis, epiglottitis pneumonia, and septic arthritis  
CPT: 86684

**[HEMOCHROM] HEREDITARY HEMOCHROMATOSIS**

SPECIMEN REQUIRED: Refrigerated or room temperature whole blood  
  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIAL HANDLING: Refrigerate if > 1 day delay  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-7 days

OTHER NAMES: C282Y Mutation; Iron Overload or Iron Storage disease

METHODOLOGY: Polymerase Chain Reaction (PCR) and Restriction enzyme digestion

CPT: 81256

**[HEMOS] Urine Hemosiderin**

SPECIMEN REQUIRED: Random urine

TUBE OR CONTAINER: Plastic urine cup

SPECIMEN VOLUME: 30 mL

MINIMUM VOLUME: 10 mL

TEST AVAILABILITY: Monday-Friday

REFERENCE RANGE: Negative

METHODOLOGY: Microscopy

CPT: 88312

**[HEMOSFL] Body Fluid Hemosiderin Pigment**

SPECIMEN REQUIRED: Body fluid

TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 30 mL

MINIMUM VOLUME: 10 mL

TEST AVAILABILITY: Monday-Friday

REFERENCE RANGE: Negative

METHODOLOGY: Microscopy

CPT: 88312

**[HEMP] HEREDITARY ERYTHRYOCYTOSIS MUT**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 3 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-4 weeks

METHODOLOGY: Polymerase Chain Reaction (PCR) Amplification/  
Sanger Sequence Analysis

CLINICAL USE: The definitive evaluation of an individual with  
JAK2-negative erythrocytosis associated with  
lifelong sustained increased RBC mass, elevated  
RBC count, hemoglobin, or hematocrit

CPT: 81479

**[HEPARIN] Heparin Anti-Xa Act, Unfractionated**

SPECIMEN REQUIRED: Citrate plasma

TUBE OR CONTAINER: Blue (Citrate)

SPECIAL HANDLING: Draw 1 FULL citrate tube; tube MUST be filled  
to the fill line to ensure proper anti-  
coagulant to blood ratio; Invert gently 3-4  
times to prevent clotting

Send to lab immediately or centrifuge and  
freeze plasma

SPECIMEN VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 0.5 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 - 4 HOURS  
REFERENCE RANGE: Therapeutic- UF Heparin = 0.3 - 0.7 IU/mL  
Therapeutic- LMW Heparin = 0.5 - 1.0 IU/mL  
Prophylaxis UF Heparin = 0.1 - 0.4 IU/mL  
Prophylaxis LMW Heparin = 0.2 - 0.4 IU/mL  
OTHER NAMES: Heparin assay; Heparin Xa  
CLINICAL USE: Monitor heparin therapy  
CPT: 85520

#### **[HEPARINP] Heparin Anti-Xa Activity**

SPECIMEN REQUIRED: Citrate plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube MUST be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 0.5 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-4 HOURS  
REFERENCE RANGE: Therapeutic- UF Heparin = 0.3 - 0.7 IU/mL  
Therapeutic- LMW Heparin = 0.5 - 1.0 IU/mL  
Prophylaxis- UF Heparin = 0.1 - 0.4 IU/mL  
Prophylaxis- LMW Heparin = 0.2 - 0.4 IU/mL  
CLINICAL USE: Monitor heparin therapy  
CPT: 85520

#### **[HEPARINT] Heparin Anti-Xa Activity**

SPECIMEN REQUIRED: Citrate plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube MUST be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 0.5 mL of PLASMA  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 1-4 HOURS  
REFERENCE RANGE: Therapeutic- UF Heparin = 0.3 - 0.7 IU/mL  
Therapeutic- LMW Heparin = 0.5 - 1.0 IU/mL  
Prophylaxis- UF Heparin = 0.1 - 0.4 IU/mL  
Prophylaxis- LMW Heparin = 0.2 - 0.4 IU/mL  
CLINICAL USE: Monitor heparin therapy  
CPT: 85520

### **[HEPCO] Heparin Cofactor II**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-8 days  
REFERENCE RANGE: 65-165 %  
METHODOLOGY: Chromagenic  
CLINICAL USE: Assessment of thrombotic risk associated with heparin cofactor II levels  
CPT: 85130

### **[HEPEAB] Hepatitis E IgM Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-6 days  
REFERENCE RANGE: Not Detected  
METHODOLOGY: Enzyme Linked Immunosorbent Assay (ELISA)  
CPT: 86790

### **[HEPEG] Hepatitis E IgG Antibody**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Dark Green (heparin)  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme Linked Immunosorbent Assay (ELISA)  
CPT: 86790

**[HEPFONDA] Fondaparinux Anti-Xa Activity**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 0.5 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: None established  
OTHER NAMES: Arixtra  
METHODOLOGY: Chromogenic  
CLINICAL USE: Monitor heparin  
CPT: 85520

**[HEPNEUT] Heparin Neutralization**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-4 days  
CPT: 85525

**[HEPQNT] Heparin Level**

SPECIMEN REQUIRED: Heparin solution  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-7 days  
CPT: 85520

**[HEVPCR] Hepatitis E RNA Quant (PCR)**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Centrifuge and freeze plasma in less than 6



hours of collection

SPECIMEN VOLUME: 4 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-8 days

REFERENCE RANGE: Negative

METHODOLOGY: Real-Time reverse transcription Polymerase Chain Reaction (RT-PCR)

CPT: 87798

#### **[HEX4U] Urine Tetrasaccharide**

SPECIMEN REQUIRED: Frozen urine (random)

TUBE OR CONTAINER: Urine cup

SPECIAL HANDLING: For diagnostic use, must be done in conjunction with GAA enzyme assay (Pompe enzyme) in blood

SPECIMEN VOLUME: 1 ml

MINIMUM VOLUME: 0.25 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 7-10 days

REFERENCE RANGE: < 20.0 mmol/mol creatinine

METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)

REFLEX TEST INFORMATION:

CPT: 83789

#### **[HGBF] Hemoglobin F (Fetal)**

SPECIMEN REQUIRED: Refrigerated whole blood

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Monday-Friday

TURNAROUND TIME: 1-4 days

REFERENCE RANGE: 1 day: 69.7% to 84.3%

5 days: 71.0% to 82.6%

3 weeks: 62.7% to 77.3%

6-9 weeks: 41.9% to 63.9%

3-4 months: 7.2% to 39.2%

6 months: 2.5% to 6.9%

8-12 months: 0.6% to 2.6%

>1 year: 0.0% to 2.0%

OTHER NAMES: Fetal Hemoglobin

METHODOLOGY: High-pressure liquid chromatography (HPLC)

CLINICAL USE: Evaluate hemoglobinopathies, hemolytic anemia; diagnose hereditary persistence of fetal

hemoglobin; diagnose thalassemia; evaluate

sickling hemoglobin

CPT: 83030

**[HGBFU] Urine Free Hemoglobin**

SPECIMEN REQUIRED: Refrigerated random urine  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIMEN VOLUME: 1 tube (6 mL)  
MINIMUM VOLUME: 1 tube (1 mL)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Reagent Strip  
CLINICAL USE: Determine the presence of hemoglobinuria  
CPT: 81003

**[HH] HEMOGLOBIN & HEMATOCRIT**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Invert specimen gently to avoid platelet clumping; Refrigerate if specimen is held longer than 24 hours  
Specimen must not be hemolyzed, clotted, or diluted with IV fluid  
Clotted specimens WILL be rejected  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 2 mL  
EDTA MICROTAINER Minimum: 250uL  
TEST INCLUDES: Hematocrit and hemoglobin  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-4 hours  
METHODOLOGY: Automated cell counter  
CLINICAL USE: Evaluate anemia, blood loss, hemolytic anemia, polycythemia, and state of hydration  
CPT: 85018; 85014

**[HHT] HERED HEMORRHAGIC TELANGIECT**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST INCLUDES: Sequencing of ACVRL1 (HHT2) and ENG (HHT1) genes  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-5 weeks  
REFERENCE RANGE: Negative  
METHODOLOGY: Polymerase Chain Reaction (PCR)/Sequencing  
CPT: 81406; 81479

**[HHV6G] Herpesvirus 6 IgG Antibody**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-7 days  
REFERENCE RANGE: Negative: Equivocal: 1:20-1:80  
Positive:  $\geq$ 1:160  
METHODOLOGY: Indirect fluorescent antibody (IFA)  
CLINICAL USE: Aid in the diagnosis of past infection/exposure  
to roseola infantum; may be useful in diagnosis  
of chronic fatigue syndrome  
CPT: 86790

#### **[HHV6M] Herpesvirus 6 IgM Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Immunofluorescence  
CPT: 86790

#### **[HHV6PCRQNT] Herpesvirus 6 DNA (Quant PCR)**

SPECIMEN REQUIRED: Plasma, bronchial lavage/wash, bone marrow,  
tracheal aspirate/wash at room temperature or  
frozen  
Frozen tissue, CSF or Fecal material  
Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD), Sterile  
container, screw top tube or swab  
SPECIAL HANDLING: Please specify source of specimen.  
Specimens at room temperature must be  
received at performing lab within 4 days of  
collection; Freeze if time exceeds 4 days  
SPECIMEN VOLUME: 5 mL (whole blood)  
2 mL plasma, CSF, bone marrow, liquid stool,  
or respiratory specimens  
5 mg tissue  
Pea sized formed stool  
MINIMUM VOLUME: 2 mL (whole blood)  
0.5 mL plasma, CSF, bone marrow, liquid stool  
or respiratory specimens  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Reverse Transcription/Polymerase Chain Reaction  
(PCR-RT)  
CPT: 87533

#### **[HHV7G] Herpesvirus 7 IgG Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-14 days  
REFERENCE RANGE: Negative: < 1:160  
METHODOLOGY: Indirect fluorescent antibody (IFA)  
CLINICAL USE: Aid in diagnosis of past infection/exposure to  
roseola infantum  
CPT: 86790

#### **[HHV7M] Herpesvirus 7 IgM Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-14 days  
REFERENCE RANGE: Negative: < 1:20  
METHODOLOGY: Indirect fluorescent antibody (IFA)  
CLINICAL USE: Aid in diagnosis of acute infection  
CPT: 86790

#### **[HHV7PCRQNT] Herpesvirus 7 DNA (Quant PCR)**

SPECIMEN REQUIRED: Plasma, bronchial lavage/wash, tracheal  
aspirate/wash at room temperature or frozen;  
Frozen tissue, CSF or Fecal material  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD), Sterile  
container or screw top tube  
SPECIAL HANDLING: Please specify source of specimen.  
Specimens at room temperature must be  
received at performing lab within 4 days of  
collection; Freeze if time exceeds 4 days  
SPECIMEN VOLUME: 2 mL plasma, CSF, liquid stool or respiratory  
specimens  
5 mg tissue  
Pea sized formed stool  
MINIMUM VOLUME: 0.5 mL plasma, CSF, liquid stool or respiratory  
specimens  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Reverse Transcription/Polymerase Chain Reaction  
(PCR-RT)  
CPT: 87799

#### **[HHV8PCRQNT] Herpesvirus 8 DNA (PCR)**

SPECIMEN REQUIRED: Bronchial lavage/wash, tracheal aspirate/wash  
at room temperature or frozen;  
Frozen tissue, CSF or Fecal material  
Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD), Sterile  
container or screw top tube

**SPECIAL HANDLING:** Please specify source of specimen.

Specimens at room temperature must be received at performing lab within 4 days of collection; Freeze if time exceeds 4 days

**SPECIMEN VOLUME:** 2 mL CSF, liquid stool or respiratory specimens

5 mg tissue

Pea sized formed stool

5 mL (whole blood)

**MINIMUM VOLUME:** 0.5 mL CSF, liquid stool or respiratory specimens

2 mL (whole blood)

**TEST AVAILABILITY:** Daily

**TURNAROUND TIME:** 2-3 days

**REFERENCE RANGE:** Not detected

**METHODOLOGY:** Reverse Transcription/Polymerase Chain Reaction (PCR-RT)

**CPT:** 87799

### **[HIDS] HYPER-IGD SYNDROME (HIDS)**

**SPECIMEN REQUIRED:** Whole blood at room temperature or buccal swabs

**TUBE OR CONTAINER:** Lavender (EDTA) or Buccal swabs

**SPECIMEN VOLUME:** 5 mL or 2 swabs

**MINIMUM VOLUME:** 3 mL

**TEST AVAILABILITY:** Daily

**TURNAROUND TIME:** 4-5 weeks

**OTHER NAMES:** MVK gene sequencing

**METHODOLOGY:** Bi-directional sequence analysis

**CPT:** 81479

### **[HINFANT] H.influenzae b Direct Antigen**

**SPECIMEN REQUIRED:** Refrigerated CSF, serum or urine (random)

**TUBE OR CONTAINER:** Sterile plastic (CSF) tube or plastic urine container; Red or Gold

**ORDERING MODULE:** MIC

**SPECIMEN VOLUME:** 0.5 mL CSF

1 mL serum

5 mL urine (random)

**TEST AVAILABILITY:** Daily

**TURNAROUND TIME:** 2-3 days

**REFERENCE RANGE:** Negative

**METHODOLOGY:** Latex agglutination (LA)

**CLINICAL USE:** Aid in documentation of active infection with Haemophilus influenzae

**CPT:** 87899

### **[HIST] Histamine Level**

**SPECIMEN REQUIRED:** Frozen plasma

**TUBE OR CONTAINER:** Lavender (EDTA)

SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 days  
METHODOLOGY: Radioimmunoassay (RIA)  
CLINICAL USE: Measure histamine that was released in vivo prior to collection of the specimen; evaluate possible systemic mastocytosis  
CPT: 83088

#### **[HISTAB] Histone Antibodies**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: Semiquantitative result of IgG antibody  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Negative: 0-99 U/mL  
Equivocal: 100-120 U/mL  
Positive: >120 U/mL  
OTHER NAMES: Drug-Induced Lupus Antibodies; H2a/H2b and H3 and H4 Antibodies  
METHODOLOGY: Multiplex bead flow cytometry  
CPT: 86235

#### **[HISTOABS] Histoplasma Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
Testing Referred to AURP Laboratories #0050174  
TURNAROUND TIME: 4-8 days  
REFERENCE RANGE: None Detected  
METHODOLOGY: Qualitative Immunodiffusion  
CLINICAL USE: Aid in the diagnosis and prognosis of histoplasmosis  
CPT: 86698

#### **[HISTOPCR] Histoplasmosis Interpretation**

SPECIMEN REQUIRED: Whole blood at room temperature; Frozen bronchoalveolar lavage (BAL), CSF or urine; Frozen tissue  
TUBE OR CONTAINER: Lavender (EDTA) or sterile container  
SPECIMEN VOLUME: 5 mL (blood)  
1 mL CSF, BAL or Urine  
>3 mm tissue  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Not Detected

METHODOLOGY: Polymerase Chain Reaction (PCR)  
CLINICAL USE: Detects the presence of Histoplasma capsulatum.  
DNA in clinical specimens  
CPT: 87798

#### **[HIT] Heparin-Induced Platelet Antibody**

SPECIMEN REQUIRED: Frozen plasma(preferred)/serum (2 aliquots)  
Lt Blue (citrate) preferred  
TUBE OR CONTAINER: Lt Blue, Gold, or Red  
SPECIAL HANDLING: Allow blood to clot for 30 minutes then  
centrifuge 10 minutes at 3000 rpm  
Include heparin type and concentration  
SPECIMEN VOLUME: 2 mL or full Lt Blue & 1 mL aliquots  
MINIMUM VOLUME: 2.7 mL & 0.5 mL aliquots  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 days  
REFERENCE RANGE: Negative RLU  
OTHER NAMES: HAT; Heparin-Associated Thrombocytopenia Ab;  
Heparin-Induced Thrombocytopenia Ab; HITA  
METHODOLOGY: Chemiluminescent immunoassay (EIA)  
REFLEX TEST INFORMATION: Confirmatory testing is recommended  
by Serotonin Release Assay (SRA), with  
a freshly drawn serum sample sent to a  
reference lab for SRA evaluation.  
CLINICAL USE: Assist in the diagnosis of heparin-induced  
thrombocytopenia  
CPT: 86022

#### **[HIV12AB] HIV (1&2) Antibody**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Gold, Red or Lavender (EDTA)  
UNACCEPTABLE SPECIMEN TYPE: Cord blood, cadaver specimens,  
and any body fluid other than  
EDTA plasma.  
SPECIAL HANDLING: Submit in the original tube, labeled with the  
patient's name or confidential ID number  
NOTE: Confidential numbers may be used in  
place of the patient's name; however, the  
confidential number must be written on the  
tube as well as in the patient name field on  
the laboratory requisition  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Nonreactive  
METHODOLOGY: Electrochemiluminescence (ECLIA)  
REFLEX TEST INFORMATION: Repeat-reactive samples are referred to  
an approved testing lab for  
confirmatory HIV-1 and HIV-2 antibody

differentiation assay testing at an  
additional charge

CLINICAL USE: Detect antigen/antibodies to HIV 1/0/2

CPT: 87389

#### **[HIV1DNARNA] HIV-1 DNA/RNA Qualitative (PCR)**

SPECIMEN REQUIRED: Refrigerated whole blood

TUBE OR CONTAINER: Lavender (EDTA)

SPECIAL HANDLING: Must not share tube with any other testing

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Tue-Sat

TURNAROUND TIME: 2-5 days

REFERENCE RANGE: Undetected

METHODOLOGY: Real-Time Polymerase Chain Reaction (PCR)

REFLEX TEST INFORMATION:

CLINICAL USE: Detects human immunodeficiency virus type 1

(HIV-1) DNA and RNA. The assay methodology is  
polymerase chain reaction (PCR) using the COBAS

AmpliPrep/COBAS TaqMan HIV-1 Qual test. This

test is optimized to yield equivalent

amplification of Group M subtypes of HIV-1.

CPT: 87535

#### **[HIV2PCRQL] HIV RNA (PCR) Interpretation**

SPECIMEN REQUIRED: Frozen serum or plasma

TUBE OR CONTAINER: Red or Lavender (EDTA)

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-9 days

REFERENCE RANGE: Not detected

METHODOLOGY: Reverse Transcriptase Polymerase chain reaction  
(PCR)

CLINICAL USE: Detect HIV-2 RNA

CPT: 87538

#### **[HIVGEN] HIV-1 GENOTYPIC DRUG RESIST**

SPECIMEN REQUIRED: Frozen plasma

TUBE OR CONTAINER: Lavender (EDTA)

SPECIAL HANDLING: Specimen must be received at performing lab  
within 96 hours of collection

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL

TEST INCLUDES: HIV-1 Genotypic Drug Resistance Sequencing  
including mutations in the protease inhibitor,

reverse-transcriptase and integrase genes

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-4 days

REFERENCE RANGE: Resistant/None detected



METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 87901

**[HIVINTEG] HIV Integrase Inhibitor Mutations**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA) or PPT (white)  
SPECIAL HANDLING: Specimen must be frozen in a screw top tube or a PPT tube  
Place in -20 C freezer  
SPECIMEN VOLUME: 6 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
CLINICAL USE: Provides phenotypic resistance analysis  
CPT: 87903

**[HIVNAT] HIV (NAT)**

SPECIMEN REQUIRED: Refrigerated plasma or whole blood  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL (whole blood) or 2 mL (plasma)  
MINIMUM VOLUME: 3 mL (whole blood) or 1 mL (plasma)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE:  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CLINICAL USE: Donor screening for detection of HIV-1 and HCV RNA from human donors  
CPT: 87535

**[HIVPHENTRY] HIV-1 PHENOSENSE ENTRY**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA) or PPT (white)  
SPECIAL HANDLING: Specimen must be frozen in a screw top tube or a PPT tube  
Place in -20 C freezer  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-10 days  
METHODOLOGY: ID of HIV-1 drug resistance mutations by sequencing  
CLINICAL USE: Direct measurement of the drug susceptibility of a patient's HIV-1 virus to entry inhibitors  
CPT: 87903

**[HMGCRAB] HMGCR Antibodies**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8-10 days  
OTHER NAMES: Autoantibody against 3-Hydroxy-3-Methylglutaryl-Coenzyme A reductase (HMGCR)  
METHODOLOGY: EIA  
CLINICAL USE: Associated with necrotizing myopathy that is commonly related to statin exposure  
CPT: 83520

**[HMWK] HMW Kininogen**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube MUST be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Clot-based  
CPT: 85293

**[HNPCCMLH1] HNPCC2 (MLH1 GENE)**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-6 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81292

**[HNPCC-MSH2] HNPCC1 (MSH2 GENE)**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-6 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81295

**[HNPCC-MSH6] HNPCC5 (MSH6 GENE)**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-6 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81298

**[HNPCC-PMS2DD] HNPCC/LYNCH-PMS2 DEL/DUP**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIAL HANDLING: Store specimen refrigerated, but ship at room temperature  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 14-35 days  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81319

**[HOLOP] HOLOPROSENCEPHALY PANEL**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST INCLUDES: Gene sequencing of DISP1, FGF8, FOXH1, NODAL, PTCH1, SHH, SIX3, TDGF1, TGIF and ZIC2 genes  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 10-12 weeks  
METHODOLOGY: Massive Parallel sequencing  
CPT: 81479

**[HOMOCYCSF] Homocysteine**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: CSF tube  
SPECIAL HANDLING: Must be in Lab Monday-Wednesday by 2:00 pm  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.25 mL  
TEST AVAILABILITY: Monday-Wednesday only  
TURNAROUND TIME: 2 weeks  
METHODOLOGY: LC-MS/MS  
CPT: 83090

**[HOMOCYS] Homocysteine**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
  
TUBE OR CONTAINER: Light Green(heparin) or Gold/Red  
SPECIAL HANDLING: Stable 4 days at room temperature  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: < 15.0 umol/L

METHODOLOGY: Enzymatic  
CLINICAL USE: Screen for patients who may be at risk for heart disease and stroke  
CPT: 83090

**[HOXD13] HOXD13-ASSOC LIMB ABNORMALITY**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks  
OTHER NAMES: HOXD13 gene analysis Associated with Limb Abnormalities  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81479

**[HPFH8] HEREDITARY PERSISTENCE OF HbF**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST INCLUDES: Mutations for HPFH-1 (g.5174452\_5259368del84917), HPFH-2 (g.5180404\_5263982del83579), HPFH-3 (g.5215683\_5265453del49771), HPFH-4 (g.5217940\_5260078del42139), HPFH-5 (g.5246023\_5258951del12929), HPFH-6 (g.5193975\_5273259del79278), HPFH-7 (g.5247860\_5270651del22792), and SEA-HPFH (g.5222878\_5250288del27411)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8-12 days  
METHODOLOGY: Multiplex PCR and gel electrophoresis  
CLINICAL USE: Aids in determining the cause of elevated HbF.  
Test confirms suspected deletional hereditary persistence of fetal hemoglobin (HPFH)  
CPT: 81479

**[HPRTRBC] HYPOXANTHINE PHOSPHORIB TRANS**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: ACD (Yellow)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 weeks  
REFERENCE RANGE: 400-2200 nmoles/min/gm Hgb  
CLINICAL USE: Aid in diagnosis of Lesch-Nyhan syndrome  
CPT: 82658

**[HPV] HPV DETECTION AND TYPE**

**SPECIMEN REQUIRED:** Conventional or liquid Pap smear, Cyto brush/cervical swab M4)

**TUBE OR CONTAINER:** Liquid pap container

**SPECIAL HANDLING:** Samples in cytology preservative should be collected using a cervical broom and placed in liquid-based cytology fixative (eg, vial with PreservCyt solution, ThinPrep, SurePath, or vial with CytoRich fixative)

Cervical specimens in PreservCyt, ThinPrep, SurePath, or vial with CytoRich fixative may be stored as long as 30 days (refrigerated or at room temperature) before testing for HPV DNA sequences. Specimens must be processed for testing within 30 days of collection

**SPECIMEN VOLUME:** 8 mL (cytology preservative)

**MINIMUM VOLUME:** 4 mL (cytology preservative)

**TEST INCLUDES:** Detection of HPV in tissue specimen; HPV typing for (6, 11), (16), (18, 45), and (31, 33, 35, 39)

**TEST AVAILABILITY:** Daily

**TURNAROUND TIME:** 5-10 days

**METHODOLOGY:** Polymerase Chain Reaction (PCR)

**CLINICAL USE:** Confirm HPV infection; determine HPV type; resolution of cases with equivocal histopathology or cytopathology

**CPT:** 87624

#### **[HPVISH] HPV PROBE IN SITU HYBRIDIZ**

**SPECIMEN REQUIRED:** Formalin-fixed, paraffin-embedded (FFPE) tissue block at room temperature or

Unstained slides

**TUBE OR CONTAINER:** Paraffin block or slides

**SPECIMEN VOLUME:** 7 slides

**MINIMUM VOLUME:** 6 slides

**TEST AVAILABILITY:** Daily

**REFERENCE RANGE:** Not detected

**METHODOLOGY:** In situ hybridization

**CLINICAL USE:** Determine HPV type; confirm HPV infection; resolve cases with equivocal histopathology

**CPT:** 88365

#### **[HPVRECT] HPV HIGH RISK-RECTAL**

**SPECIMEN REQUIRED:** Specimen in ThinPrep vial

**TUBE OR CONTAINER:** ThinPrep vial

**SPECIMEN VOLUME:** 8 mL (cytology preservative)

**MINIMUM VOLUME:** 4 mL (cytology preservative)

**TEST AVAILABILITY:** Daily

**REFERENCE RANGE:** Not detected

**METHODOLOGY:** Nucleic acid amplification (NAA)

**CLINICAL USE:** Determine HPV type; confirm HPV infection; resolve cases with equivocal histopathology

CPT: 87621 x 2

**[HSV12AB] AB HERPES SIMPLEX 1 & 2**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Determine exposure to HSV and aid in diagnosis of primary infection with HSV  
CPT: 86694; 86695; 86696

**[HSV12PCRQNT] Herpes Simplex I&II DNA (PCR)**

SPECIMEN REQUIRED: Plasma at room temperature or frozen;  
Frozen bronchial wash/lavage, tracheal aspirate/wash, tissue, CSF, Aqueous or vitreous fluid  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD), Sterile container, screw top tube or swab  
SPECIAL HANDLING: Please specify source of specimen.  
Specimens at room temperature must be received at performing lab within 4 days of collection; Freeze if time exceeds 4 days  
SPECIMEN VOLUME: 2 mL plasma, CSF or respiratory specimens  
5 mg tissue  
1 mL aqueous or vitreous fluid  
MINIMUM VOLUME: 0.5 mL plasma, CSF or respiratory specimens  
0.1 mL aqueous or vitreous fluid  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Reverse Transcription/Polymerase Chain Reaction (PCR-RT)  
CPT: 87530 x 2

**[HSV1G] Herpes Simplex Virus I IgG Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Freeze specimen if testing will not be performed within 5 days of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-7 days  
REFERENCE RANGE: Negative: METHODOLOGY: Enzyme-linked immunoassay (ELISA)  
CLINICAL USE: Detect IgG antibodies to HSV-1  
CPT: 86695

**[HSV2G] Herpes Simplex Virus II IgG Ab**

SPECIMEN REQUIRED: Frozen serum

TUBE OR CONTAINER: Red or Gold

SPECIAL HANDLING: Spin down for serum, separate and refrigerate.

Freeze specimen if testing will not be performed within 5 days of collection

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 1-7 days

REFERENCE RANGE: Negative: METHODOLOGY: Chemiluminescent immunoassay (CLIA).

REFLEX TEST INFORMATION: Reflex of specimens equivocal and low positive for HSV-2 type specific IgG to a membrane based immunoassay.

CLINICAL USE: Detect IgG antibodies to HSV-2

CPT: 86696

**[HTLVCSF] CSF HTLV I/II Antibody**

SPECIMEN REQUIRED: Frozen CSF

TUBE OR CONTAINER: Sterile tube

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 ml

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-5 days

REFERENCE RANGE: Negative

METHODOLOGY: Enzyme Immunoassay(EIA)/Western Blot

REFLEX TEST INFORMATION: If positive, results will be confirmed by Western blot at an additional charge

CPT: 86790 (86689-confirmation)

**[HTLVI-II] HTLV-I/II Antibody**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma

TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1.5 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: Negative

METHODOLOGY: Enzyme immunoassay (EIA)

CLINICAL USE: Qualitative detection of antibodies

CPT: 86790

**[HTX] HETEROTAXY PANEL**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 10 mL

MINIMUM VOLUME: 2 mL

TEST INCLUDES: Gene sequencing of ACVR2B, FOXH1, LEFTY2, NKX2-5, NODAL, ZIC3, ANKS6, CCDC11, CCDC103, CCDC114, CCDC39, CCDC40, DNAAF1, DNAAF2, DNAAF3,

DNAI1, DNAI2, DNAH5, DNAH11, DNAL1, HEATR2,  
INVS, LRRC6, TXNDC3, CRELD1, GDF1 and GJA1  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8-9 weeks  
OTHER NAMES: Heterotaxy/situs Inversus and Kartagener's  
Syndrome NextGen sequencing (NGS) panel  
METHODOLOGY: Next Generation sequencing (NGS)  
CPT: 81479 x 25

**[HUNTER] HUNTER SYNDROME/MPS II (IDS)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Mucopolysaccharidosis Type II via IDS gene; Hunter  
Syndrome  
METHODOLOGY: Bi-directional Sanger sequencing  
CPT: 81405

**[HYA] Hyaluronic Acid**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold, Green (heparin) or Lavender (EDTA)  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-10 days  
REFERENCE RANGE: 0-54 ng/mL  
METHODOLOGY: Quantitative Enzyme-linked Immunosorbent Assay  
(ELISA)  
CPT: 80299

**[HYDROXYZ] Hydroxyzine Level**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-9 days  
REFERENCE RANGE: 10 - 100 ng/mL  
OTHER NAMES: Atarax; Vistaril  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry  
(LC/MS/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[HYPP0] HYPOPHOSPHATASIA (ALPL GENE)**

SPECIMEN REQUIRED: Whole blood at room temperature



TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81479

**[IA2AB] Insulin Autoantibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-10 days  
REFERENCE RANGE:  
OTHER NAMES: ICA512 Autoantibodies; Tyrosine Phosphatase Autoantibodies  
METHODOLOGY: Immunoprecipitation assay  
CPT: 86341

**[IBCTRANS] Transferrin**

**[IBU] Ibuprofen Level**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red or Dark Green (heparin)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: 10.0 - 50.0 ug/ml  
OTHER NAMES: Advil, Midol IB, Motrin, Nuprin  
METHODOLOGY: High Performance Liquid Chromatography with Ultraviolet Detection; (HPLC-UV)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[IDH1-2] ISOCITRATE DEHYDROGENASE 1/2**

SPECIMEN REQUIRED: Whole blood, bone marrow Paraffin-embedded or formalin-fixed tissue block at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Paraffin block  
SPECIAL HANDLING: When submitting block or unstained sections, also submit an H&E-stained slide or photocopy of slide marking location of most abundant tumor and approximate % of tumor cells in that area  
SPECIMEN VOLUME: 5 mL (blood)  
3 mL (bone marrow)

MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 10-14 days  
METHODOLOGY: Polymerase chain reaction (PCR)  
CPT: 81403 x 2

**[IDIHIVGENPR] HIV-1 GENOSURE PRIme**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA) or PPT (white)  
SPECIAL HANDLING: Specimen must be frozen in a screw top tube or a PPT tube  
Place in -20 C freezer  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
CLINICAL USE: Detects antiretroviral drug resistance mutations in patients with HIV-1 infection  
CPT: 87900, 87901; 87906

**[IDORG] IDENTIFICATION OF ORGANISM X1**

**[IDORGOBI] Identification of OBI culture**

**[IDURSULF] Iduronate-2-Sulfatase (Hunter)**

SPECIMEN REQUIRED: Frozen plasma or whole blood or fibroblasts at room temperature  
TUBE OR CONTAINER: Dark green (heparin) or T-25 flasks  
SPECIAL HANDLING: Whole blood must be shipped same day as collected; otherwise separate and freeze plasma  
SPECIMEN VOLUME: 2 mL (plasma)  
5 mL (whole blood)  
2 flasks  
MINIMUM VOLUME: 1 mL (plasma)  
3 mL (whole blood)  
TEST AVAILABILITY: Daily  
OTHER NAMES: Hunter Syndrome-Enzyme Analysis, Mucopolysaccharidosis Type 2 enzyme  
CPT: 82657

**[IEPS] IMMUNOELECTROPHORESIS SERUM**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 3 ml  
MINIMUM VOLUME: 2 mL  
TEST INCLUDES: Quantitative IgG, IgA, and IgM; Protein electrophoresis; typing of monoclonal or polyclonal proteins for light and heavy chain specificity; Immunofixation electrophoresis if needed for

clarification of equivocal IEP patterns

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-4 days

REFERENCE RANGE: Normal pattern

METHODOLOGY: Electrophoresis followed by immunodiffusion against monospecific antisera to immunoglobulin and

individual heavy and light chains (IEP); protein

electrophoresis on agarose media; turbidimetric

quantitation of IgG, IgA, and IgM

CLINICAL USE: Detect and identify monoclonal immunoglobulin

gammopathies

CPT: 82784 x 3, 86320

### **[IFU] Urine Immunofixation**

SPECIMEN REQUIRED: Refrigerated aliquot of random urine

TUBE OR CONTAINER: Plastic urine container

SPECIAL HANDLING: No preservative; Collect first morning urine

SPECIMEN VOLUME: 30 mL

MINIMUM VOLUME: 10 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-4 days

REFERENCE RANGE: Normal pattern

METHODOLOGY: Agarose gel immunofixation electrophoresis (IFE)

CLINICAL USE: Useful in characterizing the proteins in cases of

proteinuria

CPT: 86335

### **[IGA] Immunoglobulin A**

SPECIMEN REQUIRED: Refrigerated serum or plasma

TUBE OR CONTAINER: Light Green (heparin), Gold or Red

SPECIAL HANDLING: Draw from a fasting patient; test cannot be performed on a lipemic sample

Stable 8 months at room temp

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 1 day

REFERENCE RANGE: Age specific

METHODOLOGY: Immunoturbidimetric

CLINICAL USE: Aid in the diagnosis and treatment of immune

deficiency states, protein-losing conditions,

chronic infections, myeloma, cirrhosis and liver

disease

CPT: 82784

### **[IGACSF] CSF Immunoglobulin A**

SPECIMEN REQUIRED: Refrigerated CSF

TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.25 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: 0.00 - 0.64  
METHODOLOGY: Immunologic  
CLINICAL USE: Quantitation of polyclonal or monoclonal response  
CPT: 82784

#### **[IGASEC] Saliva Secretory IgA**

SPECIMEN REQUIRED: Refrigerated saliva  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Sputum is not acceptable; Centrifuge and separate to remove cellular material  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Male: 4.0-24.0 mg/dL  
Female: 5.0-28.0 mg/dL  
METHODOLOGY: Nephelometry  
CLINICAL USE: Useful in investigating recurrent upper respiratory infections in children  
CPT: 82784

#### **[IGD] Immunoglobulin D**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Draw from a fasting patient; test cannot be performed on a lipemic sample  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 days  
REFERENCE RANGE: 0.13-15.27 mg/dL  
METHODOLOGY: Immunologic  
CLINICAL USE: Study patients for IgD myeloma  
CPT: 82784

#### **[IGE] Immunoglobulin E**

SPECIMEN REQUIRED: Serum or Plasma  
TUBE OR CONTAINER: Lt Green, Red or Gold  
SPECIAL HANDLING: Stable 7 days at room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: Age specific  
METHODOLOGY: Electrochemiluminescence Immunoassay (ECLIA)  
CLINICAL USE: Evaluate immunoglobulin status in possible atopic disease

CPT: 82785

### **[IGFBP-3] Insulin-like GF Binding Protein-3**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL (this volume does not allow for repeat testing)  
PEDIATRIC TEST INFO: Order PEDIGFBP3 for pediatric testing to be performed by Esoterix  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Age & gender specific  
OTHER NAMES: Insulin-like Growth Factor Binding Protein-3  
METHODOLOGY: Immunochemiluminometric Assay (ICMA)  
CLINICAL USE: Aids in evaluation of growth hormone secretion

CPT: 83520

### **[IGF-II] Insulin-like Growth Factor II**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7 days  
REFERENCE RANGE: Age specific  
OTHER NAMES: Somatomedin A  
METHODOLOGY: Radioimmunoassay (RIA) after acid: alcohol extraction  
CLINICAL USE: An adjunct to IGF-I in the clinical evaluation of growth hormone-related disorders  
CPT: 84305

### **[IGG] Immunoglobulin G**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Lt Green (heparin), Gold or Red  
SPECIAL HANDLING: Draw from a fasting patient; test cannot be performed on a lipemic sample  
Stable 4 months at room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: Age specific  
METHODOLOGY: Immunoturbidimetric  
CLINICAL USE: Aid in the diagnosis and treatment of immune deficiency states, protein-losing conditions, chronic infections, liver disease, as well as multiple sclerosis, mumps, meningitis, and

immunoglobulin G myeloma  
CPT: 82784

### **[IGGCSF] CSF Immunoglobulin G**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Freeze specimen if testing will not occur within 5 days  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.25 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
METHODOLOGY: Immunologic  
CLINICAL USE: Evaluate central nervous system involvement by infection, neoplasm, or primary neurologic disease (in particular, multiple sclerosis)  
CPT: 82784

### **[IGGSUB] IMMUNOGLOBULIN G SUBCLASSES**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1.5 mL  
TEST INCLUDES: Quantitation of IgG1,IgG2,IgG3,IgG4 & total IgG  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Age specific  
METHODOLOGY: Immunologic  
CLINICAL USE: Study patients with recurrent bacterial infections or allergy  
CPT: 82784; 82787 x4

### **[IGM] Immunoglobulin M**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Draw from a fasting patient; test cannot be performed on a lipemic sample  
Stable for 2 months at room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: Age specific  
METHODOLOGY: Immunoturbidimetric  
CLINICAL USE: Aid in the diagnosis and treatment of immune deficiency states, protein-losing conditions, chronic infections, liver disease and Waldenstrom's macroglobinemia  
CPT: 82784

### **[IGMCSF] CSF Immunoglobulin M**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.25 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: 0.00 - 0.26  
METHODOLOGY: Immunologic  
CLINICAL USE: In patients with bacterial meningitis, CSF IgM is usually elevated along with C-reactive protein  
CPT: 82784

#### **[IMMUKNOW] IMMUKNOW CELL FUNCTION ASSAY**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark Green (heparin)  
SPECIAL HANDLING: Must be collected and received in the lab by 12:00 pm Monday-Friday only  
Collect specimen after 8:00 a.m. to preserve specimen integrity  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 48 hours  
REFERENCE RANGE: Low immune cell response: Moderate immune cell response: 226-524 ATP ng/mL  
Strong immune cell response:  $\geq 525$  ATP ng/mL  
OTHER NAMES: Cylex  
METHODOLOGY: Detects cell-mediated immunity by measuring concentration of ATP from CD4 cells following stimulation  
CPT: 86352

#### **[INDIN] HIV Indinavir Resistance**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
OTHER NAMES: Crixivan  
METHODOLOGY: High-pressure liquid chromatography (HPLC)  
CLINICAL USE: Monitor indinavir therapy  
CPT: 80299

#### **[INFLA] Influenza Virus Type A Antibody**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily

REFERENCE RANGE: Negative: < 1:8  
METHODOLOGY: Complement fixation (CF)  
CLINICAL USE: Detect antibodies to Influenza A  
CPT: 86710

**[INFLB] Influenza Virus Type B Antibody**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Negative: < 1:8  
METHODOLOGY: Complement fixation (CF)  
CLINICAL USE: Detect antibodies to Influenza B  
CPT: 86710

**[INFLIXRX] Infliximab Antibody**

SPECIMEN TYPE  
Serum Red  
SPECIMEN REQUIRED  
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 gel/SST are not acceptable)  
Specimen Volume: 1 mL  
Collection Instructions: Centrifuge within 2 hours of collection.

**[INHIB] Inhibin A**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
METHODOLOGY: Enzyme Immunoassay (EIA)  
CLINICAL USE: Assess the function of the antral follicles the dominant follicle/corpus luteum of the ovaries  
in women  
CPT: 86336

**[INHIBB] Inhibin B**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL



TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
METHODOLOGY: Chemiluminescence  
CLINICAL USE: Serves as an endocrine marker for monitoring male and female gonadal function  
CPT: 214214

### **[INS] Insulin Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Gold or Light Green (heparin)  
SPECIAL HANDLING: NO isotopes administered 24 hours prior to venipuncture; Patient should be fasting for at least 7 hours prior to venipuncture  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday and Thursday  
TURNAROUND TIME: 3-4 days  
REFERENCE RANGE:  
0-17 years: 2.0-20.0 Micro International Units/mL  
> 18 years: 6.0-30.0 Micro International Units/mL  
METHODOLOGY: Competitive Immunoassay  
CLINICAL USE : Work up for fasting hypoglycemia, evaluate for insulin producing neoplasm or pancreatic islet cell hyperplasia  
CPT: 83525

### **[INSULAB] Insulin Autoantibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME:  
REFERENCE RANGE:  
OTHER NAMES: IAA; Insulin Antibodies  
METHODOLOGY: Insulin-I125 binding capacity  
CPT: 86337

### **[INT10] Interleukin 10 (IL-10)**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Gold, Red or Lavender (EDTA)  
SPECIAL HANDLING: Separate serum or plasma from cells as soon as possible  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CPT: 83520

**[INT18] Interleukin 18 (IL-18)**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Separate within 2 hours of venipuncture  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CPT: 83520

**[INT1b] Interleukin 1 Beta (IL-1b)**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-8 days  
REFERENCE RANGE: < 3.0  
METHODOLOGY: Multiplex Array  
CPT: 83520

**[INT2] Interleukin 2 (IL-2)**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIAL HANDLING: Separate serum or plasma from cells as soon as possible  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-30 days  
METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)  
CPT: 83520

**[INT2R] Interleukin-2-Receptor (IL-2R)**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-10 days  
REFERENCE RANGE: 223-710 units/mL  
OTHER NAMES: CD25; IL-2 sRa (IL-2 soluble receptor alpha)  
METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: The function of IL-2 sR is unclear, but increased levels of IL-2 sR in biological fluids correlate with increased T & B activation and immune system activation  
CPT: 83520

**[INT4] Interleukin 4 (IL-4)**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CPT: 83520

**[INT6] Interleukin 6 (IL-6)**

SPECIMEN REQUIRED: frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate serum from cells as soon as possible  
SPECIMEN VOLUME: 1.0 mL  
MINIMUM VOLUME: 1.0 mL  
  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-7 days  
OTHER NAMES: B-Cell Stimulation Factor 2; BSF-2; CDF; Cytolytic Differentiation Factor; Hepatocyte Stimulatory Factor; HGF; HSF; Hybridoma Growth Factor; IL-6  
METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)  
CPT: 83520

**[INT6AMN] Interleukin 6 (IL-6)**

SPECIMEN REQUIRED: Frozen amniotic fluid (not preferred specimen; performing lab will report with disclaimer)  
TUBE OR CONTAINER: Sterile capped/conical tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
METHODOLOGY: Multiplex Array  
CPT: 83520

**[INT8] Interleukin 8 (IL-8)**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIAL HANDLING: Separate serum or plasma from cells as soon as possible  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CPT: 83520

**[INTFA] Alpha Interferon Level**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8-16 days  
REFERENCE RANGE: < 4 IU/mL  
METHODOLOGY: Enzyme-immunoassay (EIA)  
CPT: 83520

**[INTFB] Interferon Beta Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: The specific drug (Betaseron, Rebif, Avonex) being used to treat the patient, must be provided  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
REFERENCE RANGE: < 4.0 Units  
METHODOLOGY: Multi-Analyte Immunodetection (MAID)  
CLINICAL USE: Antibodies are detectable in relapsing-remitting multiple sclerosis patients after the third year of treatment with IFNB and are associated with exacerbations of disease  
CPT: 83520

**[INTFG] Interferon Gamma Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-7 days  
REFERENCE RANGE: < 0.3 pg/mL  
METHODOLOGY: Multiplex Array  
CPT: 83520

**[INTRAB] Intrinsic Factor Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.0 - 1.1 AU/mL  
METHODOLOGY: Radioimmunoassay (RIA)

CLINICAL USE: Contributes to the diagnosis and differential diagnosis of B12 deficiency  
CPT: 86340

### **[IODI] Total Iodine Level**

SPECIMEN REQUIRED: Plasma at room temperature in a certified metal-free plastic transport tube  
TUBE OR CONTAINER: Royal Blue (EDTA)  
Lavender (EDTA) will no longer be accepted after 10/1/13  
SPECIAL HANDLING: Please contact laboratory for correct tube  
Separate plasma from cells within 45 minutes of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 40.0 - 92.0 ug/L  
METHODOLOGY: Inductively-coupled plasma/mass spectrometry (ICP/MS)  
CLINICAL USE: Monitor exposure to iodine; evaluate for iodine deficiency disorders (IDDs), excessive iodine intake or iodine in the workplace  
CPT: 83789

### **[IPF] Immature Platelet Fraction**

### **[IRF6] IRF6 GENE MUTATION**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: IRF 6 Gene analysis in Van der Woude and Popliteal Pterygium Syndromes (PPS)  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81479

### **[IRON] Iron Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin), Gold or Red  
SPECIAL HANDLING: Stable 7 days at room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0-30 days: 104-260 ug/dL  
1 Month-3 Years: 42-104 ug/dL  
4-12 years: 52-125 ug/dL  
13 Years +: (Female) 42-156 ug/dL

(Male) 52-167 ug/dL

METHODOLOGY: Colorimetric

CLINICAL USE: Aid in evaluation conditions involving red cell reproduction and destruction, iron metabolism or transplant

CPT: 83540

### **[IRONU] Urine Random Iron**

SPECIMEN REQUIRED: Refrigerated urine (random)

TUBE OR CONTAINER: Urine container

SPECIMEN VOLUME: 6 mL

MINIMUM VOLUME: 3 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-8 days

METHODOLOGY: Inductively Coupled Plasma/Optical Emission (ICP/OES)

CLINICAL USE: Monitor exposure

CPT: 83540

### **[ISLETAB] Anti-Pancreatic Islet Cell Antibody**

SPECIMEN REQUIRED: Refrigerated serum

TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-10 days

REFERENCE RANGE: Negative < 1:1

OTHER NAMES: Islet cell Ab, antipancreatic islet cell antibody, anti-islet cell Ab

METHODOLOGY: Indirect Fluorescent antibody (IFA)

CLINICAL USE: Differential diagnosis of insulin-dependent diabetes from noninsulin-dependent diabetes

CPT: 86341

### **[ITRA] ITRACONAZOLE/HYDROXYITRACON**

SPECIMEN REQUIRED: Frozen serum or plasma

TUBE OR CONTAINER: Red, Lavender (EDTA) or Dark Green (heparin)

SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.6 mL

TEST INCLUDES: Itraconazole and Hydroxyitraconazole

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-7 days

OTHER NAMES: Sporanox

METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)

CPT: 80299

### **[JAK2] JANUS KINASE 2 V617F MUTATION**

SPECIMEN REQUIRED: Whole blood or bone marrow refrigerated or

at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIAL HANDLING: Refrigerate

SPECIMEN VOLUME: 3-5 mL Blood or 3-5mL of Bone Marrow.

MINIMUM VOLUME: 3 mL (blood)

1 mL (bone marrow)

TEST AVAILABILITY: Monday-Friday

TURNAROUND TIME: 5-10 days

OTHER NAMES: JAK2 Mutation

METHODOLOGY: Polymerase Chain Reaction (PCR)

CLINICAL USE: Used in conjunction with bone marrow histology and cytogenetic analysis to assist in the diagnosis of myeloproliferative disorders (MPDs)

such as polycythemia vera, essential thrombocythemia and idiopathic myelofibrosis

CPT: 81270

#### **[JCVABIND] JC VIRUS AB W/INDEX**

SPECIMEN REQUIRED: Frozen serum or plasma

TUBE OR CONTAINER: Gold, Red or Lavender (EDTA)

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-16 days

REFERENCE RANGE: Negative

METHODOLOGY: Immunoassay (IA)

CLINICAL USE: Determine the prevalence of Serum JC Antibody in relapsing MS patients receiving Tysabri or being considered for such treatment

CPT: 86711

#### **[JCVPCRQL] JC Virus DNA Qualitative (PCR)**

SPECIMEN REQUIRED: Refrigerated whole blood

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: Negative

METHODOLOGY: Real-time polymerase chain reaction (PCR)

CLINICAL USE: Aid in the diagnosis of infections caused by JC virus

CPT: 87798

#### **[JO1AB] JO-1 Antibody**

SPECIMEN REQUIRED: Room temperature serum or plasma

TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)

SPECIMEN VOLUME: 0.6 mL

MINIMUM VOLUME: 0.3 mL (This volume does not allow for repeat testing)

TEST AVAILABILITY: Daily

REFERENCE RANGE: 0.0 - 0.9  
METHODOLOGY: Flow Cytometry  
CLINICAL USE: Evaluate patients suspected of having polymyositis  
hermatomyositis, or polymyositis-scleroderma  
overlap syndrome  
CPT: 86235

### **[K] Potassium Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Care should be taken to avoid hemolysis during  
venipuncture. Specimen should be spun and  
removed from cells within 2 hours.  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0-30 days: 3.7-6.1 mmol/L  
1 month-1 year: 4.1-5.5 mmol/L  
1 year + : 3.5-5.2 mmol/L  
OTHER NAMES: K+  
METHODOLOGY: Ion-Selective Electrode  
CLINICAL USE: Aid in the diagnosis and treatment of hypokalemia,  
hyperkalemia, renal failure, Addison's disease or  
other diseases involving electrolyte imbalance  
CPT: 84132

### **[KB] Kleihauer-Betke Fetal Hemoglobin (L**

SPECIMEN REQUIRED: Fresh whole blood (< 6 hours old)  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: This test is performed only on the day shift  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
CLINICAL USE: Determine possible fetal-maternal hemorrhage and  
assess magnitude; aid in diagnosis of certain  
types of adult anemias. Calculate dosage of Rh  
immune globulin  
CPT: 85460

### **[KBENTC] KIRBY BAUER ENTEROCOCCUS**

### **[KBF] Body Fluid Potassium**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: Sterile tube  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily



TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Ion-Selective Electrode  
CPT: 84132

**[KBGCREF] KB N. gonorrhoeae LabCorp**

**[KBGN] KIRBY BAUER, MISC GRAM NEG**

**[KBGNRU] KIRBY BAUER GNR: URINE**

**[KBPA] KIRBY BAUER PS.AERUG**

**[KBPAS] KIRBY BAUER PASTEURELLA**

**[KBSAL] KIRBY BAUER SALMONELLA**

**[KBSHI] KIRBY BAUER SHIGELLA**

**[KBSTA] KIRBY BAUER STAPH NOT URINE**

**[KBSTAUR] KIRBY BAUER STAPH URINE**

**[KBSTRB] KB BETA STREP**

**[KBSTRVIR] KB STREP VIRIDANS GROUP**

**[KELLK6-K7] Kell Antigen**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL (whole blood)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-9 days  
METHODOLOGY: Allele-specific PCR  
CPT: 81479

**[KEPPRA] Levetiracetam (Keppra) Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Dark green (heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect in a gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 10.0 - 40.0 ug/mL  
OTHER NAMES: Levetiracetam  
METHODOLOGY: Liquid chromatography mass spectrometry (LC/MS)

CLINICAL USE: Monitor therapeutic level  
CPT: 80177

**[KETU] Urine Ketones**

SPECIMEN REQUIRED: Random urine  
TUBE OR CONTAINER: Urine container  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-8 hours  
REFERENCE RANGE: Negative  
METHODOLOGY: Reagent strip  
CPT: 81002

**[KFMARUP] KNOWN FAMILIAL MUTATION-ARUP**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Specify gene  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 weeks  
METHODOLOGY: Polymerase chain reaction (PCR)/Sequencing  
CPT: 81479

**[KFMBCM] KNOWN MUTATION-BCM**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks  
METHODOLOGY: Bi-directional sequence analysis  
CPT: 81479

**[KFMCTGT] KNOWN FAMILIAL MUT-CTGT**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 weeks  
METHODOLOGY: Sanger Sequencing  
CPT: 81403

**[KITF] KIT-F (D816V) MUTATION BY PCR**

SPECIMEN REQUIRED: Refrigerated whole blood or bone marrow  
temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Pink (K2EDTA)  
SPECIMEN VOLUME: 3-5 mL

MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-9 days  
OTHER NAMES: C-kit, D816V gene mutation  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81404

#### **[KLCHAIN] KAPPA/LAMBDA LIGHT CHAINS**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Stable at room temperature for 7 days or longer if frozen at -20 C or lower  
Patient should fast for 8 hrs prior to collection  
SPECIMEN VOLUME: 0.5 ml  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: Quantitative kappa chains, lambda chains and kappa/lambda ratio  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 days  
REFERENCE RANGE: Free Kappa light chains: 3.3-19.4 mg/L  
Free Lambda light chains: 5.71-26.30 mg/dl  
Kappa/Lambda free light chain ratio: 0.26-1.65  
OTHER NAMES: Free Light Chains; Kappa Free Light Chains; Kappa/Lambda Free Light Chains; Lambda Free Light Chains; FLC; sFLC; Freelite  
METHODOLOGY: Immunologic  
CPT: 83883 x 2

#### **[KLCHAINU] KAPPA/LAMBDA LIGHT CHAINS UR**

SPECIMEN REQUIRED: Urine at room temperature (random or 24 hr)  
TUBE OR CONTAINER: Urine Red Clear tube or "P" container  
SPECIAL HANDLING: Stable at room temperature for 7 days or longer if frozen at -20 C or lower  
SPECIMEN VOLUME: 1 tube (1.5 ml)  
MINIMUM VOLUME: 1 tube (1 mL)  
TEST INCLUDES: Quantitative kappa chains, lambda chains and kappa/lambda ratio  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 days  
METHODOLOGY: Nephelometry  
CPT: 83883 x 2

#### **[KLISH] KAPPA/LAMBDA IN SITU HYBRIDIZ**

SPECIMEN REQUIRED: Formalin-fixed, paraffin-embedded (FFPE) tissue biopsy at room temperature or Unstained slides and H&E  
TUBE OR CONTAINER: Paraffin block or fresh tissue in a sterile container in 10% neutral-buffered formalin  
SPECIMEN VOLUME: 10 slides & 1 H&E

TEST INCLUDES: Kappa & Lambda by in situ hybridization,  
Kappa/Lambda ratio  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 days  
OTHER NAMES: Kappa & Lambda mRNA probes  
METHODOLOGY: In situ hybridization  
CPT: 88365 x 2

**[KMT2A] Cornelia de Lange Syndrome**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 weeks  
OTHER NAMES: Cornelia de Lange syndrome (CdLS) via KMT2A gene  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81479

**[KOH] Fungal Prep (KOH)**

SPECIMEN REQUIRED: Scrapings of skin, nail, or other vaginal secretions  
COLLECTION:  
NAILS: Cleanse area with 70% alcohol; With a sterile blade, take deep scrapings of the nail  
SKIN: Cleanse area with 70% alcohol; With a sterile blade, scrape the skin at the border of the active lesion and normal tissue  
VAGINAL SECRETIONS: Submit specimen in a tightly sealed sterile container  
SPECIAL HANDLING: Indicate specimen source  
Submit specimen in sterile tightly capped container or between two microscope slides (secure together with adhesive tape)  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 hours  
REFERENCE RANGE: Negative for fungal elements  
METHODOLOGY: Smear with direct examination  
CLINICAL USE: Determine presence of fungi in skin, nails, hair, and other sources containing cellular material  
CPT: 87220

**[KRASSEQ] K-ras GENE (NOONAN/CFC/COSTELL)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-6 weeks

OTHER NAMES: Noonan, CFC and Costello Syndromes via KRAS Gene sequencing  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81405

**[KRASTX] K-ras GENE MUTATION DETECTION**

SPECIMEN REQUIRED: Unstained slides from paraffin block or formalin-fixed paraffin embedded tissue block at room temperature  
TUBE OR CONTAINER: Slides or blocks  
SPECIMEN VOLUME: 5 unstained slides and 1 H&E stained side at 10 uM or tissue block  
TEST AVAILABILITY: Daily  
METHODOLOGY: Amplification refractory mutation system (ARMS) and real-time polymerase chain reaction using Scorpions technology  
CLINICAL USE: May indicate prognosis and drug response for many new cancer therapies  
CPT: 81275; 81403

**[KSTL] Stool Potassium**

SPECIMEN REQUIRED: Liquid stool  
TUBE OR CONTAINER: Plastic container  
SPECIAL HANDLING: Stool must be in liquid form for analysis  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: No established range  
METHODOLOGY: Ion-Selective Electrode  
CPT: 84133

**[KU] Urine Random Potassium**

SPECIMEN REQUIRED: Refrigerated random urine  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIMEN VOLUME: 1 tube (2 mL)  
MINIMUM VOLUME: 1 tube (1 mL)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Ion-Selective Electrode  
CPT: 84133

**[LACCSF] CSF Lactic Acid**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours

REFERENCE RANGE: 1.0 - 3.1 mmol/L  
METHODOLOGY: Colorimetric endpoint  
CPT: 83605

#### **[LACD] Plasma D-Lactate**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Gray (Sodium fluoride)  
SPECIAL HANDLING: Centrifuge and separate immediately  
SPECIMEN VOLUME: 2.5 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: 0.0-0.25 mmol/L  
METHODOLOGY: Endpoint Enzyme Assay  
CLINICAL USE: D-lactate is a product of bacterial overgrowth in the gastrointestinal tract. It should not be confused with L-lactate, which accumulates in some metabolic acidosis  
CPT: 83605

#### **[LACOS] Lacosamide Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Lavender(EDTA) or Dark Green (heparin)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 0.5 ml  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-12 days  
OTHER NAMES: Vimpat  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)  
CLINICAL USE: Monitor therapeutic values  
CPT: 83789

#### **[LACT] Lactic Acid Level**

SPECIMEN REQUIRED: Gray top on ice (venous).  
TUBE OR CONTAINER: Gray (sodium fluoride)  
SPECIAL HANDLING: Do not use tourniquet when drawing due to build-up of high potassium and lactic acid from the arm muscle  
Place specimen on ice; if testing not performed immediately; Centrifuge, separate and FREEZE plasma  
Specimen WILL be rejected if not on ice  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0.5 - 1.9 mmol/L  
OTHER NAMES: Lactate

METHODOLOGY: Colorimetric endpoint  
CLINICAL USE: Evaluate metabolic acidosis, regional or diffuse tissue hypoperfusion, hypoxia, shock, congestive heart failure, dehydration, and operative complications  
CPT: 83605

**[LACTO] Human Placental Lactogen**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Collect specimen Monday-Thursday only  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday-Thursday  
OTHER NAMES: HPL; Human chorionic somatomammotropin  
CLINICAL USE: Monitoring placental function  
CPT: 83632

**[LACTWB] Lactate (Blood Gas)**

**[LAL] LYSOSOMAL ACID LIPASE (LAL-D)**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA) or Filter paper card  
SPECIAL HANDLING: Must be received at performing lab within 72 hours of collection  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Monday-Thursday  
REFERENCE RANGE: Unaffected: 0.027-0.152 nmol/punch/hr  
METHODOLOGY: Determination of enzyme activity against 4-methylumbelliferyl-palmitate  
CLINICAL USE: Diagnose Wolman disease and cholesteryl ester storage disease (CESD) caused by LAL deficiency.  
CPT: 82657

**[LAM] Lamotrigine (Lamictal) Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Dark Green (heparin) or Lavender(EDTA)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 ml  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: Therapeutic: trough: 2.0 - 20.0 ug/mL  
OTHER NAMES: Lamotrigine  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)  
CLINICAL USE: Monitor therapeutic values  
CPT: 80175

**[LAP] Leukocyte Alkaline Phosphatase**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark Green (Heparin)  
SPECIMEN VOLUME: 4 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Monday-Friday (must arrive in laboratory before 1:30 pm on Friday)  
TURNAROUND TIME: 1-3 days  
REFERENCE RANGE: 25-130  
OTHER NAMES: LAP score  
METHODOLOGY: Enzyme reaction with leukocyte alkaline phosphatase liberating naphthol or a substituted naphthol compound which then couples with fast blue RR or other chromogen to form an insoluble precipitate  
CLINICAL USE: Aids in the differential diagnosis of chronic myelocytic leukemia (CML) vs. leukemoid reaction; aids in the evaluation of polycythemia vera, myelofibrosis with myeloid metaplasia, and paroxysmal nocturnal hemoglobinuria  
CPT: 85540

**[LASA] Lipid Associated Sialic Acid**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: 0-20 mg/dL  
OTHER NAMES: LASA; Lipid-Bound Sialic Acid  
METHODOLOGY: Spectrophotometry  
CLINICAL USE: Management of a variety of malignancies; generally used in conjunction with other tumor markers  
CPT: 84275

**[LC1] Liver Cytosol Antibody**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
REFERENCE RANGE: < 15  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Aid in the diagnosis of autoimmune hepatitis, type 2 (AIH-2)  
CPT: 86376

**[LCHAD] LONG CHAIN 3-OH ACYL-CoA DEHYD**

SPECIMEN REQUIRED: Whole blood at room temperature



TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks (full gene sequencing)  
2-4 days (common mutation)  
OTHER NAMES: Long-Chain 3-Hydroxyacyl-CoA Dehydrogenase (LCHAD)  
Deficiency via HADHA gene  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81403 (Common mutation); 81406 (full gene sequencing)

**[LCORGDIS] Urine Organic Acids Disclaimer**

**[LDH] Lactate Dehydrogenase**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin), Gold or Red  
SPECIAL HANDLING: Stable 7 days at room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0 - 30 days: 61-734 U/L  
1 month-14 years: 61-490 U/L  
15 Years +: 111-233 U/L  
METHODOLOGY: UV  
CLINICAL USE: Aid in the diagnosis and treatment of liver diseases such as acute viral hepatitis, cirrhosis and metastatic carcinoma of the liver, cardiac diseases such as myocardial infarction, and tumors of the lung or kidneys  
CPT: 83615

**[LDHAS] Body Fluid Lactate Dehydrogenase**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: UV  
CLINICAL USE: A fluid LD activity nearly equal to the plasma activity is usually associated with inflammatory processes  
CPT: 83615

**[LDHCSF] CSF Lactate Dehydrogenase**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 7-30 U/L  
METHODOLOGY: UV  
CLINICAL USE: Lactate dehydrogenase (LD) is a normal component of CSF. Increased amounts may occur in association with ischemic necrosis, meningitis, leukemia, metastatic cancer of the CNS, and lymphoma  
CPT: 83615

#### **[LDHFL] Body Fluid Lactate Dehydrogenase**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Transudate 200 U/L  
METHODOLOGY: UV  
CPT: 83615

#### **[LDHIV] HIV (1&2) Ag and Ab (Rapid)**

SPECIMEN REQUIRED: EDTA whole blood/plasma  
TUBE OR CONTAINER: Lavender(EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 hour  
REFERENCE RANGE: Nonreactive  
METHODOLOGY: Rapid Immunoassay  
REFLEX TEST INFORMATION: Confirmatory HIV-1 and HIV-2 antibody differentiation assay testing will be added at an additional charge for reactive results  
CLINICAL USE: Detect the presence of HIV-1/2 antibodies or HIV-1 p24 antigen.  
CPT: 87389

#### **[LDHPC] Pericardial Fluid LDH**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic rate  
CLINICAL USE: A fluid LD activity nearly equal to the plasma

activity is usually associated with inflammatory processes  
CPT: 83615

**[LDHPL] Pleural Fluid LDH**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic rate  
CLINICAL USE: A fluid LD activity nearly equal to the plasma activity is usually associated with inflammatory processes  
CPT: 83615

**[LDHPT] Peritoneal Fluid LDH**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic rate  
CLINICAL USE: A fluid LD activity nearly equal to the plasma activity is usually associated with inflammatory processes  
CPT: 83615

**[LDHSY] Synovial Fluid LDH**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic rate  
CLINICAL USE: A fluid LD activity nearly equal to the plasma activity is usually associated with inflammatory processes  
CPT: 83615

**[LDLD] LDL Cholesterol Direct**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (Li Heparin) or Gold  
SPECIAL HANDLING: Specimen Stability: 7 days refrigerated

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: 2-17 years: 18 years +: OTHER NAMES: Low-Density Lipoprotein Cholesterol (Direct)  
METHODOLOGY: Homogeneous enzymatic colorimetric  
CLINICAL USE: Evaluate risk of developing coronary artery disease  
CPT: 83721

#### **[LDS] Loews-Dietz Syndrome**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 6 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Gene sequencing of SMAD3, TGFB2, TGFBR1 & TGFBR2  
TEST AVAILABILITY: Daily  
TURNAROUND TIME:  
METHODOLOGY: Next-generation Sequencing (NGS)  
CPT: 81479

#### **[LEAD] Lead**

SPECIMEN REQUIRED: Whole blood at room temperature (submit original unopened tube)  
TUBE OR CONTAINER: Royal Blue (EDTA), Tan (EDTA) or Lavender (EDTA) microtainer for pediatrics  
Royal Blue (EDTA) adults  
Lavender (EDTA) will no longer be accepted after 10/1/13 for for a specimen collected by venipuncture  
(Lavender only accepted for capillary collection, but not recommended)

SPECIAL HANDLING: Please contact laboratory for correct tube  
SPECIMEN VOLUME: Adult 3 mL  
Pediatric 1 mL  
MINIMUM VOLUME: Adult 1 mL  
Pediatric 500 uL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-5 days  
REFERENCE RANGE: 0-15 years: 0-4 ug/dL  
OTHER NAMES: Pb, Blood  
METHODOLOGY: Atomic absorption spectrometry (AAS)  
CLINICAL USE: Monitor environmental lead exposure  
CPT: 83655

#### **[LEADU] Urine Lead**

SPECIMEN REQUIRED: Urine at room temperature (random)  
TUBE OR CONTAINER: Plastic urine container

SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Environmental exposure: METHODOLOGY: Atomic absorption spectrometry (AAS); inductively coupled plasma mass spectrometry (ICP-MS)  
CLINICAL USE: Monitor exposure to lead or lead chelation therapy  
CPT: 83655

**[LEBERS] LEBERS HEREDITARY OPTIC NEURO**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 3 ml  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 12 weeks  
METHODOLOGY: Next generation sequencing; Duplication/deletion analysis  
CPT: 81228; 81406

**[LEF] Leflunomide Level**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube; Separate from cells within 45 minutes of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
OTHER NAMES: Arava; Teriflunomide; A77/1726  
METHODOLOGY: Liquid Chromatography Tandem Mass Spectrometry (LCMSMS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 82542

**[LEGDFA] Legionella Direct FA (LAB)**

SPECIMEN REQUIRED: Refrigerated lung biopsy, lung exudate, pleural fluid, transtracheal aspirate, sputum, bronchial washing  
TUBE OR CONTAINER: Sterile leakproof container  
SPECIAL HANDLING: Specimen must be received in the laboratory before 1:30 p.m., Monday - Friday only  
SPECIMEN VOLUME: 1 mL lung exudate or 1 cc lung biopsy  
TEST AVAILABILITY: Monday-Thursday  
REFERENCE RANGE: No Legionella pneumophila detected  
METHODOLOGY: Direct fluorescent antibody (DFA)  
CLINICAL USE: Determine the presence of Legionella pneumophila organisms in direct FA smear of specimen, providing rapid diagnosis

CPT: 87278

**[LEGGCSF] Legionella pneumophila IgG Grp 1-6**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: CSF tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: < 1:128 Negative - No significant level of Legionella pneumophila Type 1-6 IgG antibody detected  
1:128 Equivocal - Questionable presence of Legionella pneumophila Type 1-6 IgG antibody detected. Repeat testing in 10-14 days may be helpful.  
1:256 or greater Positive - Presence of Legionella pneumophila Type 1-6 IgG antibody detected, suggestive of current or past infection.  
METHODOLOGY: Indirect Fluorescent Antibody (IFA)  
CLINICAL USE: Antibody detection for recent infection  
CPT: 86713

**[LEGMCSF] Legionella pneumophila IgM Grp 1-6**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: CSF tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: < 1:16  
METHODOLOGY: Indirect Fluorescent Antibody (IFA)  
CLINICAL USE: Antibody detection for recent or current infection  
CPT: 86713

**[LEGP] Legionella pneumophila S1-6 Abs**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.4 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CPT: 86713

**[LEGPNEAG] Legionella pneumophila AG-UR**

SPECIMEN REQUIRED: Refrigerated urine  
TUBE OR CONTAINER: Plastic, screw-capped container  
SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6 hours  
REFERENCE RANGE: Legionella pneumophila serogroup 1 antigen  
NOT DETECTED.  
METHODOLOGY: Immunochromatographic assay  
CLINICAL USE: Confirm the diagnosis of Legionella pneumophila  
infection  
CPT: 87899

#### **[LEISH] Leishmaniasis Antibody**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-10 days  
REFERENCE RANGE: 0 units: Negative - no significant level of  
Leishmania antibody, IgG detected  
METHODOLOGY: Semi-Quantitative Immunoassay  
CPT: 86717

#### **[LEP] Leptin**

SPECIMEN REQUIRED: Frozen serum (preferred) or plasma  
TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)  
SPECIAL HANDLING: Fasting specimen recommended  
Separate and freeze within 1 hour  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-7 days  
METHODOLOGY: Double antibody RIA  
CPT: 83519

#### **[LEPM] Leptospira IgM Antibody**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold or Green (heparin)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-7 days  
REFERENCE RANGE:  
Negative: No significant level of antibody detected  
Equivocal: Questionable presence detected. Repeat testing  
in 10-14 days may be helpful.  
Positive: Presence of IgM antibody to Leptospira detected,  
suggestive of a current or recent infection.  
OTHER NAMES: Canicola Fever; Ft Bragg Fever; Swamp Fever;  
Weil Disease  
METHODOLOGY: ImmunoDot

CLINICAL USE: Detection of specific antibody of the IgM class to  
Leptospira genus specific antigen  
CPT: 86720

**[LEPR] LEPR-RELATED OBESITY**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks  
OTHER NAMES: Monogenic Non-Syndromic Obesity Autosomal  
Recessive; LEPR- Related Obesity Monogenic  
Nonsyndromic; Leptin Receptor Deficiency; Morbid  
Obesity with Hypogonadism  
METHODOLOGY: Bi-directional sequencing  
CPT: 81479

**[LEPSEQ] LEP-RELATED OBESITY**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks  
OTHER NAMES: Obesity Severe due to Leptin Deficiency; Monogenic  
Non-Syndromic Obesity Autosomal Recessive; LEP-  
Related Obesity Monogenic Nonsyndromic  
METHODOLOGY: Bi-directional sequencing  
CPT: 81479

**[LEPTOST] Leptospira Stain**

**[LESY] Synovial Fluid LE Cells**

**[LEUC] Leucine Level**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Green (heparin)  
SPECIAL HANDLING: Centrifuge and freeze plasma immediately  
SPECIMEN VOLUME: 4 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-8 days  
REFERENCE RANGE: < 1 month: 3.7 - 21 mol/dL  
1 month - 16 yr: 4.3 - 20 mol/dL  
>16 years: 6.1 - 20 mol/dL  
METHODOLOGY: High-pressure liquid chromatography (HPLC)  
CPT: 82131

**[LEUFEC] Leukotest (Fecal)**



**SPECIMEN REQUIRED:** Refrigerated raw stool (must be loose/liquid)  
**TUBE OR CONTAINER:** Tightly sealed container  
**SPECIAL HANDLING:** No preservative is required  
**Note:** For patients 16 years and older  
**ORDERING MODULE:** MIC  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 1 day  
**REFERENCE RANGE:** Negative  
**METHODOLOGY:** Latex agglutination  
**CLINICAL USE:** Aid in differential diagnosis of diarrheal disease  
**CPT:** 83630

**[LEVAMU] Urine Levamisole**

**SPECIMEN REQUIRED:** Refrigerated or frozen urine (24-hour)  
**TUBE OR CONTAINER:** Clear/Red Urine tube (no additive)  
**SPECIMEN VOLUME:** 1 mL  
**MINIMUM VOLUME:** 0.5 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 3-10 days  
**METHODOLOGY:** Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)  
**CPT:** 80375

**[LEVO] Carbidopal Levodopa (Sinemet) Level**

**SPECIMEN REQUIRED:** Frozen serum or plasma  
**TUBE OR CONTAINER:** Red or Lavender (EDTA)  
**SPECIAL HANDLING:** Do NOT collect specimen in gel tube  
**SPECIMEN VOLUME:** 2 mL  
**MINIMUM VOLUME:** 0.7 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 3-8 days  
**OTHER NAMES:** Sinemet; Atamet; Parcopa  
**METHODOLOGY:** High Performance Liquid Chromatography (HPLC)  
**CLINICAL USE:** Therapeutic drug monitoring  
**CPT:** 80299

**[LFS] Li-FRAUMENI SYNDROME(P53 GENE)**

**SPECIMEN REQUIRED:** Whole blood at room temperature  
**TUBE OR CONTAINER:** Lavender (EDTA)  
**SPECIMEN VOLUME:** 14 mL  
**MINIMUM VOLUME:** 6 mL  
**TEST INCLUDES:** DNA testing for p53 gene mutations  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 5-6 weeks  
**REFERENCE RANGE:** No mutation detected  
**METHODOLOGY:** Direct sequencing of amplification products  
**CLINICAL USE:** Confirmation of clinical diagnosis  
**CPT:** 81405

**[LGI1AB] LEUCINE-RICH GLIOMA INACTIV**

**SPECIMEN REQUIRED:** Refrigerated or frozen serum  
**TUBE OR CONTAINER:** Red or Gold  
**SPECIAL HANDLING:** Centrifuge and separate within 2 hours of collection  
**SPECIMEN VOLUME:** 1 mL  
**MINIMUM VOLUME:** 0.2 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 2-9 days  
**REFERENCE RANGE:** < 1:10 Negative  
**METHODOLOGY:** Semi-Quantitative Indirect Fluorescent Antibody  
**REFLEX TEST INFORMATION:** If LGI1 antibody IgG is positive, LGI1 antibody IgG titer will be added at an additional charge  
**CLINICAL USE:** Aids in diagnosis of Leucine-rich Glioma Inactivated 1 Protein (LGI1) antibody disorders associated with limbic encephalitis, hyponatremia, myoclonic movements. Disorders are rarely associated with tumors.  
**CPT:** 86255

### **[LH] Luteinizing Hormone**

**SPECIMEN REQUIRED:** Refrigerated serum or plasma  
**TUBE OR CONTAINER:** Light Green (heparin) or Gold/Red  
**SPECIAL HANDLING:** Stable 5 days room temp  
**SPECIMEN VOLUME:** 1 mL  
**MINIMUM VOLUME:** 0.5 mL  
**PEDIATRIC TEST INFO:** Order PEDLH for pediatric testing

**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 1 day  
**REFERENCE RANGE:** Normally Menstruating Females  
Follicular Phase 3.6 - 19.4  
Mid-Cycle Peak 16.3 - 77.0  
Luteal Phase 1.8 - 14.8  
Postmenopausal Females 2.6 - 8.0  
Males 2.6 - 8.0  
**METHODOLOGY:** ECLIA  
**CLINICAL USE:** Aid in evaluating the normalcy of hypothalamic-pituitary-gonadal axis  
**CPT:** 83002

### **[LHRH] Luteinizing Hormone-Releas Hormone**

**SPECIMEN REQUIRED:** Frozen plasma with 0.25 ml Trasylol added  
**TUBE OR CONTAINER:** Lavender (EDTA)  
**SPECIAL HANDLING:** Separate as soon as possible after collection  
Freeze immediately after separation  
**SPECIMEN VOLUME:** 1 mL  
**MINIMUM VOLUME:** 0.5 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 3-17 days

OTHER NAMES: Gonadotropin Releasing Hormone (GNRH)  
METHODOLOGY: HPLC, Tandem Mass Spectrometry  
CPT: 83727

#### **[LIP] Lipase**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 9 - 64 U/L  
METHODOLOGY: Enzymatic colorimetric  
CLINICAL USE: Diagnosis and treatment of pancreatic disorders  
CPT: 83690

#### **[LIPFL] Body Fluid Lipase**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic colorimetric  
CPT: 83690

#### **[LIPID] Lipid Profile**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: For most valid results, specimen should be collected following an overnight (or 12-14 hour) fast  
NOTE: Ratio cannot be calculated on patients with triglyceride values >400  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST INCLUDES: Cholesterol, serum; Triglycerides, serum; HDL; LDL, calculated; HDL/LDL ratio.  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: See individual tests  
METHODOLOGY: See individual tests  
CLINICAL USE: Evaluate hyperlipidemia as an index to CAD  
CPT: 80061

#### **[LIPOA] Lipoprotein (a)**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold, or Lavender (EDTA)

SPECIAL HANDLING: Separate from cells within 2 hours  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: 75 nmol/L may indicate independent risk factor for CHD  
METHODOLOGY: Immunoturbidimetric  
CPT: 83695

#### **[LISTAB] Listeria Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: < 1:8  
METHODOLOGY: Complement Fixation  
CPT: 86723

#### **[LISTCSF] CSF Listeria Antibody**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: Sterile capped tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: < 1:1  
METHODOLOGY: Complement Fixation (CF)  
CLINICAL USE: Detection of intrathecally-produced Listeria antibodies in CSF  
CPT: 86723

#### **[LITH] Lithium Level**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIAL HANDLING: Plasma is NOT an acceptable specimen  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Therapeutic: 0.5-1.5 mmol/L  
Potentially toxic: >1.5  
OTHER NAMES: Lithobid; Eskalith  
CLINICAL USE: Monitor therapeutic drug levels; evaluate coma  
CPT: 80178

#### **[LKMA] Liver/Kidney Microsomal Titer**

SPECIMEN REQUIRED: Frozen serum

TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 10 days  
REFERENCE RANGE: Negative: 0.0-20.0  
Equivocal: 20.1-24.9  
Positive: >24.9  
OTHER NAMES: LKM; LKM-1 Antibodies; Liver-Kidney Microsomal Ab  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Aid in the diagnosis of autoimmune hepatitis, type  
2 (AIH-2)  
CPT: 86376

#### **[LMBR1] ZRS VIA LMBR1 GENE**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Zone of Polarizing Activity Regulatory Sequence  
(ZRS) in the LMBR1 Gene in Triphalangeal Thumb  
Polydactyly  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81479

#### **[LMNADNA] LMNA GENE MUTATION**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
OTHER NAMES: Emery-Dreifuss muscular dystrophy, dominant  
  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 83890; 83891; 83894; 83898 x 13; 83904 x 13; 83912

#### **[LOP] HIV Lopinavir Resistance**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
Must be separated within 45 minutes of  
collection  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
OTHER NAMES: Kaletra  
METHODOLOGY: High-Pressure Liquid chromatography (HPLC)

CLINICAL USE: Monitor lopinavir/ritonavir (Kaletra) therapy  
CPT: 80299

**[LPA3P] Max Prolif Soluble aCD28 as % CD3**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark Green (heparin)  
SPECIAL HANDLING: Specimen must be received in laboratory by 1:30 pm, Monday-Thursday only  
Specimen must arrive at performing lab within 48 hours of collection  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Testing with 2 stimulants will always be performed. When adequate specimen is available, a third stimulant will be performed  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 6-9 days  
METHODOLOGY: Flow Cytometry  
CLINICAL USE: Evaluating patients suspected of having impairment in cellular immunity  
CPT: 86353 x 2

**[LPPLA2] LIPOPROT-ASSOC PHOSPHOLIP ACT**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: Low risk: < 75 nmol/min/mL  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)  
CLINICAL USE: May aid in CVD risk stratification in specific populations.  
CPT: 83698

**[LSD] Lysergic Acid Diethylamide Level**

Specimen required: Red-top 7 mL (3 mL Min) FRZ  
Sample must be protected by light

**[LTE4UR] Urine Leukotriene E4**

SPECIMEN REQUIRED: Refrigerated or frozen urine (24-hour collection); Random accepted  
TUBE OR CONTAINER: Plastic urine container  
SPECIAL HANDLING: Collect 24-hour urine no preservative (preferred); Specimen received in preservative will be accepted  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-9 days  
REFERENCE RANGE: > 18 years of age: METHODOLOGY: Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)  
CLINICAL USE: Aid in evaluation of patients suspected of having systemic mastocytosis  
CPT: 83789

**[LYMEC6] Borrelia burgdorferi C6 Pep (EIA)**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: METHODOLOGY: Enzyme linked immunosorbent assay (ELISA)  
REFLEX TEST INFORMATION: Reflex to Western blot on positive results at an additional charge  
CLINICAL USE: Aid in the diagnosis of acute and later stages of infections by Borrelia burgdorferi  
CPT: 86618

**[LYMEPCR] Lyme Disease DNA (PCR)**

SPECIMEN REQUIRED: Room temperature whole blood; Frozen CSF or synovial fluid  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)-blood or sterile tube (CSF)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-7 days  
METHODOLOGY: Polymerase chain reaction (PCR) amplification and DNA probe detection  
CLINICAL USE: Detect Borrelia burgdorferi (Lyme disease)  
CPT: 87476

**[LYMPH7] LYMPHOCYTE SUBSET 7 (IMMUNODEF)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark green (Heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Specimen must be analyzed within 48 hours (heparin) or 72 hours (EDTA) of collection  
Specimen must be received in laboratory by 1330 on day collected  
SPECIMEN VOLUME: 4 mL  
MINIMUM VOLUME: 0.5 mL (pediatric)  
TEST INCLUDES: T-cell subsets (include naive and memory T-cells), B-cells, and NK-cells are evaluated  
TEST AVAILABILITY: Monday-Friday (must arrive in the lab before 1:30 pm)

TURNAROUND TIME: 2-4 days  
METHODOLOGY: Flow Cytometry  
CLINICAL USE: Aid in investigation of primary immunodeficiency disorders  
CPT: 86355; 86356 x 5; 86357; 86359; 86360

**[LYMPHAG] Lymphocyte Blastogenesis Antigen**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark Green (Heparin)  
SPECIAL HANDLING: Specimen must arrive in Laboratory by 1:30 p.m., Monday-Thursday only  
Must arrive at performing lab w/in 24 hours of collection  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 7-14 days  
METHODOLOGY: Flow Cytometry  
CPT: 86353

**[LYMPHMIT] Lymph Blastogenesis Mitogens**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark Green (Heparin)  
SPECIAL HANDLING: Specimen must arrive in Laboratory by 1:30 p.m., Monday-Thursday only  
Must arrive at performing lab w/in 24 hours of collection  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Phytohemagglutinin, Pokeweed and Concanavalin  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 7-14 days  
METHODOLOGY: Flow Cytometry  
CPT: 86353

**[LYSENZ] Lysosomal Enzyme Screen Interpret**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark Green (heparin)  
SPECIAL HANDLING: A clinical history must accompany the sample; Specimen must arrive in laboratory by 1:30 Monday-Thursday only; ship same day as collected  
SPECIMEN VOLUME: 8-10 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Monday-Thursday  
METHODOLOGY: Spectrophotometry  
CPT: 82657; 82658

**[LYSOZ] Lysozyme**

SPECIMEN REQUIRED: Frozen serum



TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 days  
REFERENCE RANGE: Male: 3.0-12.8 ug/mL  
Female: 2.5-12.9 ug/mL  
OTHER NAMES: Muramidase  
METHODOLOGY: Enzymatic  
CLINICAL USE: Differential diagnosis of leukemia  
CPT: 85549

#### **[MACROPRL] MACROPROLACTIN**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIAL HANDLING: Separate within 1 hour of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL (this volume does not allow for repeat testing)  
TEST INCLUDES: Prolactin, Monomeric Prolactin and percent Macroprolactin  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-7 days  
METHODOLOGY: Immunochemiluminometric assay (ICMA); PEG precipitation  
CPT: 84146 x 2

#### **[MAG] Magnesium Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0 - 30 Day: 1.3-2.4 mg/dL  
1 Month- 20 yrs: 1.9-2.4 mg/dL  
20 Years+: 1.8-2.8 mg/dL  
METHODOLOGY: Colorimetric endpoint  
CPT: 83735

#### **[MAGMCSF] Myelin Assoc Glycoprotein IgM Ab**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile capped tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-10 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Indirect Immunofluorescence (IFA)  
CPT: 83520 x 2

**[MAGUR] Urine Random Magnesium**

SPECIMEN REQUIRED: Room temperature random urine  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Colorimetric endpoint  
CPT: 83735

**[MALID] Malaria Speciation****[MANG] Manganese Level**

SPECIMEN REQUIRED: RB-EDTA Whole blood at room temperature in original unopened tube  
TUBE OR CONTAINER: Royal Blue (EDTA)  
Lavender (EDTA) will be temporarily accepted due to Royal Blue tube shortage, but may report with a disclaimer.

SPECIAL HANDLING: Please contact laboratory for correct tube;  
Submit original unopened tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Environmental exposure: METHODOLOGY: Inductively coupled plasma-mass spectrometry (ICP-MS)  
CLINICAL USE: Evaluate industrial exposure  
CPT: 83785

**[MARFAN] FBN1 GENE FOR MARFAN SYNDROME**

SPECIMEN REQUIRED: Whole blood on cool pack or cultured fibroblasts  
TUBE OR CONTAINER: Lavender (EDTA) or T25 flasks  
SPECIMEN VOLUME: 10 mL for adults and children over 10 years old  
3-5 mL - pediatric  
4-confluent flasks for fibroblasts  
MINIMUM VOLUME: 1 mL (newborn)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-6 weeks  
METHODOLOGY: Polymerase chain reaction (PCR)  
CPT: 81408

**[MARFNGS] MARFAN SYNDROME/TAAD**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST INCLUDES: Gene sequencing of ACTA2, COL3A1, COL5A1, COL5A2, FBN1, FBN2, MED12, MYH11, SKI, SLC2A10, SMAD3, TGFB2, TGFBR1, TGFBR2, CBS and FLNA

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4 weeks

OTHER NAMES: Marfan Syndrome and related aortopathies; Thoracic Aortic Aneurysm and Dissection (TAAD)

METHODOLOGY: Next-gen Sequencing (NGS)

CPT: 81405 x 3; 81406; 81408 x 2

#### **[MATCONT] MATERNAL CELL CONTAMINATION**

SPECIMEN REQUIRED: Whole blood or buccal swabs at room temperature

TUBE OR CONTAINER: Lavender (EDTA) or Buccal swab

SPECIMEN VOLUME: 5 mL or 4 swabs

MINIMUM VOLUME: 3 mL

TEST AVAILABILITY: Daily

METHODOLOGY: PCR analysis of multiple short tandem repeat (STR) loci

CLINICAL USE: Ensure accurate molecular prenatal diagnostic test results

CPT: 81265

#### **[MAVIUMDNA] Mycobacterium avium Complex (LAB)**

SPECIMEN REQUIRED: Fresh frozen tissue, paraffin embedded tissue, lower respiratory or sterile body fluid

TUBE OR CONTAINER: Sterile container

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-10 days

REFERENCE RANGE: Not detected

METHODOLOGY: Real-time Polymerase Chain Reaction (RT-PCR)

CPT: 87561

#### **[MAX] Hydrochlorothiazide Level**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma

TUBE OR CONTAINER: Red or Dark green (heparin)

SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube

SPECIMEN VOLUME: 3 mL

MINIMUM VOLUME: 0.6 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 7-10 days

REFERENCE RANGE: < 200 ng/mL

OTHER NAMES: Diuril; Hydrodiuril

METHODOLOGY: High Performance Liquid Chromatography with Ultraviolet Detection (HPLC-UV)

CLINICAL USE: Therapeutic drug monitoring

CPT: 80299

**[MAYOACANPCR] Acanthamoeba PCR detection**

SPECIMEN REQUIRED: cornea, eye or ocular scrapings, (5-10 mm), contact lens, or 1 mL contact lens solution

Submit tissue in a sterile container with 1 mL of sterile saline or viral transport media.

TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Monday-Saturday

TURNAROUND TIME: 3-5 days

REFERENCE RANGE: Not detected

METHODOLOGY: Polymerase Chain Reaction (PCR)

CPT: 87798

**[MAYOHPCS] H.pylori culture & sens MAYO**

SPECIMEN REQUIRED: 0.5 mL or 0.5 x 0.2 x 0.2 cm piece of tissue

TUBE OR CONTAINER: Sterile screw-top vial

SPECIAL HANDLING: Deliver to lab IMMEDIATELY; DO NOT ADD formalin or CytoLyt. Submit separate specimen for pathology

ORDERING MODULE: MIC

TEST INCLUDES: Culture and sensitivity if indicated

TEST AVAILABILITY: Monday-Friday 7:00 am to 2:00 pm

TURNAROUND TIME: 7-28 days

METHODOLOGY: Culture & MIC susceptibility testing

CPT: 87081 and 87077 (if appropriate)

**[MBC] MBC (Min Bactericidal Conc)**

**[MBLP] Mannose Binding Protein**

SPECIMEN REQUIRED: Serum at room temperature

TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 0.5 mL

MINIMUM VOLUME: 0.3 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-10 days

METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)

CPT: 83520

**[MBTID] MBTID**

**[MCCC1] 3-METHYLCROT-CoA CARBOXYLASE**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-6 weeks

OTHER NAMES: 3-Methylcrotonyl-CoA Carboxylase Deficiency  
(MCCC1) Gene Sequencing  
METHODOLOGY: Polymerase chain reaction (PCR)  
CPT: 81479

**[MCCC2] 3-METHYLCROT-CoA CARBOXYLASE**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
OTHER NAMES: 3-Methylcrotonyl-CoA Carboxylase Deficiency  
(MCCC2) Gene Sequencing  
METHODOLOGY: Polymerase chain reaction (PCR)  
CPT: 81406

**[MDA5] MDA5 Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
CPT: 84182

**[MDM] MYOTONIC MUSCULAR DYSTROPHY**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-10 days  
OTHER NAMES: DMPK gene repeat expansion analysis  
METHODOLOGY: PCR-amplification, Fragment analysis  
CLINICAL USE: The MDY1 probe from the myotonin protein kinase gene is used to identify large expansions of the CTG repeat region with Nco I or BamHI digested DNA. The PCR assay is particularly sensitive for identifying alleles between 30-80 repeats.  
CPT: 81401

**[MEASGCSF] CSF Rubeola (Measles) IgG Antibody**

SPECIMEN REQUIRED: Refrigerated or frozen CSF  
TUBE OR CONTAINER: Sterile Container  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: 0.89 AU or less: Negative  
0.90-1.10 AU: Equivocal

1.11 AU or greater: Positive

METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)

CPT: 86765

**[MEASMCSF] CSF Rubeola (Measles) IgM Antibody**

SPECIMEN REQUIRED: Refrigerated or frozen CSF

TUBE OR CONTAINER: Sterile Container

SPECIMEN VOLUME: 0.5 mL

MINIMUM VOLUME: 0.2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-7 days

REFERENCE RANGE: 0.79 AU or less: Negative

0.80-1.20 AU: Equivocal

1.21 AU or greater: Positive

METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)

CPT: 86765

**[MELAT] Melatonin Assay**

SPECIMEN REQUIRED: Frozen plasma

TUBE OR CONTAINER: Lavender (EDTA)

SPECIAL HANDLING: Specimen must be protected from light.

SPECIMEN VOLUME: 1.5 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

METHODOLOGY: Radioimmunoassay (RIA)

CPT: 83519

**[MEP] Meperidine (Demerol) Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature

TUBE OR CONTAINER: Red, Dark Green (heparin), or Lavender (EDTA)

SPECIAL HANDLING: Collect specimen immediately prior to next dose unless otherwise specified

Do NOT collect specimen in gel barrier tube

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.3 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: Therapeutic: 70-500 ng/mL

Potentially toxic: >1000 ng/mL

OTHER NAMES: Demerol

METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)

CLINICAL USE: Therapeutic drug monitoring

CPT: 80362

**[MERC] Mercury Level**

SPECIMEN REQUIRED: Whole blood at room temperature (submit original unopened tube)

TUBE OR CONTAINER: Royal Blue (EDTA)

Lavender (EDTA) will be temporarily accepted due to royal blue shortage, but result may

report with a disclaimer.

SPECIAL HANDLING: Please contact laboratory for correct tube;

If specimen is collected for industrial

monitoring purposes, sample should be taken

at the end of the last shift of the workweek

Submit specimen in original tube

SPECIMEN VOLUME: 7 mL

MINIMUM VOLUME: 0.6 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4 days

REFERENCE RANGE: Environmental exposure: 0.0-8.0 g/L

individuals consuming large quantities of

seafood may have values as high as 200.0 g/L

Occupational exposure: BEI : inorganic mercury

(sampling time is end of shift at end of work

week): 15.0 g/L

METHODOLOGY: Inductively coupled plasma-mass spectrometry  
(ICP-MS)

CLINICAL USE: Monitor exposure to mercury

CPT: 83825

#### **[MERCAP] Mercaptopurine Level**

SPECIMEN REQUIRED: Frozen serum or plasma

TUBE OR CONTAINER: Red or Dark Green (Heparin)

SPECIAL HANDLING: The use of serum separator tubes is not  
recommended

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 6-9 days

REFERENCE RANGE: < 1000 ng/mL

OTHER NAMES: Purinethol; 6-MP

METHODOLOGY: High Performance Liquid Chromatography with  
Ultraviolet Detection (HPLC-UV)

CLINICAL USE: Antineoplastic drug therapy

CPT: 80299

#### **[MERO] MEROPENEM LEVEL**

SPECIMEN REQUIRED: Frozen serum

TUBE OR CONTAINER: Red

SPECIAL HANDLING: The use of serum separator tubes is not  
recommended

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-4 days

METHODOLOGY: Quantitative Bioassay

CLINICAL USE: Therapeutic drug monitoring

CPT: 80299

**[MET] Metronidazole Level**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Dark green (heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-9 days  
METHODOLOGY: High Performance Liquid Chromatography (HPLC)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[METFORM] Metformin (Glucophage) Level**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Red or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-8 days  
METHODOLOGY: High Performance Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[METH] Methadone Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Dark Green (heparin), or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Therapeutic: 100-400 ng/mL  
Potentially toxic: >2000 ng/mL  
OTHER NAMES: Dolophine  
METHODOLOGY: Liquid chromatography mass spectrometry (LC-MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80358

**[METHALB] Methemalbumin**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red or Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-10 days  
METHODOLOGY: Spectrophotometry (SP)  
CPT: 83857

**[METHAMPH] METHAMPHETAMINE & METABOLITE**



**SPECIMEN REQUIRED:** Refrigerated or frozen whole blood  
**TUBE OR CONTAINER:** Gray (sodium fluoride)  
**SPECIMEN VOLUME:** 5 mL  
**MINIMUM VOLUME:** 2 mL  
**TEST INCLUDES:** Methamphetamine and Amphetamine  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 3-5 days  
**REFERENCE RANGE:** Methamphetamine: 10 - 100 ng/ml  
Amphetamine: 10 - 100 ng/ml  
**OTHER NAMES:** D-desoxyephedrine; Desoxyn; Methedrine  
**METHODOLOGY:** Gas Chromatography/Mass Spectrometry (GC/MS)  
**CPT:** 80324

#### **[METHBCO] Methemoglobin**

**SPECIMEN REQUIRED:** Whole blood on ice  
**TUBE OR CONTAINER:** Lt/Dk Green (heparin) or Heparinized syringe  
**SPECIAL HANDLING:** Keep specimen on ice and transport to lab immediately; do NOT open  
Test should be performed within 2 hours  
**REASON FOR REJECTION:** Specimen at room temp >20 minutes or on ice longer than 2 hours  
**SPECIMEN VOLUME:** 5 mL  
**MINIMUM VOLUME:** 1 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 1 hour  
**REFERENCE RANGE:** 0.0-1.0%  
**METHODOLOGY:** Spectrophotometry  
**CLINICAL USE:** Evaluate cyanosis  
**CPT:** 83050

#### **[METHEMRED] Methemoglobin Reductase**

**SPECIMEN REQUIRED:** Refrigerated whole blood  
**TUBE OR CONTAINER:** Preferred ACD solution-B (yellow)  
Lavender (EDTA) is acceptable.  
**SPECIMEN VOLUME:** 6 mL  
**MINIMUM VOLUME:** 1.0 mL (pediatric)  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 2-4 days  
**REFERENCE RANGE:** < 1 year: No reference values established  
>= 1 year: 6.6-13.3 U/g Hb  
**OTHER NAMES:** Cytochrome B reductase; Diaphorase;  
Ferrihemoglobin Reductase  
**METHODOLOGY:** Kinetic Spectrophotometry (KS)  
**CPT:** 82657

#### **[METHION] Methionine Level**

**SPECIMEN REQUIRED:** Frozen plasma  
**TUBE OR CONTAINER:** Light Green (heparin)  
**SPECIAL HANDLING:** Separate and freeze plasma within 1 hour of collection

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-8 days  
METHODOLOGY: Liquid Chromatography/Tandem mass spectrometry  
LC/MS-MS)  
CPT: 82131

#### **[METHM] Methylmalonic Acid**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold, or Light Green (heparin)  
SPECIAL HANDLING: Separate within 1 hour of collection  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-7 days  
REFERENCE RANGE: 73-376 nmol/L  
METHODOLOGY: Gas chromatography/mass spectrometry (GC/MS)  
CLINICAL USE: Diagnose megaloblastic anemia  
CPT: 83921

#### **[METHU] Urine Methadone Screen**

SPECIMEN REQUIRED: Urine at room temperature  
TUBE OR CONTAINER: Urine cup  
SPECIMEN VOLUME: 30 mL  
MINIMUM VOLUME: 10 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Negative  
OTHER NAMES: Dolophine  
METHODOLOGY: Immunoassay  
REFLEX TEST INFORMATION: If detected, confirmation will be added at an additional charge  
CLINICAL USE: Evaluate toxicity and detection as drug of abuse  
CPT: 80301

#### **[METHX] Methotrexate Level**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red-no gel  
SPECIAL HANDLING: Protect specimen from light and send to lab  
STAT  
Stable 14 days 2-8 degrees, separated from cells  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
OTHER NAMES: Mexate; MTX, Blood; Rheumatrex; Trexall  
METHODOLOGY: Homogeneous Immunoassay  
CLINICAL USE: Monitor therapeutic levels and evaluate potential toxicity  
CPT: 80299

**[METPHE] Methylphenidate (Ritalin) Level**

SPECIMEN REQUIRED: Frozen plasma or serum  
TUBE OR CONTAINER: Red, Dark green (heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Collect as a peak level 1-2 hours after dosing  
Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1.1 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Therapeutic: 5.0-20.0 ng/mL  
Potentially toxic: >40.0 ng/mL  
OTHER NAMES: Ritalin  
METHODOLOGY: Gas chromatography/nitrogen-phosphorus detector (GC-NPD)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[METPL] METANEPHRINE PLASMA**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: EDTA (lavender) PUT FROZEN PLASMA ON ICE!  
SPECIAL HANDLING: Patient should be fasting overnight (water and non-caffeinated soft drinks are permissible)  
The patient should be in a supine position for at least 15 minutes before and during sample collection  
It is preferable, but not essential, to draw the sample without a tourniquet  
Specimen must be sent to LAB on ICE.  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: Metanephrine; normetanephrine  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Normetanephrine: 0-145 pg/mL  
Metanephrine: 0-62 pg/mL  
OTHER NAMES: Metanephrine; Normetanephrine; Plasma Metanephrines  
METHODOLOGY: High-pressure liquid chromatography (HPLC)  
CLINICAL USE: Diagnose pheochromocytoma, a catecholamine-secreting tumor of the adrenal medulla  
CPT: 83835

**[MEX] Mexiletine Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Dark green (heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1.1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 48 hours

REFERENCE RANGE: Therapeutic: 0.75-2.0 ug/mL  
Potentially toxic: >2.0 ug/mL  
OTHER NAMES: Mexitil  
METHODOLOGY: High Pressure Liquid Chromatography (HPLC)  
CLINICAL USE: Therapeutic monitoring and toxicity assessment  
CPT: 80299

#### **[MGMT] MGMT GENE METHYLATION ASSAY**

SPECIMEN REQUIRED: Formalin-fixed, paraffin-embedded tissue block or 4 unstained slides at room temperature  
TUBE OR CONTAINER: Tissue block or slides  
SPECIAL HANDLING: Protect paraffin block from excessive. Ship in cooled container during summer months  
SPECIMEN VOLUME: Four unstained slides at 5 uM or FFPE tissue block  
MINIMUM VOLUME: Two unstained slides at 5 uM  
TEST AVAILABILITY: Daily  
METHODOLOGY: Quantitative methylation-specific polymerase chain reaction (PCR)  
CPT: 81287

#### **[MGRBC] Red Blood Cell Magnesium**

SPECIMEN REQUIRED: Red blood cells at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Dark Green (heparin)  
SPECIAL HANDLING: Centrifuge tube within 45 minutes of collection; discard plasma; submit only the RBC's in original tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: 4.2 - 6.8 mg/dL  
METHODOLOGY: Atomic absorption spectrometry (AAS); inductively coupled plasma-mass spectrometry (ICP-MS)  
CLINICAL USE: Evaluate magnesium deficiency  
CPT: 83735

#### **[MHATP] Treponema pallidum Antibody (MHA)**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)  
SPECIMEN VOLUME: 1 ml  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Negative: < 0.8  
Equivocal: 0.8 - 1.2  
Positive: > 1.2  
METHODOLOGY: Enzyme Immunoassay (EIA)  
CLINICAL USE: Confirmatory serology test for syphilis  
CPT: 86780

[MICACIGN6F] MIC, Acinetobacter GN6F TREK

[MICADDL] MIC, ADDITIONAL DRUGS (NO CHG)

[MICAER] MIC, AEROCOCCUS SPECIES

[MICBAC] MIC, BACILLUS SPP.

[MICBCGN6F] MIC, B.cepacia GN6F TREK

[MICCORYNE] MIC, CORYNEFORM GPRS

[MICENTC] MIC, ENTEROCOCCUS

[MICGEM] MIC, GEMELLA SPECIES

[MICGN6F] MIC, GRAM NEG GN6F TREK

[MICHACEK] MIC, HACEK

[MICHPB] MIC, HAEMOPHILUS TREK

[MICLCMAC] MIC, LabCorp M. avium complex

[MICLCMMAR] MIC, LabCorp M. marinum

[MICLCMTB] MIC, LabCorp M.tuberculosis

[MICLCNOC] MIC, LabCorp Nocardia

[MICLCRG] MIC, LabCorp Rapid Grower AFB

[MICLCSG] MIC, Labcorp Slow Grower AFB

[MICLIST] MIC, LISTERIA

[MICMAYOHP] Mayo H. pylori MIC

[MICMCAT] MIC, M.CATARRHALIS

[MICMICRO] MIC, MICROCOCCUS

[MICMISC] Miscellaneous Microbiology

This order is to be used to enter test requests which do not

currently exist in Meditech. Please call the Microbiology Laboratory at 271-4006 to verify if the test needed does not have an order code.

If MISCMIC is required to enter the order, please be specific regarding the order requested, including specimen information. Use only one MISCMIC order per specimen.

**[MICMISCGNR] MIC, MISC GNR (Tube/microtit)**

**[MICMORSP] MIC, Moraxella species**

**[MICNFGN6F] MIC, Non-fermenters GN6F TREK**

**[MICNMEN] MIC, N.MENINGITIDIS**

**[MICNOCREF] MIC, Noc/M.abs NJ NTM4**

**[MICNVS] MIC, NUTRITION.VARIANT STREP**

**[MICPAGN6F] MIC, P.aeruginosa GN6F TREK**

**[MICPAST] MIC, PASTURELLA SPP.**

**[MICRAB] Thyroid Antimicrosomal Antibody**

SPECIMEN REQUIRED: Serum at room temperature

TUBE OR CONTAINER: Red, Gold, or Lt Green

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-3 Days

REFERENCE RANGE: 0-6 days: 0-117 IU/mL

7 days to 3 months: 0-47 IU/mL

4-11 months: 0-32 IU/mL

1-5 years: 0-13 IU/mL

6-10 years: 0-18 IU/mL

11-19 years: 0-26 IU/mL

>19 years: 0-34 IU/mL

OTHER NAMES: Antimicrosomal Ab ; Antithyroid Microsomal Ab;  
Thyroid Peroxidase Autoantibodies ; TPO Antibodies

METHODOLOGY: Immunochemiluminometric assay (ICMA)

CLINICAL USE: Differential diagnosis of hypothyroidism and thyroiditis

CPT: 86376

**[MICRGREF] MIC, RAPID GROWER NJ NTM6**

**[MICRHOD] MIC, RHODOCOCCUS SPECIES**

**[MICROB2U] Urine Beta-2-Microglobulin**

SPECIMEN REQUIRED: Refrigerated random urine  
TUBE OR CONTAINER: Plastic urine container  
SPECIAL HANDLING: Have patient void and discard sample, then drink a large glass of water and collect a urine sample in one hour; Adjust final pH to 6-8 with 1 mol/L NaOH  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: < 300 ug/L  
METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: Evaluate renal disease; monitor certain types of malignancies and AIDS  
CPT: 82232

**[MICROT] MIC, ROTHIA****[MICSGREF] MIC, SLOW GROWER AFB NJ NTM13****[MICSPNEU] MIC, STREP PNEUMONIAE****[MICSTA] MIC, STAPHYLOCOCCUS****[MICSTENOGN6F] MIC, S.maltophilia GN6F TREK****[MICSTR] MIC, STREP (not pneumo)****[MICVANR] MIC, INTRINSIC VAN RESIST GP****[MICYO3] MIC, YEAST TREK YO3****[MITO] Mitotane Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark Green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 days  
REFERENCE RANGE: < 100 ug/mL  
OTHER NAMES: Lysodren  
METHODOLOGY: Gas Chromatography/Flame Ionization Detection (GC/FID)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[MJAB] MJ ANTIBODY****[MLDSEQ] Mold Organism Identification (LAB)**

SPECIMEN REQUIRED: Pure culture: plate, slant or blood culture bottle (pure) at room temperature  
TUBE OR CONTAINER: Plate or slant  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
METHODOLOGY: RNA Sequencing  
CPT: 87153

**[MMA-A] METHYLMALONIC ACIDEMIA MMA-A**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81479

**[MMA-B] METHYLMALONIC ACIDEMIA MMA-B**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81479

**[MMA-CHC] MMA ACIDEMIA & HOMOCYSTINURIA**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
OTHER NAMES: Methylmalonic aciduria and homocystinuria, cblC type; MMA-CHC gene sequencing  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81404

**[MMACSF] Methylmalonic Acid**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3  
TEST AVAILABILITY: Daily



TURNAROUND TIME: 3-8 days

CPT: 83921

**[MMA-MUT] METHYLMALONIC ACIDEMIA MMA-MUT**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-6 weeks

METHODOLOGY: Polymerase Chain Reaction (PCR)

CPT: 81479

**[MNRBC] MANGANESE PLASMA & RBC**

SPECIMEN REQUIRED: Red blood cells (RBCs) AND Plasma at room temperature

TUBE OR CONTAINER: Royal Blue (EDTA)

SPECIAL HANDLING: Please contact laboratory for correct tube;

Plasma should be separated from cells within

45 minutes of collection

SPECIMEN VOLUME: 3 mL each (plasma and RBCs)

MINIMUM VOLUME: 2 mL each (plasma and RBCs)

TEST AVAILABILITY: Daily

REFERENCE RANGE: Manganese, plasma: Manganese, RBC: 11.0-23.0 ng/mL

METHODOLOGY: Inductively coupled plasma-mass spectrometry (ICP-MS)

CLINICAL USE: Evaluate manganese stores

CPT: 83785

**[MNREF] Body Fluid Mononuclear WBCs**

**[MODAFBSM] Modified AFB Smear**

**[MODY3] MODY3 DNA (TCF1)**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 3 mL

TEST INCLUDES: DNA sequencing of the HNF1A gene

TEST AVAILABILITY: Daily

TURNAROUND TIME: 5-6 weeks

OTHER NAMES: HNF1A Gene mutation; Monogenic Diabetes

Evaluation; Maturity-Onset Diabetes of the Young

METHODOLOGY: DNA sequencing

CPT: 81405

**[MOG] Myelin Assoc Glycoprotein Antibody**

SPECIMEN REQUIRED: Refrigerated or Frozen serum

TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Monday, Tuesday, Thursday  
TURNAROUND TIME: 5 days  
REFERENCE RANGE: Negative  
OTHER NAMES: MOG-IgG, MOG, Optic Neuritis Antibody, Transverse Myelitis Antibody, Vision Loss Antibody, ADEM antibody, NMO antibody  
METHODOLOGY: Flow Cytometry  
REFLEX TEST INFORMATION: When the results of this assay require further evaluation, the reflex titer test will be performed at an additional charge.  
CLINICAL USE: Diagnosis of inflammatory demyelinating diseases (IDD) with similar phenotype to neuromyelitis optica spectrum disorder (NMOSD), including optic neuritis (single or bilateral) and transverse myelitis.  
CPT: 86255

#### **[MOLY] Molybdenum Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Royal blue (EDTA)  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-7 days  
REFERENCE RANGE: < 3.0 ng/mL  
METHODOLOGY: Inductively Coupled Plasma/Mass Spectrometry (ICP/MS)  
CLINICAL USE: Exposure monitoring  
CPT: 83018

#### **[MONKEYPOXPCR] MONKEYPOX (ORTHOPOXVIRUS) PCR**

SPECIMEN REQUIRED: Dry Swab (Polyester)  
TUBE OR CONTAINER: Sterile aliquot tube or sleeve (PeopleSoft No. 33235)  
SPECIMEN VOLUME: 2 Swabs  
MINIMUM VOLUME: 2 Swabs  
TEST INCLUDES: N/A  
TEST AVAILABILITY: Varies  
TURNAROUND TIME: 2- 3 days  
REFERENCE RANGE:  
Test Result Reference Interval  
Orthopoxvirus DNA Detect Abnormal Not Detected  
Non-variola Orthopoxvirus DNA detected by real-time PCR  
Orthopoxvirus DNA Equivocal Not Detected  
Real-time PCR testing for non-variola Orthopoxvirus DNA result is equivocal.  
An equivocal result may occur in the case of an inadequate

specimen where definitive detection of orthopoxvirus DNA could not be confirmed. If a patient diagnosis has not been determined, submit an additional specimen for analysis. Orthopoxvirus DNA Inconclusive Not Detected Inconclusive for non-variola Orthopoxvirus DNA by real-time PCR. An inconclusive result may occur in the case of an inadequate specimen. If a patient diagnosis has not been determined, submit an additional specimen for analysis. Orthopoxvirus DNA Not Detected Not Detected Non-variola Orthopoxvirus not DNA detected by real-time PCR OTHER NAMES: MONKEYPOXPCR, LC140230 METHODOLOGY: Polymerase Chain Reaction CLINICAL USE: Vesicular specimens collected from persons infected with a non-variola Orthopoxvirus (such as vaccinia, monkeypox, or cowpox) are expected to produce a positive result with this assay. Although this assay does not differentiate vaccinia or monkeypox virus from cowpox, camelpox, ectomelia or gerbilpox virus, a positive result with this assay in the United States is most likely due to monkeypox virus or vaccinia virus; however, potential exposure to other Orthopoxviruses should be considered. CPT: 87593

#### **[MONO] Monoscreen**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1.0 mL  
MINIMUM VOLUME: 0.25 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Negative  
METHODOLOGY: RAPID EIA  
CLINICAL USE: Detect heterophile antibody related to infectious mononucleosis  
CPT: 86308

#### **[MORTOT] Morphine Level**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark Green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-9 days  
REFERENCE RANGE: 10 - 70 ng/mL  
OTHER NAMES: Astramorph; Duramorph; MS Contin; Roxanol

METHODOLOGY: Gas Chromatography/Mass Spectrometry (GS/MS)  
CPT: 80361

**[MPS1] MPS TYPE 1 (IDUA GENE)**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: IDUA Gene Sequencing; Mucopolysaccharidosis Type I  
Hurler Syndrome  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81406

**[MPS3A] Mucopolysaccharidoses Screen**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark Green (heparin)  
SPECIAL HANDLING: Ship same day as received; Monday-Thursday  
only  
SPECIMEN VOLUME: 4 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-7 days  
REFERENCE RANGE:  
METHODOLOGY: Enzyme analysis  
CPT: 82657

**[MPS3C] Mucopolysaccharidoses Screen**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark Green (heparin)  
SPECIAL HANDLING: Ship same day as received; Monday-Thursday  
only  
SPECIMEN VOLUME: 4 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 5-7 days  
REFERENCE RANGE:  
OTHER NAMES: Sanfilippo, Type C - Acetyl CoA: glucosamine N-  
acetyl transferase  
METHODOLOGY: Enzyme analysis  
CPT: 82657

**[MPS3D] Mucopolysaccharidoses Screen**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark Green (heparin)  
SPECIAL HANDLING: Ship same day as received; Monday-Thursday  
only  
SPECIMEN VOLUME: 4 mL  
MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-7 days  
REFERENCE RANGE:  
METHODOLOGY: Enzyme analysis  
CPT: 82657

**[MPSENZ] MUCOPOLYSACCHARIDE ENZYM PANEL**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Dark green (heparin)  
SPECIAL HANDLING: Whole blood must be shipped same day as collected; Must arrive in lab Monday-Thursday only before noon  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 7 mL  
TEST INCLUDES: a-iduronidase, Iduronate-2-sulfatase, Heparan-N-sulfatase, N-acetyl-a-glucosaminidase, Acetyl CoA:glucosamine N-acetyltransferase, N-acetyl glucosamine-6-sulfatase, N-acetyl galactosamine-6-sulfatase, b-galactosidase, Arylsulfatase B, b-glucuronidase  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 14 days  
METHODOLOGY: Enzymatic  
CPT: 82657 x5

**[MRD] Minimal Residual Disease Interpret**

SPECIMEN REQUIRED: Bone marrow at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
METHODOLOGY: Flow Cytometry  
CPT: 88184; 88185 per each additional marker

**[MRSAS] MRSA Surveillance Screen**

SPECIMEN REQUIRED: Swab of right & left nares  
TUBE OR CONTAINER: BBL CultureSwab (or equivalent)  
SPECIAL HANDLING: Surveillance cultures will be performed on identified high-risk patient populations. Any patient with positive results will be placed in Contact Precautions. Initiate MRSA Surveillance Screen at pre-op or during first 24 hours following admission. Refer to OUMC Infection Control policy IC-15

ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 days  
REFERENCE RANGE: No MRSA detected  
METHODOLOGY: Culture

**[MRSASH] MRSA Screen Workup**

**[MSEROTYPE] Microbiology serotyping**

**[MSNM43] MS NEG MIC PANEL 43**

**[MSNM56] MS NEG MIC PANEL 56**

**[MSNUC61] MS GRAM NEG URINE COMBO 61**

**[MSPC33] MS POS COMBO 33**

**[MSPM29] MS POS MIC 29**

**[MSPM34] MS POS MIC 34**

**[MSSTREP] MS MICROSTREP**

**[MTHFCSF] CSF 5-Methyltetrahydrofolate**

SPECIMEN REQUIRED: Frozen CSF

TUBE OR CONTAINER: Special collection containers; contact Lab

SPECIAL HANDLING: Must be in Lab Monday-Thursday by 2:00 pm

SPECIMEN VOLUME: 0.5 mL (each tube)

TEST AVAILABILITY: Monday-Thursday only

TURNAROUND TIME: 1 week

METHODOLOGY: HPLC with electrochemical detection

CPT: 82542

**[MTHFR] METHYLENETETRAHYDROFOLATE RED**

SPECIMEN REQUIRED: Refrigerated whole blood

TUBE OR CONTAINER: Lavender (EDTA), Pink, or Yellow (ACD)

SPECIMEN VOLUME: 3 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-8 days

OTHER NAMES: Hyperhomocysteinemia, C677T and A1298C Mutations;  
Methylenetetrahydrofolate Reductase

METHODOLOGY: Polymerase chain reaction (PCR)/Fluorescence  
Monitoring

CLINICAL USE: Follow-up evaluation in individuals with  
hyperhomocysteinemia; evaluation of patients with  
venous thrombosis

CPT: 81291

**[MUCIN] Synovial Fluid Mucin Clot**

SPECIMEN REQUIRED: Refrigerated synovial fluid

TUBE OR CONTAINER: Green (heparin) or Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Firmed clot formed  
METHODOLOGY: Precipitation  
CLINICAL USE: Differential diagnosis of joint disease  
CPT: 83872

**[MULLAB] Anti-Mullerian Hormone**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Gold or Red  
CAUSE FOR REJECTION: Gross hemolysis, gross lipemia, specimen out of stability  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-16 days  
REFERENCE RANGE: Age and gender specific  
OTHER NAMES: AMH  
METHODOLOGY: Electrochemiluminescence  
CPT: 83520

**[MUMPG] Mumps Virus IgG Antibody**

SPECIMEN REQUIRED: Room temperature serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday, Thursday  
TURNAROUND TIME: 1-5 days  
REFERENCE RANGE: Negative: Equivocal 0.35-0.49  
Positive: >0.49  
METHODOLOGY: Enzyme Linked Fluorescent Assay (ELFA)  
CLINICAL USE: Determine immunity to mumps virus  
CPT: 86735

**[MUMPGCSF] CSF Mumps Virus IgG Antibody**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile tube  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: 0.90 - 1.09 IV: Equivocal  
>= 1.10 IV: Positive  
METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)  
CPT: 86735

**[MUMPM] Mumps Virus IgM Antibody**

SPECIMEN REQUIRED: Refrigerated serum

TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Negative: Borderline: 0.80 - 1.20  
Positive: >1.20  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Aid in the diagnosis of acute mumps infection  
CPT: 86735

**[MUMPMCSF] CSF Mumps Virus IgM Antibody**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile tube  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-7 days  
REFERENCE RANGE: 0.91 - 1.09 IV: Equivocal  
>= 1.10 IV: Positive  
METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)  
CPT: 86735

**[MUMPPCR] Mumps Virus RNA (PCR)**

SPECIMEN REQUIRED: Frozen or refrigerated buccal swab in viral transport media  
TUBE OR CONTAINER: Viral transport media  
SPECIMEN VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 days  
METHODOLOGY: Real-time polymerase chain reaction (PCR)  
CLINICAL USE: aid in the diagnosis of infection with Mumps virus  
CPT: 87798

**[MUNC13-4] MUNC13-4 GENE (FHL)**

SPECIMEN REQUIRED: Room temperature whole blood  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Familial Hemophagocytic Lymphohistiocytosis type 3  
via MUNC13-4 gene  
METHODOLOGY: Bi-directional Sanger sequencing  
CPT: 81479

**[MURTYPAB] Murine Typhus (R.typhi) IgG Ab**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.4 mL  
MINIMUM VOLUME: 0.2 mL



TEST AVAILABILITY: Daily  
REFERENCE RANGE: Negative (limit of detection): Present or past infection: 1:16-1:64  
Recent infection:  $\geq$ 1:128  
METHODOLOGY: Indirect fluorescent antibody (IFA)  
CLINICAL USE: Detect antibodies following infection with murine typhus  
CPT: 86317

**[MYCOGAB] *Mycoplasma pneumoniae* IgG Antibody**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: Negative:  $<$  100 units/mL  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Aid in the diagnosis of atypical pneumonia  
CPT: 86738

**[MYCOMAB] *Mycoplasma pneumoniae* IgM Antibody**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: Negative: METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Aid in the diagnosis of atypical pneumonia and Stevens-Johnson syndrome by providing laboratory support for a *Mycoplasma pneumoniae* infection  
CPT: 86738

**[MYCOPCR] *Mycoplasma pneumoniae* DNA (PCR)**

SPECIMEN REQUIRED: Refrigerated Throat/nasopharyngeal (NP) swab, bronchoalveolar (BAL)/bronchial wash/aspirate, NP wash/aspirate  
TUBE OR CONTAINER: Sterile container or swab  
SPECIMEN VOLUME: 1 mL BAL, pleural fluid or sputum  
1 swab  
MINIMUM VOLUME: 0.5 mL BAL, pleural fluid or sputum  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
METHODOLOGY: Real-time Polymerase Chain Reaction (PCR)  
CLINICAL USE: Aid in the diagnosis of infections caused by *Mycoplasma pneumoniae*  
CPT: 87581

**[MYCOPCRBLD] *Mycoplasma pneumoniae* DNA (PCR)**

SPECIMEN REQUIRED: 10mL ACD/YELLOW Whole Blood (5ml min)

TUBE OR CONTAINER: ACD/YELLOW Whole Blood  
SPECIAL HANDLING: Collect Monday-Thursday Only. Must arrive at testing lab within 48 hours of collection Keep at Room Temp.  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
METHODOLOGY: Real-time Polymerase Chain Reaction (PCR)  
CLINICAL USE: Aid in the diagnosis of infections caused by *Mycoplasma pneumoniae*  
CPT: 87581

**[MYCOPNCSF] *Mycoplasma pneumoniae* DNA (PCR)**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: None detected  
METHODOLOGY: Polymerase Chain Reaction  
CPT: 87581

**[MYCUREAPCR] *Mycoplasma/Ureaplasma* (RT-PCR)**

SPECIMEN REQUIRED: Frozen tissue or fluids; embedded tissue at room temperature  
TUBE OR CONTAINER: Sterile container  
TEST AVAILABILITY: Daily  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 87801

**[MYD88] MYD88 L265P MUTATION**

SPECIMEN REQUIRED: Refrigerated whole blood or bone marrow  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-12 days  
OTHER NAMES:  
METHODOLOGY: Real-time Polymerase Chain Reaction  
CLINICAL USE: Useful in distinguishing lymphoplasmacytic lymphoma (LPL) from other low-grade B-cell lymphoproliferative disorders which may be in the differential diagnosis  
CPT: 81479

**[MYELAB] Anti-Myeloperoxidase Ab (p-ANCA)**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.6 mL  
MINIMUM VOLUME: 0.3 mL

TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.0 - 9.0 units/mL  
OTHER NAMES: Anti-MPO Antibodies; MPO; pANCA-Specific Antibody  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Diagnosis and monitoring inflammatory activity in primary systemic small vessel vasculitides  
CPT: 86021

#### **[MYELCSF] CSF Myelin Basic Protein**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile tube  
SPECIAL HANDLING: Centrifuge CSF at 1500xg for 20 minutes and place the supernatant in a separate tube.  
Ensure that residual fibrin and cellular matter have been removed prior to transport  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.8 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.0-4.0 mcg/L  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Diagnose multiple sclerosis w/in 5 days of onset of symptoms; determine whether an MS patient is having an active demyelinating episode; determine whether active demyelination is occurring in patients being treated by intrathecal chemotherapy or radiation therapy for neoplastic diseases involving the CNS; diagnose acute brain tissue destruction in children, including newborns  
CPT: 83873

#### **[MYH7] MYH7-HYPERTROPHIC CARDIOMYOP**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Hypertrophic Cardiomyopathy and other MYH7-Related Disorders via MYH7 gene sequencing  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81407

#### **[MYH9-1] MYH9 RELATED DISORDERS TIER 1**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: Bi-directional Sanger Sequencing

CLINICAL USE: Confirmation of clinical diagnosis  
CPT: 81479

### **[MYOG] Myoglobin**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin), Gold or Red  
SPECIAL HANDLING: Stable 8 days at room temp  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 Hours  
REFERENCE RANGE: Male: 28-72 ng/mL  
Female: 25-58 ng/mL  
METHODOLOGY: ECLIA  
CLINICAL USE: Diagnose skeletal or myocardial muscle injury  
CPT: 83874

### **[MYOQLU] Urine Myoglobin**

SPECIMEN REQUIRED: Refrigerated urine (random)  
TUBE OR CONTAINER: Plastic urine container  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Negative  
CPT: 83874

### **[MYOGU] Urine Myoglobin, Quantitative**

SPECIMEN REQUIRED: Frozen urine (random)  
TUBE OR CONTAINER: Plastic urine container  
SPECIAL HANDLING: Collect early morning specimen or immediately after exercise  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: 0 - 5 ng/mL  
METHODOLOGY: Immunochemiluminometric (ICMA)  
CPT: 83874

### **[MYOT] COMPLETE MYOTONIA EVALUATION**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Must arrive in lab by 1:00 pm Monday-Thursday only  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST INCLUDES: CLCN1 DNA Sequencing, DM1 DNA, DM2 DNA, SCN4A DNA Sequencing  
TEST AVAILABILITY: Monday - Thursday only

TURNAROUND TIME: 21 - 28 days  
REFERENCE RANGE: CLCN1 and SCN4A: No mutation detected,  
DM1 normal: 5-34 CTG repeats;  
DM2 normal: Less than 177 base pairs  
METHODOLOGY: Polymerase chain reaction (PCR), Fragment  
analysis and Southern blot  
CLINICAL USE: Detects CTG repeat expansions in the DMPK gene,  
CCTG repeat expansions in the ZNF9 gene, and  
point mutations in the CLCN1 and SCN4A gene  
CPT: 81401; 81479 x 3

**[MYPEROX] Periph Blood Myeloperoxidase Stain**

**[NA] Sodium Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Separate from cells promptly  
Specimen Stability: 14 days room temp  
SPECIMEN VOLUME: 1.0 mL  
MINIMUM VOLUME: 0.4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 137-146 mmol/L  
METHODOLOGY: Ion-Selective Electrode  
CLINICAL USE: Diagnosis and treatment of aldosteronism, diabetes  
insipidus, adrenal hypertension, Addison's disease  
dehydration, inappropriate antidiuretic hormone  
secretion or other diseases involving electrolyte  
imbalance  
CPT: 84295

**[NAADG] N-Acetyl-alpha-D-Glucosaminidase**

SPECIMEN REQUIRED: Frozen plasma, whole blood or fibroblasts at  
room temperature  
TUBE OR CONTAINER: Dark green (heparin) or T-25 flasks  
SPECIMEN VOLUME: 4 mL (plasma); 10 mL (whole blood) or 2 flasks  
MINIMUM VOLUME: 2 mL (plasma) or 5 mL (whole blood)  
TEST AVAILABILITY: Daily  
OTHER NAMES: Sanfilippo syndrome type B  
CPT: 82657

**[NACETYLUR] N-ACETYL-L-ASPARTIC ACID URINE**

SPECIMEN REQUIRED: Frozen urine (random)  
TUBE OR CONTAINER: Plastic urine container  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-8 days  
REFERENCE RANGE: 19.7 +/- 10.8 mg/g creatinine  
METHODOLOGY: Gas Chromatography/Mass Spectrometry (GC/MS)

CPT: 82543

**[NADGAL] N-ACETYL-D-GALACTOSAMINIDASE**

SPECIMEN REQUIRED: Frozen serum, whole blood or fibroblasts at room temperature

TUBE OR CONTAINER: Gold, Red or T-25 flasks

SPECIAL HANDLING: Specimen must be received in the laboratory by 1:00 p.m., Monday-Wednesday only

Ship specimen overnight on same day of collection

SPECIMEN VOLUME: 4 mL (serum); 10 mL (whole blood) or 2 flasks

MINIMUM VOLUME: 2 mL (serum) or 5 mL (whole blood)

TEST AVAILABILITY: Monday-Wednesday

OTHER NAMES: Schindler disease

CPT: 82657

**[NAFL] Body Fluid Sodium**

SPECIMEN REQUIRED: Refrigerated body fluid

TUBE OR CONTAINER: Sterile tube

SPECIAL HANDLING: Specify source of fluid

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours

REFERENCE RANGE: None established

METHODOLOGY: Ion-Selective Electrode

CPT: 84295

**[NASTL] Stool Sodium**

SPECIMEN REQUIRED: Liquid stool

TUBE OR CONTAINER: Plastic container

SPECIAL HANDLING: Stool must be in liquid form for analysis

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 24 hours

REFERENCE RANGE: No established range

METHODOLOGY: Ion-Selective Electrode

CPT: 84302

**[NATM] UR SODIUM TIMED**

SPECIMEN REQUIRED: Refrigerated aliquot of 24-hour urine

TUBE OR CONTAINER: Plastic container

SPECIAL HANDLING: Collect 24-hour urine in container "P" (no preservative)

SPECIMEN VOLUME: 10 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 24 hours

REFERENCE RANGE: 40-222 mmol/24 hour

METHODOLOGY: Ion-Selective Electrode

CLINICAL USE: Diagnose acromegaly; evaluate hypopituitarism and hypothalamic lesions in children

CPT: 84300

#### **[NAU] Urine Random Sodium**

SPECIMEN REQUIRED: Refrigerated random urine

TUBE OR CONTAINER: Clear/Red Urine tube (no additive)

SPECIMEN VOLUME: 1 tube (2 mL)

MINIMUM VOLUME: 1 tube (1 mL)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 24 hours

REFERENCE RANGE: None established

METHODOLOGY: Ion-Selective Electrode

CLINICAL USE: Work up for volume depletion, acute renal failure, acute oliguria, and differential diagnosis of hyponatremia

CPT: 84300

#### **[NBL] NEUROBLASTOMA (ALK/PHOX2B)**

SPECIMEN REQUIRED: Room temperature whole blood

TUBE OR CONTAINER: Lavender (EDTA)

SPECIAL HANDLING: Ship M-Thurs only; refrigerate on weekend

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 3 mL

TEST INCLUDES: Sequence analysis of PHOX2B and ALK genes

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-6 weeks

METHODOLOGY: Polymerase Chain Reaction (PCR)

CPT: 81404; 81479

#### **[NEIAG] N.meningitidis Antigens**

SPECIMEN REQUIRED: Refrigerated serum or cerebrospinal fluid

TUBE OR CONTAINER: Red, Gold or sterile container

ORDERING MODULE: MIC

SPECIMEN VOLUME: 2 mL (serum)

8 mL (urine)

1 mL (CSF)

MINIMUM VOLUME: 1 mL (serum)

5 mL (urine)

0.5 mL (CSF)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-4 days

REFERENCE RANGE: Negative

METHODOLOGY: Latex agglutination

CLINICAL USE:

CPT: 87899

#### **[NEOP] Neopterin**

SPECIMEN REQUIRED: Refrigerated serum or plasma

TUBE OR CONTAINER: Gold, Red or Lavender (EDTA)  
SPECIAL HANDLING: Protect specimen from light  
SPECIMEN VOLUME: 0.8 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Adults: METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Increased levels of neopterin are found during impaired renal function and viral infection in transplant patients. Elevated levels are also indicators for conditions related to impaired cellular immunity  
CPT: 83520

#### **[NEOPCSF] Neopterin**

#### **[NEUROKA] Neurokinin A (Substance K)**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Z tube  
SPECIAL HANDLING: Specimen must be collected in special Z-tube;  
Call laboratory to order tube  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.0 - 40.0 pg/mL  
METHODOLOGY: Direct radioimmunoassay (RIA)  
CPT: 83519

#### **[NEUTCAB] Cytoplasmic ANCA (c-ANCA) Antibody**

SPECIMEN REQUIRED: Room temperature serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)  
TEST INCLUDES: Detection of cytoplasmic autoantibodies exhibiting p-ANCA or c-ANCA patterns  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Negative: 1:20  
OTHER NAMES: ANCA; MPO-ANCA; PR3-ANCA  
METHODOLOGY: Indirect Fluorescent Antibody  
CLINICAL USE: Diagnosis and monitoring inflammatory activity in primary systemic small vessel vasculitides  
CPT: 86256 x 2

#### **[NEUTFUN] NEUTROPHIL FUNCTION**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark Green (heparin)  
SPECIAL HANDLING: Must arrive in Laboratory by 1:30 pm, Monday through Thursday only  
Ship same day as collected  
Must arrive at performing lab w/in 36 hours



of collection

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 3 mL

TEST AVAILABILITY: Monday-Thursday

TURNAROUND TIME: 2-4 days

METHODOLOGY: Flow Cytometry (FC)

CLINICAL USE: Useful in diagnosis of chronic granulomatous disease and in overall metabolic integrity of phagocytizing neutrophils

CPT: 82657

#### **[NF1] NEUROFIBROMATOSIS TYPE 1**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 3 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 5-6 weeks

METHODOLOGY: Polymerase Chain Reaction (PCR)

CPT: 81408

#### **[NF1DD] NEUROFIBROMATOSIS 1 DEL/DUP**

SPECIMEN REQUIRED: Refrigerated whole blood

TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 14 days

METHODOLOGY: Multiplex Ligation-dependent Probe Amplification

CPT: 81479

#### **[NF2] NEUROFIBROMATOSIS TYPE 2 DNA**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 3 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-6 weeks

METHODOLOGY: Bi-directional DNA sequencing

CPT: 81406

#### **[NICK] Nickel**

SPECIMEN REQUIRED: Whole blood at room temperature (submit original unopened tube or plasma)

TUBE OR CONTAINER: Royal Blue (EDTA)

Lavender (EDTA) will be temporarily accepted due to royal blue shortage, but result may report with a disclaimer.

SPECIAL HANDLING: Please contact laboratory for correct tube; Submit original unopened tube or serum or

plasma removed from a royal blue-top tube,  
& transfer to a certified metal-free plastic  
transport tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 Days  
REFERENCE RANGE: Environmental exposure: 0.6-7.5 g/L  
Occupational exposure: Levels of 3.0-11.0 g/L  
may be seen in refinery workers  
METHODOLOGY: Inductively coupled plasma-mass spectrometry  
(ICP-MS)  
CLINICAL USE: Monitor exposure to nickel  
CPT: 83885

**[NIPBL] NIPBL-CORNELIA de LANGE SYNDR**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR) and Bi-directional  
sequencing  
CPT: 81479

**[NKFUNC] Natural Killer Cell Functional Assay**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark green (heparin)  
SPECIAL HANDLING: Must arrive at performing lab within 24 hours  
Specimen must arrive in lab before 1:30 p.m,  
Monday-Thursday only  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Monday-Thursday  
METHODOLOGY: Flow Cytometry  
CPT: 86352; 86357

**[NKX2-1] THYROID DYSGENESIS via NKX2-1**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Congenital Hypothyroidism (Thyroid Dysgenesis) via  
the NKX2-1/TTF1 Gene  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81479

**[NMDACSF] CSF NMDA Receptor IgG Antibody**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-10 days  
REFERENCE RANGE: Negative  
OTHER NAMES: N-methyl-D-aspartate Receptor antibody, IgG  
METHODOLOGY: Indirect Immunofluorescence (IFA)  
REFLEX TEST INFORMATION: If NMDA CSF antibody IgG is positive, then an NMDA CSF antibody IgG titer is reported. Additional charges apply.  
CLINICAL USE: Associated with autoimmune limbic encephalitis  
CPT: 86255

**[NMDAG] Anti-NMDA Receptor**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-10 days  
REFERENCE RANGE: Negative  
OTHER NAMES: N-methyl-D-aspartate Receptor antibody, IgG  
METHODOLOGY: Indirect Immunofluorescence (IFA)  
REFLEX TEST INFORMATION: If NMDA antibody IgG is positive, then an NMDA CSF antibody IgG titer is reported. Additional charges apply.  
CLINICAL USE: Associated with autoimmune limbic encephalitis  
CPT: 86255

**[NMOG] Neuromyelitis Optica IgG Antibody**

SPECIMEN REQUIRED: Refrigerated or Frozen serum  
(Serum good for 72 hours ambient)  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate from cells ASAP  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-7 days  
REFERENCE RANGE: Negative  
OTHER NAMES: Neuromyelitis Optica immunoglobulin G (NMO-IgG);  
Aquaporin-4  
METHODOLOGY: Fluorescence-Activated Cell Sorting Assay (FACS)  
CPT: 86255

**[NMOGCSF] CSF Neuromyelitis Optica IgG Ab**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile tube

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Indirect Immunofluorescence (IFA)  
CPT: 86255

**[NMOGCSFTITER] CSF Neuromyelitis Optica IgG Titer**

**[NMOIFGTITER] Neuromyelitis Optica IgG Antibody**

**[NOONAN] NOONAN SYNDROME SEQUENCING**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST INCLUDES: Gene sequencing of PTPN11, SOS1, RAF1, KRAS, SHOC2, BRAF, NRAS, RIT1, CBL, SPRED1, MAP2K1 (MEK1), MAP2K2 (MEK2), HRAS, ACTB and ACTG1  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 weeks  
METHODOLOGY: NextGen sequencing (NGS)  
CPT: 81405 x 2; 81406 x 2

**[NORT] Nortriptyline (Aventyl) Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Dark green (heparin) or Lavender(EDTA)  
SPECIAL HANDLING: Collect immediately prior to next dose  
Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 48 hours  
REFERENCE RANGE: Therapeutic: 50-150 ng/mL  
Potential toxicity: >500 ng/mL  
OTHER NAMES: Aventyl; Pamelor  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)  
CLINICAL USE: Monitor therapeutic drug level and assess toxicity  
CPT: 80335

**[NOTCH1] NOTCH1 GENE SEQUENCING**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-6 weeks  
OTHER NAMES: Adams-Oliver Syndrome type 5 via NOTCH1 gene

METHODOLOGY: Sequencing of entire coding region  
CPT: 81479

**[NOTCH2] ALAGILLE 2 (ALGS2) VIA NOTCH2**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST AVAILABILITY: Daily  
OTHER NAMES: Alagille syndrome 2 (ALGS2) via NOTCH2 gene  
METHODOLOGY: Sanger sequencing  
CPT: 81479

**[NPHNGS] NEPHRONOPHTHISIS NEXTGEN SEQ**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 2 mL  
TEST INCLUDES: Sequencing of the NPH genes ANKS6, CEP164, CEP290, GLI2S, INVS, IQCB1, NEK8, NPHP1, NPHP3, NPHP4, RPGRIP1L, SDCCAG8, TMEM67, TTC21B, WDR19 and ZNF423  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 months  
METHODOLOGY: Next Generation Sequencing (NGS)  
CPT: 81406; 81407; 81408; 81479 x 13

**[NPM1] NPM1 MUTATION**

SPECIMEN REQUIRED: Refrigerated whole blood or bone marrow  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 3-5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-8 days  
METHODOLOGY: Polymerase Chain Reaction (PCR)/ Fragment Analysis  
CPT: 81310

**[NPS] NAIL-PATELLA SYNDROME (LMX1B)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks  
OTHER NAMES: LMX1B Gene Sequencing  
METHODOLOGY: Bi-directional sequence analysis  
CPT: 81479

**[NSE] Neuron Specific Enolase**

SPECIMEN REQUIRED: Refrigerated serum

TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.0 - 12.5 ng/mL  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Adjunct in the monitoring of patients with small cell lung cancer (SCLC)  
CPT: 86316

#### **[NTMPCR] Mycobacterium DNA (PCR)**

SPECIMEN REQUIRED: Fresh frozen tissue, paraffin embedded tissue, lower respiratory or sterile body fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 87551

#### **[NTX] CROSSLINKED TELOPEPTIDE/NTX**

SPECIMEN REQUIRED: Refrigerated random urine  
TUBE OR CONTAINER: Urine container  
SPECIAL HANDLING: Collect the second void of the morning or an aliquot of a 24-hour urine (no preservative)  
SPECIMEN VOLUME: 20 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Adults: Male: 0-62 mM BCE/mmol creatinine, Female (20-49 yrs): 0-64 mM BCE/mmol creat (>49 yrs): 0-89 mM BCE/mmol creat  
Pediatrics: age-specific  
OTHER NAMES: Collagen Cross-Linked N-Telopeptide; N-Telopeptide; Osteomark  
METHODOLOGY: Ortho Vitros Enhanced Chemiluminescence System  
CLINICAL USE: Evaluation of osteoporosis and assessment of antiresorptive therapy  
CPT: 82523; 82570

#### **[NTXSER] N-Telopeptide**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Serum must be separated immediately after clot formation and centrifugation  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL (This volume does not allow for repeat

testing)

TEST AVAILABILITY: Daily

REFERENCE RANGE:

Male: mean: 14.8 nM BCE/L, range: 5.4-24.2 nM BCE/L

Female: mean: 12.6 nM BCE/L, range: 6.2-19.0 nM BCE/L

OTHER NAMES: N-Telopeptide crosslinks

METHODOLOGY: Enzyme immunoassay (EIA)

CLINICAL USE: Monitor antiresorptive therapy with estrogen and calcium supplementation as well as drug therapy

CPT: 82523

#### **[NUC5] 5'-Nucleotidase**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma

TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-3 days

REFERENCE RANGE: 2-10 IU/L

METHODOLOGY: Kinetic - 340 nm

CLINICAL USE: Liver related enzyme used to work up cholestatic/biliary obstruction and investigate the origin of increased serum alkaline phosphatase

CPT: 83915

#### **[NUSWABVAG] NUSWAB VAGINITIS**

#### **[O2HBCO] Oxyhemoglobin Percent**

SPECIMEN REQUIRED: Whole blood on ice

TUBE OR CONTAINER: Green Tube (Heparin) or Heparinized syringe

SPECIAL HANDLING: Keep specimen on ice and transport to lab immediately; do NOT open

Test should be performed within 8 hours

Do not use EDTA

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 1 hour

REFERENCE RANGE: 94-97 %

METHODOLOGY: Spectrophotometry

CPT: 84311

#### **[O2SATCO] O2 Saturation**

SPECIMEN REQUIRED: Heparinized whole blood

TUBE OR CONTAINER: Dark Green (heparin) or Heparinized syringe

SPECIAL HANDLING: Transport to lab immediately; Do Not open

Test should be performed within 30 minutes

SPECIMEN VOLUME: 5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours

METHODOLOGY: Spectrophotometry  
CPT: 82810

**[OBP.] OBSTETRICS PANEL W/O TYPE/SCRN**

SPECIMEN REQUIRED: Refrigerated whole blood and serum  
TUBE OR CONTAINER: Gold and Lavender  
SPECIMEN VOLUME: 4 mL each  
MINIMUM VOLUME: 2 mL each  
TEST INCLUDES: CBC, RPR, HBsAg, Rubella Screen  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: See individual test  
METHODOLOGY: See individual test  
CPT: 85027; 86592; 86762; 87340

**[OCCBLD] Fecal Occult Blood, Guaiac**

SPECIMEN REQUIRED: Fresh stool or hemocult slide  
TUBE OR CONTAINER: Tightly sealed container or hemocult slide  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 hours  
REFERENCE RANGE: Negative  
OTHER NAMES: Hemocult  
METHODOLOGY: Guaiac  
CLINICAL USE: Detection of gastrointestinal bleeding  
CPT: 82272

**[OCCBLDG] Gastric Occult Blood**

SPECIMEN REQUIRED: Gastric contents  
TUBE OR CONTAINER: Tightly sealed plastic container  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 hours  
REFERENCE RANGE: Negative  
METHODOLOGY: Guaiac  
CLINICAL USE: Detection of gastrointestinal bleeding  
CPT: 82271

**[OCCBLDICT] FECAL OCCULT BLD ICT: FIT TEST**

Immunochemical Fecal Occult Blood Test (FIT test)  
SPECIMEN REQUIRED: Hemocult ICT cards obtained from Micro lab  
TUBE OR CONTAINER: Hemocult ICT collection cards  
SPECIAL HANDLING:  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily (24/7)  
TURNAROUND TIME: 4 hours  
REFERENCE RANGE: Negative  
OTHER NAMES: Hemocult ICT, FIT test  
METHODOLOGY: Immunochemical  
CLINICAL USE: Detection of lower gastrointestinal bleeding.



NOT recommended for diagnosis of Upper gastrointestinal bleeding.

**[OHCORT18] 18-OH-Corticosterone**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate within 45 minutes of collection  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-10 days  
REFERENCE RANGE: Age-Specific  
METHODOLOGY: Mass Spectrometry  
CPT: 83519

**[OPANT] O&P Antigens Giardia/Cryptosp**

SPECIMEN REQUIRED: Raw stool  
TUBE OR CONTAINER: Para-Pak Formalin vial (pink top)  
ORDERING MODULE: MIC  
SPECIMEN VOLUME: 5 mL or walnut-size portion (minimum)  
TEST INCLUDES: Giardia antigen and Cryptosporidium antigen  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Diagnosis of infection with Giardia and/or Cryptosporidium  
CPT: 87328; 87329

**[OPDIR] Ova & Parasites, Direct Prep**

SPECIMEN REQUIRED: Liquid stool, suspected worm or parasitic insect  
TUBE OR CONTAINER: Tightly sealed container  
TEST AVAILABILITY: Monday-Friday  
TURN-AROUND-TIME: 72 hours  
METHODOLOGY: Microscopy and/or visual exam

**[OSFRAG] OSMOTIC FRAGILITY PROFILE**

SPECIMEN REQUIRED: Refrigerated whole blood, in unopened tube from patient and a normal unrelated person (label NORMAL CONTROL)  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Specimen must arrive in laboratory by 1:00 p.m. on the day it is collected (Ship Mon-Fri only)  
A Control specimen must be included  
Specimen must arrive at performing lab within 72 hours of collection  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL

TEST INCLUDES: Immediate and 24 hour incubation  
TEST AVAILABILITY: Monday-Saturday  
TURNAROUND TIME: 72 hours  
REFERENCE RANGE: Normal  
METHODOLOGY: Osmotic lysis  
CLINICAL USE: Useful for suspected hereditary spherocytosis  
CPT: 85557

#### **[OSMO] Serum Osmolality**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Gold, Red or Light Green (heparin)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 280-300 mOsm/kg  
METHODOLOGY: Freezing point depression  
CLINICAL USE: Evaluate electrolyte balance, hyperosmolar status  
and hydration status  
CPT: 83930

#### **[OSMOU] Urine Osmolality**

SPECIMEN REQUIRED: Random urine  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIMEN VOLUME: 1 tube (6 mL)  
MINIMUM VOLUME: 1 tube (1 mL)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 300-900 mOsm/kg  
METHODOLOGY: Freezing point depression  
CLINICAL USE: Evaluate concentration ability of kidneys;  
evaluate electrolyte balance  
CPT: 83935

#### **[OSTEOC] Osteocalcin**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Centrifuge and freeze immediately  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat  
testing)  
TEST AVAILABILITY: Daily  
OTHER NAMES: BGP; Bone GLA Protein  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Evaluate bone disease  
CPT: 83937

#### **[OTC] ORNITHINE TRANSCARBAMYLASE**

SPECIMEN REQUIRED: Refrigerated whole blood or cultured  
amniocytes at room temperature

TUBE OR CONTAINER: Lavender (EDTA), Yellow (ACD) or T-25 flasks  
SPECIMEN VOLUME: 3 mL  
2 T-25 flasks

MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 weeks  
OTHER NAMES: Hyperammonemia via OTC gene; Ornithine  
Transcarbamylase Deficiency  
METHODOLOGY: Polymerase Chain Reaction (PCR)/Sequencing  
CPT: 81405 (Sequencing)

**[OVALFAT] Urine Oval Fat Bodies**

**[OVARAB] Anti-Ovary Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8-10 days  
OTHER NAMES: Anti-Steroidal Antibodies  
METHODOLOGY: Indirect Immunofluorescence (IFA)  
CPT: 86255

**[OXAL] Plasma Oxalate**

SPECIMEN REQUIRED: Frozen acidified plasma  
TUBE OR CONTAINER: Dark Green (sodium heparin)  
SPECIAL HANDLING: Collect specimen from a fasting patient; place  
on wet ice and deliver to lab immediately;  
Adjust pH to 1-3.5 with HCl

SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Reference values have not been established for  
patients < 21 and > 81 years of age  
METHODOLOGY: Ion Chromatography (IC)  
CPT: 83945

**[OXCARB] Oxcarbazepine Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 ml  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 10-35 ug/mL  
OTHER NAMES: GP 47680; Trileptal

METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry  
(LC/MS/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80183

**[P155] p155/140 ANTIBODY**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 ml  
TEST AVAILABILITY: Daily  
CPT: 83516

**[PAH] PHENYLALANINE HYDROXYLASE(PAH)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81406

**[PAI-1] PLASMINOGEN ACT INHIBIT-1 GENO**

SPECIMEN REQUIRED: Room temperature or Refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-10 days  
METHODOLOGY: Polymerase chain reaction (PCR) and restriction  
fragment length polymorphism (RFLP) technologies  
CLINICAL USE: Deep vein thrombosis (DVT) and coronary artery  
disease (CAD) are associated with increased PAI-1  
levels. Elevated PAI-1 levels may help predict  
risk of reinfarction in survivors of myocardial  
infarction, particularly in young individuals  
CPT: 81400

**[PAI1ACT] Plasminogen Activat Inhib-1 Activty**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube MUST be filled  
to the fill line to ensure proper anti-  
coagulant to blood ratio; Invert gently 3-4  
times to prevent clotting  
Send to lab immediately or centrifuge and  
freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA

MINIMUM VOLUME: 1 full tube  
Testing volume: 0.5 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: 0 - 14 IU/mL  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: May help predict risk of reinfarction in survivors of myocardial infarction, particularly in young individuals. Deficiency of PAI-1, an extremely rare and difficult diagnosis to make, has been associated with a bleeding diathesis  
CPT: 85415

#### **[PANCRE] Pancreastatin**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Z tube  
SPECIAL HANDLING: Specimen must be collected in special Z-tube;  
Call laboratory to order tube  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.0 - 135 pg/mL  
METHODOLOGY: Direct radioimmunoassay (RIA)  
CPT: 83519

#### **[PANPOLY] Pancreatic Polypeptide**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Patients should fast for 10 hours prior to specimen collection  
Freeze specimen within 4 hours of collection  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.0-418.0 pg/mL  
METHODOLOGY: Radioimmunoassay (RIA)  
CLINICAL USE: Support a diagnosis of pancreatic endocrine tumors  
CPT: 83519

#### **[PAPA1] PAPA SYNDROME (PSTPIP1)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Pyogenic Sterile Arthritis, Pyoderma Gangrenosum, and Acne (PAPA) Syndrome; PSTPIP1 gene analysis

METHODOLOGY: Polymerase chain reaction (PCR)

CPT: 81479

**[PAPHOS] Prostatic Acid Phosphatase**

SPECIMEN REQUIRED: Refrigerated serum

TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 0.5 mL

MINIMUM VOLUME: 0.2 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: 0.0-1.2 U/L

METHODOLOGY: Immunochemiluminometric (ICMA)

CLINICAL USE: Aid in diagnosing and monitoring prostate cancer

CPT: 84066

**[PARANEO] PARANEOPLASTIC AUTOANTIBODIES**

SPECIMEN REQUIRED: Refrigerated serum

TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 4 mL

MINIMUM VOLUME: 2.5 mL

TEST INCLUDES: Anti-Neuronal Nuclear Antibody (ANNA), and  
and Purkinje Cell Cytoplasmic Antibody (PCCA)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 11-19 days

METHODOLOGY: Immunofluorescence antibody (IFA)

CLINICAL USE: Investigating neurological symptoms that appear in  
the course of, or after, cancer therapy, and are  
not explainable by metastasis

CPT: 83519 x 5; 83520; 86256 X 9

**[PARANEOCSF] PARANEOPLASTIC AUTOAB CSF**

SPECIMEN REQUIRED: Refrigerated or frozen CSF

TUBE OR CONTAINER: CSF tube

SPECIMEN VOLUME: 4 mL

MINIMUM VOLUME: 3 mL

TEST INCLUDES: Anti-Neuronal Nuclear Ab, Type 1, 2 & 3, Anti-  
Glial Nuclear Ab, Type 1, Purkinje Cell  
Cytoplasmic Ab Type 1, 2 & Tr, Amphiphysin Ab,  
CRMP-5-IgG

and Purkinje Cell Cytoplasmic Antibody (PCCA)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-9 days

REFERENCE RANGE: < 1:2 Negative

METHODOLOGY: Immunofluorescence antibody (IFA); Western Blot

CLINICAL USE: An aid in the diagnosis of paraneoplastic  
neurological autoimmune disorders related to  
carcinoma of lung, breast, ovary, thymoma, or

Hodgkin's lymphoma

CPT: 86256 X 9

**[PARATHR] Parathyroid Hormone Related Protein**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Collect specimen in chilled EDTA (lavender) tube. OPTIONAL: Add 0.25 mL Trasylol (to be performed in lab); separate and freeze plasma  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 Days  
REFERENCE RANGE: < 2.0 pmol/L  
OTHER NAMES: PTH-Related Peptide (PTH-rP); Parathyroid Hormone-related Peptide  
METHODOLOGY: Electrochemiluminescence (ECL)  
CLINICAL USE: PTH-r is the principle mediator of humoral hypercalcemia of malignancy  
CPT: 82397

#### **[PAR-ENTPCR] PARECHOVIRUS/ENTEROVIRUS PCR**

SPECIMEN REQUIRED: Frozen serum, plasma or CSF  
TUBE OR CONTAINER: Gold, Lavender (EDTA) or CSF tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: Enterovirus and Parechovirus  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Reverse Transcription/Polymerase Chain Reaction (PCR-RT)  
CLINICAL USE: Detection of Enterovirus or Parechovirus  
CPT: 87498; 87798

#### **[PARIAB] Anti-Parietal Cell Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Negative: 0.0-20.0  
Equivocal: 20.1-24.9  
Positive: >24.9  
OTHER NAMES: APCA; Gastric Parietal Cell Antibodies  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Differential diagnosis of pernicious anemia  
CPT: 86256

#### **[PAROX] Paroxetine Level**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-5 days  
REFERENCE RANGE: 20 - 200 ng/mL  
OTHER NAMES: Paxil  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[PARVPCR] Parvovirus B19 DNA (PCR)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-6 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CLINICAL USE: Detects the presence of parvovirus B19 DNA  
CPT: 87798

**[PARVPCRAMN] Parvovirus B19 DNA (PCR)**

SPECIMEN REQUIRED: Frozen Amniotic fluid; uncentrifuged  
TUBE OR CONTAINER: Sterile plastic tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CLINICAL USE: Associated with still-birth, arthritis, aplastic crisis and fifth disease  
CPT: 87798

**[PARVPCRQNT] Parvovirus B19 DNA (PCR)**

SPECIMEN REQUIRED: Plasma, bronchial lavage/wash, tracheal aspirate/wash, amniotic, pleural or pericardial fluid at room temperature or frozen  
Frozen bone marrow  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD), Sterile container, screw top tube  
SPECIAL HANDLING: Please specify source of specimen.  
Specimens at room temperature must be received at performing lab within 4 days of collection; Freeze if time exceeds 4 days  
SPECIMEN VOLUME: 2 mL plasma, CSF, bone marrow, fluids or respiratory specimens



5 mg tissue

MINIMUM VOLUME: 0.5 mL plasma, CSF, fluids or respiratory specimens

0.2 mL bone marrow

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-3 days

REFERENCE RANGE: Not detected

METHODOLOGY: Real-time Polymerase Chain Reaction (PCR-RT)

CPT: 87799

**[PARVQLT] Parvovirus B19 DNA (PCR)**

SPECIMEN REQUIRED: Slides from paraffin embedded tissue at room temperature

Frozen CSF or synovial fluid

TUBE OR CONTAINER: Slides or sterile container

SPECIMEN VOLUME: 1 mL (fluids)

MINIMUM VOLUME: 0.5 mL (fluids)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-6 days

REFERENCE RANGE: Not detected

OTHER NAMES: Parvovirus B19 DNA

METHODOLOGY: Polymerase Chain Reaction (PCR)

**[PATHREV] Pathologist Review (Hematology)**

**[PBG] Serum Porphobilinogen**

SPECIMEN REQUIRED: Frozen serum

TUBE OR CONTAINER: Red or Gold

SPECIAL HANDLING: Protect specimen from light (wrap in foil)

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: 0.0-0.1 mcg/mL

CPT: 84110

**[PBM] PEDIATRIC BONE MARROW DIFF**

**[PBP2A] Penicillin binding protein 2a**

**[PC] Differential Comment**

**[PCC-MAX] PHEOCHROMOCYTOMA (PCC) MAX**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 3 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-4 weeks

OTHER NAMES: Pheochromocytoma (PCC) susceptibility via MAX gene

METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81479

**[PCPFA] Pneumocystis DFA**

SPECIMEN REQUIRED: Refrigerated bronchial washings, brushings, lavages or induced sputums  
VOLUME: 2 mL; 1 mL minimum  
TUBE OR CONTAINER: Tightly sealed sterile container  
SPECIAL HANDLING: Indicate specimen source; INDUCED SPUTUM  
Expectorated sputum and suctioned respiratory will NOT be accepted  
Do NOT add CytoLyt  
Deliver to lab ASAP  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Negative  
METHODOLOGY: Direct fluorescent antibody (DFA)  
CLINICAL USE: Determine presence of *Pneumocystis jiroveci*  
CPT: 87281

**[PCPPCR] Pneumocystis carinii/jiroveci (PCR)**

SPECIMEN REQUIRED: Frozen bronchoalveolar lavage (BAL)  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Real-time Polymerase Chain Reaction (RT-PCR)  
CPT: 87799

**[PCRBORD] Bordetella PCR**

SPECIMEN REQUIRED: Nasopharyngeal swab  
Collection instructions: Specimens must be obtained with a dacron swab on a flexible wire which is passed gently through the nose into the nasopharynx, rotated and removed. Aspirates of the nasopharynx or bronchus are not acceptable.  
TUBE OR CONTAINER: Regan-Lowe tube media  
SPECIAL HANDLING: Obtain a collection kit containing an NP swab & Regan-Lowe agar tube, plus collection instructions from the Micro Lab (271-4006).  
ORDERING MODULE: MIC  
TEST INCLUDES: Bordetella PCR  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 72 hours  
REFERENCE RANGE: Negative for Bordetella  
METHODOLOGY: Polymerase chain reaction (PCR)  
CLINICAL USE: Detection of *Bordetella pertussis* and/or

parapertussis by PCR; establish diagnosis of whooping cough.

**[PE-1] Stool Pancreatic Elastase**

SPECIMEN REQUIRED: Refrigerated or frozen random stool (solid)  
TUBE OR CONTAINER: Stool cup or neat vial container  
SPECIMEN VOLUME: 3 grams  
MINIMUM VOLUME: 1 gram  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: > 200 ug E1/g stool  
METHODOLOGY: Enzyme-linked Immunosorbent Assay (ELISA)  
CLINICAL USE: Identifies pancreatic exocrine insufficiency due to chronic pancreatitis, gallstones, cystic fibrosis, cholelithiasis, diabetes mellitus, and other conditions  
CPT: 82653

**[PED17HYD] 17-Hydroxyprogesterone**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate and freeze within 1 hour  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.1 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
METHODOLOGY: High pressure liquid chromatography/tandem mass spectrometry (HPLC/MS-MS)  
CLINICAL USE: Markedly elevated in patients with congenital adrenal hyperplasia (adrenogenital syndrome) due to 21-hydroxylase deficiency; evaluate hirsutism and/or infertility; assess certain adrenal or ovarian tumors with endocrine activity  
CPT: 83498

**[PEDALDOS] Aldosterone**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate within 1 hour of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Age specific  
METHODOLOGY: High pressure liquid chromatography/tandem mass spectrometry (HPLC/MS-MS)  
CLINICAL USE: Evaluate patients with hypertension and possible hyperaldosteronism

CPT: 82088

**[PEDDEOXC] 11-Deoxycortisol (Compound S)**

SPECIMEN REQUIRED: Frozen serum (preferred) or plasma  
TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)  
SPECIAL HANDLING: Separate within 1 hour of collection  
Do not use for Metyrapone test  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-8 days  
REFERENCE RANGE: Age-specific  
OTHER NAMES: Specific Compound S  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS) after chromatography and solvent extraction  
CLINICAL USE: Evaluate hypothalamic-pituitary-adrenal axis and pituitary ACTH reserve  
CPT: 82634

**[PEDDHEA] Dehydroepiandrosterone (DHEA)**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate within 1 hour of collection  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-7 days  
REFERENCE RANGE: Age-specific  
OTHER NAMES: DHEA; Unconjugated DHEA  
METHODOLOGY: Radioimmunoassay (RIA) after solvent extraction  
CLINICAL USE: Evaluate adrenal carcinomas which frequently secrete large amounts of DHEA  
CPT: 82626

**[PEDDHEAS] Dehydroepiandrosterone (DHEA)**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate within 1 hour of collection  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.1 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 days  
REFERENCE RANGE: Age-specific  
OTHER NAMES: DHEA-S; DHEA-SO<sub>4</sub>; DHEA Sulfate  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)

CLINICAL USE: Aid in the evaluation of androgen excess (hirsutism and/or virilization), including Stein-Leventhal syndrome and adrenocortical diseases, including congenital adrenal hyperplasia and adrenal tumor  
CPT: 82627

#### **[PEDESTRA] Estradiol (E2) Level**

SPECIMEN REQUIRED: Refrigerated serum/plasma  
TUBE OR CONTAINER: Red, Gold or Lt Green  
SPECIAL HANDLING: Stable 24 hrs Room Temp, 2 days Refrigerated

SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: Age-specific  
METHODOLOGY: ECLIA  
CLINICAL USE: Assess hypothalamic and pituitary function; assess ovarian failure and follicular maturation. In males, E2 measurements may be helpful in the assessment of unexplained gynecomastia  
CPT: 82670

#### **[PEDESTRO] Total Estrogens**

SPECIMEN REQUIRED: Frozen serum (preferred) or plasma  
TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)  
SPECIAL HANDLING: Separate within 1 hour of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 days  
REFERENCE RANGE: Age-specific  
METHODOLOGY: Radioimmunoassay (RIA) after solvent extraction  
CLINICAL USE: Evaluate for ovarian estrogen producing tumor in the premenarcheal and postmenopausal female; evaluate estrogen excess in males  
CPT: 82672

#### **[PEDFSH] Follicle Stimulating Hormone**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold, LT Green (heparin)  
SPECIAL HANDLING: Stable 5 days at room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: Age-specific  
METHODOLOGY: ECLIA

CLINICAL USE: Distinguish primary gonadal failure from secondary (hypothalamic/pituitary) causes of gonadal failure, menstrual disturbances and amenorrhea  
CPT: 83001

**[PEDIGF1] Insulin-like Growth Factor I**

SPECIMEN REQUIRED: Frozen serum

TUBE OR CONTAINER: Red or Gold

SPECIAL HANDLING: Separate within 1 hour of collection

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.1 mL (this volume does not allow for repeat testing)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-6 days

REFERENCE RANGE: Age-specific

OTHER NAMES: IGF-1; Somatomedin-C, Sulfation Factor

METHODOLOGY: Blocking radioimmunoassay (RIA) after acid:alcohol extraction

CLINICAL USE: Diagnose acromegaly, in which Sm-C and GH are increased; evaluate hypopituitarism and hypothalamic lesions in children (diagnosis of dwarfism and response to therapy).

CPT: 84305

**[PEDIGFBP1] Insulin-like GF Binding Protein-1**

SPECIMEN REQUIRED: Frozen serum

TUBE OR CONTAINER: Red or Gold

SPECIAL HANDLING: Separate within 1 hour of collection

SPECIMEN VOLUME: 0.5 mL

MINIMUM VOLUME: 0.1 mL (this volume does not allow for repeat testing)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-7 days

REFERENCE RANGE: Age-specific

METHODOLOGY: Immunochemiluminometric assay (ICMA)

CPT: 83519

**[PEDIGFBP2] Insulin-like GF Binding Protein-2**

SPECIMEN REQUIRED: Frozen serum (preferred) or plasma

TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)

SPECIAL HANDLING: Separate within 1 hour of collection

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 5-20 days

REFERENCE RANGE: Age-specific

METHODOLOGY: Radioimmunoassay (RIA)

CPT: 83519

**[PEDIGFBP3] Insulin-like GF Binding Protein-3**

SPECIMEN REQUIRED: Frozen serum (preferred) or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIAL HANDLING: Separate within 1 hour of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.25 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 days  
REFERENCE RANGE: Age-specific  
OTHER NAMES: Insulin-like Growth Factor Binding Protein-3  
METHODOLOGY: Radioimmunoassay (RIA) in dilute serum  
CLINICAL USE: Aids in evaluation of growth hormone secretion  
CPT: 83519

**[PEDLH] Luteinizing Hormone**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lt Green  
SPECIAL HANDLING: Refrigerated Serum/Plasma  
  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
METHODOLOGY: ECLIA  
CLINICAL USE: Aid in evaluating the normalcy of hypothalamic-pituitary-gonadal axis  
CPT: 83002

**[PEDPROGEST] Progesterone Level**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold, or Lt Green (heparin)  
SPECIAL HANDLING: Stable for 24 hours at room temp  
  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: Not established for males or prepubertal female  
METHODOLOGY: ECLIA  
CPT: 84144

**[PEDPROLAC] Prolactin**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold or Light Green (heparin)  
SPECIAL HANDLING: Separate from cell promptly.  
Stable 5 days room temp  
  
SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: Male: 4.1 - 28.4  
Female: 1.9 - 46.9  
METHODOLOGY: ECLIA  
CLINICAL USE: Pituitary function test  
CPT: 84146

#### **[PEDREN] Renin Activity**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Separate within 1 hour of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 days  
REFERENCE RANGE: Age-specific  
METHODOLOGY: Radioimmunoassay (RIA)  
CLINICAL USE: Aid in differential diagnosis of individuals with hypertension  
CPT: 84244

#### **[PEDTEST] Total Testosterone**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate within 1 hour of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 days  
REFERENCE RANGE: Age-specific  
METHODOLOGY: High-pressure liquid chromatography (HPLC)  
CLINICAL USE: Indicator of LH secretion and Leydig cell function; evaluate gonadal and adrenal function; aid in diagnosis of hypogonadism, hypopituitarism, Klinefelter syndrome, and impotence (low values) in males, and hirsutism, anovulation, amenorrhea, and virilization in females  
CPT: 84403

#### **[PEMPHAB] PEMPHIGOID AB PANEL**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: IgG and IgA epithelial BMZ antibodies and IgG bullous pemphigoid BP 180 & 230 antigens



TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-10 days  
REFERENCE RANGE: Basement Membrane Zone Ab: < 1:10 Negative  
Bullous Pemphigoid: < 9 Units  
METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)/Indirect  
Fluorescent Antibody (IFA)  
CLINICAL USE: Aid in initial diagnostic assessment and disease  
monitoring in pemphigoid, epidermolysis bullosa  
acquisita, and linear IgA bullous dermatosis  
CPT: 83516 x 2; 86256 x 4

#### **[PENTOBARB] Pentobarbital (Nembutal) Level**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red  
Also Acceptable: 5 mL blood in ORANGE RST, LIME GREEN PST, GOLD  
SST or GREEN TOP tube Pediatric Draw: 3 Full RED (PLAIN)  
MICROTAINERS  
SPECIAL HANDLING: Do NOT use a serum-separator tube; Collect  
specimen immediately prior to next dose  
unless otherwise indicated  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
REFERENCE RANGE: 1-5 mg/L  
OTHER NAMES: Nembutal  
METHODOLOGY: GC/MS  
CLINICAL USE: Short-term treatment of insomnia; preoperative  
sedation; high-dose barbiturate coma treatment  
for increased intracranial pressure or status  
epilepticus unresponsive to other therapy  
CPT: 80345

#### **[PEPSG1] Pepsinogen I**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender(EDTA)  
SPECIAL HANDLING: Separate and freeze within 45 minutes of  
collection  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 28 - 100 ng/mL  
METHODOLOGY: Direct Radioimmunoassay  
CPT: 83519

#### **[PEPSG2] Pepsinogen II**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender(EDTA)  
SPECIAL HANDLING: Separate and freeze within 45 minutes of  
collection  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily  
REFERENCE RANGE: < 22 ng/mL  
METHODOLOGY: Direct Radioimmunoassay  
CPT: 83519

**[PERF] Perforin/Granzyme B**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Must arrive at performing lab within 24 hours  
Specimen must arrive in lab before 1:30 p.m,  
Monday-Thursday only  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Monday-Thursday only  
TURNAROUND TIME: 5-9 days  
METHODOLOGY: Flow Cytometry  
CPT: 88184

**[PEROXPLAS] PEROXISOMAL PLASMALOGEN FIBRO**

SPECIMEN REQUIRED: Fibroblasts at room temperature  
TUBE OR CONTAINER: T-25 flasks  
SPECIMEN VOLUME: 2 flasks  
MINIMUM VOLUME: 1 flask  
TEST AVAILABILITY: Daily  
OTHER NAMES: Peroxisomal Plasmalogen Synthesis (Fibroblast)  
CPT: 82658

**[PERPH] Perphenazine (Trilafon) Level**

SPECIMEN REQUIRED: Frozen serum or plasma; Protect from light  
TUBE OR CONTAINER: Red or Dark green (heparin)  
SPECIAL HANDLING: The use of serum separator tubes is not recommended  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-9 days  
REFERENCE RANGE: 5.0 - 30.0 ng/mL  
OTHER NAMES: Trilafon  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80342

**[PERTA] Bordetella pertussis IgA Ab (FHA)**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8-9 days

REFERENCE RANGE: Negative: < 9 units  
METHODOLOGY: Enzyme Immunoassay (EIA)  
CLINICAL USE: Establish evidence of early/acute infection with  
Bordetella pertussis  
CPT: 86615

#### **[PETH] Phosphatidylethanol**

SPECIMEN REQUIRED: Whole blood  
TUBE OR CONTAINER: Lavendar or Gray  
SPECIAL HANDLING:  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY:  
TURNAROUND TIME: 5-10 days  
REFERENCE RANGE: PEth levels in excess of 20 ng/mL are  
considered evidence of  
Moderate to heavy ethanol consumption.  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry  
CLINICAL USE: Measures blood levels of Phosphatidylethanol, an  
alcohol-specific biomarker  
CPT: 80321

#### **[PF4] Platelet Factor 4**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: CTAD tube (please call ahead - Lab must  
obtain special tube  
SPECIAL HANDLING: Specimen must be collected in special tube  
to the fill line to ensure proper anti-  
coagulant to blood ratio; Invert gently 3-4  
times to prevent clotting  
Send to lab immediately or centrifuge and  
freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 3-15 days  
REFERENCE RANGE: 0-35 (adults)  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Assess platelet activation  
CPT: 83520

#### **[PFA] Platelet Function Assay**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: To eliminate agitation of specimen during  
transport, specimen should be collected at the  
site where test is performed.  
Specimen must be received at performing lab

within 4 hours of collection

Sample must be walked to the laboratory, held in an upright position, with little to no movement of the tube.

SPECIMEN VOLUME: 2 FULL tubes

MINIMUM VOLUME: 1 FULL tube

TEST AVAILABILITY: Monday-Friday (must be received by 2:00 pm (direct to Referrals)

TURNAROUND TIME: 24 hours

METHODOLOGY: PFA

CLINICAL USE: Evaluate platelet function

CPT: 85576

### **[PGD2] Prostaglandin D2**

SPECIMEN REQUIRED: Frozen serum or plasma

TUBE OR CONTAINER: Red, Gold or Lavender(EDTA)

SPECIMEN VOLUME: 3 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: 35 - 115 pg/mL

METHODOLOGY: Direct Radioimmunoassay

CPT: 84150

### **[PGD2UR] Urine Prostaglandin D2 24 Hr**

SPECIMEN REQUIRED: Urine at room temperature or frozen (24-hour (collection)

TUBE OR CONTAINER: Plastic urine container

SPECIAL HANDLING: Collect 24-hour urine in "P" container (no preservative)

Provide 24 hour total volume

SPECIMEN VOLUME: 10 mL

MINIMUM VOLUME: 5 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: 100 - 280 ng/24 hours

METHODOLOGY: Direct Radioimmunoassay

CPT: 84150

### **[PGE2] Prostaglandin E2**

SPECIMEN REQUIRED: Frozen serum or plasma

TUBE OR CONTAINER: Red, Gold or Lavender(EDTA)

SPECIMEN VOLUME: 3 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: 250 - 400 pg/mL

METHODOLOGY: Direct Radioimmunoassay

CPT: 84150

### **[PGL1SDHD] PARAGANGLIOMA 1-SDHD**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Hereditary Paraganglioma (PGL) Type 1 via SDHD gene  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CLINICAL USE: Diagnosis of familial SDHD gene mutations in patients with paragangliomas or pheochromocytomas  
CPT: 81404

**[PGL2SDHAF2] PARAGANGLIOMA 2-SDHAF2**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Hereditary Paraganglioma (PGL) Type 2 via SDHAF2 gene  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CLINICAL USE: Diagnosis of familial SDHAF2 gene mutations in patients with paragangliomas or pheochromocytomas  
CPT: 81479

**[PGL3SDHC] PARAGANGLIOMA 3-SDHC**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Hereditary Paraganglioma (PGL) Type 3 via SDHC gene  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CLINICAL USE: Diagnosis of familial SDHC gene mutations in patients with paragangliomas or pheochromocytomas  
CPT: 81405

**[PGL4SDHB] PARAGANGLIOMA 4-SDHB**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Hereditary Paraganglioma (PGL) Type 4 via SDHB gene  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CLINICAL USE: Diagnosis of familial SDHB gene mutations in

patients with paragangliomas or pheochromocytomas  
CPT: 81405

**[PGL5SDHA] PARAGANGLIOMA 5-SDHA**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Hereditary Paraganglioma (PGL) Type 5 via SDHA gene  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CLINICAL USE: Diagnosis of familial SDHA gene mutations in patients with paragangliomas or pheochromocytomas  
CPT: 81479

**[PGL-PCC] PARAGANGLIOMA/PHEOCHROMOCYTOMA**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Gene sequencing of SDHD, SDHAF2, SDHC, SDHB, SDHA and MAX genes  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81404; 81405 x 2; 81479 x 3

**[PHD] Dialysate Fluid pH**

SPECIMEN REQUIRED: Fluid on ice  
TUBE OR CONTAINER: Sterile container or syringe  
SPECIAL HANDLING: Specimen must be submitted on ice  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Electrochemical  
CLINICAL USE: Determine pH of specimen  
CPT: 83986

**[PHENO] Phenobarbital Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin), Gold or Red  
SPECIAL HANDLING: Include time of last phenobarbital dose  
Stable 7 days room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 14-38 mg/L  
METHODOLOGY: KIMS  
CLINICAL USE: Monitor patients for compliance, efficiency, and possible toxicity  
CPT: 80184

#### **[PHENYT] Phenytoin (Dilantin) Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin), Gold or Red  
SPECIAL HANDLING: Include time of last phenytoin dose  
Stable 4 days room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 10.0-20.0 ug/mL  
OTHER NAMES: Dilantin  
METHODOLOGY: KIMS  
CLINICAL USE: Therapeutic monitor and assessment of toxicity  
CPT: 80185

#### **[PHFL] Body Fluid pH**

SPECIMEN REQUIRED: Body fluid in syringe on ice  
TUBE OR CONTAINER: Heparinized syringe on ice  
SPECIAL HANDLING: Remove needle from syringe; cap tightly; must be tested within two hours of collection;  
Do NOT centrifuge specimen;  
Specify source of fluid  
REJECTION: Reject if not recieved on ice or within one hour of collection.

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Electrochemical  
CLINICAL USE: Aid in the diagnosis of pleuritis, empyema, bacterial peritonitis, rheumatoid effusion, carcinoma, and esophageal rupture  
CPT: 83986

#### **[PHGAS] Gastric Fluid pH**

SPECIMEN REQUIRED: Gastric sample  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Notify chemistry when specimen is to be collected  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Electrochemical-pH meter  
CLINICAL USE: Evaluate gastric acid secretion  
CPT: 83986

#### **[PHLDF] Philadelphia-like B Cell ALL**

SPECIMEN REQUIRED: Bone marrow (Preferred)  
TUBE OR CONTAINER: Yellow top (ACD), Acceptable: Green top (heparin) or lavender (EDTA)  
SPECIMEN VOLUME: Blood 6 mL; Bone Marrow 2-3 mL  
MINIMUM VOLUME: Blood-2mL; Bone Marrow-1mL  
SPECIMEN REQUIRED: Blood  
TUBE OR CONTAINER: Yellow top (ACD), Acceptable: Green top (heparin) or lavender (EDTA)  
SPECIMEN VOLUME: Blood-6mL  
MINIMUM VOLUME: Blood-2mL  
SPECIAL INSTRUCTIONS:  
ALGORITHM:

#### **[PHOS] Phosphorus Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light green (heparin) or Gold  
SPECIAL HANDLING: Separate from cell within 2 hours  
Stable 24 hrs room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0-30 day: 1.5-4.6 mg/dL  
1 month-3 years: 3.7-6.3 mg/dL  
4-12 years: 3.2-5.2 mg/dL  
13 years-adult: 2.5-4.5 mg/dL  
METHODOLOGY: Phosphomolybdate UV  
CLINICAL USE: Aid in diagnosis and treatment of various disorders, including parathyroid gland and kidney disease, and vitamin D imbalance  
CPT: 84100

#### **[PHOSPHAT] PHOSPHATIDYLSERINE AB**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: Anti-phosphatidylserine antibodies IgG, IgM & IgA  
TEST AVAILABILITY: Daily  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Aid in diagnosing aPS (antiphospholipid syndrome) for assessing thrombotic risk



CPT: 86148 x 3

#### **[PHOSUR] Urine Random Phosphorus**

SPECIMEN REQUIRED: Refrigerated random urine  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Phosphomolybdate UV  
CPT: 84105

#### **[PHPL] Pleural Fluid pH**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Heparinized syringe  
SPECIAL HANDLING: Remove needle from syringe; cap tightly; must be tested within two hours of collection;  
Do NOT centrifuge specimen;  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
CLINICAL USE: Determine pH of body fluid; pH of pleural fluid relates to inflammatory states: in empyema and in loculated effusions pleural fluid pH is CPT: 83986

#### **[PHSTL] Stool pH**

SPECIMEN REQUIRED: Refrigerated stool (random)  
TUBE OR CONTAINER: Container with tight seal  
SPECIMEN VOLUME: 1 gram  
MINIMUM VOLUME: 0.5 gram  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 7.0-7.5  
METHODOLOGY: Aqueous stool suspension measured with pH paper  
CLINICAL USE: Detect carbohydrate and fat malabsorption: evaluate small intestinal disaccharidase deficiencies  
CPT: 89240

#### **[PHTNF] Free Phenytoin Level**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 0.8-2.2 mg/L

OTHER NAMES: Dilantin Free

METHODOLOGY: Chemiluminescent

CLINICAL USE: May be helpful in overdosages, since only the free portion can be cleared by dialysis

CPT: 80186

#### **[PHU] Urine pH**

SPECIMEN REQUIRED: Refrigerated urine (random)

TUBE OR CONTAINER: Plastic urine container

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-8 hours

REFERENCE RANGE: 5.0-8.0

METHODOLOGY: Reagent strip

CLINICAL USE: Crude measure of the acid-base balance of the body; aid in determining subtle presence of distal renal tubular disease or pyelonephritis; useful for identifying crystals in urine and determining predisposition to form a given type of stone

CPT: 83986

#### **[PIGA] PIGA GENE MUTATION**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 4 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-5 weeks

CPT: 81479

#### **[PIN] Pinworm Exam**

SPECIMEN REQUIRED: Scotch tape with pinworm

COLLECTION: Collect specimen as soon as the patient awakens in the morning. Apply a piece of CLEAR scotch tape, sticky side down, to the perianal area. Remove the tape and place it sticky side down, onto a clean glass slide. Label the slide and place it into a slide carrier.

TUBE OR CONTAINER: Slide with tape

ORDERING MODULE: MIC

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4 hours

REFERENCE RANGE: Negative for *Enterobius vermicularis* (pinworm)

METHODOLOGY: Microscopy

CLINICAL USE: Detection of pinworm

CPT: 87172

#### **[PINP] Collagen Propeptide**

SPECIMEN REQUIRED: Refrigerated serum

TUBE OR CONTAINER: Red or Gold

SPECIAL HANDLING: Serum must be separated immediately after clot formation and centrifugation  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL (This volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Male: 22-87 ug/L  
Female: Premenopausal: 19-83 ug/L  
Postmenopausal: 16-96 ug/L  
OTHER NAMES: Intact N-Terminal Propeptide of Type 1 Procollagen  
METHODOLOGY: Radioimmunoassay (RIA)  
CLINICAL USE: Indicator of type I collagen turnover  
CPT: 82523

#### **[PIPEC] Pipecolic Acid**

SPECIMEN REQUIRED: Room temperature plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
OTHER NAMES: Piperidine-2 carboxylic acid  
METHODOLOGY: Gas Chromatography-Mass Spectrometry (GC-MS)  
CPT: 82542

#### **[PIPECU] Urine Pipecolic Acid**

SPECIMEN REQUIRED: Frozen urine  
TUBE OR CONTAINER: Random urine  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Daily  
CPT: 82542

#### **[PLA1-A2] HUMAN PLT ANTIGEN (HPA1a/b)**

SPECIMEN REQUIRED: Room temperature whole blood  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIAL HANDLING: Refrigerate if > 1 day delay  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 3-8 days  
OTHER NAMES: Human Platelet Antigen 1 Genotype (HPA-1)  
METHODOLOGY: Polymerase Chain Reaction (PCR) and Fluorescence Monitoring  
CPT: 81400

#### **[PLASM] Plasminogen Activity**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube MUST be filled to the fill line to ensure proper anti-

coagulant to blood ratio; Invert gently 3-4 times to prevent clotting

Send to lab immediately or centrifuge and freeze plasma

SPECIMEN VOLUME: 1 full tube

Testing volume: 2 mL of PLASMA

MINIMUM VOLUME: 1 full tube

Testing volume: 1 mL of PLASMA

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-7 days

REFERENCE RANGE: 78 - 130%

METHODOLOGY: Streptokinase (SK) as mixed with the patient sample and the resulting plasminogen-SK complex converts a chromogenic substrate to produce color

CLINICAL USE: Evaluate thrombotic disease; monitor thrombolytic therapy; study dysplasminogen

CPT: 85420

#### **[PLASMODPCR] Plasmodium species DNA (PCR)**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-6 days

REFERENCE RANGE: Not detected

OTHER NAMES: Malaria PCR

METHODOLOGY: Real-time Polymerase Chain Reaction (PCR)

REFLEX TEST INFORMATION: If detected, additional testing to determine species will be performed at an additional charge

CLINICAL USE: Aid in identifying species to human pathogenic

Plasmodium sp (ie, P falciparum, P knowlesi,

P malariae, P ovale, and P vivax)

CPT: 87798

#### **[PLAVPLT] Platelet Function Assay**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Contact Blood Bank for special tube

SPECIAL HANDLING: To eliminate agitation of specimen during transport, specimen should be collected at the site where test is performed.

Specimen must be received in Blood Bank within 4 hours of collection

Sample must be walked to the Blood Bank, held in an upright position, with little to no movement of the tube.

SPECIMEN VOLUME: 2 FULL tubes

MINIMUM VOLUME: 1 FULL tube

TEST AVAILABILITY: Seven days a week / 24 hours a day

TURNAROUND TIME: 24 hours  
OTHER NAMES: VerifyNow, P2Y12 Inhibitor  
METHODOLOGY:  
CLINICAL USE: Evaluate platelet function  
CPT: 85576

**[PLTAGG] Platelet Aggregation Test**

SPECIMEN REQUIRED: Whole blood  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Call Core Lab 405-271-8001 ext 37219 ext 37219  
least 3 days before test is to be performed to  
to schedule; MUST BE HAND CARRIED and  
Delivered in Core Lab before noon.  
Immediately after drawing, invert tubes gently  
3-4 times to prevent clotting  
CANNOT BE TUBED TO OUMC. MUST BE HAND CARRIED  
SPECIMEN VOLUME: 7 FULL tubes  
SPECIMEN VOLUME: 7 FULL tubes  
MINIMUM VOLUME: 5 FULL tubes  
TEST AVAILABILITY: Tuesday-Thursday  
TURNAROUND TIME: 3 days  
CLINICAL USE: Evaluate platelet function  
CPT: 85576

**[PMNREF] Body Fluid Polynuclear WBCs**

**[PNHFLOW] PNH BY FLOW CYTOMETRY**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark Green (heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Specimen must be received in laboratory by  
1:30 pm, Monday-Friday only  
Specimen must arrive at performing lab within  
48 hours of collection  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: CD45, CD16, CD24, CD15, CD14, CD64, and FLAER  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 2-3 days  
METHODOLOGY: Flow Cytometry  
REFLEX TEST INFORMATION: If positive, CD59 and Glycophorin A  
CLINICAL USE: The following markers are utilized to test  
neutrophils and/or monocytes: CD24, CD15, CD45,  
FLAER, CD64, CD14. If a PNH clone is identified,  
the following markers are used to test red blood  
cells: glycophorin A, CD59.  
CPT: 88184; 88185 x 6

**[PNPO] PYRIDOXAL PHOS DEPEND SEIZURES**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81479

**[POCCAPLACT] Lactic Acid, Venous**

**[POCCOM] Specimen Comment (Misc)**

**[POCCOMCHEM] Specimen Comment (Misc)**

**[POCCREA] POC CREATININE TEST**

**[POCGLUC] POC GLUCOSE TEST**

**[POCKET] Whole Blood Ketones Quantitative**

SPECIMEN REQUIRED: Refrigerated serum or heparin plasma  
TUBE OR CONTAINER: Finger Stick/Heparanized Green Top  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES:  
TEST AVAILABILITY: Daily  
TURNAROUND TIME:  
REFERENCE RANGE: Negative  
METHODOLOGY: Precision Xtra  
CLINICAL USE: Diagnose ketonemia, ketoacidosis resulting from diabetes mellitus, alcoholism, stress, starvation, intestinal disorders including emesis, glycogen storage disease (von Gierke), infantile organic acidemias, and other metabolic disorders  
CPT: 82009

**[POCLYTES] POC ELECTROLYTE PANEL**

**[POCMODE] POC Blood Gas Vent Mode**

**[POCPT] PROTHROMBIN TIME - POC**

**[POLG] POLG GENE-MITOCHONDRIAL**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Buccal swab  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Full gene sequencing  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks

REFERENCE RANGE: No mutation detected  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CLINICAL USE: Confirmation of clinical diagnosis  
CPT: 81406

#### **[POMPENZ] Pompe Disease**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Must be received in lab by 1:30 pm  
Monday-Thursday only; Specimen must be  
shipped same day as collected  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Monday-Thursday

TURNAROUND TIME: 7-10 days  
REFERENCE RANGE:  
OTHER NAMES: Acid alpha-glucosidase deficiency  
METHODOLOGY: Fluorometric Enzyme Assay  
REFLEX TEST INFORMATION:  
CPT: 82657

#### **[POR] Plasma Total Porphyrins**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Green (Heparin)  
SPECIAL HANDLING: Protect specimen from light  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: 0-15 nmol/L  
METHODOLOGY: Scanning Fluorometry  
CLINICAL USE: Aid in diagnosis of hereditary coproporphyrria,  
variegate porphyria  
CPT: 84311

#### **[PORPHRAN] Urine Random Porphobilinogen**

SPECIMEN REQUIRED: Light protected, frozen urine (random)  
TUBE OR CONTAINER: Plastic urine container  
SPECIAL HANDLING: No preservative required unless ordered with  
Delta ALA, then specimen must be acidified  
with 0.5 mL 30% glacial acetic acid;  
Protect specimen from light:  
pH less than 6  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.0-2.0 mg/L  
METHODOLOGY: Chromatography/spectrophotometry  
CLINICAL USE: Detect porphyrias and porphyrinurias

CPT: 84110

**[POSRPR] Rapid Plasma Reagin Titer**

**[PR3AB] Anti-Proteinase 3 (c-ANCA)**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.6 ml  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.0 - 3.5 units/mL  
OTHER NAMES: Antiproteinase 3 (PR3) antibodies  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Diagnosis and monitoring inflammatory activity in primary systemic small vessel vasculitides  
CPT: 86021

**[PREALB] Prealbumin**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Sample should be removed from clot as soon as possible and refrigerated  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Age dependent  
OTHER NAMES: Transthyretin; Thyroxine-binding prealbumin (TBPA)  
Tryptophan-rich prealbumin  
METHODOLOGY: Immunourbidimetric  
CLINICAL USE: Evaluate protein malnutrition, total parenteral nutrition and liver dysfunction  
CPT: 84134

**[PREGAB] Pregabalin (Lyrica) Level**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark Green (heparin)  
SPECIMEN: VOLUME 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
OTHER NAMES: Lyrica  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
CLINICAL USE: Monitor therapeutic drug level  
CPT: 80299

**[PREGNEN] Pregnenolone**

SPECIMEN REQUIRED: Frozen serum (preferred) or plasma  
TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)



SPECIAL HANDLING: Separate within 1 hour of collection  
SPECIMEN VOLUME: 2.5 mL  
MINIMUM VOLUME: 1.1 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-7 days  
REFERENCE RANGE: Age-specific  
METHODOLOGY: Radioimmunoassay (RIA) after column chromatography  
CPT: 84140

**[PREKAL] Prekallikrein Factor Activity**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 ml  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: Normal: >49%  
Mild Deficiency: 5 - 49%  
Severe Deficiency: < 5%  
OTHER NAMES: Fletcher Factor  
METHODOLOGY: Clotting time assay  
CPT: 85292

**[PRETR] Chimerism Pre-Transplant Recipient**

**[PREV1679] X-LINKED MEGALOCORNEA 1(CHRD1**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
OTHER NAMES:

METHODOLOGY:  
CLINICAL USE: Confirmation of clinical diagnosis  
CPT: 81479

**[PRF1] FAMILIAL HLH VIA PRF1 GENE**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3- 4 weeks  
OTHER NAMES: Familial Hemophagocytic Lymphohistiocytosis type 2;  
Perforin 1 (PRF1) gene  
METHODOLOGY: Bi-directional Sanger sequencing  
CPT: 81479

**[PROBNP] NT-Pro-B-Type Natriuretic Peptide**

SPECIMEN REQUIRED: Plasma or serum  
TUBE OR CONTAINER: Lt Green, Lavender, Red or Gold  
SPECIAL HANDLING: Stable 3 days at Room Temp  
6 days at 2-8 degrees  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day

REFERENCE RANGE: < 75 years old: > 75 years old: METHODOLOGY: Sandwich principle  
CLINICAL USE: Support a diagnosis of congestive heart failure (CHF)  
CPT: 83880

**[PROBNPFLD] NT-Pro-B-Type Natriuretic Peptide**

SPECIMEN REQUIRED: Frozen body fluid  
TUBE OR CONTAINER: Sterile tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days

METHODOLOGY: Electrochemiluminescent Immunoassay (ECLIA)  
CLINICAL USE: Support a diagnosis of congestive heart failure (CHF)  
CPT: 83880

**[PROCALC] Procalcitonin**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Green (Heparin) or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: < 0.50 ng/mL: Low risk for progression to severe sepsis  
METHODOLOGY: Chemiluminescent Microparticle Immunoassay (CMIA)  
CLINICAL USE: Elevated values may be consistent with systemic inflammatory response or localized bacterial infection  
CPT: 84145

**[PROCR] Activated Protein C Resistance**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-

coagulant to blood ratio; Invert gently 3-4 times to prevent clotting

Send to lab immediately or centrifuge and freeze plasma

SPECIMEN VOLUME: 1 full tube

Testing volume: 2 mL of PLASMA

MINIMUM VOLUME: 1 full tube

Testing volume: 0.8 mL of PLASMA

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-7 days

REFERENCE RANGE: > 2.0

OTHER NAMES: APC

METHODOLOGY: Clot

CLINICAL USE: Resistance to APC is, to date, the most common cause of inherited thrombophilia and is demonstrated in 20-60% of patients with recurrent venous thrombosis

CPT: 85307

### **[PROG] Progesterone Level**

SPECIMEN REQUIRED: Refrigerated serum or plasma

TUBE OR CONTAINER: Lt Green (heparin) or Gold/Red

SPECIAL HANDLING: Stable for 24 hours at room temp

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 0.3 mL

PEDIATRIC TEST INFO: Order PEDPROGEST for pediatric testing

TEST AVAILABILITY: Daily

TURNAROUND TIME: 1 day

REFERENCE RANGE: Male: Not established

Female: Normal Menstruating

Follicular: Luteal: 2.3 - 34.3

Postmenopausal: Pregnant Female:

1st tri: 4.1-239.6

2nd tri: 36.2-154.5

3rd tri: 45.0 - 395.3

METHODOLOGY: ECLIA

CLINICAL USE: Establish presence of a functioning corpus luteum or luteal cell function; assess placental function during pregnancy, ovarian function test

CPT: 84144

### **[PROGHPLC] Progesterone Level**

ONLY FOR USE ON PATIENTS RECEIVING DHEA!

Collect

Serum Separator Tube (SST). Also acceptable: Plain Red, Pink (K2EDTA), Plasma Separator Tube (PST), Green (Sodium Heparin), or Green (Lithium Heparin).

Specimen Preparation

Transfer 1 mL serum or plasma to an ARUP Standard Transport

Tube. (Min: 0.3 mL)  
Storage/Transport Temperature  
Refrigerated. Also acceptable: Frozen.  
Unacceptable Conditions  
Grossly hemolyzed specimens.  
Stability  
After separation from cells: Ambient: Unacceptable;  
Refrigerated: 1 week; Frozen: 6 months.

#### **[PROINS] Proinsulin**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.0 - 9.4 pmol/L  
METHODOLOGY: Enzyme immunoassay (EIA)  
CPT: 84206

#### **[PROLAC] Prolactin**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Lt Green (heparin) or Gold/Red  
SPECIAL HANDLING: Separate from cell promptly.  
Stable 5 days at room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
PEDIATRIC TEST INFO: Order PEDPROLAC for pediatric testing

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: Male: 4.1 - 28.4  
Female: 1.9 - 46.9

METHODOLOGY: ECLIA  
CLINICAL USE: Pituitary function test  
CPT: 84146

#### **[PROLEAD] PROTOPORPHYRIN & LEAD PROFILE**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Royal Blue (EDTA)  
Lavender (EDTA) will no longer be accepted after 10/1/13  
SPECIAL HANDLING: Please contact laboratory for correct tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: Lead, blood; protoporphyrin, free erythrocyte; and zinc protoporphyrin  
TEST AVAILABILITY: Daily  
METHODOLOGY: Lead: Atomic absorption spectrometry (AAS)

ZPP: Fluorometry  
CLINICAL USE: Monitor lead exposure  
CPT: 83655; 84202

**[PROMETH] Promethazine (Phenergan) Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-9 days  
REFERENCE RANGE: < 150 ng/mL  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 84022

**[PROPGLY] Propylene Glycol Level**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Red or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.7 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-10 days  
METHODOLOGY: Gas Chromatography (GC)  
CLINICAL USE: Overexposure/Poisoning determination  
CPT: 84600

**[PROSTE2U] Urine Prostaglandin E2**

SPECIMEN REQUIRED: Urine at room temperature or frozen (24-hour collection)  
TUBE OR CONTAINER: Plastic urine container  
SPECIAL HANDLING: Collect 24-hour urine in "P" container (no preservative)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 400 - 620 ng/24 hours  
METHODOLOGY: Direct Radioimmunoassay  
CPT: 84150

**[PROSTF2] 11 beta-Prostaglandin F2 alpha**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender(EDTA)  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 10 days

REFERENCE RANGE: 80-240 pg/mL  
METHODOLOGY: Direct Radioimmunoassay  
CPT: 84150

### **[PROT] PROTOPORPHYRINS**

SPECIMEN REQUIRED: Whole blood at room temperature (submit original unopened tube)  
TUBE OR CONTAINER: Royal Blue (EDTA), Tan (EDTA) or Lavender (EDTA) microtainer for pediatrics  
Royal Blue (EDTA) adults  
Lavender (EDTA) will no longer be accepted after 10/1/13 for for a specimen collected by venipuncture (Lavender accepted for capillary collection but not recommended)  
SPECIAL HANDLING: Please contact laboratory for correct tube  
SPECIMEN VOLUME: 7 mL  
MINIMUM VOLUME: 0.2 mL  
TEST INCLUDES: Zinc protoporphyrin  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: ZPP, blood: Adults: 0-36 g/dL; occupational exposure: BEI (sampling time is after one month's exposure):  
METHODOLOGY: Fluorometry  
CLINICAL USE: Monitor chronic industrial exposure to lead  
CPT: 84202

### **[PROTAS] Body Fluid Total Protein**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Colorimetric  
CLINICAL USE: Evaluate effusions; diagnose transudate versus exudate  
CPT: 84157

### **[PROTCF] Protein C Activity**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Patient should avoid coumadin therapy for 3 weeks prior to test  
Draw 2 FULL citrate tubes; tube MUST be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and

freeze plasma

SPECIMEN VOLUME: 2 full tubes

Testing specimen: 2 transport tubes with 1 ml plasma each

MINIMUM VOLUME: 1 full tube

Testing specimen: 2 transport tubes with 0.5 ml

TEST AVAILABILITY: Daily

TURNAROUND TIME: 1-7 days

REFERENCE RANGE: 70-160%

OTHER NAMES: Protein C, Functional; Functional Protein C

METHODOLOGY: Clot

REFLEX TEST INFORMATION: Protein C antigen will be reflexed at an additional charge, if activity is below normal

CLINICAL USE: Aid in diagnosis of patients at risk of venous thromboembolic disease

CPT: 85303

#### **[PROTCSF] CSF Total Protein**

SPECIMEN REQUIRED: Refrigerated CSF

TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours

REFERENCE RANGE: 0-30 days: 22-135 mg/dL

> 1 month: 17- 50 mg/dL

METHODOLOGY: Turbidimetric

CLINICAL USE: A nonspecific but reliable indication of CNS pathology such as meningitis, brain abscess, neoplastic disease, and multiple sclerosis

CPT: 84157

#### **[PROTDIP] Urine Protein**

#### **[PROTFL] Body Fluid Total Protein**

SPECIMEN REQUIRED: Refrigerated body fluid

TUBE OR CONTAINER: Sterile container

SPECIAL HANDLING: Specify source of fluid

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours

REFERENCE RANGE: None established

METHODOLOGY: Colorimetric

CPT: 84157

#### **[PROTPC] Pericardial Fluid Total Protein**

SPECIMEN REQUIRED: Refrigerated fluid

TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Colorimetric  
CLINICAL USE: Evaluate effusions; diagnose transudate versus  
exudate  
CPT: 84157

**[PROTPL] Pleural Fluid Total Protein**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Colorimetric  
CLINICAL USE: Evaluate effusions; diagnose transudate versus  
exudate  
CPT: 84157

**[PROTPT] Peritoneal Fluid Total Protein**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Colorimetric  
CLINICAL USE: Evaluate effusions; diagnose transudate versus  
exudate  
CPT: 84157

**[PROTR] Protriptyline Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark green (heparin)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-5 days  
REFERENCE RANGE: 50-170 ng/mL  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry  
(LC/MS/MS)  
CLINICAL USE: Therapeutic monitoring and toxicity assessment  
CPT: 80299



**[PROTRAN] Urine Random Total Protein**

SPECIMEN REQUIRED: Refrigerated random urine  
TUBE OR CONTAINER: Plastic urine container  
SPECIAL HANDLING: First morning specimen is preferred  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Turbidimetric  
CPT: 84145

**[PROTS] Free Protein S Antigen**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Patient should avoid coumadin therapy for 2 weeks & avoid heparin for 2 days prior to test  
Draw 2 FULL citrate tubes; tube MUST be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 2 full tubes  
Testing specimen: 2 transport tubes with 1 ml plasma each  
MINIMUM VOLUME: 1 full tube  
Testing specimen: 2 transport tubes with 0.5 ml plasma each  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-7 days  
REFERENCE RANGE: 65-150 %  
METHODOLOGY: Clot  
REFLEX TEST INFORMATION: When the free antigen result is below normal, Protein S Antigen total & Protein S activity will be reflexed at an additional charge  
CLINICAL USE: Aid in diagnosis of patients at risk of venous thromboembolic disease  
CPT: 85306

**[PROTSY] Synovial Fluid Total Protein**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Colorimetric

CLINICAL USE: Evaluate effusions; diagnose transudate versus exudate  
CPT: 84157

**[PRSS1] PANCREATITIS (PRSS1) SEQ**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81404

**[PSA] Prostate Specific Antigen Total**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (Li heparin) or Gold/Red  
SPECIAL HANDLING: Specimen Stability: 5 days-refrigerated  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: MALE: 50-69 years: > or = 70 years: None Established  
FEMALE: None Established  
METHODOLOGY: Electrochemiluminescence Immunoassay  
CLINICAL USE: Most sensitive marker for monitoring patients with prostate cancer  
CPT: 84153

**[PSAS] Prostate Specific Antigen Screen**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 0.0-4.0 ng/mL  
METHODOLOGY: Chemiluminescence  
CLINICAL USE: Used in annual prostate screening  
CPT: G0103

**[PSEU] Pseudocholinesterase**

SPECIMEN REQUIRED: Refrigerated plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Must be centrifuged and separated immediately  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: 1000-3500 IU/L

METHODOLOGY: Spectrophotometry (Ellman) - kinetic  
CLINICAL USE: Screen pre-operative patients for succinylcholine  
(suxamethonium) anesthetic sensitivity, genetic  
or secondary to insecticide exposure  
CPT: 82480

### **[PTFRAG] Prothrombin Fragment 1.2**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube MUST be filled  
to the fill line to ensure proper anti-  
coagulant to blood ratio; Invert gently 3-4  
times to prevent clotting  
Send to lab immediately or centrifuge and  
freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-8 days  
REFERENCE RANGE: 0.4 - 1.8 nm/L  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Levels are elevated in patients with deep venous  
thrombosis, pulmonary embolism, disseminated  
intravascular coagulation, septicemia, pre-  
eclampsia, prothrombotic state, eclampsia & trauma  
CPT: 83520

### **[PTH] PARATHYROID HORMONE (INTACT)**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Allow specimen to clot at room temperature;  
Separate and refrigerate within 8 hours of  
collection; Stable for 2 days refrigerated

Fasting specimen recommended

SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
PEDIATRIC TEST INFO: Min: 1 full microtainer (1mL)  
Opt: 2 full microtainers (2mL)  
TEST INCLUDES: PTH and Calcium  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: 5-44 pg/mL  
OTHER NAMES: PTH Intact; PTH Whole Molecule  
METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: Differential diagnosis of hypercalcemia  
CPT: 83970

### **[PTHAB] Anti-Parathyroid Hormone Antibody**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Do NOT collect in a gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-10 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Radiobinding Assay  
CLINICAL USE: Useful in autoimmune disorders involving parathyroid gland resulting in the production of anti-PTH and hypoparathyroidism  
CPT: 83519

### **[PTHFLD] Body Fluid Parathyroid Hormone**

SPECIMEN REQUIRED: Frozen fine needle aspirate or body fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Indicate source of specimen; specimen must be clear, not viscous or bloody  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 Days  
METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: Determine the presence of parathyroid hormone-secreting cells near the parathyroid glands. The presence of large amounts of parathyroid hormone in nonparathyroid cells may indicate metastasis of parathyroid tumor cells to other sites.  
CPT: 83970

### **[PTT] Activated Partial Thromboplast Time**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube MUST be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
It is essential to know if patient is on coumadin  
Clotted specimens will be rejected  
PT, PTT & Fibrinogen may be performed from one full tube  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube

Testing volume: 1 mL of PLASMA

TEST AVAILABILITY: Daily

TURNAROUND TIME: 1-4 hours

REFERENCE RANGE: 25.0-38.0 seconds

Anticoagulants including vitamin K antagonists, unfractionated and low molecular weight heparins, direct oral anticoagulants, and direct thrombin inhibitors can interfere with routine and specialized coagulation testing. Great care should be taken in interpretation of results when patients are anticoagulated during testing.

OTHER NAMES: aPTT-LA; aPTT, Lupus-Sensitive; Lupus-Sensitive aPTT

METHODOLOGY: Photo-optical clot detection

CLINICAL USE: Evaluation of intrinsic coagulation system; monitor heparin therapy

CPT: 85730

### **[PWS] PRADER-WILLI SYNDROME**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3 weeks

METHODOLOGY: Polymerase Chain Reaction

CPT: 81331

### **[PYR5CSF] CSF Pyridoxine 5 Phosphate**

SPECIMEN REQUIRED: Frozen CSF

TUBE OR CONTAINER: Sterile CSF tube

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-3 weeks

METHODOLOGY: HPLC/fluorescence

CLINICAL USE: Useful for diagnosis of disorders leading to low CSF levels of this cofactor

CPT: 84207

### **[PYRU] Pyruvic Acid**

SPECIMEN REQUIRED: Whole blood on ice

TUBE OR CONTAINER: Gray (Sodium fluoride) on ice

SPECIAL HANDLING: Draw blood into chilled gray top tube from a fasting and resting patient; special processing to be performed by laboratory

SPECIMEN VOLUME: 5 mL supernatant

MINIMUM VOLUME: 0.2 mL supernatant

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2 days

REFERENCE RANGE: 0.3-0.7 mg/dL

OTHER NAMES: Pyruvate  
METHODOLOGY: Pyruvate-lactate spectrophotometry  
CLINICAL USE: Assess O2 derivation; provide index of the severity of circulatory failure  
CPT: 84210

**[PYRUK] Erythrocytes Pyruvate Kinase Assay**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA), Dark Green (heparin) or Yellow (ACD)  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: 9.0 - 22.0 U/g Hgb  
METHODOLOGY: Enzymatic  
CPT: 84220

**[QFEV] Q FEVER IgG TITER**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.4 mL  
MINIMUM VOLUME: 0.2 mL  
TEST INCLUDES: Titer of both Phase I and Phase II responses of IgG antibody  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Negative: < 1:16  
OTHER NAMES: Coxiella burnetii Antibodies  
METHODOLOGY: Indirect fluorescent antibody (IFA)  
CLINICAL USE: Aid in the differential diagnosis for Q fever  
CPT: 86638

**[QUET] Quetiapine (Seroquel) Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature; Freeze after 3 days  
TUBE OR CONTAINER: Red or Dark green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-8 days  
REFERENCE RANGE: 100 - 1000 ng/mL  
METHODOLOGY: High Performance Liquid Chromatography with Ultraviolet Detection; (HPLC-UV)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[QUIN] Quinidine Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red or Dark green (heparin)

SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 days  
REFERENCE RANGE: Therapeutic: 2.0 - 5.0 ug/mL  
Potentially toxic: > 5.0 ug/mL  
METHODOLOGY: Immunoassay  
CLINICAL USE: Therapeutic monitoring and toxicity assessment  
CPT: 80194

#### **[RA] Rheumatoid Factor Screen**

SPECIMEN REQUIRED: Serum or plasma  
TUBE OR CONTAINER: Red, Gold, Lt Green (heparin)  
CAUSE FOR REJECTION: Specimens other than Serum or Hep. Plasma  
Do not use for Body Fluid testing.  
SPECIAL HANDLING: Stable for 24 hours at room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: Negative: < 11.0 IU/mL  
OTHER NAMES: Rheumatoid Arthritis Factor; RF Titer  
METHODOLOGY: Immunoturbidimetric  
CLINICAL USE: Differential diagnosis and prognosis of rheumatoid arthritis and related entities  
CPT: 86431

#### **[RAB27A] RAB27A GENE (FHL) GRISCELLI**

SPECIMEN REQUIRED: Room temperature whole blood  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Griscelli Syndrome via RAB27A gene  
METHODOLOGY: Bi-directional Sanger sequencing  
CPT: 81479

#### **[RABAB] Rabies Virus Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Specimen will be rejected if grossly hemolyzed or lipemic  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-10 days  
METHODOLOGY: Rapid Fluorescent Focus Inhibition Test (RFFIT)  
CPT: 86382

**[RAFL] Body Fluid Rheumatoid Factor Screen**

SPECIMEN REQUIRED: Refrigerated or frozen body fluid  
TUBE OR CONTAINER: Plastic tube  
SPECIAL HANDLING: Indicate source of fluid; Unable to perform on breast milk or salivary fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: None established  
METHODOLOGY: Quantitative Turbidimetric  
CPT: 86431

**[RAJI] Immune Complex Detection -Raji Cell**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIAL HANDLING: Freeze at -70 C or store on dry ice within six hours of collection. Specimen is stable for 14 days if stored at -70 C. Storage of specimens at -20 C will yield erroneous results.  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.1 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Normal < 15.1 ug Eq/mL  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Detect circulating immune complexes  
CPT: 86332

**[RAM] Rheumatoid Factor IgM Antibody**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: Negative: METHODOLOGY: Enzyme immunoassay (EIA)  
CPT: 86431

**[RASTASCARIS] Ascaris Allergen IgE Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
METHODOLOGY: Quantitative allergen-specific IgE test  
CPT: 86003

**[RASTASP] Aspergillus fumigatus Allergen**



SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Negative  
Methodology: Quantitative allergen-specific IgE test  
CPT: 86003

**[RASTBAN] Banana Allergen (RAST)**

**[RASTBEEF] Beef Allergen (RAST)**

**[RASTCAND] Candida albicans Allergen IgE Ab**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Negative  
Methodology: Quantitative allergen-specific IgE test  
CPT: 86003

**[RASTCHOC] Chocolate Allergen**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE:  
METHODOLOGY: Quantitative allergen-specific IgE test  
CPT: 86003

**[RASTGLUT] Gluten Allergen**

**[RASTLAT] Latex Allergen**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-3 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Quantitative allergen-specific IgE test  
CLINICAL USE: Detect sensitivity to latex  
CPT: 86003

**[RASTMILK] Cow's Milk Allergen**

**[RASTORAN] Orange Allergen**

**[RASTPENICILG] Penicillin-G Allergen**

**[RASTPENICILV] Penicillin-V Allergen**

**[RASTPORK] Pork Allergen (RAST)**

**[RASTSOY] Soybean Allergen IgE Antibody**

**[RASTSTRAW] Strawberry Allergen (RAST)**

**[RASTTANG] Tangerine Allergen**

**[RASTTILAPIA] Tilapia Allergen IgE Antibody**

**[RASTTOM] RAST TOMATO**

**[RASYS] Synovial Fluid Rheumatoid Factor**

SPECIMEN REQUIRED: Refrigerated body fluid

TUBE OR CONTAINER: Clean plastic tube

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 1-3 days

REFERENCE RANGE: Negative: < 1:10

METHODOLOGY: Hemagglutination

CPT: 86431

**[RB1] RETINOBLASTOMA (RB1) GENE**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-5 weeks

OTHER NAMES: Retinoblastoma via the RB1 gene

METHODOLOGY: Next-generation Sequencing (NGS)

CPT: 81406

**[RBC BAND 3] RBC Band 3 Protein Reduction**

SPECIMEN REQUIRED: Lavender (EDTA) or green (sodium or lithium heparin). Include a Wright stained slide.

TUBE OR CONTAINER: Lavender (EDTA)

SPECIAL HANDLING: Transport 4mL refrigerated whole blood in the original container. Specimens must be analyzed within seven days of collection.  
SPECIMEN VOLUME: 4 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Sunday-Saturday  
TURNAROUND TIME: 1-3 Days  
REFERENCE RANGE: Normal  
METHODOLOGY: Qualitative Flow Cytometry  
CLINICAL USE: This test can be used to confirm the suspected  
CPT: 88184

#### **[RBCGEN] RED CELL GENOTYPING**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL (whole blood)  
MINIMUM VOLUME: 3 mL (whole blood)  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 4-8 days  
METHODOLOGY: Polymerase chain reaction (PCR)-hybridization probe analysis  
CPT: 81479

#### **[RBCPLAS] RBC Plasmalogens**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1.5 mL  
METHODOLOGY: Chromatography  
CPT: 82542

#### **[RBPJ] ADAMS-OLIVER TYPE 3 (RBPJ)**

SPECIMEN REQUIRED: Whole blood room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-6 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81479

#### **[RCD] REVERSIBLE COX DEFICIENCY**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 6 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Analysis of two mitochondrial mutations associated with Reversible Cox Deficiency:  
m.14674T>C and m.14674T>G  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 1 week  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81479

**[RCDP1] RHIZOMELIC CHONDRODYSPL (PEX7)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
OTHER NAMES: Rhizomelic Chondrodysplasia Punctata type 1 via  
PEX7 gene sequencing  
METHODOLOGY: Targeted Capture followed by Massively Parallel  
Sequencing  
CPT: 81479

**[RCDP2] RHIZOMELIC CHONDRODYSPL(GNPAT)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
OTHER NAMES: Rhizomelic Chondrodysplasia Punctata type 2 via  
GNPAT gene sequencing  
METHODOLOGY: Targeted Capture followed by Massively Parallel  
Sequencing  
CPT: 81479

**[RCDP3] RHIZOMELIC CHONDRODYSPL(AGPS)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
OTHER NAMES: Rhizomelic Chondrodysplasia Punctata type 3 via  
AGPS gene sequencing  
METHODOLOGY: Targeted Capture followed by Massively Parallel  
Sequencing  
CPT: 81479

**[RECOVAB] ANTI-RECOVERIN AB (CAR)**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Specimen must be received in Laboratory by  
1:30 pm, Monday through Friday only  
SPECIMEN VOLUME: 5 ml  
MINIMUM VOLUME: 2 ml

TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 7-14 days  
REFERENCE RANGE: Negative  
OTHER NAMES: Recombx CAR (Anti-Recoverin) Antibody Test;  
Cancer Associated Retinopathy  
METHODOLOGY: Western Blot  
CPT: 84182

#### **[REDUCSTL] Stool Reducing Substances**

SPECIMEN REQUIRED: Fresh random stool (Frozen)  
TUBE OR CONTAINER: Plastic container with tight seal  
SPECIMEN VOLUME: 5 gram  
MINIMUM VOLUME: 1 gram  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Semi-quantitative Colorimetry  
CLINICAL USE: Detect deficiency of intestinal border enzymes  
CPT: 84377

#### **[REFSHL] REFERRED TO STATE HEALTH LAB**

#### **[RENINA] Renin Activity**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Patient's posture and time of collection  
should be noted  
Freeze immediately  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
PEDIATRIC TEST INFO: Order PEDREN for pediatric testing to be  
performed by Esoterix  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Age specific  
OTHER NAMES: Plasma Renin Activity (PRA); PRA  
METHODOLOGY: Radioimmunoassay (RIA)  
CLINICAL USE: Aid in differential diagnosis of individuals with  
hypertension  
CPT: 84244

#### **[REPT] Reptilase-R Time**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled  
to the fill line to ensure proper anti-  
coagulant to blood ratio; Invert gently 3-4  
times to prevent clotting  
Send to lab immediately or centrifuge and  
freeze plasma

SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
METHODOLOGY: Rate of fibrin clot formation after the addition  
of reptilase  
CLINICAL USE: Diagnosis of fibrinogen deficiency, both  
congenital and acquired  
CPT: 85635

#### **[RETAB] Anti-Reticulin Antibody**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Negative: < 1:40  
METHODOLOGY: Indirect Fluorescent Antibody (IFA)  
CLINICAL USE: Detect antibodies associated with gluten  
enteropathies such as celiac disease  
CPT: 86256

#### **[RETBP] Retinol-Binding Protein**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Green (heparin)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: 18 years and older: 1.4-5.7 mg/dL  
OTHER NAMES: RBP4  
METHODOLOGY: Immunologic  
CLINICAL USE: Reflects the synthesis capacity of the liver and  
may indicate early malnutrition, acute and  
chronic hepatic disease, advanced chronic renal  
insufficiency, and cystic fibrosis  
CPT: 83883

#### **[RETPTC] RET-PTC1/PTC3 TRANSLOCATION**

SPECIMEN REQUIRED: Paraffin-embedded tissue or slides at room  
temperature or refrigerated (protect from  
excessive heat  
TUBE OR CONTAINER: Slides or tissue block  
SPECIMEN VOLUME: 5 slides  
MINIMUM VOLUME: 3 slides  
TURNAROUND TIME: 10-14 days  
OTHER NAMES: RET-CCDC6 and RET-NCOA4 (RET-PTC1 and RET-PTC3)

Translocations Detection by PCR  
METHODOLOGY: Polymerase chain reaction (PCR)  
CLINICAL USE: Detects RET-CCDC6 and RET-NCOA4 gene fusions associated with thyroid cancer  
CPT: 81479

#### **[RFP] RENAL FUNCTION PANEL**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.8 mL  
TEST INCLUDES: Sodium, potassium, chloride, CO<sub>2</sub>, BUN, glucose, creatinine, albumin, calcium, phosphorus  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: See individual test  
METHODOLOGY: See individual tests  
CPT: 80069

#### **[RHABDO] RHABDOMYOLYSIS PANEL NGS**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Sequencing of 29 genes: ACADL, ACADM, ACADVL, ACAD9, AGL, AMPD1, C10orf2, CPT1B, CPT2, ETFA, ETFB, GAA, GYS1, HADHA, HADHB, LPIN1, OPA1, OPA3, PFKM, PGAM2, PGM1, PHKA1, POLG, POLG2, PYGM, RRM2B, SUCLA2, TK2, TYMP  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
OTHER NAMES: Myopathy/Rhabdomyolysis Panel  
METHODOLOGY: Next Generation Sequencing (NGS)  
CPT: 81401 x 2; 81404 x 2; 81405 x 2; 81406 x 5; 81407 x 2; 81479 x 16

#### **[RIBCSF] Ribosomal P Protein Antibody**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
METHODOLOGY: Enzyme immunoassay (EIA)  
CPT: 83516

#### **[RIBPAB] Ribosomal P Protein Antibody**

SPECIMEN REQUIRED: Serum at room temperature (can be stored for up to 7 days refrigerated)  
TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-6 days  
METHODOLGOY: Multiplex flow immunoassay  
CPT: 86235

**[RICKDNA] Rickettsia rickettsii DNA (PCR)**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.7 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Not Detected  
OTHER NAMES: Rickettsia rickettsii DNA by PCR  
METHODOLOGY: Real-time Polymerase Chain Reaction (PCR)  
CLINICAL USE: Aid in the diagnosis of infection due to Rickettsia  
CPT: 87798

**[RIF] Rifampin Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red-no gel or Dark Green (heparin)  
SPECIAL HANLDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-10 days  
METHODOLOGY: High-pressure liquid chromatography with Ultraviolet Detection; (HPLC-UV)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[RIFAB] RIFABUTIN (MYCOBUTIN) LEVEL**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
Ship Monday-Thursday only  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Sunday-Thursday  
TURNAROUND TIME: 3-9 days  
OTHER NAMES: Mycobutin  
METHODOLOGY: High performance Liquid chromatography (HPLC)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[RITON] RITONAVIR (NORVIR) LEVEL**

SPECIMEN REQUIRED: Frozen serum



TUBE OR CONTAINER: Red  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
METHODOLOGY: High performance liquid chromatography (HPLC)  
CPT: 82542

**[RNAPOLY123] RNA Polymerase I,II,III IgG Ab**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
ORDERING MODULE: LAB  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Immunoprecipitation  
CLINICAL USE: Evaluating patients suspected of having systemic sclerosis, when used in conjunction with centromere and Scl70 antibodies or provides diagnostic and prognostic information in patients with systemic sclerosis  
CPT: 83516

**[RNAPOLYG] RNA Polymerase III IgG Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Gold or Red  
ORDERING MODULE: LAB  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)  
CLINICAL USE: Evaluating patients suspected of having systemic sclerosis, when used in conjunction with centromere and Scl70 antibodies or provides diagnostic and prognostic information in patients with systemic sclerosis  
CPT: 83516

**[ROCKYG] Rickettsia IgG Ab (Rocky Mt Fever)**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.4 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Negative: Present/past: 1:16-1:64  
Recent:  $\geq 1:128$   
OTHER NAMES: Rickettsia rickettsii

METHODOLOGY: Enzyme immunoassay (EIA)  
REFLEX TEST INFORMATION: A positive IgG will reflex a titer by Indirect fluorescent antibody (IFA) at no additional charge  
CLINICAL USE: Establish the diagnosis of infection due to Rickettsia in the spotted fever group or in the typhus group  
CPT: 86757

**[ROCKYGM] AB ROCKY MT FEVER IGG/IGM**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.8 mL  
TEST INCLUDES: IgG and IgM antibodies  
TURNAROUND TIME: 4 days  
REFERENCE RANGE: IgG: Negative: < 1:16  
IgM: Negative: < 9 units  
OTHER NAMES: Rickettsia rickettsii  
METHODOLOGY: Enzyme immunoassay (EIA)  
REFLEX TEST INFORMATION: A positive IgG will reflex a titer by Indirect fluorescent antibody (IFA) at no additional charge  
CLINICAL USE: Establish the diagnosis of infection due to Rickettsia in the spotted fever group  
CPT: 86757 x 2

**[RPE65] LCA2/RP20 VIA RPE65 GENE**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST INCLUDES: DNA sequencing of all 14 coding exons and splice site of the RPE65 gene  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Leber Congenital Amaurosis 2 (LCA2) and Retinitis Pigmentosa 20 (RP20) via RPE65 gene  
METHODOLOGY: Bi-directional sequencing  
CPT: 81406

**[RPPANEL] RETINITIS PIGMENTOSA GENES**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Comprehensive sequencing and Deletion/Duplication Panel (> 60 genes included)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 12 weeks

METHODOLOGY: Next Generation Sequencing (NGS)  
CPT: 81228; 81406

**[RPR] Rapid Plasma Reagin**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Gold, Red, Green (heparin) or Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Nonreactive  
OTHER NAMES: Nontreponemal Test; RPR; STS; Syphilis Serology  
METHODOLOGY: Charcoal Flocculation  
REFLEX TEST INFORMATION: Specimens with a reactive response will reflex a FTA Ab test at an additional charge  
CLINICAL USE: Test for syphilis  
CPT: 86592

**[RSVAB] Respiratory Syncytial Virus Ab**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 days  
REFERENCE RANGE: Negative: OTHER NAMES: Respiratory Syncytial Virus antibody  
METHODOLOGY: Complement fixation (CF)  
CLINICAL USE: Aid in establishing the diagnosis of respiratory syncytial virus infection  
CPT: 86756

**[RUBEAB] Rubeola (Measles) IgG Antibody**

SPECIMEN REQUIRED: Serum  
TUBE OR CONTAINER: Gold or Red  
SPECIAL HANDLING: Refrigerate at 2-8 degrees C for up to 8 days

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
PEDIATRIC TEST INFO: 0.5 ml; 1 Gold microtainer  
TEST AVAILABILITY:  
TURNAROUND TIME: 1-5 days  
REFERENCE RANGE: NEGATIVE EQUIVOCAL 0.50-0.69  
POSITIVE >0.69  
OTHER NAMES: Measles antibodies  
METHODOLOGY: ELISA  
CLINICAL USE: Determine immune status or aid in diagnosis of recent infection

CPT: 86765

**[RUBELLAIGG] Rubella IgG Antibody**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Gold, Red or Light Green (heparin)  
SPECIAL HANDLING: Separate from cells promptly.  
Stable 7 days at room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Negative: < 10  
Positive:  $\geq 10.0$   
OTHER NAMES: German Measles Antibody  
METHODOLOGY: Electrochemiluminescence Immunoassay  
CLINICAL USE: Recommended for immune status determination  
CPT: 86762

**[RUBEM] Rubeola (Measles) IgM Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.4 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Negative: Borderline: 0.80 - 1.20 AU  
Positive:  $>1.20$  AU  
OTHER NAMES: Measles antibody  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Demonstrate acute infection with measles virus;  
differential diagnosis of a pregnant female  
exposed to or presenting with a rash  
CPT: 86765

**[RUBGCSF] CSF Rubella IgG Antibody**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: 5 IU/mL or less: Negative  
5-9 IU/mL: Equivocal  
10 IU/mL or greater: Positive  
OTHER NAMES: German Measles Antibody  
METHODOLOGY: Chemiluminescent Immunoassay  
CPT: 86317

**[RUBMAB] Rubella IgM Antibody**

SPECIMEN REQUIRED: Frozen serum

TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 days  
REFERENCE RANGE: Negative: < 20.0 AU/mL  
Equivocal: 20.0-24.9 AU/mL  
Positive: > 24.9 AU/mL  
OTHER NAMES: German Measles Antibody  
METHODOLOGY: Chemiluminescent immunoassay (CLIA)  
CPT: 86762

**[RUBMCSF] CSF Rubella IgM Antibody**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: 0.89 IV or less: Negative  
0.90-1.09 IV: Equivocal  
1.10 IV or greater: Positive  
OTHER NAMES: German Measles Antibody  
METHODOLOGY: Chemiluminescent Immunoassay  
CPT: 86317

**[RUBTAYSEQ] RUBINSTEIN-TAYBI SEQUENCING**

SPECIMEN REQUIRED: Whole blood Fibroblasts or amniotic fluid at room temperature  
TUBE OR CONTAINER: Lavender (EDTA), T-25 flasks or sterile container  
SPECIMEN VOLUME: 5 mL (whole blood)  
2 flasks  
40 mL (amniotic fluid)  
MINIMUM VOLUME: 2 mL (whole blood)  
1 flask  
30 mL (amniotic fluid)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81479

**[RUFIN] Rufinamide Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark Green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
Separate within two hours of collection  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-6 days  
REFERENCE RANGE: Expected plasma concentrations in patients taking recommended daily dosages:  
up to 60.0 g/mL  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[S100B] S-100B ACCUQUANT**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
REFERENCE RANGE: 0.00 - 0.12 ug/L  
METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)  
CLINICAL USE: Useful for prognosis and treatment monitoring of patients diagnosed with malignant melanoma  
CPT: 86316

**[SAL] Salicylates Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green(heparin), Red or Gold  
SPECIAL HANDLING: Stable 14 days at 2-8 degrees  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 44-220 ug/mL  
Potentially toxic: > 220 ug/mL  
OTHER NAMES: Aspirin; Salicylic Acid  
METHODOLOGY: Enzymatic  
CLINICAL USE: Monitor therapeutic drug level, evaluate toxicity  
CPT: 80329

**[SALCORT] Saliva Cortisol**

SPECIMEN REQUIRED: Fresh frozen saliva  
TUBE OR CONTAINER: Sterile tube #see SEE SPECIAL HANDLING  
SPECIAL HANDLING: Special collection kits available. Please contact laboratory  
SPECIMEN VOLUME: 1 mL or swab  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-8 days  
METHODOLOGY: High-pressure liquid chromatography (HPLC)/tandem mass spectrometry (LC/MS/MS)  
CPT: 82533

**[SANAFIB] Sanfilippo Syndrome Type A Interp**

SPECIMEN REQUIRED: Fibroblasts at room temperature  
TUBE OR CONTAINER: T25 flasks  
SPECIMEN VOLUME: 2 T25 flasks  
TEST AVAILABILITY: Daily  
OTHER NAMES: Sanfilippo Syndrome type A, Heparin sulfamidase activity  
METHODOLOGY: Enzyme activity  
CPT: 82658

**[SANFIB] Sanfilippo Syndrome Type D Interp**

SPECIMEN REQUIRED: Fibroblasts at room temperature  
TUBE OR CONTAINER: T25 flasks  
SPECIMEN VOLUME: 2 T25 flasks  
TEST AVAILABILITY: Daily  
OTHER NAMES: Sanfilippo Syndrome type D, N-acetylglucosamine 6-sulfatase  
METHODOLOGY: Enzyme activity  
CPT: 82657

**[SAP] Slam Associated Protein (SAP)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark green (heparin)  
SPECIAL HANDLING: Must arrive in lab by 1:30 pm Monday-Thursday only; Must be shipped same day as collected  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Monday-Thursday  
METHODOLOGY: Flow Cytometry  
CPT: 88184

**[SCHISTAB] Schistosoma IgG Antibody**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold, Green(heparin) or Lavender(EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-6 days  
REFERENCE RANGE: < 1.00  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Detection of infection caused by Schistosoma species  
CPT: 86682

**[SCLERAB] Scl-70 (Scleroderma) Antibody**

SPECIMEN REQUIRED: Room temperature serum or plasma  
TUBE OR CONTAINER: Red, Gold, Lavender (EDTA) or Green (heparin)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 6 Days  
REFERENCE RANGE: 0.0 - 0.9 AI  
OTHER NAMES: Antiscleroderma-70; SCL-70  
METHODOLOGY: Multiplex bead flow cytometry  
CLINICAL USE: Differential diagnosis of scleroderma  
(progressive systemic sclerosis)  
CPT: 86235

#### **[SDSHORT] SKELETAL DYSPL & SHORT STATURE**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 6 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Gene sequencing of B3GALT6, CANT1, CHST3, FLNB, IMPAD1, SLC26A2, XYLT1  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: Next Generation sequencing (NextGen)  
CPT: 81479 x 7

#### **[SEDWES] Sedimentation Rate, Westergren**

SPECIMEN REQUIRED: Room temperature or refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Room temperature samples are acceptable for testing up to 6 hours; Refrigerated samples are acceptable for testing up to 12 hours  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 0.1 mL Pediatric; 1.0 mL Adult  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 hours  
REFERENCE RANGE: 0-50 years: Female: 0 - 20 mm/hr  
Male: 0 - 15 mm/hr  
51 years +: Female: 0 - 30 mm/hr  
Male: 0 - 20 mm/hr  
OTHER NAMES: Erythrocyte Sedimentation Rate; ESR; Westergren Sedimentation Rate  
METHODOLOGY: RBC sedimentation rate  
CLINICAL USE: Evaluate nonspecific activity of infections, inflammatory states, autoimmune disorders, and plasma cell dyscrasias  
CPT: 85651

#### **[SEL] Selenium Level**

SPECIMEN REQUIRED: Whole blood at room temperature (submit original unopened tube)  
TUBE OR CONTAINER: Royal Blue (EDTA)  
Lavender will temporarily be accepted due to royal blue tube shortage, but result may report with a disclaimer.  
SPECIAL HANDLING: Please contact laboratory for correct tube;



Submit original unopened tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Environmental exposure: 79-326 ug/L  
METHODOLOGY: Inductively coupled plasma-mass spectrometry (ICP-MS)  
CLINICAL USE: Monitor selenium deficiency and occupational exposure  
CPT: 84255

**[SENS] Sensitivity Testing Only**

**[SERO] Serotonin**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Serum must be separated within 30 minutes of collection  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1.0 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Male: 21-321 ng/mL  
Female: 0-420 ng/mL  
METHODOLOGY: High-pressure liquid chromatography (HPLC) with electrochemical (EC) detection  
CLINICAL USE: Diagnose carcinoid syndrome  
CPT: 84260

**[SERTM] Urine Serotonin**

SPECIMEN REQUIRED: Frozen urine (24 hour)  
TUBE OR CONTAINER: Urine tube  
SPECIAL HANDLING: Refrigerate specimen during collection; Add 50 mL of 50% acetic acid at start of collection  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: METHODOLOGY: Liquid chromatography-Tandem Mass Spectrometry (LC-MS/MS)  
CLINICAL USE: Aid in diagnosis of some carcinoid tumors  
CPT: 84260

**[SERVDRLQL] VDRL**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Nonreactive  
METHODOLOGY: Flocculation  
CLINICAL USE: Screen for syphilis; useful in assessing adequacy of treatment. Biologic false-positives are common in a variety of other infections or rheumatic diseases, thus more specific T. pallidum tests are recommended for confirmation  
CPT: 86592

#### **[SEZFLOW] Sezary Cell**

SPECIMEN REQUIRED: Whole Blood  
TUBE OR CONTAINER: Preferred: Yellow top (ACD)  
Acceptable: EDTA, Heparin  
SPECIMEN VOLUME: 6 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Specimens are processed MOnday through Sunday and reported Monday through Saturday  
TURNAROUND TIME: 1-3 days  
METHODOLOGY: Immunophenotyping  
CPT: 88184; 88185 per each additional marker

#### **[SGFL] Body Fluid Specific Gravity**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Refractometry  
CPT: 84135

#### **[SGSY] Synovial Fluid Specific Gravity**

SPECIMEN REQUIRED: Refrigerated synovial fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Refractometry  
CPT: 84135

#### **[SGUA] Urine Specific Gravity**

SPECIMEN REQUIRED: Clean catch random urine  
TUBE OR CONTAINER: Plastic urine container  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-8 hours  
REFERENCE RANGE: 1.007-1.030  
METHODOLOGY: Refractometry  
CLINICAL USE: Evaluate renal concentrating power; hydration status  
CPT: 81003

#### **[SHBG] Sex Hormone Binding Globulin**

SPECIMEN REQUIRED: Refrigerated or frozen serum/plasma  
TUBE OR CONTAINER: Gold, Red or Lt Green  
SPECIAL HANDLING: Specimen stability: 5 days - room temp  
7 days - refrigerated  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: Age specific  
OTHER NAMES: SHBG; Testosterone Binding Globulin (TeBG)  
METHODOLOGY: ECLIA  
CLINICAL USE: Decreased levels of SHBG are frequently seen in hirsutism, virilization, obese postmenopausal women, and in women with diffuse hair loss  
Increased levels may be present in cases of hyperthyroidism, testicular feminization, cirrhosis, male hypogonadism, pregnancy, women using oral contraceptives, and prepubertal children.  
CPT: 84270

#### **[SIALCSF] CSF Sialic Acid**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Transfer tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
CPT: 84275

#### **[SIALU] Urine Sialic Acid**

SPECIMEN REQUIRED: Frozen Urine (random)  
TUBE OR CONTAINER: Urine container  
SPECIMEN VOLUME: 20 mL  
MINIMUM VOLUME: 12 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 21 days  
METHODOLOGY:  
CLINICAL USE: To rule out sialic acid storage disorder  
CPT: 84275

#### **[SICKSC] Sickle Cell Screen**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 hours  
REFERENCE RANGE: Negative  
OTHER NAMES: Hemoglobin S ; Hgb Solubility ; Sickle Cell Preparation; Sickle Cell Solubility Test; Sickle Cell Test; Sickledex  
CLINICAL USE: Qualitative determination of presence of hemoglobin S; detect sickling hemoglobins; evaluate hemolytic anemia  
CPT: 85660

#### **[SILV] Silver**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Royal Blue (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-8 days  
METHODOLOGY: Inductively coupled plasma-mass spectrometry (ICP-MS)  
CLINICAL USE: Monitor exposure to silver  
CPT: 83018

#### **[SIRO] Sirolimus Level**

SPECIMEN REQUIRED: Refrigerated or room temperature whole blood  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Trough: 30 minutes to 1 hour before the next oral dose  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1.1 mL  
TURNAROUND TIME: Daily  
REFERENCE RANGE: 8.3 - 26.3 ng/mL  
OTHER NAMES: Rapamune; Rapamycin  
METHODOLOGY: Abbott Chemiluminescent microparticle immunoassay (CMIA)  
CLINICAL USE: Monitor immunosuppressive therapy following organ transplant  
CPT: 80195

#### **[SJA] SJOGRENS SYNDROME PROFILE**

SPECIMEN REQUIRED: Room temperature serum  
TUBE OR CONTAINER: Red, Gold, or Lavender (EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)  
TEST INCLUDES: IgG antibody to SS-A (anti-Ro) and SS-B (anti-La)  
TEST AVAILABILITY: Daily

REFERENCE RANGE: 0.0 - 0.9 AI  
OTHER NAMES: Anti-La & Anti-Ro antibodies; anti-SSA/anti-SSB antibodies  
METHODOLOGY: Flow Cytometry  
CLINICAL USE: Aid in diagnosis of Sjogren's syndrome (especially with vasculitis) and lupus patients with Sjogren's overlap syndrome  
CPT: 86235 x 2

**[SKELDYS] SKELETAL DYSPLASIA NGS PANEL**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Sequencing of 161 genes that may be associated with skeletal dysplasia  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
METHODOLOGY: Next Generation sequencing (NextGen)  
CPT: 81401 x 3; 81404; 81405 x 3; 81406 x 4; 81407; 81408 x4  
81479

**[SKI] SHPRINTZEN-GOLDBERG VIA SKI**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Shprintzen-Goldberg syndrome (SGS) via SKI gene  
METHODOLOGY: Bi-directional Sanger Sequencing  
CLINICAL USE: Confirmation of clinical diagnosis  
CPT: 81479

**[SKINAB] Anti-ICS (Pemphigus) Antibody**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 days  
REFERENCE RANGE: Negative: METHODOLOGY: Indirect fluorescent antibody (IFA)  
CLINICAL USE: Detect the presence of circulating pemphigus and bullous pemphigoid anti-bodies in sera  
CPT: 86256

**[SLAG] Soluble Liver Antigen (SLA)**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-9 days  
REFERENCE RANGE: Negative: 0.0- 20.0 units  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Aid in diagnosis of autoimmune hepatitis (AIH)  
CPT: 83516

**[SMAC] SOLUBLE MEMB ATTACK COMPLEX**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING:  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 month  
REFERENCE RANGE: < 0.3 mg/L  
METHODOLOGY: ELISA  
REFLEX TEST INFORMATION:  
CLINICAL USE: Screening is appropriate for patient with  
biopsy-proved Dense Deposit Disease (DDD)  
aka Membranoproliferative Glomerulonephritis Type  
II, MPGNII  
CPT: 83516

**[SMAD4] JUVENILE POLYPOSIS (SMAD4)**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
REFERENCE RANGE: Negative  
METHODOLOGY: Polymerase Chain Reaction (PCR)/Sequencing  
CPT: 81406

**[SMADNA] SPINAL MUSCULAR ATROPHY DNA**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-10 days  
REFERENCE RANGE: No mutation detected  
METHODOLOGY: Polymerase Chain Reaction (PCR), Enzyme digestion-  
Deletion/Duplication analysis exon 7  
CLINICAL USE: Confirmation of diagnosis; prenatal testing  
CPT: 81329

**[SMC1A] SMC1A-CORNELIA de LANGE SYNDR**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR) and Bi-directional sequencing  
CPT: 81479

**[SMTHAB] Anti-Smooth Muscle Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 Days  
REFERENCE RANGE: Negative: 0-19  
Weak positive: 20-30  
Moderate to strong positive: >30  
OTHER NAMES: SMA; F-actin antibody  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Aid in the diagnosis of liver disease  
CPT: 83516

**[SOMAC] Somatomedin-C**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL (this volume does not allow for repeat testing)  
PEDIATRIC TEST INFO: Order PEDIGF1 for pediatric testing to be performed by Esoterix  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7 days  
REFERENCE RANGE: Age specific  
OTHER NAMES: IGF-1; Somatomedin-C, Sulfation Factor  
METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: Assist in the assessment of growth disorders  
CPT: 84305

**[SOMAT] Somatostatin Level**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Pre-chill tube before collecting specimen  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days

METHODOLOGY: Extraction, Radioimmunoassay  
CPT: 84307

**[SOT] Sotalol Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-9 days  
REFERENCE RANGE: 500 - 4000 ng/mL  
OTHER NAMES: Betapace; Sorine  
METHODOLOGY: High Performance Liquid Chromatography with  
Fluorescence Detection (HPLC-FL)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[SPERMABS] Anti-Sperm Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate from cells within 45 minutes of  
collection  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME:  
REFERENCE RANGE:  
METHODOLOGY: Enzyme-linked immunoassay (ELISA)  
CPT: 89325

**[SPHINGO] Neimann-Pick Disease**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Yellow (ACD)  
SPECIAL HANDLING: Must be received at referring laboratory  
within 48 hours of collection; Ship Monday  
through Thursday only  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 7 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 2 - 10 days  
REFERENCE RANGE: 30 - 120 pmol/min/mg protein  
METHODOLOGY:  
CLINICAL USE:  
CPT: 82658

**[SPINK1] PANCREATITIS (SPINK1) SEQ**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL



MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81404

**[SPOR] Sporothrix Antibodies**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Latex Agglutination (LA)  
CPT: 86671

**[SPORCSF] Sporothrix Antibodies**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: Transfer tube  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Latex Agglutination  
CPT: 86671

**[SPRED1DD] LEGIUS (SPRED1) DEL/DUP**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 14 days  
METHODOLOGY: Multiplex Ligation-dependent Probe Amplification  
CPT: 81479

**[SRNS-FSGS] SRNS/FSGS NEXTGEN PANEL**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: Sequencing of 27 genes; ACTN4, ADCK4, ARHGAP24, ARHGDI, CD2AP, CFH, COQ2, COQ6, CUBN, DGKE, INF2, ITGA3, ITGB4, LAMB2, LMX1B, MEFV, MYO1E, NEIL1, NPHS1, NPHS2, PDSS2, PLCE1, PTPRO, SCARB2, SMARCA1, TRPC6, WT1  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 12 weeks

OTHER NAMES: Steroid-resistant nephrotic syndrome (SRNS)/Focal segmental glomerulosclerosis (FSGS) by NEXTGEN sequencing (NGS)  
METHODOLOGY: NextGen Sequencing  
CPT: 81404; 81405; 81406; 81407

**[SRS] RUSSELL-SILVER SYNDROME (H19)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Ship within 5 days of collection  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 weeks  
OTHER NAMES: Beckwith-Wiedemann Syndrome - H19 methylation  
METHODOLOGY: Quantitative methylation sensitive PCR (Q-MSP)  
CPT: 81401  
81401; 81402 (SRS + UPD7)

**[SsGEN] S/s RED CELL AG GENOTYPE**

SPECIMEN REQUIRED: Whole blood from mother & father and amniotic fluid at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) and sterile container  
SPECIMEN VOLUME: 5 mL (whole blood-each parent)  
15 mL (amniotic fluid)  
MINIMUM VOLUME: 3 mL (whole blood-each parent)  
7 mL (amniotic fluid)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-9 days  
METHODOLOGY: Allele-specific PCR  
CPT: 81479; 86905 x 2 (Parental)  
CPT: 81479 x 2; 86905 x 2 (Prenatal)

**[SSULFU] Urine S-Sulfo-Cysteine**

SPECIMEN REQUIRED: Frozen urine (random)  
TUBE OR CONTAINER: Plastic urine container  
SPECIAL HANDLING: Early morning specimen preferred  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 days  
METHODOLOGY: Dip stick for sulfite, and ion exchange chromatography  
CLINICAL USE: Increased in sulfite oxidase deficiency and molybdenum cofactor deficiency  
CPT: 82131

**[ST2] ST2 CARDIAC BIOMARKER**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Red or Gold

SPECIAL HANDLING: If storage longer than 5 days, freeze sample  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: < 35 ng/mL  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Aid in prognosis for patients diagnosed with chronic heart failure  
CPT: 83520

#### **[STACHABA] Stachybotrys IgA Antibody**

SPECIMEN REQUIRED: Refrigerated or room temperature serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-8 days  
REFERENCE RANGE: < 1 mg/L  
METHODOLOGY: Enzyme immunoassay (FEIA)  
disorders in conjunction with other clinical findings  
CPT: 83520

#### **[STERSULF] STEROID SULFATASE**

SPECIMEN REQUIRED: Refrigerated whole blood or skin fibroblasts  
TUBE OR CONTAINER: Yellow (ACD) or T25 flasks  
SPECIAL HANDLING: Must arrive in Laboratory Monday-Thursday by 2:00 p.m. only  
SPECIMEN VOLUME: 10 mLs  
MINIMUM VOLUME: 7 mLs  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 2-10 days  
REFERENCE RANGE: 2.0 - 9.3 nmol/hr/mg protein (WBC)  
1.5 - 6.0 nmol/hr/mg protein (Fibroblasts)  
METHODOLOGY: Enzymatic activity  
CPT: 82658

#### **[STFR] Soluble Transferrin Receptor**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold, Green (heparin) or Lavender(EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 12.2 - 27.3 nmol/L  
METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: Aid in diagnosis of iron deficiency in individuals with chronic disease (inflammatory diseases, infections, malignancies), many of whom are anemic

CPT: 87238

**[STGD1] MACULAR DYST/DEGENER/STARGARDT**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 3 mL  
TEST INCLUDES: DNA sequencing of genes associated with Macular Dystrophy/Degeneration and Stargardt Syndrome (Emory-15 genes, Casey Eye-8 genes)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 12 weeks  
METHODOLOGY: Next Generation Sequencing (NGS)  
CPT: 81404; 81406 and 81408 (Emory)  
CPT: 81479 (OHSU-CEI)

**[STK11SEQ] STK11 GENE IN PEUTZ-JEGHERS**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Specimen must arrive in laboratory by 1:30 p.m., Monday - Thursday only  
SPECIMEN VOLUME: 6 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 4 weeks  
OTHER NAMES: Peutz-Jeghers Syndrome; Hamartomatous intestinal polyposis  
METHODOLOGY: Direct automated fluorescent sequencing  
CPT: 81405

**[STL1-2] STICKLER I/II (COL2A1/COL11A1)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST INCLUDES: Gene sequencing for Stickler Syndrome I (COL2A1) and Stickler Syndrome II (COL11A1)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
METHODOLOGY: Sanger sequencing  
CPT: 81479 x 2

**[STL2] STICKLER II (COL11A1)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Sanger sequencing  
CPT: 81479

**[STLNGS] STICKLER SYNDROME NGS**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 8 mL  
MINIMUM VOLUME: 4 mL  
TEST INCLUDES: Gene sequencing for COL11A1, COL11A2, COL2A1, COL9A1, COL9A2 and COL8A3  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: NextGen sequencing (NGS)  
CPT: 81479 x 6

**[STONE] CALCULI/STONE ANALYSIS**

SPECIMEN REQUIRED: Stone  
TUBE OR CONTAINER: Sterile plastic container  
SPECIMEN VOLUME: Stone  
TEST INCLUDES: Photograph and chemical analysis  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 weeks  
CLINICAL USE: Determine composition of urinary stone  
CPT: 82360

**[STP] Syphilis IgG/IgM Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold, Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Nonreactive  
OTHER NAMES: Treponemal Test; Syphilis Serology IgG, IgM  
METHODOLOGY: CMIA  
REFLEX TEST INFORMATION:  
CLINICAL USE: Test for syphilis  
CPT: 86780

**[STRAANT] Strep A Direct Rapid Test**

SPECIMEN REQUIRED: Swab of tonsillar area, posterior pharynx, and area of inflammation with swab  
Avoid contact with tongue and cheek  
TUBE OR CONTAINER: BBL Culture Swab (with liquid Stuart's)  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 hour  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme immunoassay (EIA)  
REFLEX TEST INFORMATION: A Throat culture will be set up on all negative direct Strep A test, at an additional charge

CLINICAL USE: Aid in the diagnosis of a Streptococcus infection  
CPT: 87430

**[STRBANT] Strep B Direct Antigen Test**

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SPECIMEN REQUIRED: Refrigerated CSF, serum or urine (random)  
TUBE OR CONTAINER: Sterile plastic (CSF) tube or plastic urine container; Red or Gold  
SPECIAL HANDLING: Indicate source of specimen  
ORDERING MODULE: MIC  
SPECIMEN VOLUME: 0.5 mL CSF  
1 mL serum  
5 mL urine (random)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Latex agglutination (LA)  
CLINICAL USE: Aid in documentation of active beta streptococcal infection  
CPT: 87802

**[STREP] Streptomycin Level**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: 35 - 45 ug/mL (peak serum)  
METHODOLOGY: High-performance liquid chromatography (HPLC)  
CPT: 80299

**[STREPAB14] STREP PNEUMO SEROTYPE (14)**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: IgG antibody to serotypes 1,3,4,5,9,8,12,14,19, 23,26,51,56 and 68  
TEST AVAILABILITY: Daily  
METHODOLOGY: Fluorescence immunoassay (FIA)  
CLINICAL USE: Provides a measure of IgG antibody to specific capsular types  
CPT: 86609 x 14

**[STREPAB23] STREP PNEUMO IGG 23 SEROTYPES**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST INCLUDES: IgG antibody to serotypes 1,2,3,4,5,8,9N,12F,14,17F,19F,20,22F,23F,6B,10A,11A,7F,15B,18C,19A,9V and 33F

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-4 days

METHODOLOGY: Fluorescence immunoassay (FIA)

CLINICAL USE: Assesses the response to active immunization with nonconjugated, 23-valent vaccines

CPT: 86317 x 23

#### **[STRIAB] Anti-Striated Muscle Antibody**

SPECIMEN REQUIRED: Serum at room temperature

TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 0.4 mL

MINIMUM VOLUME: 0.2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2 days

REFERENCE RANGE: Negative: < 1:40

METHODOLOGY: Indirect Fluorescent Antibody (IFA)

CLINICAL USE: Aid in diagnosis of myasthenia gravis and thymoma

CPT: 86256

#### **[STRONGG] Strongyloides IgG Antibody**

SPECIMEN REQUIRED: Refrigerated serum

TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 0.5 mL

MINIMUM VOLUME: 0.2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 2-9 days

METHODOLOGY: Enzyme immunoassay (EIA)

CLINICAL USE: Qualitative determination of IgG antibodies to *Strongyloides ratti* in human sera

CPT: 86682

#### **[STRPNEAG] S.pneumoniae Antigen - UR/CSF**

Testing for *Streptococcus pneumoniae* antigen is performed on a limited basis on cases of suspected meningitis & septicemia. Criteria for performance include:

- a. pretreatment of the patient with antibiotics prior to specimen collection, or
- b. other lab tests of the CSF which indicate bacterial meningitis (high protein, low glucose, high cell count), or
- c. positive gram stain of CSF consistent with the morphology of *S. pneumoniae*.

This test will be rejected if the above criteria are not met.

Minimum requirements:

CSF: 0.1 ml

Urine: 1 ml

TAT: 4 hours

**[STUDYTROPONT] Troponin T Generation 5 ng/L**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lithium heparin gel tube  
SPECIAL HANDLING: Lithium heparin gel tubes should be centrifuged within 2 hours of collection.  
Plasma should be aliquoted within 2 hours of collection.  
SPECIMEN VOLUME: 1.0 mL  
MINIMUM VOLUME: 0.3 mL  
REFERENCE RANGE: METHODOLOGY: Electrochemiluminescence immunoassay (ECLIA)  
CLINICAL USE: Aiding in the exclusion of the diagnosis of acute coronary syndrome in a single plasma specimen; Aiding in the diagnosis of acute coronary syndrome; Possible utility in monitoring patients with nonischemic causes of cardiac injury.  
CPT: 84484

**[STX11] STX11 GENE (FHL TYPE 4)**

SPECIMEN REQUIRED: Room temperature whole blood  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Familial Hemophagocytic Lymphohistiocytosis type 4 via STX11 gene  
METHODOLOGY: Bi-directional Sanger sequencing  
CPT: 81479

**[STXBP2] STXBP2 GENE (FHL TYPE 5)**

SPECIMEN REQUIRED: Room temperature whole blood  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Familial Hemophagocytic Lymphohistiocytosis type 5 via STXBP2 gene  
METHODOLOGY: Bi-directional Sanger sequencing  
CPT: 81479

**[SUBP] Substance P**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA) containing GI preservative  
SPECIAL HANDLING: Call lab to obtain special tube  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL



TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-10 days  
REFERENCE RANGE: 40 - 270 pg/mL  
METHODOLGOY: Radioimmunoassay (RIA)  
CPT: 83520

**[SUCCINYLU] Urine Succinylacetone**

SPECIMEN REQUIRED: Frozen urine (random)  
TUBE OR CONTAINER: Plastic urine container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-14 days  
REFERENCE RANGE: 0.000-0.300 mmol/moL creatinine  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)  
CLINICAL USE: Quantify succinylacetone which is diagnostic for tyrosinemia type I  
CPT: 83921

**[SUCCSF] CSF Succinyladenosine**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Transfer tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
CPT: 82542

**[SULFATIDE] Urine Sulfatides**

SPECIMEN REQUIRED: Urine at room temperature  
TUBE OR CONTAINER: Urine container  
SPECIMEN VOLUME: 20 mL  
MINIMUM VOLUME: 5 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Thin Layer Chromatography (TLC)  
CPT: 82542

**[SULFONAM] Sulfonamides Level**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-10 days  
METHODOLOGY: Spectrophotometry (SP)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

**[SYNCAN] Urine Synthetic THC (K2)**

SPECIMEN REQUIRED: Refrigerated or frozen urine  
TUBE OR CONTAINER: Urine cup  
SPECIMEN VOLUME: 10 mL  
TEST INCLUDES: Screens for the following drugs/or metabolites:  
JWH-018 and metabolites, JWH-073 and metabolites,  
JWH-122 metabolites, JWH-200 metabolites, JWH-250  
metabolites, JWH-398 metabolites, RCS-4  
metabolites, AM-2201 metabolites, UR-144  
metabolites, MAM-2201 metabolites  
TEST AVAILABILITY: Daily  
OTHER NAMES: K2, Spice  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry  
(LC/MS-MS)  
REFLEX TEST INFORMATION: If positive, confirmation is performed  
CPT: 80307

**[T15;17] PML/RARa t(15:17) (RT-PCR)**

SPECIMEN REQUIRED: Refrigerated peripheral blood or bone marrow  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)  
SPECIAL HANDLING: Must be received in the lab within 72 hours  
of collection due to instability of RNA.  
WBCC is required to accompany specimen.  
SPECIMEN VOLUME: 3-5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 2-3 business days  
METHODOLOGY: Reverse transcriptase-Polymerase Chain Reaction  
(RT-PCR)  
CPT: 81315

**[T3] Triiodothyronine (T3) Uptake**

SPECIMEN REQUIRED: Serum at room temperature  
Serum only - plasma unacceptable

TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 days  
REFERENCE RANGE: Age and gender specific  
OTHER NAMES: Thyroid Hormone Binding Ratio (THBR); T3 Resin  
Uptake  
METHODOLOGY: Cloned enzyme donor immunoassay (CEDIA)  
CLINICAL USE: Thyroid function test; Aid in diagnosis of  
hyper- or hypothyroidism  
CPT: 84479

**[T3F] Free Triiodothyronine (T3) pg/mL**

SPECIMEN REQUIRED: Refrigerated plasma or serum

TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Stable 5 days at room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 2.28-4.95 pg/mL  
OTHER NAMES: Free T3; T3, Free; T3, Free, Serum; Tri-iodothyronine, Free; Unbound T3  
METHODOLOGY: ECLIA  
CLINICAL USE: Evaluate thyroid function and assess abnormal binding protein disorders  
CPT: 84481

#### **[T3REV] Reverse Triiodothyronine (T3)**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: No radioisotopes administered 24 hours prior to venipuncture  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.6 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Age specific  
OTHER NAMES: Reverse Tri-iodothyronine  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)  
CLINICAL USE: Evaluating the euthyroid sick patient with low T3 concentrations; also useful in evaluating thyroid function and metabolism  
CPT: 84482

#### **[T3TOT] Total Triiodothyronine**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 days  
REFERENCE RANGE: Age and gender specific  
OTHER NAMES: T3 Hormone; T3; Tri-iodothyronine  
METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: Thyroid function which is particularly useful in diagnosis of T3 thyrotoxicosis, in which T3 is increased and T4 is within normal limits  
CPT: 84480

#### **[T4] Thyroxine (T4)**

SPECIMEN REQUIRED: Refrigerated plasma or serum

TUBE OR CONTAINER: Light Green (heparin) or Gold/Red  
SPECIAL HANDLING: Specimen Stability: 7 days refrigerated  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Age specific  
OTHER NAMES: T4, Total; Tetraiodothyronine  
METHODOLOGY: Electrochemiluminescence Immunoassay  
CLINICAL INFORMATION: Thyroid function test  
CPT: 84436

#### **[T4F] Free Thyroxine**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold SST (serum)  
SPECIAL HANDLING: Stable 5 days at room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 1.0-2.1 ng/dL  
OTHER NAMES; Free T4, Direct; Free Thyroxine; T4, Free, Direct;  
Unbound T4  
METHODOLOGY: ECLIA  
CLINICAL USE: Sensitive thyroid function test indicated when  
binding globulin (TBG) problems are perceived  
CPT: 84439

#### **[T4FD] Free Thyroxine (Dialysis)**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIAL HANDLING:  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat  
testing  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-7 days  
REFERENCE RANGE: Age-specific  
METHODOLOGY: Direct dialysis and HPLC Tandem Mass Spectrometry  
CLINICAL USE: Most reliable method for measuring free thyroxine  
(T4) in serum; assess the thyroid status of a  
patient, especially in disorders associated with  
abnormal binding protein concentration  
CPT: 84439

#### **[TACRO] Tacrolimus (Prograf) Level**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Set up Daily; Specimen needs to be in lab before 1200 PM to be resultd on same day  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 9.0-19.9 ng/mL  
OTHER NAMES: FK506; Prograf  
METHODOLOGY: Abbott Chemiluminescent Microparticle Immunoassay (CMIA)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80197

**[TBCSFPCR] M. tuberculosis Complex DNA (PCR)**

SPECIMEN REQUIRED: Refrigerated CSF  
TUBE OR CONTAINER: Sterile tube or container  
SPECIMEN VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Nucleic acid amplification (NAA) technology  
CLINICAL USE: Detection of M. tuberculosis  
CPT: 87556

**[TBG] Thyroxine Binding Globulin**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-5 days  
REFERENCE RANGE: Age-specific  
METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: Distinguish between high T4 levels due to hyperthyroidism and due to increased binding by TBG in euthyroid individuals who have normal levels of free hormones; document cases of hereditary deficiency or increase of TBG; work-up of thyroid disease  
CPT: 84442

**[TBS] TOWNES-BROCKS SYDNROME (SALL1)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81479

**[TCELLEXT] T-CELL IMMUNODEFICIENCY EXTEND**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Dark green (Heparin) or Lavender (EDTA)

SPECIAL HANDLING: Specimen must be analyzed within 48 hours (heparin) or 72 hours (EDTA) of collection

Specimen must be received in laboratory by noon on day collected

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 0.5 mL (pediatric)

TEST INCLUDES: Includes helper T-cells (CD4+ and CD3+), naive helper T-cells (CD4+ and CD45RA+), memory helper T-cells (CD4+ and CD45RO+), suppressor T-cells (CD8+ and CD3+), CD4:CD8 ratio, total T-cells (CD3+), B-cells (CD19+ and CD3-), and NK-cells ([CD16+/CD56+] and CD3-)

TEST AVAILABILITY: Monday-Friday (must arrive in the lab before 2:30 pm)

TURNAROUND TIME: 2-4 days

OTHER NAMES: Lymphocyte Subset 6

METHODOLOGY: Flow Cytometry

CLINICAL USE: Enumerate the percents and absolute cell counts of lymphocyte subsets in lysed whole blood

CPT: 86355; 86356 x 3; 86357; 86359; 86360

#### **[TCOF1] TREACHER COLLINS (TSC1) TCOF1**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 8 mL

MINIMUM VOLUME: 4 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 1-2 weeks

OTHER NAMES: Treacher Collins Syndrome 1 (TSC1) via TCOF1 gene

METHODOLOGY: Sanger sequencing

CPT: 81479

#### **[TCRPCR] T-CELL RECEPTOR GENE REARRANG**

SPECIMEN REQUIRED: Refrigerated whole blood or bone marrow (Other acceptable specimens: Fresh frozen tissue-frozen or paraffin-embedded tissue at room temperature)

TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD)

SPECIMEN VOLUME: 5 mL whole blood

3 mL bone marrow

MINIMUM VOLUME: 1 mL(whole blood)

1 mL bone marrow

TEST AVAILABILITY: Monday-Friday

TURNAROUND TIME: 6-8 days

OTHER NAMES: T-Cell Clonality

METHODOLOGY: Polymerase chain reaction (PCR)/Capillary Electrophoresis

CPT: 81342

#### **[TDT] Terminal Deoxynucleotid Transferase**

**SPECIMEN REQUIRED:** Standard bone marrow, touch preps, or peripheral blood smears at room or whole blood at room temperature  
**TUBE OR CONTAINER:** Lavender (EDTA)  
**SPECIAL HANDLING:** Peripheral smears must be less than 3 days old  
**SPECIMEN VOLUME:** 1 mL  
**REFERENCE RANGE:** Negative  
**METHODOLOGY:** Indirect immunofluorescent antibody (IFA)  
**CLINICAL USE:** TdT is an enzyme which catalyzes the polymerization of several nucleotides in the absence of a DNA template. Normally, only 1% of bone marrow has TdT activity. High levels of this enzyme (normal unique only to thymocytes) have been found in almost all young patients with T-cell and common ALL, 30% of CML patients in blasts crisis, 50% of patients with acute undifferentiated leukemia, most patients with lymphoblastic lymphoma and, in rare occasions, acute myelogenous leukemia.  
**CPT:** 88346

#### **[TEICHAB] Teichoic Acid Antibody**

**SPECIMEN REQUIRED:** Refrigerated serum  
**TUBE OR CONTAINER:** Red or Gold  
**SPECIMEN VOLUME:** 0.6 mL  
**MINIMUM VOLUME:** 0.3 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 3-4 days  
**REFERENCE RANGE:** Negative: < 1:2  
**METHODOLOGY:** Double immunodiffusion (DID)  
**CLINICAL USE:** Assess therapy in chronic infections caused by *Staphylococcus aureus*  
**CPT:** 86329

#### **[TEST] Total Testosterone**

**SPECIMEN REQUIRED:** Plasma/Serum  
**TUBE OR CONTAINER:** Lt Green, Gold or Red  
**SPECIAL HANDLING:** Specimen stability: 5 days - room temp  
14 days - refrigerated  
**SPECIMEN VOLUME:** 1 mL  
**MINIMUM VOLUME:** 0.5 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 1 day  
**REFERENCE RANGE:** Age specific  
**METHODOLOGY:** ECLIA  
**CLINICAL USE:** Indicator of LH secretion and Leydig cell function; evaluate gonadal and adrenal function; aid in diagnosis of hypogonadism, hypopituitarism, Klinefelter syndrome, and impotence (low values) in males, and hirsutism, anovulation, amenorrhea, and virilization in females

CPT: 84403

**[TET2] TET2 GENE MUTATION ANALYSIS**

**SPECIMEN REQUIRED:** Whole blood or bone marrow at room temperature

**TUBE OR CONTAINER:** Lavender (EDTA)

**SPECIAL HANDLING:** Ship same day as collected; Must be received at performing lab < 72 hours; Use cold pack for transport, but not in direct contact with specimen

**SPECIMEN VOLUME:** 5 mL (blood)

2 mL (bone marrow)

**MINIMUM VOLUME:** 2 mL (blood)

1 mL (bone marrow)

**TEST AVAILABILITY:** Monday-Thursday

**TURNAROUND TIME:** 1-2 weeks

**METHODOLOGY:** Bi-directional Sequencing

CPT: 81479

**[TETAB] Tetanus Antitoxin Assay**

**SPECIMEN REQUIRED:** Refrigerated serum

**TUBE OR CONTAINER:** Red or Gold

**SPECIMEN VOLUME:** 1 mL

**MINIMUM VOLUME:** 0.5 mL

**TEST AVAILABILITY:** Daily

**TURNAROUND TIME:** 3-7 days

**REFERENCE RANGE:** Nonprotective: **METHODOLOGY:** Enzyme immunoassay (EIA)

**CLINICAL USE:** Assess immunity against tetanus by determining levels of circulating antibodies to tetanus toxin or to measure the immune response

CPT: 86317

**[TGFB2] TRANSFORM GROWTH FACTOR BETA 2**

**SPECIMEN REQUIRED:** Whole blood at room temperature

**TUBE OR CONTAINER:** Lavender (EDTA)

**SPECIMEN VOLUME:** 7 mL

**MINIMUM VOLUME:** 3 mL

**TEST AVAILABILITY:** Daily

**TURNAROUND TIME:** 4-6 weeks

**REFERENCE RANGE:** No mutation detected

**OTHER NAMES:** Familial Thoracic Aneurysms and Dissections via TGFB2 gene

**METHODOLOGY:** Polymerase Chain Reaction (PCR)

CPT: 81479

**[THAL] Thallium**

**SPECIMEN REQUIRED:** Refrigerated or frozen plasma in a certified metal-free plastic transport tube

**TUBE OR CONTAINER:** Royal Blue with/without EDTA

**SPECIAL HANDLING:** Separate within 2 hours of collection



SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 days  
REFERENCE RANGE: < 5.0 ng/mL  
METHODOLOGY: Inductively coupled plasma/Mass Spectrometry (ICP/MS)  
CLINICAL USE: Overexposure/poisoning determination  
CPT: 83018

#### **[THAP1] DYSTONIA 6 VIA THAP1**

SPECIMEN REQUIRED: Whole blood or isolated DNA at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks  
METHODOLOGY: PCR amplification and direct DNA sequencing of the coding exons  
CPT: 81404

#### **[THBCO] Other Total Hemoglobin (Blood Gas)**

SPECIMEN REQUIRED: Whole blood on ice  
TUBE OR CONTAINER: Dark Green (heparin) or Heparinized syringe  
SPECIAL HANDLING: Keep specimen on ice and transport to lab immediately; do NOT open  
Test should be performed within 8 hours  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 hour  
REFERENCE RANGE: 0 -30 days: 12.5-20.5 g/dL  
1 month-9 years: 9.9-14.9 g/dL  
10 years + : 11.4-18.0 g/dL  
METHODOLOGY: Spectrophotometry  
CPT: 85018

#### **[THEO] Theophylline Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 0 Day: 6.0-12.0 mg/L  
1 Month+: 10.0-20.0 mg/L  
OTHER NAMES: Aminophylline; Somophyllin; Theo-Dur; Theolair; Theospan  
METHODOLOGY: Turbidimetric inhibition immunoassay

CLINICAL USE: Monitor therapeutic drug level and assess toxicity  
CPT: 80198

### **[THERMAMP] THERMAL AMPLITUDE**

SPECIMEN REQUIRED: Refrigerated whole blood AND serum  
TUBE OR CONTAINER: Lavender (EDTA) & Red (no gel)  
SPECIAL HANDLING: Red top tubes should be prewarmed and maintained at 37 C during clotting; Separate serum immediately  
SPECIMEN VOLUME: 20 mL (Serum)  
5 mL (whole blood)  
MINIMUM VOLUME: 15 mL (Serum)  
3 mL (whole blood)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-9 days  
METHODOLOGY: Serological  
CPT: 86940 x 3; 86941 x 3

### **[THIO] Thiocyanate Level**

SPECIMEN REQUIRED: Frozen plasma or serum  
TUBE OR CONTAINER: Dark Green (heparin) or Red  
SPECIAL HANDLING: Please indicate if the patient is a smoker or nonsmoker  
Separate serum from cells as soon as possible  
SPECIMEN VOLUME: 1 ml  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: 0 Day: 6.0-12.0 mg/dL  
1 Month +: 10.0-20.0 mg/dL  
METHODOLOGY: Spectrophotometry  
CLINICAL USE: Evaluate toxicity, nitroprusside poisoning and smoking  
CPT: 84430

### **[THIOC] Thiopurine Metabolites**

SPECIMEN TYPE  
Whole Blood EDTA  
SHIPPING INSTRUCTIONS  
Specimen must be shipped refrigerated.  
SPECIMEN REQUIRED  
Container/Tube: Lavender top (EDTA)  
Specimen Volume: 3 mL  
Collection Instructions: Send specimen in original tube. Do not aliquot, centrifuge, or freeze.  
FORMS  
If not ordering electronically, complete, print, and send Gastroenterology and Hepatology Client Test Request (T728) with the specimen  
SPECIMEN MINIMUM VOLUME

1.5 mL

**[THIORP] THIORIDAZINE (MELLARIL) PROFIL**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark green (heparin)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: Mesoridazine and thioridazine  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-8 days  
REFERENCE RANGE: Thioridazine: 250 - 1250 ng/mL  
Mesoridazine: 150 - 1000 ng/mL  
OTHER NAMES: Mellaril  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
CLINICAL USE: Monitor therapeutic drug level  
CPT: 80342

**[THIOT] Thiothixene Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red-no gel or Dark green (heparin)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 3 ml  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-10 days  
REFERENCE RANGE: Therapeutic: 10-30 ng/mL  
Potentially toxic: >100 ng/mL  
OTHER NAMES: Navane  
Methodology: High Performance Liquid Chromatography with Fluorescence Detection; (HPLC-FL)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80342

**[THTOAB] Th/To Ribonucleoprotein Antibody**

**[THYM] Thymidine Kinase**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Green (heparin)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 15 days  
REFERENCE RANGE: < 500 nanomoles/liter plasma  
METHODOLOGY: Mass spectroscopy (MS)  
CLINICAL USE: Aid in diagnosis of mitochondrial depletion syndromes  
CPT: 83789

**[THYROAB] Anti-Thyroglobulin Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 Days  
REFERENCE RANGE: 0.0 - 0.9 IU/mL  
METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: Detect and confirm autoimmune thyroiditis,  
Hashimoto's thyroiditis  
CPT: 86800

**[THYROGFNA] Thyroglobulin Needle Washout**

SPECIMEN REQUIRED: Frozen fine needle aspirate  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: Indicate source of specimen; specimen must be  
clear, not viscous or blood  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 Days  
REFERENCE RANGE: < 10 ng/mL  
METHODOLOGY: Immunochemiluminescent assay (ICMA)  
CLINICAL USE: Aid in diagnosis of papillary or follicular  
thyroid cancer  
CPT: 84432

**[TIAG] Tiagabine (Gabitril) Level**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark Green (Heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
OTHER NAMES: Gabitril  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry  
(LC/MS/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80199

**[TICL] Ticarcillin Level**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube;  
Send list of other antibiotics patient is  
taking

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-7 days  
METHODOLOGY: Bioassay  
CLINICAL USE: Monitor therapeutic drug level  
CPT: 80299

#### **[TICP] Ticarcillin Level**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube;  
Send list of other antibiotics patient is taking; Collect specimen within 15-30 minutes after the end of I.V. infusion or 45-60 minutes after an IM injection or 90 minutes after oral intake  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-7 days  
METHODOLOGY: Bioassay  
CLINICAL USE: Monitor therapeutic drug level  
CPT: 80299

#### **[TICT] Ticarcillin Level**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red (no gel)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube;  
Send list of other antibiotics patient is taking; Collect specimen just before or within 15 minutes of the next dose  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-7 days  
METHODOLOGY: Bioassay  
CLINICAL USE: Monitor therapeutic drug level  
CPT: 80299

#### **[TITAN] Titanium**

SPECIMEN REQUIRED: Refrigerated or frozen whole blood  
TUBE OR CONTAINER: Royal Blue with/without EDTA  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
METHODOLOGY: Inductively coupled plasma/Mass Spectrometry (ICP/MS)  
CLINICAL USE: Overexposure/poisoning determination  
CPT: 83018

### **[TLR] TOLL-LIKE RECEPTOR FUNCTION**

**SPECIMEN REQUIRED:** Whole blood of patient and normal control at room temperature

**TUBE OR CONTAINER:** Dark Green (heparin)

**SPECIAL HANDLING:** Specimen must be received in laboratory by 1:30 pm, Monday-Thursday only

Specimen must arrive at performing lab within 48 hours of collection

Must send Patient & control collected at approximately the same time

**SPECIMEN VOLUME:** 10 mL

**MINIMUM VOLUME:** 3 mL

**TEST AVAILABILITY:** Monday-Thursday

**TURNAROUND TIME:** 10-12 days

**METHODOLOGY:** Cell culture/Quantitative Multiplex Bead Assay

**CLINICAL USE:** Assist in diagnosis of innate immunodeficiencies when genetic defects of the innate immune system

are suspected in individuals negative for other immunodeficiencies (eg, no detectable abnormality of antibody function, complement activity, neutrophil function, or cell mediated immunity).

**CPT:** 86353 x 6; 83520 x 3

### **[TOB] Random Tobramycin Level**

**SPECIMEN REQUIRED:** Refrigerated plasma or serum

**TUBE OR CONTAINER:** Light Green (Li heparin), Gold or Red

**SPECIAL HANDLING:** Specimen Stability: 3 days refrigerated

**SPECIMEN VOLUME:** 1 mL

**MINIMUM VOLUME:** 0.5 mL

**TEST AVAILABILITY:** Daily

**TURNAROUND TIME:** 8 hours

**REFERENCE RANGE:** None established

**OTHER NAMES:** Tobral; Nebcin

**METHODOLOGY:** Homogeneous Enzyme Immunoassay

**CLINICAL USE:** Monitor therapeutic drug level and assess toxicity

**CPT:** 80200

### **[TOBP] Tobramycin Level Peak**

**SPECIMEN REQUIRED:** Refrigerated plasma or serum

**TUBE OR CONTAINER:** Light Green (Li heparin), Gold or Red

**SPECIAL HANDLING:** Peak samples should be drawn 60 minutes after an IM injection, 30 minutes after the end of a 30 minute IV infusion, or immediately after a 60 minute infusion

Specimen Stability: 3 days-refrigerated

**SPECIMEN VOLUME:** 1 mL

**MINIMUM VOLUME:** 0.5 mL

**TEST AVAILABILITY:** Daily

**TURNAROUND TIME:** 8 hours

**REFERENCE RANGE:** 4.1-10.3 ug/mL

OTHER NAMES: Tobral; Nebcin  
METHODOLOGY: Homogeneous Enzyme Immunoassay  
CLINICAL USE: Monitor therapeutic drug level and assess toxicity  
CPT: 80200

**[TOBT] Tobramycin Level Trough**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin), Gold or Red  
SPECIAL HANDLING: Draw immediately prior to next dose  
Specimen Stability: 3 days refrigerated  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: OTHER NAMES: Tobral; Nebcin  
METHODOLOGY: Homogeneous Enzyme Immunoassay  
CLINICAL USE: Monitor therapeutic drug level and assess toxicity  
CPT: 80200

**[TOL] Toluene**

SPECIMEN REQUIRED: Frozen whole blood  
TUBE OR CONTAINER: Dark green (heparin)  
SPECIAL HANDLING: Tubes should be filled to prevent loss of volatile compound into headspace  
SPECIMEN VOLUME: 20 mL (split into 2 tubes)  
MINIMUM VOLUME: 7 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-9 days  
REFERENCE RANGE: Environmental exposure: none detected  
METHODOLOGY: Headspace Gas Chromatography/Flame Ionization Detection (GC-FID)  
CLINICAL USE: Monitor exposure to toluene  
CPT: 84600

**[TOP] Topiramate Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Dark green (heparin) or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 2.0 - 25.0 ug/mL  
OTHER NAMES: Topamax  
METHODOLOGY: Liquid Chromatography/Mass Spectrometry (LC/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80201

**[TOTPORF] Stool Porphyrins**

SPECIMEN REQUIRED: Frozen stool  
TUBE OR CONTAINER: Plastic container

SPECIMEN VOLUME: 20 grams  
MINIMUM VOLUME: 10 grams  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-8 days  
REFERENCE RANGE: 0-200 nmol/g  
REFLEX TEST INFORMATION: Fractionation of porphyrins will be reflexed is total is increased  
CPT: 84126

**[TOXAB] Toxocara Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-6 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme-linked immunosorbant assay (ELISA)  
CLINICAL USE: Detect antibody to Toxocara canis  
CPT: 86682

**[TOXOA] Toxoplasma IgA Antibody**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
REFERENCE RANGE: < 0.90  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Valuable tool for the early detection of acute disease in pregnant women and individuals with AIDS  
CPT: 86777

**[TOXOIGG] Toxoplasma IgG Ab, Quantitative**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Gold, Red or Light Green (Li heparin)  
SPECIAL HANDLING: Stability 3 days at room temperature  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: Non-Reactive: < 1.0 IU/mL  
Equivocal:  $\geq 1$  - Reactive:  $\geq 3.0$  IU/mL  
METHODOLOGY: Electrochemiluminescence Immunoassay  
CLINICAL USE: Support the diagnosis of toxoplasmosis; document past exposure and/or immunity to Toxoplasma gondii  
CPT: 86777



**[TOXOM] Toxoplasma IgM Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Refrigerate at 2-8 degrees C for up to 8 days  
Freeze at -20 degrees C if testing is not completed within 8 days.  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Negative: < 8.0 AU/mL  
Equivocal: 8.0-9.9 AU/mL  
Positive: > 9.9 AU/mL  
METHODOLOGY: Chemiluminescent immunoassay (CLIA)  
CLINICAL USE: Support the diagnosis of toxoplasmosis  
CPT: 86778

**[TOXPCR] Toxoplasma gondii DNA (PCR)**

SPECIMEN REQUIRED: Whole blood or bone marrow at room temperature; Refrigerated CSF  
TUBE OR CONTAINER: Lavender (EDTA), Yellow (ACD), Sterile tube  
SPECIAL HANDLING: Only stable for 7 days; CSF can be frozen  
SPECIMEN VOLUME: 3 mL (whole blood or bone marrow)  
1 mL (CSF)  
MINIMUM VOLUME: 2 mL (whole blood or bone marrow)  
0.5 mL (CSF)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Polymerase chain reaction (PCR) with Southern blot confirmation  
CPT: 87798

**[TOXPCRAMN] Toxoplasma gondii DNA (PCR)**

SPECIMEN REQUIRED: Frozen amniotic fluid (unspun)  
TUBE OR CONTAINER: Sterile tube  
SPECIAL HANDLING: Do NOT centrifuge fluid  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-6 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Polymerase chain reaction (PCR) with Southern blot confirmation  
CPT: 87798

**[TOXPCRQNT] Toxoplasma gondii DNA (PCR)**

SPECIMEN REQUIRED: Bronchial lavage/wash, Pericardial/pleural fluid, tracheal aspirate/wash, amniotic fluid at room temperature or frozen  
Frozen Aqueous fluid, CSF or Vitreous fluid

Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD), Sterile container or screw top tube  
SPECIAL HANDLING: Please specify source of specimen.  
Specimens at room temperature must be received at performing lab within 4 days of collection; Freeze if time exceeds 4 days  
SPECIMEN VOLUME: 5 mL (whole blood)  
2 mL CSF, amniotic/pericardial/pleural fluids or respiratory specimens  
0.5 mL aqueous or vitreous fluid  
MINIMUM VOLUME: 1 mL (whole blood)  
0.5 mL CSF, amniotic/pericardial/pleural fluids or respiratory specimens  
0.1 mL aqueous or vitreous fluid  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Reverse Transcription/Polymerase Chain Reaction (PCR-RT)  
CPT: 87799

#### **[TP] Total Protein**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (Li heparin) or Gold  
SPECIAL HANDLING: Specimen Stability: 6 days room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: < 1 year: None Established  
> 1 year: 6.0-8.5 g/dL  
METHODOLOGY: Colorimetric  
CLINICAL USE: Evaluate nutritional status and investigate edema  
CPT: 84155

#### **[TP53] TP53 Sequencing**

SPECIMEN REQUIRED: Peripheral blood, Bone Marrow OR FFPE solid tumor tissue. Paraffin block is preferred.  
Alternatively, send 1 H&E slide plus 5-10 unstained slides cut at 5 or more microns.  
Please use positively-charged slides and 10% NBF fixative. Do not use zinc fixatives.  
TUBE OR CONTAINER: Lavender (EDTA) or Bone Marrow (EDTA) or  
SPECIAL HANDLING: Use cold pack for transport, making sure cold pack is not in direct contact with specimen.  
SPECIMEN VOLUME: 5 mL (whole blood)  
2 mL (bone marrow)  
TURNAROUND TIME: 10 days  
METHODOLOGY: Molecular

CPT: 81405

**[TPP1-PPT1] TPP1 & PPT1**

SPECIMEN REQUIRED: Refrigerated whole blood  
TUBE OR CONTAINER: Yellow (ACD)  
SPECIAL HANDLING: Specimen must be received in laboratory by 1:30 pm, Monday through Friday only  
Must be received at performing lab within 48 hours of collection  
SPECIMEN VOLUME: 7 mL  
MINIMUM VOLUME: 5 mL  
TEST INCLUDES: Tripeptidyl Peptidase 1 (TPP1) and Palmitoyl-Protein Thioesterase 1 (PPT1)  
TEST AVAILABILITY: Monday-Thursday only  
REFERENCE RANGE: TPP1: 85 - 326 nmol/hr/mg protein  
PPT1: 20 - 93 nmol/hr/mg protein  
OTHER NAMES: Tripeptidyl Peptidase 1 (TPP1) and Palmitoyl-Protein Thioesterase 1 (PPT1)  
METHODOLOGY: Fluorometric  
CLINICAL USE: Aid in the evaluation of patients with clinical presentations suggestive of NCL; Aid in the differential diagnosis of infantile and late infantile NCL  
CPT: 82657

**[TRAB] TSH Receptor Antibody**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: No radioisotopes administered 24 hours prior to venipuncture  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 10 days  
REFERENCE RANGE: TSH binding inhibition index:  
Negative: Borderline: 10-15  
Positive: > 15  
OTHER NAMES: LATS; Long-Acting Thyroid Stimulator; Thyrotropin-Binding Inhibitory Immunoglobulin; TRAb; TSH Receptor Antibody; TSH Receptor Binding Inhibitory Immunoglobulin  
METHODOLOGY: Radioimmunoassay (RIA)  
CLINICAL USE: Aid in diagnosis of hyperthyroidism and Graves' disease  
CPT: 83519

**[TrABS] Anti-Tr Antibody**

SPECIMEN REQUIRED: Frozen room temperature  
TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: Negative: < 1:10 Units  
METHODOLOGY: Indirect Immunofluorescence (IFA)  
CLINICAL USE: Associated with paraneoplastic cerebellar degeneration and Hodgkin's disease  
CPT: 86255

#### **[TRAMT] Tramadol (Ultram) Level**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Lavender (EDTA) or Dark green (heparin)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 days  
OTHER NAMES: Ultram  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 82492

#### **[TRANSA] Tissue Transglutaminase IgA Ab**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Negative: 0 - 3 U/mL  
Weak positive: 4 - 10 U/mL  
Positive: >10 U/mL  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Aid in the diagnosis of gluten-sensitive enteropathy (GSE), such as celiac disease and dermatitis herpetiformis  
CPT: 83516

#### **[TRANSF] Transferrin**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Hemolyzed specimens will be rejected  
Specimen Stability: 8 day-room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 111 - 301 mg/dL

METHODOLOGY: Immunoturbidimetric  
CLINICAL USE: Aids in diagnosis of malnutrition, acute inflammation, infection, assessment of renal function and RBC disorders, such as iron deficiency anemia  
CPT: 84466

#### **[TRANSG] Tissue Transglutaminase IgG Ab**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Gold or Red  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Negative: < 6 U/mL  
Weak positive: 6 - 9 U/mL  
Positive: > 9 U/mL  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Aid in the diagnosis of gluten-sensitive enteropathy (GSE), such as celiac disease and dermatitis herpetiformis  
CPT: 83516

#### **[TRAP] Tartrate Resistant Acid Phosphatase**

SPECIMEN REQUIRED: Serum  
TUBE OR CONTAINER: Red or gold  
SPECIAL HANDLING: Centrifuge 15 minutes at 1,000b and store SST tube refrigerated prior to shipment.  
If not able to ship same day drawn, aliquot and store serum frozen prior to shipment.  
Please add a comment to Test Requisition that sample was stored frozen.  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 8-14 days  
CLINICAL USE: Non-specific indicator of lipid storage and may be useful in monitoring treatment of Gaucher disease  
CPT: 84060

#### **[TRAPS] TNFRSF1A MUTATION IN TRAPS**

SPECIMEN REQUIRED: Whole blood at room temperature (ship on ice (pack during hot weather) or buccal swab  
TUBE OR CONTAINER: EDTA (lavender) or swab  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-5 weeks  
OTHER NAMES: TRAPS-Tumor Necrosis Factor Receptor-Associated periodic Fever Syndrome; Familial Hibernian Fever;

Autosomal Dominant Familial Periodic Fever:

TNFRSF1A gene sequencing

METHODOLOGY: Bi-directional sequence analysis of exons 2, 3, and 4, amplified from genomic DNA

CPT: 81479

#### **[TREGS] REGULATORY T-CELL**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Dark green (Heparin) or Lavender (EDTA)

SPECIAL HANDLING: Specimen must be analyzed within 72 hours of collection

Specimen must be received in laboratory by noon on day collected

SPECIMEN VOLUME: 4 mL

MINIMUM VOLUME: 0.5 mL (pediatric)

TEST INCLUDES: Regulatory T-cells (Tregs) are a population of CD4+, CD25+, CD127

TEST AVAILABILITY: Monday-Friday (must arrive in the lab before 1:30 pm)

TURNAROUND TIME: 2-4 days

METHODOLOGY: Flow Cytometry

CLINICAL USE: Aid in investigation of primary immunodeficiency disorders

CPT: 86356

#### **[TRH] Thyroid Releasing Hormone**

SPECIMEN REQUIRED: Frozen plasma

TUBE OR CONTAINER: PTH-RP

SPECIAL HANDLING: Collect blood in a special PTH-RP tube and gently invert the tube twice; centrifuge immediately, transfer and freeze

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: < 5 pg/mL

METHODOLOGY: Direct Radioimmunoassay (RIA)

CPT: 83519

#### **[TRICHABG] Trichinella IgG Antibody**

SPECIMEN REQUIRED: Frozen serum

TUBE OR CONTAINER: Red or Gold

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-6 days

CPT: 86784

#### **[TRICHNAA] Trichomonas vaginalis (NAA)**

SPECIMEN REQUIRED: Room temperature or refrigerated Vaginal, endocervical, or male urethral swab,

or cervical cells in liquid cytology vial  
Urine specimens are performed in house;order  
VPTV  
TUBE OR CONTAINER: Gen-Probe Aptima swab; liquid cytology vial  
SPECIAL HANDLING:  
ORDERING MODULE: LAB  
SPECIMEN VOLUME: One swab or entire liquid cytology vial  
TEST AVAILABILITY: Daily  
TURNAROUND TIME:  
REFERENCE RANGE: None detected  
METHODOLOGY: Nucleic Acid Amplification (NAA)  
CLINICAL USE: Diagnosis of Trichomonas vaginalis infection  
CPT: 87661

#### **[TRIFL] Trifluoperazine Level**

SPECIMEN REQUIRED: Refrigerated or frozen serum or plasma  
TUBE OR CONTAINER: Red or Dark green (heparin)  
SPECIAL HANDLING: Do NOT use gel barrier tube; protect from light  
Separate from cells within 2 hours of collection  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 6-8 days  
REFERENCE RANGE: 4.0 - 40.0 ng/mL  
OTHER NAMES: Stelazine  
METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80342

#### **[TRIG] Triglycerides Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Fasting specimen is recommended  
Specimen Stability: 2 days-room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: < 17 years: > 17 years: METHODOLOGY: Enzymatic colorimetric  
CLINICAL USE: Aid in diagnosis and treatment of patients with diabetes mellitus, nephrosis, liver obstruction, and other diseases involving lipid metabolism, or various endocrine disorders  
CPT: 84478

#### **[TRIGFL] Body Fluid Triglycerides**

**SPECIMEN REQUIRED:** Refrigerated body fluid  
**TUBE OR CONTAINER:** Sterile container  
**SPECIAL HANDLING:** Specify source of fluid  
A fasting specimen (12-14 hours or fasting after last meal) is recommended. Random specimens are acceptable  
**SPECIMEN VOLUME:** 1 mL  
**MINIMUM VOLUME:** 0.5 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 8 hours  
**REFERENCE RANGE:** None established  
**METHODOLOGY:** Enzymatic Colorimetric  
**CPT:** 84478

#### **[TRIGPC] Pericardial Fluid Triglycerides**

**SPECIMEN REQUIRED:** Refrigerated fluid  
**TUBE OR CONTAINER:** Sterile container  
**SPECIAL HANDLING:** A fasting specimen (12-14 hours or fasting after last meal) is recommended. Random specimens are acceptable  
**SPECIMEN VOLUME:** 1 mL  
**MINIMUM VOLUME:** 0.5 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 8 hours  
**REFERENCE RANGE:** None established  
**METHODOLOGY:** Timed endpoint  
**CPT:** 84478

#### **[TRIGPL] Pleural Fluid Triglycerides**

**SPECIMEN REQUIRED:** Refrigerated fluid  
**TUBE OR CONTAINER:** Sterile container  
**SPECIAL HANDLING:** A fasting specimen (12-14 hours or fasting after last meal) is recommended. Random specimens are acceptable  
**SPECIMEN VOLUME:** 1 mL  
**MINIMUM VOLUME:** 0.5 mL  
**TEST AVAILABILITY:** Daily  
**TURNAROUND TIME:** 8 hours  
**REFERENCE RANGE:** None established  
**METHODOLOGY:** Timed endpoint  
**CPT:** 84478

#### **[TRIGPT] Peritoneal Fluid Triglycerides**

**SPECIMEN REQUIRED:** Refrigerated fluid  
**TUBE OR CONTAINER:** Sterile container  
**SPECIAL HANDLING:** A fasting specimen (12-14 hours or fasting after last meal) is recommended. Random specimens are acceptable  
**SPECIMEN VOLUME:** 1 mL  
**MINIMUM VOLUME:** 0.5 mL



TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Timed endpoint  
CPT: 84478

#### **[TRIGSY] Synovial Fluid Triglycerides**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIAL HANDLING: A fasting specimen (12-14 hours or fasting after last meal) is recommended. Random specimens are acceptable  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Timed endpoint  
CPT: 84478

#### **[TRISCR] Tricyclic Antidepressants Screen**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Gold, Red or Light Green (heparin)  
SPECIAL HANDLING: Specimen Stability: 8 hours room temp  
48 hours refrigerated  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 2 mL  
TEST INCLUDES: Qualitative estimate of combined amount of Amitriptyline, Doxepine Desipramine, Imipramine, Nortriptyline and metabolites  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Negative  
METHODOLOGY: Homogeneous enzyme immunoassay  
CLINICAL USE: Detect possible toxicity in emergency overdose situations  
CPT: 80335

#### **[TROFDNA] HIV Co-receptor Tropism Assay**

SPECIMEN REQUIRED: Frozen whole blood  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Specimen must be frozen in a screw top tube  
Place in -20 C freezer  
SPECIMEN VOLUME: 6 mL  
MINIMUM VOLUME: 4 mL  
TEST AVAILABILITY: Daily  
CLINICAL USE: To be used when a patient's viral load is undetectable, tropism is unknown, and substitution with a CCR5 antagonist-containing regimen is desired

CPT: 87906

**[TROFILE] HIV Co-receptor Tropism Assay**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA) or PPT (white)  
SPECIAL HANDLING: Specimen must be frozen in a screw top tube or a PPT tube  
Place in -20 C freezer  
SPECIMEN VOLUME: 6 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
CLINICAL USE: Identifies the tropism of a patient's HIV  
CPT: 87906

**[TROPI] Troponin I**

SPECIMEN REQUIRED: Refrigerated plasma  
TUBE OR CONTAINER: Light Green (heparin)  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 12 hours  
REFERENCE RANGE: Negative: 0.0-0.39 ng/mL  
Suggestive of myocardial injury: 0.4-1.2 ng/mL  
Consistent with recent myocardial necrosis:  
>1.5 ng/mL  
METHODOLOGY: Chemiluminescence  
CLINICAL USE: Detect cardiac injury and diagnose acute myocardial infarction  
CPT: 84484

**[TROPT] Troponin T**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Light Green (Li Heparin)  
SPECIAL HANDLING: Specimen Stability: 24 hours-refrigerated  
SPECIMEN VOLUME: 0.8 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2 Hours  
REFERENCE RANGE: Female: Male: METHODOLOGY: Electrochemiluminescence immunoassay (ECLIA)  
CLINICAL USE: Detect cardiac injury; predict mortality in cases of unstable angina; serve as a marker for perioperative myocardial infarction  
CPT: 84484

**[TROPT2NDHR] Troponin T 120 Minute**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Light Green  
SPECIMEN VOLUME: 0.8 mL  
MINIMUM VOLUME: 0.3 mL

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Female: Male: METHODOLOGY: Electrochemiluminescence immunoassay (ECLIA)  
CLINICAL USE: Detect cardiac injury; predict mortality in cases of unstable angina; serve as a marker for perioperative myocardial infarction  
CPT: 84484

#### **[TROPTBASE] Troponin T Baseline**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Light Green  
SPECIMEN VOLUME: 0.8 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: Female: Male: METHODOLOGY: Electrochemiluminescence immunoassay (ECLIA)  
CLINICAL USE: Detect cardiac injury; predict mortality in cases of unstable angina; serve as a marker for perioperative myocardial infarction  
CPT: 84484

#### **[TRY] Tryptase**

SPECIMEN REQUIRED: Refrigerated serum or plasma  
TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)  
SPECIAL HANDLING: Obtain specimen between 15 minutes and 3 hours after event suspected of causing mast cell activation  
SPECIMEN VOLUME: 0.7 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-8 days  
METHODOLOGY: ImmunoCAP  
CLINICAL USE: Elevated levels of tryptase are found following mast cell activation in anaphylaxis in serum and in allergic rhinitis in nasal fluid. Elevated levels of tryptase are also found in serum in systemic mastocytosis  
CPT: 83520

#### **[TRYP] Trypsin Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Gold, Green (heparin), or Lavender(EDTA)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-7 days  
REFERENCE RANGE: 10.0 - 57.0 ng/mL

OTHER NAMES: Cathodic Trypsinogen; TLI; Trypsinogen  
METHODOLOGY: Radioimmunoassay (RIA)  
CLINICAL USE: Specific indicator of pancreatic damage; this assay is useful in the evaluation of acute pancreatitis  
CPT: 83519

**[TRYPG] Trypanosoma cruzi IgG Antibody**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate from cells within 45 minutes of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-10 days  
REFERENCE RANGE: 0.20 - 1.20 O.D. - Equivocal  
>= 1.21 O.D. - Positive  
METHODOLOGY: Enzyme-Linked Immunosorbent Assay (ELISA)  
CLINICAL USE: Support clinical diagnosis of Chagas Disease  
CPT: 86753

**[TRYPM] Trypanosoma cruzi IgM Antibody**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate from cells within 45 minutes of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-10 days  
REFERENCE RANGE: < 1:16: Negative  
>= 1:16: Positive  
METHODOLOGY: Indirect Fluorescent Antibody (IFA)  
CLINICAL USE: Support clinical diagnosis of Chagas Disease  
CPT: 86753

**[TRYPT] Tryptophan Level**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Green (heparin)  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-9 days  
METHODOLOGY: Liquid chromatography/tandem Mass spectrometry (LC/MS-MS)  
CPT: 82131

**[TSC1DNA] TSC1 DNA SEQUENCING**

SPECIMEN REQUIRED: Whole Blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR) and Bi-directional sequencing  
CLINICAL USE: Detects sequence variations in TSC1 genes  
CPT: 81406

#### **[TSC2DNA] TSC2 DNA SEQUENCING**

SPECIMEN REQUIRED: Whole Blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR) and Bi-directional sequencing  
CLINICAL USE: Detects sequence variations in TSC2 genes  
CPT: 81407

#### **[TSH] Thyroid Stimulating Hormone (TSH)**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Specimen Stability: 8 days-room temp  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 0.35-4.89 uIU/mL  
OTHER NAMES: Third-Generation TSH; Thyrotropin; TSH  
METHODOLOGY: ECLIA  
CLINICAL USE: Primary thyroid function test  
CPT: 84443

#### **[TSI] Thyroid Stimulating Immunoglobulin**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Centrifuge and separate cells within 2 hours of collection  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 0.00--0.55 IU/L  
OTHER NAMES: Human Thyroid Stimulator (HTS); Long-Acting Thyroid Stimulator (LATS); Thyroid-Stimulating Antibody (TSAb); TSI  
METHODOLOGY: The IMMULITE 2000 TSI assay designed for the

specific Semi- Quantitative detection of stimulating autoantibodies using a bridging format and human TSH receptor fragment chimeric recombinant proteins. The capture and detection proteins are designed to be specific for antibodies that stimulate the native receptor. This method provides a determination of thyroid stimulating autoantibodies that are specific to TSH receptors in human serum or plasma. The assay is traceable to WHO NIBSC 08/204.

CLINICAL USE: Detected in the majority of patients (77.8%) with Graves' disease; also associated with a small portion (15.9%) of patients with toxic multinodular goiter  
CPT: 84445

#### **[TUMNEC] Tumor Necrosis Factor**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: < 8.1 pg/mL  
OTHER NAMES: Cachectin; TNFa  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CLINICAL USE: Levels may be elevated in sepsis, autoimmune diseases, various infectious diseases and transplant rejection  
CPT: 83520

#### **[TWIST] CRANIOSYN/SAETHRE-CHOTZEN(TWIS**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 2 tubes of 3-5 mL (children & adults)  
MINIMUM VOLUME: 1-2 mL (newborn)  
TEST INCLUDES: Sequencing of the entire coding region of the Twist gene  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 15-20 days  
OTHER NAMES: Saethre-Chatzen Syndrome via Twist Gene  
METHODOLOGY: PCR amplification and DNA sequencing  
CLINICAL USE: Confirm the nature of the dwarfism in affected individual; Determine whether Saethre-Chatzen syndrome is responsible for abnormalities in skull eyes, or limbs; Discriminate between syndromes with different but overlapping clinical symptoms in affected individual; To establish whether symptoms are spontaneous or inherited within a family; Evaluate risk of having a child with

Saethre-Chotzen Syndrome  
CPT: 81479 (sequencing); 81406 (deletion/duplication)

**[TYPHUS] TYPHUS FEVER GROUP-RICKETTSIA**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST INCLUDES: IgG and IgM  
TEST AVAILABILITY: Daily  
METHODOLOGY: Immunofluorescence (IF)  
CPT: 86757 x 2

**[TYR] OCA1 VIA TYR GENE SEQUENCING**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 weeks  
OTHER NAMES: Oculocutaneous Albinism Type 1 (OCA)  
METHODOLOGY: Bi-directional Sanger Sequencing  
CPT: 81404

**[TYSAB] TYSABRI AB (NATALIZUMAB)**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or Gold  
separate within 1 hour of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
METHODOLOGY: Enzyme linked immunoassay (ELISA)  
CPT: 83516

**[UBT] Urea Breath Test (Timed)**

SPECIMEN REQUIRED: Breath samples at room temperature on patients  $\geq$  18 years of age  
TUBE OR CONTAINER: Pediatric patients: One blue sample bag (baseline) and one pink sample bag (post-dose)  
Adult patients: One blue sample bag (baseline) and one grey sample bag (post-dose)  
SPECIAL HANDLING: Call laboratory to obtain specimen collection kit; Collect sample on patients 3 years old or greater  
SPECIAL INSTRUCTIONS: The patient should not take antimicrobials, proton pump inhibitors, or bismuth preparations within two weeks

prior to testing. Note: Solution contains phenylalanine. Phenylketonurics should be warned.

SPECIMEN VOLUME: Pediatric patients:

One blue sample bag and one pink sample bag

Adult patients:

One blue sample bag and one grey sample bag

TEST AVAILABILITY: Daily

REFERENCE RANGE: Negative

METHODOLOGY: IR (Infrared) spectroscopy to assess the presence of (13) CO<sub>2</sub>

CLINICAL USE: Aid in the diagnosis of H. pylori infection

CPT: 83013

**[UCWKUP] Urine Culture Workup**

**[UETANA] E-TEST MIC, ANAEROBES**

**[UGT1A1GENO] UGT1A1 TA Repeat Genotype**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 10 mL

MINIMUM VOLUME: 3 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 1 week

METHODOLOGY: Capillary electrophoresis

CPT: 81350

**[UKBGP] KIRBY BAUER, MISC GRAM POS**

**[ULTRALH] Luteinizing Hormone**

SPECIMEN REQUIRED: Frozen serum (preferred) or plasma

TUBE OR CONTAINER: Red, Gold or Lavender (EDTA)

SPECIAL HANDLING: Serum or plasma must be separated from cells within 45 minutes of collection

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

METHODOLOGY: 2-site electrochemiluminescence

CLINICAL USE: Aid in evaluating the normalcy of hypothalamic-pituitary-gonadal axis

CPT: 83002

**[UNHGB] Unstable Hemoglobin**

SPECIMEN REQUIRED: Refrigerated whole blood

TUBE OR CONTAINER: Lavender (EDTA)

SPECIAL HANDLING: Must be received at performing lab within 24 hours of collection; Collect Monday through

Thursday only and send to lab by 1:00 pm

Do NOT perform test on patients < 6 months



SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Monday-Thursday only  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Visual identification of Hemoglobin precipitates  
CPT: 83068

#### **[UNUR] Urine Random Urea Nitrogen**

SPECIMEN REQUIRED: Refrigerated random urine  
TUBE OR CONTAINER: Clear/Red Urine tube (no additive)  
SPECIMEN VOLUME: 1 tube (6 mL)  
MINIMUM VOLUME: 1 tube (1 mL)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Kenetic with Urease/Glutamate dehydrogenase  
CPT: 84540

#### **[UREMH] Ureaplasma/M. hominis culture**

SPECIMEN REQUIRED: Urogenital, urine, joint fluid, CSF;  
Refrigerate after collection and during transport  
TUBE OR CONTAINER: Micro-Test Multi-Microbe  
SPECIAL HANDLING: Indicate specimen source; Order CULMYC for  
respiratory mycoplasmas on respiratory specimens  
Inclusion of patient clinical history and  
differential diagnostic considerations is very  
helpful  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 weeks  
CLINICAL INFORMATION: Ureaplasma and urogenital mycoplasmas  
have been indicated as a cause of infertility and should be  
considered in an infertility workup  
REFERENCE RANGE: No growth  
METHODOLOGY: Culture

#### **[URFEP] URINE IRON PROFILE**

SPECIMEN REQUIRED: Refrigerated urine (24 hour)  
TUBE OR CONTAINER: Plastic urine container (no preservative)  
SPECIAL HANDLING: 24 hour urine collected in "P" container  
(no preservative)  
SPECIMEN VOLUME: 6 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-8 days  
METHODOLOGY: Inductively Coupled Plasma/Optical Emission  
(ICP/OES)  
CLINICAL USE: Monitor exposure  
CPT: 83540

**[URIC] Uric Acid**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: For Patients on ELITECK order URICPOST ELITECK  
Specimen Stability: 3 days-room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Female: 2.6-6.0 mg/dL  
Male: 3.5-7.2 mg/dL  
METHODOLOGY: Enzymatic Colorimetric  
CPT: 84550

**[URICPC] Pericardial Fluid Uric Acid**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic Colorimetric  
CPT: 84560

**[URICPL] Pleural Fluid Uric Acid**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic Colorimetric  
CPT: 84560

**[URICPOST ELITEK] Uric Acid**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Collect blood samples in pre-chilled tubes containing heparin and immediately immerse and maintain sample in an ice water bath.  
Assay samples within 4 hours of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: Female: 2.6-6.0 mg/dL  
Male: 3.5-7.2 mg/dL

METHODOLOGY: Enzymatic Colorimetric  
CPT: 84550

**[URICPT] Peritoneal Fluid Uric Acid**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic Colormetric  
CPT: 84560

**[URICSY] Synovial Fluid Uric Acid**

SPECIMEN REQUIRED: Refrigerated fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic Colorimetric  
CPT: 84560

**[URICUR] Urine Random Uric Acid**

SPECIMEN REQUIRED: Refrigerated random urine  
TUBE OR CONTAINER: Plastic urine container  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: None established  
METHODOLOGY: Enzymatic Colorimetric  
CLINICAL USE: Renal function test  
CPT: 84560

**[UTTRGSENSCHG] UTT RG SENS REFERRED \*CHARGE\***

**[UWBCPCR] Bacterial PCR Univ Washington**

SPECIMEN REQUIRED: Fresh frozen tissue, paraffin embedded  
tissue, lower respiratory or sterile body  
fluid  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Polymerase Chain Reaction (PCR)

CPT: 87801

**[UWFUNPCR] Fungal PCR Univ Washington**

SPECIMEN REQUIRED: Fresh frozen tissue, paraffin embedded tissue, lower respiratory or sterile body fluid

TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-5 days

REFERENCE RANGE: Not detected

METHODOLOGY: Polymerase Chain Reaction (PCR)

CPT: 87801

**[UWMTBPCR] M tb cmpl PCR Univ Washington**

SPECIMEN REQUIRED: Fresh frozen tissue, paraffin embedded tissue, lower respiratory or sterile body fluid

TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-5 days

REFERENCE RANGE: Not detected

METHODOLOGY: Polymerase Chain Reaction (PCR)

CPT: 87801

**[UWNTMPCR] Non-TB PCR Univ Washington**

SPECIMEN REQUIRED: Fresh frozen tissue, paraffin embedded tissue, lower respiratory or sterile body fluid

TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-5 days

REFERENCE RANGE: Not detected

METHODOLOGY: Polymerase Chain Reaction (PCR)

CPT: 87801

**[VAGDNA] VAGINITIS/VAGINOSIS DNA PROBE**

SPECIMEN REQUIRED: Vaginal fluid swab at room temperature or refrigerated. Mon-Thur collection only.

TUBE OR CONTAINER: Affirm VPIII Ambient Temperature Transport System (ATTS)

SPECIAL HANDLING: Break ampule in ATTS reagent dropper and dispense reagent into sample collection tube.

Using transport swab provided, obtain a sample from the posterior vaginal fornix. Immediately

place swab in collection tube. Break swab shaft at prescored line. Press cap onto collection tube until it snaps in place. Specimen collected or transported other than previously described or specimen more than 72 hours old will be rejected  
SPECIMEN VOLUME: One swab in correct transport  
TEST INCLUDES: Detection and identification of Candida species, Gardnerella vaginalis, and Trichomonas vaginalis  
TEST AVAILABILITY: Monday-Saturday  
TURNAROUND TIME:  
METHODOLOGY: DNA probe  
CLINICAL USE: Aid in diagnosis of vaginal fluid specimens from patients with symptoms of vaginitis/vaginosis  
CPT: 87480; 87510; 87660

#### **[VALP] Valproic Acid (Depakene) Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Specimen Stability: 2 days-room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 50-100 ug/mL  
OTHER NAMES: Depakene; Depakote; Valproate; Dipropylacetic Acid  
METHODOLOGY: Homogeneous enzyme immunoassay  
CLINICAL USE: Monitor therapeutic drug level and assess toxicity  
CPT: 80164

#### **[VALPF] Free Valproic Acid Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
SPECIMEN VOLUME: 3 mL  
MINIMUM VOLUME: 1.1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
REFERENCE RANGE: Therapeutic: 6.0-22.0 ug/mL  
METHODOLOGY: Ultrafiltrate assayed by immunoassay  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80299

#### **[VANCO] Random Vancomycin Level**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (Li heparin) or Gold  
SPECIAL HANDLING: Specimen Stability: 48 hours-room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily

TURNAROUND TIME: 8 hours  
REFERENCE RANGE: None established  
METHODOLOGY: KIMS  
CLINICAL USE: Monitor therapeutic drug level and assess toxicity  
CPT: 80202

#### **[VANCP] Vancomycin Level Peak**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (Li heparin) or Gold  
SPECIAL HANDLING: Peak samples should be drawn 60 minutes after an I.M. injection, 30 minutes, 1 hour or 2 hours after a 60-minute I.V. infusion  
Specimen Stability: 48 hours-room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 20-40 ug/mL  
OTHER NAMES: Vancocin  
METHODOLOGY: KIMS  
CLINICAL USE: Monitor therapeutic drug level and assess toxicity  
CPT: 80202

#### **[VANCT] Vancomycin Level Trough**

SPECIMEN REQUIRED: Refrigerated plasma or serum  
TUBE OR CONTAINER: Light Green (heparin) or Gold  
SPECIAL HANDLING: Draw immediately prior to the next dose  
Specimen Stability: 48 hours-room temp  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8 hours  
REFERENCE RANGE: 10-20 ug/mL  
OTHER NAMES: Vancocin  
METHODOLOGY: Turbidimetric inhibition immunoassay  
CLINICAL USE: Monitor therapeutic drug level and assess toxicity  
CPT: 80202

#### **[VAP] VAP CHOLESTEROL PROFILE**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Gold or Red  
SPECIAL HANDLING: 10-12 hour fasting specimen is required; separate within 45 minutes of collection  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST INCLUDES: Total LDL-cholesterol (direct); Total HDL-cholesterol (direct; total VLDL-Cholesterol (direct); Triglycerides (direct); Total Non-HDL cholesterol (LDL+VLDL); Lp(a); Real LDL cholesterol; LDL-C pattern size; Remnant lipo-

proteins; subclass information  
TEST AVAILABILITY: Daily  
OTHER NAMES: Lipoprotein Subfractionation Profile; Expanded Lipoprotein Analysis; HDL Subfractions; LDL Particle Size; LDL Subfractions; Vertical Auto Profile  
METHODOLOGY: Vertical density-gradient ultracentrifugation followed by measurement of the cholesterol distribution and Enzymatic  
CLINICAL USE: Comprehensive lipoprotein analysis  
CPT: 83701

#### **[VARG] Varicella-Zoster IgG Antibody**

SPECIMEN REQUIRED: Serum  
TUBE OR CONTAINER: Gold or Red  
SPECIAL HANDLING: Refrigerate at 2-8 degrees C for 2 days  
Freeze at -20 degrees C for up to 2 months  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
PEDIATRIC TEST INFO: 0.5 mL; 1 Gold microtainer  
TEST AVAILABILITY: Monday - Friday  
TURNAROUND TIME: 1-2 days  
REFERENCE RANGE: Negative: Equivocal: 0.60-0.89  
Positive: >0.89  
OTHER NAMES: Chickenpox IgG; Herpes Zoster Antibodies; VZV IgG  
METHODOLOGY: Enzyme-Linked Liquid Fluorescent Assay (ELFA)  
CLINICAL USE: Diagnose VZV infection; determine adult susceptibility to infection  
CPT: 86787

#### **[VARM] Varicella-Zoster IgM Antibody**

SPECIMEN REQUIRED: Serum at room temperature  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Negative: < 0.91 AU  
Borderline: 0.91 - 1.09 AU  
Positive: > 1.09 AU  
OTHER NAMES: Chickenpox IgM; Herpes Zoster Antibodies; VZV IgM  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Aid in confirmation of acute VZV infection  
CPT: 86787

#### **[VASO] Vasoactive Intestinal Polypeptide**

SPECIMEN REQUIRED: Frozen plasma with trasylol  
TUBE OR CONTAINER: Lavender (EDTA) -chilled  
SPECIAL HANDLING: Collect in chilled EDTA tube; transfer to red top tube with 0.25 mL Trasylol solution. Mix well, centrifuge, transfer plasma to

pecially labeled transport tube and freeze.

Contact laboratory for collection kit.

Patient must not have received radioactive substances 24 hours prior to test. patient

should receive at least 300 grams of carbohydrate daily for 3 days before fasting

12 hours

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 0.4 mL (this volume does not allow for repeat testing)

TEST AVAILABILITY: Daily

TURNAROUND TIME: 7 days

REFERENCE RANGE: 23.0-63.0 pg/mL

OTHER NAMES: VIP

METHODOLOGY: Radioimmunoassay (RIA)

CLINICAL USE: VIP can be secreted by pancreatic or ectopic islet cell tumors, and in islet-cell hyperplasia

CPT: 84586

**[vBCUB] BIOFIRE BLOOD CULTURE ID**

**[VCMVPCR] CYTOMEGALOVIRUS PCR**

SPECIMEN REQUIREMENTS: 1ML OF CSF

SPECIMENS MUST BE SENT TO THE LAB IMMEDIATELY AND FROZEN AT -70 C IN LESS THAN 6 HOURS OF COLLECTION.

**[VDRLCSF] CSF VDRL**

SPECIMEN REQUIRED: Refrigerated CSF

TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 1-3 days

REFERENCE RANGE: Nonreactive

METHODOLOGY: Agglutination

REFLEX TEST INFORMATION: Reactive tests will be reflexed to a quantitative test at an additional charge

CLINICAL USE: Test for syphilis/neurosyphilis

CPT: 86592

**[VEBVPCR] EPSTEIN BAR VIRUS CSF**

SPECIMEN REQUIREMENTS: 1ML OF CSF

SPECIMENS MUST BE SENT TO THE LAB IMMEDIATELY AND FROZEN AT -70 C IN LESS THAN 6 HOURS OF COLLECTION.

**[VEGF] Vascular Endothelial Growth Factor**

SPECIMEN REQUIRED: Frozen plasma

TUBE OR CONTAINER: Lavender (EDTA)

SPECIAL HANDLING: Separate and freeze immediately



SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME:  
REFERENCE RANGE: 0-115 pg/mL  
METHODOLOGY: Enzyme immunoassay (EIA)  
CLINICAL USE: Assessment of tumor progression and prognosis  
CPT: 83520

**[VENTTY] ENTEROVIRUS TYPING OF ISOLATES**

**[VERBCGP] Verigene BC-GP Nucleic Acid**

**[VGCCAB] Voltage-Gated Calcium Channel Ab**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Separate serum from cells within 1 hour of collection  
SPECIMEN VOLUME: 0.2 mL  
MINIMUM VOLUME: 0.1 (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: OTHER NAMES: Lambert-Eaton Myasthenic Syndrome  
Antibody; LEMS  
Autoantibody; VGCCA; VGCC Antibody  
METHODOLOGY: Radioimmunoassay (RIA)  
CLINICAL USE: Aid in the diagnosis of Lambert-Eaton myasthenic syndrome (LEMS)  
CPT: 83519

**[VGKCAB] Voltage-Gated Potassium Channel Ab**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 4 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-10 days  
METHODOLOGY: Quantitative Radiobinding Assay  
CLINICAL USE: Associated with neuromuscular weakness as found in neuromyotonia; VGKC antibodies are also associated with paraneoplastic neurological syndromes and limbic encephalitis  
CPT: 83519

**[VHHV6] HHV6 PCR**

SPECIMEN REQUIREMENTS: 1ML OF CSF  
SPECIMENS MUST BE SENT TO THE LAB IMMEDIATELY AND FROZEN AT -70 C IN LESS THAN 6 HOURS OF COLLECTION.

**[VHL] VON HIPPEL-LINDAU DISEASE**

**SPECIMEN REQUIRED:** Whole blood at room temperature  
**TUBE OR CONTAINER:** Lavender (EDTA)  
**SPECIMEN VOLUME:** 5 mL  
**MINIMUM VOLUME:** 3 mL  
**TEST AVAILABILITY:** Monday-Friday  
**TURNAROUND TIME:** 3-4 weeks  
**METHODOLOGY:** Polymerase Chain Reaction (PCR)  
**CPT:** 81404

**[VINABPR20] INFLUENZA A/B (EIA/PCR20)**

**SPECIMEN REQUIRED:** Refrigerated viral transport of epithelial scrapings

**COLLECTION INSTRUCTIONS:**

Nasopharyngeal wash+NP:

1. Draw up 1-2 mL of sterile saline into a 3-5 mL syringe.
2. Remove the needle from the syringe and put on a butterfly with a large tubing. Cut the tubing to a length of 2-3".
3. Place the tubing in the nasopharyngeal passage. Inject the saline rapidly and draw back rapidly.
4. Inject saline and nasal material into the viral transport medium. If viral transport medium is not available, the NP wash may be added to 1.0 mL of trypticase soy broth or sterile saline.
5. After or before doing the wash, use a dacron NP swab to do a good epithelial cell scraping of the nasopharyngeal area. Place and cut or break the swab into the same vial as the wash. (Immunofluorescent testing is done on the epithelial cells the combination of both the wash and nasopharyngeal scraping are essential to obtain enough cells to perform the test.)

Alternate NP collection instructions:

1. Insert a type 1 (NP) dacron tipped, aluminum-shafted swab into nasopharyngeal passage for 1 minute.
2. Immediately following the removal of the swab roll the swab onto the center of a glass slide. Keep the area confined to the size of a dime. Do not leave any large clumps of mucous; spread the specimen out evenly over the dime size area. (This will make a maximum of 2 slides). Send to the lab immediately in glass slide holders
3. Repeat step 1 and cut or break the swab into viral transport medium or have the patient gargle 3mL of sterile saline for 10 seconds; expell the gargle into a sterile container. This is for a viral culture if the slide collection is poor or if the FA is negative. The culture is not performed if the FA is positive.

**TUBE OR CONTAINER:** Viral transport tube

**ORDERING MODULE:** MIC

**TEST INCLUDES:** Influenza A and B Direct EIA and respiratory virus PCR if EIA is negative

**TEST AVAILABILITY:** Monday-Saturday

TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Negative  
METHODOLOGY: EIA & PCR  
CLINICAL USE: Rapid identification of Influenza virus

#### **[VISC] Blood Viscosity**

SPECIMEN REQUIRED: Refrigerated serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: 1.6-1.9 relative to saline  
METHODOLOGY: Viscosimetry (Ostwald)  
CLINICAL USE: Evaluate hyperviscosity syndrome associated with monoclonal gammopathy state  
CPT: 85810

#### **[VISCBF] Body Fluid Viscosity**

SPECIMEN REQUIRED: Refrigerated body fluid  
TUBE OR CONTAINER: Sterile tube  
SPECIAL HANDLING: Specify source of fluid  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-4 days  
METHODOLOGY: Viscometry  
CLINICAL USE: Evaluate hyperviscosity syndrome associated with monoclonal gammopathy state  
CPT: 85810

#### **[VITA] Vitamin A Level**

SPECIMEN REQUIRED: Room temperature serum  
TUBE OR CONTAINER: Red or Gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 8-10 days  
REFERENCE RANGE: Age and gender specific  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)  
CLINICAL USE: Differential diagnosis of hypervitaminosis A  
CPT: 84590

#### **[VITB12] Vitamin B12 Level**

SPECIMEN REQUIRED: Refrigerated or frozen serum. Can use Lithium Heparin if not ordered with Folate.  
TUBE OR CONTAINER: Lt Green, Gold or Red  
SPECIAL HANDLING: Stable 2 hrs at room Temp, 48 hrs refrigerated

SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: 231 - 1177 pg/mL  
OTHER NAMES: B12; Cobalamin  
METHODOLOGY: Electrochemiluminescence Immunoassay  
CLINICAL USE: Detect B12 deficiency as in pernicious anemia;  
diagnose folic acid deficiency  
CPT: 82607

#### **[VITB1B] Whole Blood Vitamin B1 Level**

SPECIMEN REQUIRED: Frozen whole blood  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Freeze in original tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 10 days  
REFERENCE RANGE: 66.5 - 200.0 nmol/L  
OTHER NAMES: Thiamine  
METHODOLOGY: High-pressure liquid chromatography (HPLC) with  
fluorescence detection  
CLINICAL USE: Important cofactor for the transketolation  
reactions of the pentose phosphate cycle, which  
provides pentose phosphate for nucleotide  
synthesis and for the reduced NADP required for  
various synthetic pathways  
CPT: 84425

#### **[VITB2] Vitamin B2 Level**

SPECIMEN REQUIRED: Frozen whole blood  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Freeze immediately and protect from light  
SPECIMEN VOLUME: 1.5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 137-370 g/L  
OTHER NAMES: Riboflavin  
METHODOLOGY: High-pressure liquid chromatography (HPLC) with  
fluorescence detector  
CLINICAL USE: Detect riboflavin deficiency  
CPT: 84252

#### **[VITB3] VITAMIN B3/NIACIN METABOLITE**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red, Lavender (EDTA)  
SPECIAL HANDLING: Separate within 1 hour of collection  
Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1.0 mL

MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: Nicotinic Acid (Niacin) and Nicotinamide  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4-7 days  
REFERENCE RANGE: Nicotinic Acid: 0.0-5.0 ng/mL  
Nicotinamide: 5.2-72.1 ng/mL  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)  
CPT: 82542

#### **[VITB5] Pantothenic Acid Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red or Lavender (EDTA)  
SPECIAL HANDLING: Separate plasma from cells within 45 minutes of collection; Protect from light (wrap in foil)  
Do NOT collect in gel barrier tube  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: 12.9-253.1 ng/mL  
OTHER NAMES: Pantothenic acid  
METHODOLOGY: Liquid chromatography/tandem mass spectrometry (LC/MS-MS)  
CPT: 84591

#### **[VITB6] Vitamin B6 Level**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Separate and freeze immediately; protect specimen from light  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-7 days  
REFERENCE RANGE: Male: 5.3 - 46.7 ng/mL  
Female: 2.0 - 32.8 ng/mL  
OTHER NAMES: PLP; Pyridoxal 5-Phosphate; Pyridoxine  
METHODOLOGY: High-pressure liquid chromatography (HPLC) with electrochemical (EC) detection  
CLINICAL USE: Detect vitamin B6 deficiency  
CPT: 84207

#### **[VITC] Vitamin C level**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Light Green (heparin)  
SPECIAL HANDLING: Draw in chilled tube and place in ice  
Protect specimen from light  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-7 days  
REFERENCE RANGE: 0.4 - 2.0 mg/dL  
OTHER NAMES: Ascorbic Acid  
METHODOLOGY: High-pressure liquid chromatography (HPLC) with electrochemical (EC) detection  
CLINICAL USE: Evaluation of vitamin C deficiency  
CPT: 82180

#### **[VITD125] Vitamin D 1,25-Dihydroxy**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red, Gold, Lavender(EDTA), or Green(heparin)  
SPECIAL HANDLING: No isotopes administered 24 hours prior to venipuncture  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL (this volume does not allow for repeat testing)  
PEDIATRIC TEST INFO: Order PEDVITD125 for pediatric testing to be performed by Esoterix  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3 days  
REFERENCE RANGE: 19.9-79.3 pg/mL  
OTHER NAMES: Calcitriol; 1,25-Dihydroxycholecalciferol; 1,25-Dihydroxy Vitamin D3; 1,25(OH)<sub>2</sub> D3  
METHODOLOGY: Immunochemiluminometric assay (ICMA)  
CLINICAL USE: Aid in the diagnosis of hyperparathyroidism, hypoparathyroidism, pseudohypoparathyroidism, renal osteodystrophy, vitamin D resistant rickets  
CPT: 82652

#### **[VITD25] 25-Hydroxy Vitamin D3**

SPECIMEN REQUIRED: Refrigerated serum/plasma  
TUBE OR CONTAINER: Red, Gold, Lt Green  
SPECIAL HANDLING: Specimen Stability: 8 hours-room temp  
SPECIMEN VOLUME: 2.0 mL  
MINIMUM VOLUME: 0.5 mL (this volume does not allow for repeat testing)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1 day  
REFERENCE RANGE: 35.0 - 110.0 ng/mL  
OTHER NAMES: Cholecalciferol Metabolite; 25-Hydroxycalciferol; 25-OH-D; Vitamin D3 Metabolite  
METHODOLOGY: ELECTROCHEMILUMINESCENCE BINDING Assay  
CLINICAL USE: Rule out vitamin D deficiency as cause of bone disease; differential diagnosis of hypercalcemia  
CPT: 82306

#### **[VITK] Vitamin K Level**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Red or Gold (preferred) or Lavender (EDTA)

SPECIAL HANDLING: Protect specimen from light  
SPECIMEN VOLUME: 1.5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: 0-1 year: 0.13-3.37 ng/mL  
2- 17 years: 0.13-1.39 ng/mL  
>17 years: 0.13-1.88 ng/mL  
OTHER NAMES: Phylloquinone; Phytonadione  
METHODOLOGY: High-pressure liquid chromatography (HPLC) with electrochemical (EC) detection  
CLINICAL USE: Vitamin K deficiency may be induced by obstructive liver disease, obstructive icterus, malabsorption due to celiac disease, pancreatitis, diarrhea, and antibiotic abuse; may be used to treat blood clotting disorders, bone metabolism disorders, and hemorrhagic disorders of newborns  
CPT: 84597

#### **[VLCAD] VERY LONG CHAIN ACYL-CoA DEHYD**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
REFERENCE RANGE: No mutation detected  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CPT: 81406

#### **[VMEAFAI] MEASLES VIRUS FA + CULTURE**

SPECIMEN REQUIRED:  
Nasopharyngeal wash+NP instructions:  
1. Draw up 1-2 mL of sterile saline into a 3-5 mL syringe.  
2. Remove the needle from the syringe and put on a butterfly with a large tubing. Cut the tubing to a length of 2-3".  
3. Place the tubing in the nasopharyngeal passage. Inject the saline rapidly and draw back rapidly.  
4. Inject saline and nasal material into the viral transport medium. (If viral transport medium is not available, the NP wash may be added to 1.0 mL of trypticase soy broth or sterile saline.)  
5. After or before doing the wash, use a Dacron NP swab to do a good epithelial cell scraping of the nasopharyngeal area. Place and cut or break the swab into the same vial as the wash. (Immunofluorescent testing is done on the epithelial cells. The combination of both the wash and nasopharyngeal scraping are essential to obtain enough cells to perform the test.)  
Alternate NP collection instructions:

1. Insert a type 1 (NP) dacron tipped, aluminum-shafted swab into nasopharyngeal passage for 1 minute.

2. Immediately following the removal of the swab roll the swab onto the center of a glass slide. Keep the area confined to the size of a dime. Do not leave any large clumps of mucous; spread the specimen out evenly over the dime size area. (This will make a maximum of 2 slides).

Send to the lab immediately in glass slide holders

3. Repeat step 1 and cut or break the swab into viral transport medium or have the patient gargle 3 mL of sterile saline for 10 seconds; expell the gargle into a sterile container.

This is for a viral culture if the slide collection is poor or if the FA is negative. The culture is not performed if the FA is positive.

TUBE OR CONTAINER: Viral tranport tube

TEST INCLUDES: Measles FA and culture

TEST AVAILABILITY: Monday-Saturday

TURNAROUND TIME: 1-14 days

METHODOLOGY: Cytopathic effect (CE); Fluorescent antibody (FA)

CPT: 87252; 87283

#### **[VMEASVI] MEASLES SHELL VIAL + CULTURE**

SPECIMEN REQUIRED:

Nasopharyngeal wash+NP instructions:

1. Draw up 1-2 mL of sterile saline into a 3-5 mL syringe.

2. Remove the needle from the syringe and put on a butterfly with a large tubing. Cut the tubing to a length of 2-3".

3. Place the tubing in the nasopharyngeal passage. Inject the saline rapidly and draw back rapidly.

4. Inject saline and nasal material into the viral transport medium. (If viral transport medium is not available, the NP wash may be added to 1.0 mL of trypticase soy broth or sterile saline.)

5. After or before doing the wash, use a Dacron NP swab to do a good epithelial cell scraping of the nasopharyngeal area.

Place and cut or break the swab into the same vial as the wash.

TEST AVAILABILITY: Daily

TURNAROUND TIME: 48-96 hours

CPT: 87254; 87252

#### **[VMEAVC] MEASLE VIRUS CULTURE**

SPECIMEN REQUIRED:

Nasopharyngeal wash+NP instructions:

1. Draw up 1-2 mL of sterile saline into a 3-5 mL syringe.

2. Remove the needle from the syringe and put on a butterfly with a large tubing. Cut the tubing to a length of 2-3".

3. Place the tubing in the nasopharyngeal passage. Inject the saline rapidly and draw back rapidly.

4. Inject saline and nasal material into the viral transport



medium. (If viral transport medium is not available, the NP wash may be added to 1.0 mL of trypticase soy broth or sterile saline.)

5. After or before doing the wash, use a Dacron NP swab to do a good epithelial cell scraping of the nasopharyngeal area. Place and cut or break the swab into the same vial as the wash.

TUBE OR CONTAINER: Viral transport media

TURNAROUND TIME: 1-14 Days

METHODOLOGY: Cytopathic Effect (CE)

#### **[VMUMSVI] MUMPS SHELL VIAL + CULTURE**

##### **SPECIMEN REQUIRED:**

Nasopharyngeal wash+NP instructions:

1. Draw up 1-2 mL of sterile saline into a 3-5 mL syringe.
2. Remove the needle from the syringe and put on a butterfly with a large tubing. Cut the tubing to a length of 2-3".
3. Place the tubing in the nasopharyngeal passage. Inject the saline rapidly and draw back rapidly.
4. Inject saline and nasal material into the viral transport medium. (If viral transport medium is not available, the NP wash may be added to 1.0 mL of trypticase soy broth or sterile saline.)
5. After or before doing the wash, use a Dacron NP swab to do a good epithelial cell scraping of the nasopharyngeal area. Place and cut or break the swab into the same vial as the wash.

TUBE OR CONTAINER: Viral transport media

TEST INCLUDES: Mumps Shell Vial & Culture

TEST AVAILABILITY: Daily 48-96 hours

CPT: 87252; 87254

#### **[VMUMVC] MUMPS CULTURE**

##### **SPECIMEN REQUIRED:**

Nasopharyngeal wash+NP instructions:

1. Draw up 1-2 mL of sterile saline into a 3-5 mL syringe.
2. Remove the needle from the syringe and put on a butterfly with a large tubing. Cut the tubing to a length of 2-3".
3. Place the tubing in the nasopharyngeal passage. Inject the saline rapidly and draw back rapidly.
4. Inject saline and nasal material into the viral transport medium. (If viral transport medium is not available, the NP wash may be added to 1.0 mL of trypticase soy broth or sterile saline.)
5. After or before doing the wash, use a Dacron NP swab to do a good epithelial cell scraping of the nasopharyngeal area. Place and cut or break the swab into the same vial as the wash.

TUBE OR CONTAINER: Viral transport media

TURNAROUND TIME: 1-14 Days

METHODOLOGY: Cytopathic Effect (CPE)

**[VORIC] Voriconazole Level**

SPECIMEN REQUIRED: Frozen serum

TUBE OR CONTAINER: Red

SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 1-4 days

REFERENCE RANGE: 1.0-5.5 mcg/mL

METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS)

CLINICAL USE: Therapeutic Drug Monitoring

CPT: 80299

**[VPARVC] PARAINFLUENZA CULTURE**

SPECIMEN REQUIRED: Any respiratory sample on ice

COLLECTION INSTRUCTIONS:

Nasopharyngeal wash+NP:

1. Draw up 1-2 mL of sterile saline into a 3-5 mL syringe.
2. Remove the needle from the syringe and put on a butterfly with a large tubing. Cut the tubing to a length of 2-3".
3. Place the tubing in the nasopharyngeal passage. Inject the saline rapidly and draw back rapidly.
4. Inject saline and nasal material into the viral transport medium. If viral transport medium is not available, the NP wash may be added to 1.0 mL of trypticase soy broth or sterile saline.
5. After or before doing the wash, use a dacron NP swab to do a good epithelial cell scraping of the nasopharyngeal area. Place and cut or break the swab into the same vial as the wash.

THROAT:

Collect with viral swab. Refrigerate following collection and during transport.

TUBE OR CONTAINER: Viral transport tube

SPECIAL HANDLING: Indicate source of specimen;. Inclusion of patient clinical history and differential diagnostic considerations is very helpful

ORDERING MODULE: MIC

TEST INCLUDES: Parainfluenza 1,2,3 & 4 culture ONLY

TEST AVAILABILITY: Monday-Saturday

TURNAROUND TIME: < 96 hours for final

REFERENCE RANGE: No growth

METHODOLOGY: Culture

CLINICAL USE: Isolate and identify Parainfluenza

CPT: 87252

**[vPCDEIA] EIA C. difficile**

**[vPCDIFF] PCR Clostridium difficile**

SAMPLE SOURCE: Fresh, unformed stool, see following criteria.  
Specimens should be liquid or soft and take the shape of the container.

Store the specimen at 2-8C until testing is performed. The specimen is stable for up to 5 days when stored at 2-8C.

Only patients with diarrhea, defined as at least 3 unformed or watery stools in a 24-hour period, should be tested. Testing will be restricted to one specimen in 7 days. Testing will not be performed if the patient has had a positive C. difficile PCR in the past 30 days.

Usual sample volume: Greater than or = to a jelly bean

Collect the unformed stool specimen in a clean container with a tight fitting lid.

Send to the laboratory as soon as possible.

Alternatively, specimens can be kept at room temperature (20-30C) for up to 24 hours; this will not be routinely done, since it may affect other test ordered on the same specimen.

Rejection criteria: formed stools, rectal swabs and fluid obtained at colonoscopy are not acceptable.

Turn Around Time:

In by 7am to 3pm

Out the same day

**[VPCMV] CSF Cytomegalovirus DNA (PCR)**

SPECIMEN REQUIRED: Frozen or refrigerated CSF

TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME:

REFERENCE RANGE: Not detected

OTHER NAMES: Cytomegalovirus DNA

METHODOLOGY: Real-time polymerase chain reaction (PCR)

CLINICAL USE: aid in the diagnosis of CMV infection

CPT: 87496

**[VPCMVQ] CMV PCR QUANT BLOOD**

SPECIMEN REQUIRED: Frozen plasma

TUBE OR CONTAINER: Lavender (EDTA)

SPECIAL HANDLING: Separate plasma and freeze in plastic container within 6 hours of collection. Do

NOT collect in green tube

SPECIMEN VOLUME: 4 mL

MINIMUM VOLUME: 3.5 mL

TEST AVAILABILITY: Monday-Friday

TURNAROUND TIME: 7 days

REFERENCE RANGE: Not detected

OTHER NAMES: Cytomegalovirus (CMV) quantitative (viral load)

METHODOLOGY: Polymerase chain reaction (PCR)  
CPT: 87497

**[vPCOV] SARS-CoV-2 PCR**

**[VPCTNGE] CHLAMYDIA/GC PCR EYE**

**[VPCTNGS] CHLAMYDIA/GC PCR SWAB**

**[VPCTNGU] CHLAMYDIA/GC PCR URINE**

**[VPEBV] CSF Epstein-Barr Virus DNA (PCR)**

SPECIMEN REQUIRED: Frozen or refrigerated CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME:  
REFERENCE RANGE: Not detected  
METHODOLOGY: Real-time polymerase chain reaction (PCR)  
CLINICAL USE: aid in the diagnosis of infection with  
Epstein-Barr virus (EBV)  
CPT: 87798

**[VPENT] ENTEROVIRUS PCR (CSF)**

SPECIMEN REQUIREMENTS: .5ML OF CSF  
SPECIMENS MUST BE SENT TO THE LAB IMMEDIATELY AND FROZEN  
AT -70 C IN LESS THAN 6 HOURS OF COLLECTION.  
TUBE OR CONTAINER: CSF tube  
ORDERING MODULE: MIC  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 36 hours  
REFERENCE RANGE: Not Detected  
METHODOLOGY: Real-time PCR (Genexpert)

**[VPGI] Biofire GI PCR Panel**

Specimen: raw stool in sterile container or in Cary Blair transport medium, collection.  
Turn around time: 24 hours  
Testing availability: 24/7  
Methodology: PCR  
Test Detects: Campylobacter spp. (*C. jejuni*, *C. coli*, &  
*C. upsaliensis*)  
*Plesiomonas shigelloides*  
*Salmonella* spp.  
*Vibrio* spp. (*V. parahemolyticus*, *V. vulnificus*,  
*V. cholerae*)  
*Yersinia enterocolitica*  
Enteroaggregative *E. coli* (EAEC)  
Enteropathogenic *E. coli* (EPEC)

Enterotoxigenic E. coli (ETEC) lt/st  
Shiga-like toxin-producing E. coli(STEC) stx1/stx2  
Shigella/Enteroinvasive E. coli (EIEC)  
Adenovirus F 40/41  
Astrovirus  
Norovirus GI/GII  
Rotavirus A  
Sapovirus (Genogroups I, II, IV, & V)  
Cryptosporidium  
Cylospora cayetanensis  
Entamoeba histolytica  
Giardia lymbia  
Reference range: Not Detected

#### **[VPHCVQ] HCV RNA (QUANTITATIVE)**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Separate plasma and freeze in plastic container within 6 hours of collection. Do NOT collect in green tube  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 3.5 mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 7 days  
REFERENCE RANGE: Not detected  
OTHER NAMES: Hepatitis C Virus RNA PCR, quantitative; Hepatitis C Viral load; HCV Viral load  
METHODOLOGY: Polymerase chain reaction (PCR)  
CLINICAL USE: Detect and confirm hepatitis C virus infection  
CPT: 87522

#### **[VPHCVQG] HCV QUANT WITH GENOTYPE**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Lavender-tall (EDTA)  
SPECIAL HANDLING: Collect 4 Lavender tubes  
Separate plasma and freeze in plastic container within 6 hours of collection. Do NOT collect in green tube  
SPECIMEN VOLUME: 10 mL  
MINIMUM VOLUME: 6.5 mL  
TEST INCLUDES: Quantitative HCV and HCV genotype when quantitation values are > 100 IU/mL  
TEST AVAILABILITY: Monday-Friday  
TURNAROUND TIME: 7 days  
OTHER NAMES: Hepatitis C Virus RNA PCR, quantitative with reflex to genotyping; HCV Viral load with reflex to genotyping  
METHODOLOGY: Polymerase chain reaction (PCR) and Fluorescence Resonance Energy Transfer (FRET), Genotypes 1-6  
CLINICAL USE: Detect and confirm hepatitis C virus infection

CPT: 87522; 87902

**[VPHHV6] CSF Herpesvirus 6 DNA (PCR)**

SPECIMEN REQUIRED: Frozen or refrigerated CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME:  
REFERENCE RANGE: Not detected  
METHODOLOGY: Real-time polymerase chain reaction (PCR)  
CLINICAL USE: aid in the diagnosis of infection with human herpesvirus 6 (HHV-6)  
CPT: 87532

**[VPHSV] HERPES SIMPLEX PCR (CSF)**

SPECIMEN REQUIREMENTS: 0.5ML OF CSF  
SPECIMENS MUST BE SENT TO THE LAB IMMEDIATELY AND FROZEN AT -70 C IN LESS THAN 6 HOURS OF COLLECTION.

**[VPHSVO] HERPES SIMPLEX PCR (Non-CSF)**

SPECIMEN REQUIREMENTS: 0.5ML OF CSF  
SPECIMENS MUST BE SENT TO THE LAB IMMEDIATELY AND FROZEN AT -70 C IN LESS THAN 6 HOURS OF COLLECTION.

**[vPIAD] ADENOVIRUS PCR**

SPECIMEN REQUIRED:

Nasopharyngeal wash+NP instructions:

1. Draw up 1-2 mL of sterile saline into a 3-5 mL syringe.
2. Remove the needle from the syringe and put on a butterfly with a large tubing. Cut the tubing to a length of 2-3".
3. Place the tubing in the nasopharyngeal passage. Inject the saline rapidly and draw back rapidly.
4. Inject saline and nasal material into the viral transport medium. (If viral transport medium is not available, the NP wash may be added to 1.0 mL of trypticase soy broth or sterile saline.)
5. After or before doing the wash, use a Dacron NP swab to do a good epithelial cell scraping of the nasopharyngeal area. Place and cut or break the swab into the same vial as the wash. (Immunofluorescent testing is done on the epithelial cells. The combination of both the wash and nasopharyngeal scraping are essential to obtain enough cells to perform the test.)

Alternate NP collection instructions:

1. Insert a type 1 (NP) dacron tipped, aluminum-shafted swab into nasopharyngeal passage for 1 minute.
2. Cut or break the swab into viral transport medium.

Trachial Aspirates

The aspirate can be put in viral transport medium

Refrigerate following collection and during transport.

NP swab: Collect with rayon or Dacron wire swab; place swab into viral transport media tube. Refrigerate following collection and during transport.

TUBE OR CONTAINER: Viral transport media

TEST AVAILABILITY: Sunday-Saturday

TURNAROUND TIME: 24 hours

METHODOLOGY: PCR- Flim Array Technology

### **[VPLABC] LIAT INFLUENZA A/B COVID PCR**

SPECIMEN: Epithelial scrapings using a flocked swab and sent in Viral transport system.

Collection instructions:

1. Instruct the patient to blow their nose.
2. Place the patient in a seated position with head against a fixed object (e.g. a wall) to prevent the patient from pulling away during this procedure.
3. Tilt the patient's head back at a 70 degree angle
4. Insert the flocked swab into one nostril straight back (not upwards) and continue along the floor of the nasal passage for several centimeters until reaching the nasopharynx (resistance will be met).
  - a. The distance from the nose to the ear gives an estimate of the distance the swab should be inserted.
  - b. Do not force the swab, if obstruction is encountered before reaching the nasopharynx, remove the swab and try the other nostril.
5. Rotate the swab gently for 5-10 seconds to loosen the epithelial cells.
6. Remove the swab and immediately insert the swab into the transport media tube, placing the swab head at least inch below the surface of the media. Break the swab shaft by bending until it snaps and leave the swab in the tube.

Attach the cap securely.

Unacceptable Specimens:

Nasal Washes, Nasal specimens or specimens collected with Calcium alginate, cotton, rayon, foam swabs or dry swabs not in transport media are not recommended for PCR.

Nasopharyngeal Washes.

ORDERING MODULE: MIC

TEST AVAILABILITY: 24/7

TURNAROUND TIME: REFERENCE RANGE: Not Detected/Negative

METHODOLOGY: PCR

CPT 87636

### **[VPLABR] RSV and Influenza A/B LIAT PCR**

CPT - 87502

SPECIMEN REQUIRED: Viral transport of epithelial scrapings

NP SWAB COLLECTION INSTRUCTIONS:

1. Instruct the patient to blow their nose.

2. Place the patient in a seated position with head against a fixed object (e.g. a wall) to prevent the patient from pulling away during this procedure.
3. Tilt the patient's head back at a 70 degree angle
4. Insert the swab into one nostril straight back (not upwards) and continue along the floor of the nasal passage for several centimeters until reaching the nasopharynx (resistance will be met).
  - a. The distance from the nose to the ear gives an estimate of the distance the swab should be inserted.
  - b. Do not force the swab, if obstruction is encountered before reaching the nasopharynx, remove the swab and try the other nostril.
5. Rotate the swab gently for 5-10 seconds to loosen the epithelial cells.
6. Remove the swab and immediately insert the swab into the transport media tube, placing the swab head at least inch below the surface of the media. Break the swab shaft by bending until it snaps and leave the swab in the tube.

Attach the cap securely.

Unacceptable Specimens:

Nasal Washes, Nasal specimens or specimens collected with Calcium alginate, cotton, rayon, foam swabs or dry swabs not in transport media are not recommended for PCR.

Nasopharyngeal Washes.

Transport on wet ice.

TUBE OR CONTAINER: UTM Viral transport tube

ORDERING MODULE: MIC

TEST INCLUDES: RSV; Influenza A & B

TEST AVAILABILITY: Daily

TURNAROUND TIME:< 1 hour

REFERENCE RANGE:"Not Detected", (Negative)

METHODOLOGY: Real-time PCR, no confirmatory test needed.

CPT - 87502

SPECIMEN REQUIRED: Viral transport of epithelial scrapings

NP SWAB COLLECTION INSTRUCTIONS:

1. Instruct the patient to blow their nose.
2. Place the patient in a seated position with head against a fixed object (e.g. a wall) to prevent the patient from pulling away during this procedure.
3. Tilt the patient's head back at a 70 degree angle
4. Insert the swab into one nostril straight back (not upwards) and continue along the floor of the nasal passage for several centimeters until reaching the nasopharynx (resistance will be met).
  - a. The distance from the nose to the ear gives an estimate of the distance the swab should be inserted.
  - b. Do not force the swab, if obstruction is encountered before reaching the nasopharynx, remove the swab and try the other nostril.
5. Rotate the swab gently for 5-10 seconds to loosen the



epithelial cells.

6. Remove the swab and immediately insert the swab into the transp

**[VPR20C] Respiratory PCR20 + COVID**

**[VPRSV] RSV PCR**

**SPECIMEN REQUIRED:**

Nasopharyngeal wash+NP instructions:

1. Draw up 1-2 mL of sterile saline into a 3-5 mL syringe.
2. Remove the needle from the syringe and put on a butterfly with a large tubing. Cut the tubing to a length of 2-3".
3. Place the tubing in the nasopharyngeal passage. Inject the saline rapidly and draw back rapidly.
4. Inject saline and nasal material into the viral transport medium. (If viral transport medium is not available, the NP wash may be added to 1.0 mL of trypticase soy broth or sterile saline.)
5. After or before doing the wash, use a Dacron NP swab to do a good epithelial cell scraping of the nasopharyngeal area. Place and cut or break the swab into the same vial as the wash. (Immunofluorescent testing is done on the epithelial cells. The combination of both the wash and nasopharyngeal scraping are essential to obtain enough cells to perform the test.)

Alternate NP collection instructions:

1. Insert a type 1 (NP) dacron tipped, aluminum-shafted swab into nasopharyngeal passage for 1 minute.
2. Immediately following the removal of the swab roll the swab onto the center of a glass slide. Keep the area confined to the size of a dime. Do not leave any large clumps of mucous; spread the specimen out evenly over the dime size area. (This will make a maximum of 2 slides). Send to the lab immediately in glass slide holders
3. Repeat step 1 and cut or break the swab into viral transport medium or have the patient gargle 3 mL of sterile saline for 10 seconds; expell the gargle into a sterile container. This is for a viral culture if the slide collection is poor or if the FA is negative. The culture is not performed if the FA is positive.

The aspirate can be put in viral transport medium and used for culture backup. Culture backup for adults requires a throat swab or gargle placed in viral transport medium. If FA is positive the culture is not performed. Select any 2 viruses to be tested for: RSV, Parainfluenza virus, Influenza A/B, Adenovirus.

Influenza A and B can be tested for separately or pooled. Draw up 1-2 mL sterile saline into a 3-5 mL syringe. Attach 2 inches of 18-20 guage tubing to syringe tip. Insert tube end into nostril. Quickly instill saline into nostril. Aspirate the recoverable nasal specimen. Inject nasal specimen from syringe

into viral transport media tube. Refrigerate following collection and during transport.

NP swab: Collect with rayon or Dacron wire swab; place swab into viral transport media tube. Refrigerate following collection and during transport.

TUBE OR CONTAINER: Viral transport media

TEST AVAILABILITY: Monday-Saturday

TURNAROUND TIME: 24 hours

METHODOLOGY: Direct fluorescent antibody (DFA)

**[VPRUBELLARNAQU] RUBELLA VIRUS RNA PCR QL**

**[VPTV] Trichomonas vaginalis PCR**

**[VPVAG] BD MAX VAGINAL PANEL PCR**

SPECIMEN REQUIRED: Vaginal swab (taken before exam) in BD MAX UVE buffer tube.

SPECIAL HANDLING: Transport without delay to the laboratory or keep refrigerated until transported to lab

Limited to 1 specimen every 24 hours.

ORDERING MODULE: MIC

TEST INCLUDES: PCR detection of *Trichomonas vaginalis*, *Candida albicans*, *C. parapsilosis*, *C. tropicalis*, *C. dubliniensis*, *C. glabrata*, *C. krusei*, and bacteria associated with normal vaginal flora and bacterial vaginosis.

TEST AVAILABILITY: Daily

TURNAROUND TIME: 24 hours

REFERENCE RANGE: Not detected

METHODOLOGY: PCR

CLINICAL USE: Detection of *Trichomonas vaginalis*, *Candida* spp., agents of vaginosis or normal vaginal flora.

**[VPVZ] Varicella-Zoster Virus DNA (PCR)**

SPECIMEN REQUIRED: Frozen or refrigerated CSF

TUBE OR CONTAINER: Sterile container

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.2 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME:

REFERENCE RANGE: Not detected

METHODOLOGY: Real-time polymerase chain reaction (PCR)

CLINICAL USE: aid in the diagnosis of infections caused by varicella zoster virus (VZV)

CPT: 87798

**[VPVZV] DiaSorin Varicella Zoster PCR**

SPECIMEN REQUIRED: Scraping of lesion using flocced swab

SPECIAL HANDLING: Place swab into Viral transport system and

transport on ice. Specimens can be stored at 2 to 8 C up to 7 days or longer if stored at ORDERING MODULE: MIC  
TEST INCLUDES: Direct amplification and detection of Varicella Zoster virus by PCR.  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Not detected  
METHODOLOGY: PCR  
CLINICAL USE: Detection of Varicella Zoster Viral DNA directly from cutaneous or mucocutaneous lesions.  
CPT code: 87798

**[VPXMTB] Xpert MTB-Rifampin PCR**

SPECIMEN REQUIRED: Raw sputum, 2ml (minimum 1 ml)  
SPECIAL HANDLING: Transport and store specimens at 2-8 degrees C. Specimens can be stored at room temp for up to 3 days or at 2-8 degrees C up to 10 days  
ORDERING MODULE: MIC  
TEST INCLUDES: PCR detection of Mycobacterium tuberculosis complex DNA and detection of mutations in the rpoB gene (indication rifampin resistance) by PCR  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 24 hours  
REFERENCE RANGE: Not detected  
METHODOLOGY: PCR  
CLINICAL USE: Detection of M. tuberculosis complex DNA and rifampin resistance directly from raw sputum specimens.

**[VPXSF] Cepheid XpertPlus SARS A/B PCR**

**[VPXSFR] Cepheid XptPlus SARS Flu RSV**

**[VRHIVC] RHINOVIRUS CULTURE**

SPECIMEN REQUIRED:  
Nasopharyngeal wash+NP instructions:  
1. Draw up 1-2 mL of sterile saline into a 3-5 mL syringe.  
2. Remove the needle from the syringe and put on a butterfly with a large tubing. Cut the tubing to a length of 2-3".  
3. Place the tubing in the nasopharyngeal passage. Inject the saline rapidly and draw back rapidly.  
4. Inject saline and nasal material into the viral transport medium. (If viral transport medium is not available, the NP wash may be added to 1.0 mL of trypticase soy broth or sterile saline.)  
5. After or before doing the wash, use a Dacron NP swab to do a good epithelial cell scraping of the nasopharyngeal area. Place and cut or break the swab into the same vial as the wash.

TUBE OR CONTAINER: Viral transport media

TURNAROUND TIME: 1-14 DAYS

TEST INCLUDES: Rhinovirus culture ONLY

**[VRSVABPR20] RSV, FLU A/B (EIA/RESP.PCR20)**

SPECIMEN REQUIRED: Refrigerated viral transport of epithelial scrapings

COLLECTION INSTRUCTIONS:

Nasopharyngeal wash+NP:

1. Draw up 1-2 mL of sterile saline into a 3-5 mL syringe.
2. Remove the needle from the syringe and put on a butterfly with a large tubing. Cut the tubing to a length of 2-3".
3. Place the tubing in the nasopharyngeal passage. Inject the saline rapidly and draw back rapidly.
4. Inject saline and nasal material into the viral transport medium. If viral transport medium is not available, the NP wash may be added to 1.0 mL of trypticase soy broth or sterile saline.
5. After or before doing the wash, use a dacron NP swab to do a good epithelial cell scraping of the nasopharyngeal area. Place and cut or break the swab into the same vial as the wash. (Immunofluorescent testing is done on the epithelial cells the combination of both the wash and nasopharyngeal scraping are essential to obtain enough cells to perform the test.)

Alternate NP collection instructions:

1. Insert a type 1 (NP) dacron tipped, aluminum-shafted swab into nasopharyngeal passage for 1 minute.
2. Immediately following the removal of the swab roll the swab onto the center of a glass slide. Keep the area confined to the size of a dime. Do not leave any large clumps of mucous; spread the specimen out evenly over the dime size area. (This will make a maximum of 2 slides). Send to the lab immediately in glass slide holders
3. Repeat step 1 and cut or break the swab into viral transport medium or have the patient gargle 3mL of sterile saline for 10 seconds; expell the gargle into a sterile container. This is for a viral culture if the slide collection is poor or if the FA is negative. The culture is not performed if the FA is positive.

TUBE OR CONTAINER: Viral transport tube

ORDERING MODULE: MIC

TEST INCLUDES: Influenza A and B Direct EIA and respiratory viral PCR if EIA is negative

TEST AVAILABILITY: Monday-Saturday

TURNAROUND TIME: 24 hours

REFERENCE RANGE: Negative

METHODOLOGY: EIA & PCR

CLINICAL USE: Rapid identification of Influenza virus

**[VRSVVC] RSV CULTURE**

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**SPECIMEN REQUIRED:** Any respiratory specimen on ice

**COLLECTION INSTRUCTIONS:**

Nasopharyngeal wash+NP:

1. Draw up 1-2 mL of sterile saline into a 3-5 mL syringe.
2. Remove the needle from the syringe and put on a butterfly with a large tubing. Cut the tubing to a length of 2-3".
3. Place the tubing in the nasopharyngeal passage. Inject the saline rapidly and draw back rapidly.
4. Inject saline and nasal material into the viral transport medium. If viral transport medium is not available, the NP wash may be added to 1.0 mL of trypticase soy broth or sterile saline.
5. After or before doing the wash, use a dacron NP swab to do a good epithelial cell scraping of the nasopharyngeal area. Place and cut or break the swab into the same vial as the wash.

**TUBE OR CONTAINER:** Viral transport media

**SPECIAL HANDLING:** Indicate source of specimen; Inclusion of patient's clinical history and differential diagnostic considerations is very helpful.

Deliver to lab immediately

**ORDERING MODULE:** MIC

**TEST INCLUDES:** Culture ONLY

**TEST AVAILABILITY:** Monday-Saturday

**TURNAROUND TIME:** 10-12 days

**REFERENCE RANGE:** No growth

**METHODOLOGY:** Cytopathic Effect (CPE)

**CLINICAL USE:** Isolate and identify Respiratory syncytial virus

**CPT:** 87252

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**[VVCEY] VIRAL CULTURE EYE**

IF REQUESTING IN OE, ORDER AS A VC.

**SAMPLE SOURCE:** PALPEBRAL CONJUNCTIVA (EYE SWAB)

**Agent Suspected:** Herpes simplex virus, Adenovirus, Enterovirus

**Unacceptable Specimens:** Eye exudate is considered a poor specimen and should be noted in Meditech.

**Usual Sample Volume:** Good epithelial cell scraping

**Collection Device:** Viral Transport Media, Flocked tip swab, plastic shaft

**Turn Around Times:**

**In-By Time (Cut-off):** 1700 M-F, 1200 Saturday-Sunday

**Out-By Time (Report):** Negative cultures are kept 10-14 days, all positive cultures are telephoned immediately.

**Detection Method:** Cell Culture Cytopathic Effect (CPE)

**Comments:** Please note on request any other viruses that are suspected. Store at 2 C to 8 C.

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**[VVCGEN] VIRAL CULTURE GENITAL**

**SAMPLE SOURCE:** CERVICAL SWABS

**Agent Suspected:** Herpes simplex virus

Unacceptable Specimens: N/A

Usual Sample Volume: Good epithelial cell scraping of base of lesion

Collection Device: Viral Transport Media, Flocked tip swab, plastic shaft

Turn Around Times:

In-By Time (Cut-off): 1600 M-F, 1200 Saturday-Sunday

Out-By Time (Report): Negative cultures are kept 7 days, all positive cultures are telephoned.

Detection Method: Cell Culture Cytopathic Effect (CPE)

Comments:

Please note on request any other viruses that are suspected. Store at 2 C to 8 C.

### **[VVCLE] VIRAL CULTURE SKIN/VES/LES/PET**

IF REQUESTING IN OE, ORDER AS A VC.

SAMPLE SOURCE: SWABS OF VESICLE FLUID AND BASE OF VESICLES OR LESIONS for Herpes simplex virus or Enterovirus

Agent Suspected: Herpes simplex virus, Enterovirus

Unacceptable Specimens: N/A

Usual Sample Volume: Good epithelial cell scraping of base of lesion

Collection Device: Viral Transport Media, Flocked tip swab, plastic shaft

Turn Around Times:

In-By Time (Cut-off): 1600 M-F, 1200 Saturday-Sunday

Out-By Time (Report): Negative cultures are kept 7-10 days, all positive cultures are telephoned.

Detection Method: Cell Culture Cytopathic Effect (CPE)

Comments:

Please note on request any other viruses that are suspected. Store at 2 C to 8 C.

Swab of Vesicle Fluid and Base of Vesicle: Wash area with 70% alcohol, unroof the vesicle with a small needle, gently blot the vesicular fluid with a swab; using the same swab, scrape the base of the vesicle and place the swab in the vial of transport medium.

IF REQUESTING IN OE, ORDER AS A VVZVC.

SAMPLE SOURCE: PERCUTANEOUS NEEDLE ASPIRATION WITH A 1 ML SYRINGE CONTAINING 0.2 ML VIRAL TRANSPORT MEDIA.

Agent Suspected: Varicella zoster

Sub-optimal Specimens: Swabs of vesicle

Usual Sample Volume: Vesicular Fluid

Collection Device: Cell culture tubes obtained in Virology

Turn Around Times:

In-By Time (Cut-off): 1600 M-F, 1200 Saturday-Sunday

Out-By Time (Report): Negative cultures are kept 10-14 days, all positive cultures are telephoned.

Detection Method: Cell Culture Cytopathic Effect (CPE)

Comments: On weekends, contact the ID Doctor on call. (See Viral FA, Antigen Detection Specimen Collection)

Send back to lab immediately at room temperature to go into the incubator.

### **[VVCMO] VIRAL CULTURE MOUTH**

IF REQUESTING IN OE, ORDER AS A VC.

SAMPLE SOURCE: MOUTH/THROAT SWABS

Agent Suspected: Herpes simplex virus, Adenovirus, Enterovirus, CMV

Unacceptable Specimens: N/A

Usual Sample Volume: Good epithelial cell scraping of mouth ulcerations

Collection Device: Viral Transport Media, Flocked tip swab, plastic shaft

Turn Around Times:

In-By Time (Cut-off): 1700 M-F, 1200 Saturday-Sunday

Out-By Time (Report): Negative cultures are kept 10-21 days, based on agent suspected, all positive ultures are telephoned immediately.

Detection Method: Cell Culture Cytopathic Effect (CPE)

Comments: Please note on request any other viruses that are suspected. Store at 2 C to 8 C.

### **[VVCNOS] VIRAL CULTURE NOS NONRESP.**

USE THIS ORDER FOR A VIRAL CULTURE NOS NONRESPIRATORY.

Make sure to list the specimen source and description.

Include the viral agent suspected.

All swabs must be placed in viral transport medium.

Non swab specimens are sent in sterile containers.

Turn around time will vary by agent suspected, 7-21 days

All positive results are called immediately.

### **[VVCRESP] VIRAL CULTURE RESPIRATORY**

IF REQUESTING IN OE, ORDER AS A VVCRESP.

SPECIMEN REQUIRED:

Nasopharyngeal wash+NP instructions:

1. Draw up 1-2 mL of sterile saline into a 3-5 mL syringe.
2. Remove the needle from the syringe and put on a butterfly with a large tubing. Cut the tubing to a length of 2-3".
3. Place the tubing in the nasopharyngeal passage. Inject the saline rapidly and draw back rapidly.
4. Inject saline and nasal material into the viral transport medium. (If viral transport medium is not available, the NP+ wash may be added to 1.0 mL of trypticase soy broth or sterile saline.)
5. After or before doing the wash, use a flocked swab to do a good epithelial cell scraping of the nasopharyngeal area. Place and break the swab into the same vial as the wash.

Alternate NP collection instructions:

1. Insert a flocked swab into the nasopharyngeal passage for

1 minute.

2. Break the swab into the viral transport media.

Gargle

Have the patient gargle 3 mL of sterile saline for 10 seconds; expell the gargle into a sterile container.

send to the lab immdiately on ice.

TUBE OR CONTAINER: Viral transport media

TEST INCLUDES: RSV; Parainfluenza 1, 2, & 3; Influenza A & B;

Adenovirus, Herpes Simplex, Rhinovirus; Enterovirus; and

Cytomegalovirus

TURNAROUND TIME: 1-14 Days

### **[VVCSL] VIRAL CULTURE STOOL**

IF REQUESTING IN OE, ORDER AS A VC.

SAMPLE SOURCE: STOOL

Agent Suspected: Enterovirus, Adenovirus, CMV

Unacceptable Specimens: Diapers, dried out stool, specimens that are soaked into wooden sticks

Usual Sample Volume: Stool specimen greater or equal to jelly bean size

Minimum Sample Volume: Pea size

Collection Device: Sterile container

Turn Around Times:

In-By Time (Cut-off): 1700 M-F, 1200 Saturday-Sunday

Out-By Time (Report): Negative cultures are kept 10-14 days, all positive cultures are telephoned immediately.

Detection Method: Cell Culture Cytopathic Effect (CPE)

Comments: Please note on request any other viruses that are suspected. Store at 2 C to 8 C.

SAMPLE SOURCE: RECTAL SWAB

Agent Suspected: Enterovirus, Adenovirus

Unacceptable Specimens: N/A

Usual Sample Volume: Feces should be visible in viral transport media

Collection Device: Viral Transport Media, Flocked swab, plastic shaft

Turn Around Times:

In-By Time (Cut-off): 1700 M-F, 1200 Saturday-Sunday

Out-By Time (Report): Negative cultures are kept 10-14 days, all positive cultures are telephoned immediately.

Detection Method: Cell Culture Cytopathic Effect (CPE)

Comments: Please note on request any other viruses that are suspected. Store at 2 C to 8 C.

### **[VVCTH] VIRAL CULTURE THROAT**

IF REQUESTING IN OE, ORDER AS A VC.

SAMPLE SOURCE: THROAT SWABS

Agent Suspected: Herpes simplex virus, Adenovirus, Enterovirus, CMV

Unacceptable Specimens: N/A



Usual Sample Volume: Good epithelial cell scraping of throat  
Collection Device: Viral Transport Media, Flocked tip swab, plastic shaft  
Turn Around Times:  
In-By Time (Cut-off): 1700 M-F, 1200 Saturday-Sunday  
Out-By Time (Report): Negative cultures are kept 10-21 days, all positive cultures are telephoned immediately.  
Detection Method: Cell Culture Cytopathic Effect (CPE)  
Comments: Please note on request any other viruses that are suspected. Store at 2 C to 8 C.

#### **[VVCTIS] VIRAL CULTURE TISSUE**

IF REQUESTING IN OE, ORDER AS A VC.  
SAMPLE SOURCE: AUTOPSY, BIOPSY (Please notify lab in advance on biopsy specimens)  
Agent Suspected: Request specific viral agents on slip.  
Unacceptable Specimens: N/A  
Usual Sample Volume: 1 cm<sup>2</sup>  
Minimum Sample Volume: Whatever is possible.  
Collect according to standard procedures  
Collection Device: Viral Transport Media  
Turn Around Times:  
In-By Time (Cut-off): 1700 M-F, 1200 Saturday-Sunday  
Out-By Time (Report): Negative cultures are kept 10-21 days, all positive cultures are telephoned immediately.  
Detection Method: Cell Culture Cytopathic Effect (CPE)  
Comments: Please note on request any other viruses that are suspected. Store at 2 C to 8 C.

#### **[VVCUR] VIRAL CULTURE URINE**

IF REQUESTING IN OE, ORDER AS A VC.  
SAMPLE SOURCE: URINE  
Agent Suspected: CMV (If for Adenovirus, indicate or it will not be set up in culture for the detection of Adenovirus)  
Unacceptable Specimens: Do not freeze urine.  
Usual Sample Volume: 10-15 mL of freshly voided urine  
Minimum Sample Volume: 1 mL  
Collection Device: Sterile Container  
Turn Around Times:  
In-By Time (Cut-off): 1700 M-F, 1200 Saturday-Sunday  
Out-By Time (Report): Negative cultures are kept 10-21 days, all positive cultures are telephoned immediately.  
Detection Method: Cell Culture Cytopathic Effect (CPE)  
Comments: Please note on request if specimen is for Mumps or Adenovirus. (Mumps request are referred out.)  
Store at 2 C to 8 C.

#### **[VVCVAG] VIRAL CULTURE VAGINAL**

USE THIS ORDER FOR A VIRAL VAGINAL CULTURE.  
IF REQUESTING IN OE, ORDER AS A VC.

SAMPLE SOURCE: VAGINAL

Agent Suspected: Enterovirus, Herpes simplex virus, Adenovirus  
Varicella zoster

Unacceptable Specimens: N/A

Usual Sample Volume: Good epithelial cell scraping of the  
vaginal area

Collection Device: Viral Transport Media, Flocked tip swab,  
plastic shaft

Turn Around Times:

In-By Time (Cut-off): 1700 M-F, 1200 Saturday-Sunday

Out-By Time (Report): Negative cultures are kept 10-14 days,  
all positive cultures are telephoned immediately.

Detection Method: Cell Culture Cytopathic Effect (CPE)

Comments: Please note on request any other viruses that are  
suspected. Store at 2 C to 8 C.

### **[VVZFA] VARICELLA ZOSTER FA**

USE THIS ORDER FOR A VIRAL SKIN, LESION, VESICLE, FA.  
(CALL 3586 FOR ANY QUESTIONS ON COLLECTION.)

SPECIMEN REQUIRED:

1. PICK FRESHEST VESICLE.
2. COLLECT CULTURE FIRST, 1CC SYRINGE AND CELL CULTURE TUBE  
OBTAINED FROM VIROLOGY. M-F 7AM-5PM AND 10AM TO 12PM SAT.
3. UNROOF VESICLE WITH #15 BARD-PARKER SCAPLE.
4. SCRAPE THE BASE OF THE VESICLE (OBTAIN BASAL AND PARABASAL  
CELLS).
5. IN THE CENTER OF 2 GLASS SLIDES SMEAR THE SPECIMEN IN A  
CIRCULAR MOTION OUT TO THE SIZE OF A DIME.
6. AIR DRY AND TRANSPORT TO THE LAB IMMEDIATELY. KEEP  
REFRIGERATED.

TUBE OR CONTAINER: Slides

TEST AVAILABILITY: Monday-Saturday

TURNAROUND TIME: 24 hours

NORMAL TEST VALUES: Negative

METHODOLOGY: DFA

### **[VVZFAI] VARICELLA ZOSTER FA + CULTURE**

SPECIMEN REQUIRED: Refrigerated specimen

COLLECTION INSTRUCTIONS:

1. Pick freshest vesicle
2. Collect culture first, aspirate the fluid from the vesicle  
into the tuberculin syringe and inject it into the cell  
culture tubes. Obtain collection materials from Virology  
M-F 7 am to 5 pm and Saturday 10 am to 12 pm.
3. Unroof vesicle with #15 Bard-Parker scalpel.
4. Scrape the base of the vesicle (obtain basal and parabasal  
cells).
5. In the center of 2 glass slides smear the specimen in a  
circular motion out to the size of a dime.
6. Air dry and transport to the lab immediately

If Virology is closed use following method for VZ culture only.

1. Unroof vesicle with #15 Bard-Parker scalpel.
2. Scrape the base of the vesicle (obtain basal and parabasal cells) with a NP/male swab.
3. Break swab in to viral transport media.
4. Transport to the lab immediately

TUBE OR CONTAINER: Viral transport media

SPECIAL HANDLING: Call 271-3586 for collection materials and questions about specimen collection

ORDERING MODULE: MIC

TEST INCLUDES: VZV FA and viral culture; if FA is positive, culture is not performed

TEST AVAILABILITY: Monday-Saturday

TURNAROUND TIME: 24 hours

REFERENCE RANGE: Negative

METHODOLOGY: Direct fluorescent antibody (DFA)

CLINICAL USE: Rapid diagnosis of varicella-zoster virus

CPT: 87252; 87290

### **[VVZPCR] VARICELLA ZOSTER PCR**

SPECIMEN REQUIREMENTS: 1ML OF CSF

SPECIMENS MUST BE SENT TO THE LAB IMMEDIATELY AND FROZEN AT -70 C IN LESS THAN 6 HOURS OF COLLECTION.

### **[VVZSVI] VARICELLA ZOSTER SV + CULTURE**

SPECIMEN REQUIRED:

1. Pick freshest vesicle
2. Collect culture first, aspirate the fluid from the vesicle into the tuberculin syringe and inject it into the cell culture tubes. Obtain collection materials from Virology M-F 7 am to 5 pm and Saturday 10 am to 12 pm.
3. Unroof vesicle with #15 Bard-Parker scalpel.
4. Scrape the base of the vesicle (obtain basal and parabasal cells).
5. In the center of 2 glass slides smear the specimen in a circular motion out to the size of a dime.
6. Air dry and transport to the lab immediately. Keep refrigerated.

If Virology is closed use following method for VZ culture only.

1. Unroof vesicle with #15 Bard-Parker scalpel.
2. Scrape the base of the vesicle (obtain basal and parabasal cells) with a NP/male swab.
3. Break swab in to viral transport media.
4. Transport to the lab immediately. Keep refrigerated.

TUBE OR CONTAINER: Viral transport media

SPECIAL HANDLING: Call 271-3586 for collection materials and questions about specimen collection

TEST AVAILABILITY: Monday-Saturday

TURNAROUND TIME: 48-96 hours

METHODOLOGY: Shell vial

CPT: 87252; 87254

**[VVZVC] VARICELLA ZOSTER CULTURE**

**SPECIMEN REQUIRED:** Refrigerated specimen

**COLLECTION INSTRUCTIONS:**

1. Pick freshest vesicle
2. Collect culture first, aspirate the fluid from the vesicle into the tuberculin syringe and inject it into the cell culture tubes. Obtain collection materials from Virology M-F 7 am to 5 pm and Saturday 10 am to 12 pm. If Virology is closed use following method for VZ culture only.

1. Unroof vesicle with #15 Bard-Parker scalpel.
2. Scrape the base of the vesicle (obtain basal and parabasal cells) with a NP/male swab.
3. Break swab in to viral transport media.
4. Transport to the lab immediately. Keep refrigerated.

**SOURCE:**

**VESICLE FLUID:** Collect specimen with viral culture swab; refrigerate following collection and during transport.

**LUNG TISSUE:** Submit lung biopsy material in sterile screw-cap container. Add a small amount of sterile saline to prevent drying. Do not add formalin; if pathology exam is ordered also, submit separate specimen.

**TUBE OR CONTAINER:** Viral transport media

**SPECIAL HANDLING:** Indicate source of specimen; inclusion of patient's clinical history and/or differential diagnostic considerations is very helpful; Call 271-3586 for collection materials and questions about specimen collection

**ORDERING MODULE:** MIC

**TEST INCLUDES:** VZV culture ONLY

**TEST AVAILABILITY:** Set up Monday-Saturday

**TURNAROUND TIME:** 10 days

**REFERENCE RANGE:** No growth

**METHODOLOGY:** Cytopathic Effect (CPE)

**CLINICAL USE:** Aid in diagnosis of disease caused by varicella-zoster virus (ie, chickenpox and shingles)

CPT: 87252

**[VW2N] VON WILLEBRAND TYPE 2N BINDING**

**SPECIMEN REQUIRED:** Frozen plasma

**TUBE OR CONTAINER :** Blue (Citrate)

**SPECIAL HANDLING:** Draw 3 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting

Send to lab immediately or centrifuge and freeze plasma

**SPECIMEN VOLUME:** 3 full tubes

Testing specimen: 3 transport tubes with 1 mL

plasma each

MINIMUM VOLUME: 2 full tubes

Testing specimen: 3 transport tubes with 0.5 ml

plasma each

TEST INCLUDES: vw Factor antigen and vw Type 2N binding

TEST AVAILABILITY: Daily

TURNAROUND TIME: 8-12 days

METHODOLOGY: Enzyme-linked immunoassay (ELISA); Chromogenic

CPT: 85246; 85240

### **[VWAG] von Willebrand Factor Antigen**

SPECIMEN REQUIRED: Frozen plasma

TUBE OR CONTAINER: Blue (Citrate)

SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting

Send to lab immediately or centrifuge and freeze plasma

SPECIMEN VOLUME: 1 full tube

Testing volume: 1 mL of PLASMA

MINIMUM VOLUME: 1 full tube

Testing volume: 0.5 mL of PLASMA

TEST AVAILABILITY: Monday-Friday

TURNAROUND TIME: 7-10 days

REFERENCE RANGE: 50-240%

CLINICAL USE: A coagulation parameter useful in the differential diagnosis of hemophilia A and von Willebrand disease

CPT: 85246

### **[VWFPROPAG] von Willebrand Factor Antigen**

SPECIMEN REQUIRED: Frozen plasma

TUBE OR CONTAINER: Blue (Citrate)

SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting

Send to lab immediately or centrifuge and freeze plasma

SPECIMEN VOLUME: 1 full tube

Testing volume: 1 mL of PLASMA

MINIMUM VOLUME: 1 full tube

Testing volume: 0.5 mL of PLASMA

TEST AVAILABILITY: Monday-Friday

TURNAROUND TIME: 8-12 days

REFERENCE RANGE: 62-183 IU/dL

METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA) with fluorescence detection

CPT: 85246

**[VWM] von Willebrand Factor Multimers**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 2 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 2 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-10 days  
REFERENCE RANGE: < 0.4 inhibitor units  
OTHER NAMES; vWF Multimers  
METHODOLOGY: Electrophoresis  
CPT: 85247

**[VWR] von Willebrand Ristocetin Cofactor**

SPECIMEN REQUIRED: Frozen plasma  
TUBE OR CONTAINER: Blue (Citrate)  
SPECIAL HANDLING: Draw 1 FULL citrate tube; tube must be filled to the fill line to ensure proper anti-coagulant to blood ratio; Invert gently 3-4 times to prevent clotting  
Send to lab immediately or centrifuge and freeze plasma  
SPECIMEN VOLUME: 1 full tube  
Testing volume: 1 mL of PLASMA  
MINIMUM VOLUME: 1 full tube  
Testing volume: 0.5 mL of PLASMA  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 7-10 days  
REFERENCE RANGE: 54-279%  
OTHER NAMES: Ristocetin Cofactor; vW Factor Assay; von Willebrand Factor (vWF) Activity  
CLINICAL USE: Aid with the differential diagnosis between hemophilia and von Willebrand disease  
CPT: 85245

**[VZVGCSF] CSF Varicella-Zoster IgG Antibody**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile CSF container  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days

REFERENCE RANGE: 134 IV or less: Negative  
135-165 IV: Equivocal  
166 IV or greater: Positive  
METHODOLOGY: Semi-quantitative Chemiluminescent Immunoassay  
CPT: 86787

**[VZVMCSF] CSF Varicella-Zoster IgM Antibody**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile CSF container  
SPECIMEN VOLUME: 0.5 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-6 days  
REFERENCE RANGE: 0.90 ISR or less: Negative  
0.91-1.09 ISR: Equivocal  
1.10 ISR or greater: Positive  
METHODOLOGY: Enzyme-linked immunosorbent assay (ELISA)  
CPT: 86787

**[VZVPCRQNT] Varicella-Zoster Virus DNA (PCR)**

SPECIMEN REQUIRED: Plasma, bronchial lavage/wash, skin/eye swab, tracheal aspirate/wash at room temperature/frozen  
Frozen tissue, CSF, aqueous or vitreous fluid  
TUBE OR CONTAINER: Lavender (EDTA) or Yellow (ACD), Sterile container or screw top tube  
SPECIAL HANDLING: Please specify source of specimen.  
Specimens at room temperature must be received at performing lab within 4 days of collection; Freeze if time exceeds 4 days  
SPECIMEN VOLUME: 2 mL plasma, CSF or respiratory specimens  
5 mg tissue  
0.5 mL vitreous/aqueous fluid  
1 Swab  
MINIMUM VOLUME: 0.5 mL plasma, CSF or respiratory specimens  
0.1 mL vitreous/aqueous fluid  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 days  
REFERENCE RANGE: Not detected  
METHODOLOGY: Reverse Transcription/Polymerase Chain Reaction (PCR-RT)  
CPT: 87799

**[WAARD2] WAARDENBURG SYNDROME 2 (MITF)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
OTHER NAMES: MITF Gene sequencing

METHODOLOGY: Polymerase chain reaction (PCR)

CPT: 81479

**[WAARDNGS] WAARDENBURG SYNDROME NGS**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST INCLUDES: Gene sequencing of six genes (PAX3, MITF, SNA12, SOX10, EDN3 and EDNRB) associated with Waardenburg Syndrome types 1, 2, 3 & 4

TEST AVAILABILITY: Daily

TURNAROUND TIME: 3-4 weeks

METHODOLOGY: NextGen sequencing (NGS)

CPT: 81479 x 6

**[WARF] Warfarin (Coumadin) Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature

TUBE OR CONTAINER: Red, Dark green (heparin) or Lavender (EDTA)

SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 0.6 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: 2.0-5.0 ug/mL

Potentially toxic: >10.0 ug/mL

OTHER NAMES: Coumadin; Jantoven

METHODOLOGY: High-pressure liquid chromatography (HPLC)

CPT: 80299

**[WASQR] Alpha Globin Gene Sequence**

**[WBDDR] Beta Globin Cluster Locus Interp**

**[WBSQR] Beta Globin Gene Sequencing**

**[WES] WHOLE EXOME SEQUENCING**

SPECIMEN REQUIRED: Whole blood at room temperature

TUBE OR CONTAINER: Lavender (EDTA)

SPECIMEN VOLUME: 5 mL

MINIMUM VOLUME: 2 mL

TEST INCLUDES: Sequencing of the protein-coding regions of the human genome, which represents ~20,000 genes and accounts for approximately ~2% of all human genetic material

TEST AVAILABILITY: Daily

TURNAROUND TIME: 15-16 weeks

METHODOLOGY: Exome Capture and Next Generation Sequencing

CPT: 81415



**[WESNIL] AB WEST NILE VIRUS**

SPECIMEN REQUIRED: Frozen serum  
TUBE OR CONTAINER: Red or gold  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.5 mL  
TEST INCLUDES: West Nile IgG and IgM  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 5-8 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Enzyme Immunoassay (EIA)  
CLINICAL USE: Support a diagnosis of West Nile virus infection  
CPT: 86788; 86789

**[WESNILMSH] West Nile Virus IgM Antibody****[WESTNILPCR] West Nile Virus RNA (RT-PCR)**

SPECIMEN REQUIRED: Frozen serum or plasma  
TUBE OR CONTAINER: Gold, Red, Lavender (EDTA) or Yellow (ACD)  
SPECIMEN VOLUME: 3.5 mL  
MINIMUM VOLUME: 2.5 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: Negative  
METHODOLOGY: UltraQual polymerase chain reaction (PCR)  
CLINICAL USE: Detect West Nile virus (WNV) RNA  
CPT: 87798

**[WFSSEQ] WOLFRAM SYNDROME SEQUENCING**

SPECIMEN REQUIRED: Whole Blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST INCLUDES: Sequencing of WSF1 and CISD2 genes  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
METHODOLOGY: Bi-directional Sanger sequencing  
CPT: 81479 x 2

**[WGSQR] Gamma Globin Gene Sequence Result****[WHIPPLE] TROPH WHIPPLEI PCR BLOOD**

SPECIMEN REQUIRED: EDTA plasma or serum, Formalin-fixed paraffin embedded (FFPE) tissue.  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 1 ml  
MINIMUM VOLUME: 0.5 mL  
REFERENCE RANGE: Negative  
METHODOLOGY: Qualitative Polymerase Chain Reaction (PCR)  
CLINICAL USE: Aid in diagnosis of Whipple's disease, especially

for identifying inconclusive or suspicious cases  
CPT: 87798

**[WHIPPLEPCR] TROPH WHIPPLEI PCR FLD/TISSUE**

SPECIMEN REQUIRED: Refrigerated CSF, synovial or vitreous fluid; frozen fresh tissue or paraffin block at room temperature  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 1 ml (fluid)  
5 mm (biopsy)  
MINIMUM VOLUME: 0.5 mL (fluid)  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
REFERENCE RANGE: Negative  
METHODOLOGY: Rapid Polymerase Chain Reaction (PCR)  
CLINICAL USE: Aid in diagnosis of Whipple's disease, especially for identifying inconclusive or suspicious cases  
CPT: 87798

**[WISP3] WISP3 GENE ANALYSIS**

SPECIMEN REQUIRED: Whole blood, Fibroblasts, amniocytes or CVS at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or T-25 flasks  
SPECIMEN VOLUME: 8 mL or 4 T-25 flasks  
MINIMUM VOLUME: 4 mL or 2 T-25 flasks  
OTHER NAMES: WNT1 inducible signaling pathway protein 3; Progressive pseudorheumatoid arthropathy of childhood  
METHODOLOGY: Sanger sequencing  
CPT: 81479

**[WNILCSFPCR] CSF West Nile Virus RNA (PCR)**

SPECIMEN REQUIRED: Frozen CSF  
TUBE OR CONTAINER: Sterile container  
SPECIMEN VOLUME: 2.5 mL  
MINIMUM VOLUME: 1.25 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-5 days  
REFERENCE RANGE: Negative  
METHODOLOGY: UltraQual polymerase chain reaction (PCR)  
CLINICAL USE: Detect West Nile virus (WNV) RNA  
CPT: 87798

**[WNT10A] ECTODERMAL DYSPLASIA (WNT10A)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA) or Buccal swab  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 4 weeks

REFERENCE RANGE: No mutation detected  
OTHER NAMES: Autosomal Hypohidrotic Ectodermal Dysplasia  
METHODOLOGY: Polymerase Chain Reaction (PCR)  
CLINICAL USE: Confirmation of clinical diagnosis  
CPT: 81479

#### **[WNT4] DISORDER OF SEX DEVELOP (WNT4)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: 46,XX Disorder of sex development (DSD) via the WNT4 gene  
METHODOLOGY: Bi-directional Sanger Sequencing  
CLINICAL USE: Confirmation of clinical diagnosis  
CPT: 81479

#### **[WNT5A] ROBINOW SYNDROME (WNT5A)**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 6 mL  
MINIMUM VOLUME: 3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 1-2 weeks  
METHODOLOGY: Sanger sequencing  
CPT: 81479

#### **[WT1] WT-1 DNA SEQUENCING**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Specimen must arrive in laboratory by 1:30 pm  
Monday through Thursday only  
Ship within 24 hours of collection  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 1 mL  
TEST AVAILABILITY: Monday-Thursday  
TURNAROUND TIME: 2-3 weeks  
METHODOLOGY: DNA Sequencing  
CPT: 81405

#### **[XALD] X-LINKED ADRENOLEUKODYSTROPHY**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-3 weeks  
METHODOLOGY: Polymerase Chain Reaction (PCR)/Sequencing or

Multiplex Ligation-dependent Probe Amplification  
CPT: 81405 Sequencing; 81479 (deletion/duplication)

**[XLPBIRC4] X-LINKED LYMPHOPROLIF-BIRC4**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Familial Hemophagocytic Lymphohistiocytosis,  
X-linked Lymphoproliferative disease via the  
XIAP/BIRC4 gene  
METHODOLOGY: Bi-directional Sanger sequencing  
CPT: 81479

**[XLPSH2D1A] X-LINKED LYMPHOPROLIF-SH2D1A**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-4 weeks  
OTHER NAMES: Familial Hemophagocytic Lymphohistiocytosis,  
X-linked Lymphoproliferative disease via the  
SH2D1A gene  
METHODOLOGY: Bi-directional Sanger sequencing  
CPT: 81404

**[XOMEDXSL] XOMEDxSLICE-SPECIFIC GENE**

SPECIMEN REQUIRED: Whole blood at room temperature  
TUBE OR CONTAINER: Lavender (EDTA)  
SPECIAL HANDLING: Prior to submitting the patient's sample for  
testing, the phenotype driven gene list must  
be submitted using the XomeDxSlice online  
submission tool by the ordering provider  
SPECIMEN VOLUME: 5 mL  
MINIMUM VOLUME: 2 mL  
TEST INCLUDES: Captures and sequences the whole exome, but  
analysis is targeted to a limited and specific  
phenotype-driven gene list.  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 10-12 weeks  
METHODOLOGY: Next-gen Sequencing  
CLINICAL USE: XomeDxSlice is best suited for individuals with a  
clearly defined, oligogenic phenotype where a  
comprehensive gene panel is not available, or the  
patient has a single gene disorder for which  
clinical testing is not currently available  
CPT: 81479

**[XsTONECOMP] STONE COMPOSITION****[YSTSEQ] Yeast/Fungal Identification**

SPECIMEN REQUIRED: Pure culture: plate, slant or blood culture bottle (pure) at room temperature  
TUBE OR CONTAINER: Plate or slant  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
METHODOLOGY: RNA Sequencing  
CPT: 87153

**[ZI] Zinc Level**

SPECIMEN REQUIRED: Plasma at room temperature in a certified metal-free plastic transport tube  
TUBE OR CONTAINER: Royal Blue (EDTA) Lavendar spun and poured off into metal-free will be accepted, but may affect results  
SPECIAL HANDLING: Please contact laboratory for correct tube; Plasma should be separated from cells within 45 minutes of collection  
SPECIMEN VOLUME: 2 mL  
MINIMUM VOLUME: 0.6 mL  
TEST AVAILABILITY: Daily  
REFERENCE RANGE: Environmental exposure: 70-150 ug/dL  
OTHER NAMES: Zn  
METHODOLOGY: Atomic absorption spectrometry (AAS); inductively coupled plasma-mass spectrometry (IPC-MS)  
CLINICAL USE: Monitor exposure to zinc  
CPT: 84630

**[ZIKAIGM-CSF] Zika Virus IgM Antibody**

SPECIMEN REQUIRED: CSF (Must be accompanied by a serum specimen)  
Preferred specimen for detection of neuroinvasive disease  
TUBE OR CONTAINER: CSF: Sterile, plastic, screw-cap tube  
SPECIAL HANDLING: CSF: preferably, freeze at -20 degrees C or colder, then ship on dry ice; however refrigerated (2-8 degrees C) shipment using ice-packs is acceptable.  
SPECIMAN VOLUME: 1 mL CSF  
MINIMUM VOLUME: 1 mL CSF  
TURNAROUND TIME: Within 10 working days from receipt.  
METHODOLOGY: Specimens are testing using an IgM antibody capture enzyme-linked immunosorbent assay (MAC-ELISA).  
REFLEX TEST INFORMATION: Per CDC testing guidelines, specimens that are 'presumptive positive; or 'equivocal' on intial screen may be reflexed to an arbovirus panel

plaque reduction neutralization test (PRNT).

CLINICAL USE: Zika virus is a member of the Flavivirus group of Arboviruses, and is transmitted to humans primarily by the bite of an infected mosquito. Perinatal, in utero, sexual and blood transfusion transmissions have also been documented.

#### **[ZIKAIGM-SERUM] Zika Virus IgM Antibody**

SPECIMEN REQUIRED: Whole blood collected in serum separator tube (SST)

TUBE OR CONTAINER: Gold

SPECIAL HANDLING: Serum: Store refrigerated (2-8 degrees C and ship using ice packs.

SPECIMAN VOLUME: 2mL serum, collect additional tubes to meet volume requirements, as needed

MINIMUM VOLUME: 2mL

TURNAROUND TIME: Within 10 working days from receipt.

METHODOLOGY: Specimens are testing using an IgM antibody capture enzyme-linked immunosorbent assay (MAC-ELISA).

REFLEX TEST INFORMATION: Per CDC testing guidelines, specimens that are 'presumptive positive; or 'equivocal' on initial screen may be reflexed to an arbovirus panel plaque reduction neutralization test (PRNT).

CLINICAL USE: Zika virus is a member of the Flavivirus group of Arboviruses, and is transmitted to humans primarily by the bite of an infected mosquito. Perinatal, in utero, sexual and blood transfusion transmissions have also been documented.

#### **[ZIKAPCR-AMNIO] Amniotic Fluid Zika Virus (PCR)**

SPECIMEN REQUIRED: Amniotic Fluid (Must be accompanied by a serum specimen)

TUBE OR CONTAINER: Sterile, plastic, screw-cap tube

SPECIAL HANDLING: Preferably, freeze at -20 degrees C or colder, then ship on dry ice; however refrigerated (2-8 degrees C) shipment using ice-packs is acceptable.

SPECIMAN VOLUME: 1 mL

MINIMUM VOLUME: 1 mL

TURNAROUND TIME: Within 10 working days from receipt.

METHODOLOGY: Specimens are testing using a real-time, reverse transcription-polymerase chain reaction (rRT-PCR) assay developed by the CDC (Triplex Real-time RT-PCR Assay).

CLINICAL USE: Zika virus is a member of the Flavivirus group of Arboviruses, and is transmitted to humans

primarily by the bite of an infected mosquito.  
Perinatal, in utero, sexual and blood transfusion  
transmissions have also been documented.

#### **[ZIKAPCR-CSF] CSF Zika Virus (PCR)**

SPECIMEN REQUIRED: CSF (Must be accompanied by a serum specimen)

TUBE OR CONTAINER: CSF: Sterile, plastic, screw-cap tube

SPECIAL HANDLING: CSF: preferably, freeze at -20 degrees C or  
colder, then ship on dry ice; however  
refrigerated (2-8 degrees C) shipment  
using ice-packs is acceptable.

SPECIMAN VOLUME: 1 mL CSF

MINIMUM VOLUME: 1 mL CSF

TURNAROUND TIME: Within 10 working days from receipt.

METHODOLOGY: Specimens are testing using a real-time, reverse  
transcription-polymerase chain reaction (rRT-PCR)  
assay developed by the CDC (Trioplex Real-time  
RT-PCR Assay).

CLINICAL USE: Zika virus is a member of the Flavivirus group of  
Arboviruses, and is transmitted to humans  
primarily by the bite of an infected mosquito.  
Perinatal, in utero, sexual and blood transfusion  
transmissions have also been documented.

#### **[ZIKAPCR-SERUM] Serum Zika Virus (PCR)**

SPECIMEN REQUIRED: Whole blood collected in serum separator  
tube (SST)

TUBE OR CONTAINER: Gold

SPECIAL HANDLING: Serum: Store refrigerated (2-8 degrees C and  
ship using ice packs.

SPECIMAN VOLUME: 2mL serum, collect additional tubes to meet  
volume requirements, as needed

MINIMUM VOLUME: 2mL

TURNAROUND TIME: Within 10 working days from receipt.

METHODOLOGY: Specimens are testing using a real-time, reverse  
transcription-polymerase chain reaction (rRT-PCR)  
assay developed by the CDC (Trioplex Real-time  
RT-PCR Assay).

CLINICAL USE: Zika virus is a member of the Flavivirus group of  
Arboviruses, and is transmitted to humans  
primarily by the bite of an infected mosquito.  
Perinatal, in utero, sexual and blood transfusion  
transmissions have also been documented.

#### **[ZIKAPCR-URINE] Urine Zika Virus (PCR)**

SPECIMEN REQUIRED: URINE (Must be accompanied by a serum  
specimen); preferred specimen for  
early acute phase infection

TUBE OR CONTAINER: Urine: Sterile, plastic, screw-cap tube (Do

NOT Send Urine Collection Cups.

SPECIAL HANDLING: Urine: preferably, freeze at -20 degrees C or colder, then ship on dry ice; however refrigerated (2-8 degrees C) shipment using ice-packs is acceptable.

SPECIMAN VOLUME: 1 mL

MINIMUM VOLUME: 1 mL

TURNAROUND TIME: Within 10 working days from receipt.

METHODOLOGY: Specimens are testing using a real-time, reverse transcription-polymerase chain reaction (rRT-PCR) assay developed by the CDC (Trioplex Real-time RT-PCR Assay).

CLINICAL USE: Zika virus is a member of the Flavivirus group of Arboviruses, and is transmitted to humans primarily by the bite of an infected mosquito. Perinatal, in utero, sexual and blood transfusion transmissions have also been documented.

#### **[ZIPRAS] Ziprasidone (Geodon) Level**

SPECIMEN REQUIRED: Frozen or refrigerated serum or plasma

TUBE OR CONTAINER: Red or Dark green (heparin)

SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
Serum or plasma should be separated from

cells within two hours of venipuncture

SPECIMEN VOLUME: 2 mL

MINIMUM VOLUME: 1 mL

TEST AVAILABILITY: Daily

TURNAROUND TIME: 4-11 days

REFERENCE RANGE: Expected plasma concentrations in patients taking recommended daily dosages:  
up to 220 ng/mL

OTHER NAMES: Geodon, Zeldox

METHODOLOGY: Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)

CLINICAL USE: Therapeutic drug monitoring

CPT: 80299

#### **[ZNRBC] RBC Zinc**

SPECIMEN REQUIRED: Room temperature red blood cells (RBCs)

TUBE OR CONTAINER: Royal Blue (EDTA)

SPECIAL HANDLING: Please contact laboratory for correct tube;  
Plasma should be separated from cells within  
45 minutes of collection and discard plasma.  
Send ONLY RBCs in original tube.

SPECIMEN VOLUME: 1 mL

MINIMUM VOLUME: 0.5 mL

TEST AVAILABILITY: Daily

REFERENCE RANGE: 822-1571 ug/dL

METHODOLOGY: Inductively coupled plasma-mass spectrometry (IPC-MS)



CPT: 84630

**[ZNT8AB] Zinc Transporter 8 Antibody**

SPECIMEN REQUIRED: Refrigerated or frozen serum  
TUBE OR CONTAINER: Red or Gold  
SPECIAL HANDLING: Centrifuge and separate within 45 minutes of collection  
SPECIMEN VOLUME: 1 mL  
MINIMUM VOLUME: 0.3 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 2-9 days  
REFERENCE RANGE: 0.0 - 0.15.0 Kronus Units/mL  
METHODOLOGY: Quantitative Enzyme-linked Immunosorbent Assay (ELISA)  
CPT: 86341

**[ZONI] Zonisamide (Zonegran) Level**

SPECIMEN REQUIRED: Serum or plasma at room temperature  
TUBE OR CONTAINER: Red or Lavender (EDTA)  
SPECIAL HANDLING: Do NOT collect specimen in gel barrier tube  
Separate from cells within 45 minutes of collection  
SPECIMEN VOLUME: 1.2 mL  
MINIMUM VOLUME: 0.4 mL  
TEST AVAILABILITY: Daily  
TURNAROUND TIME: 3-5 days  
REFERENCE RANGE: 10.0 - 40.0 ug/mL  
OTHER NAMES: Zonegran  
METHODOLOGY: Liquid Chromatography/tandem mass spectrometry (LC/MS-MS)  
CLINICAL USE: Therapeutic drug monitoring  
CPT: 80203

**[ZUREAPL] Ureaplasma Culture**

SPECIMEN REQUIRED: Urogenital, urine, joint fluid, CSF;  
Refrigerate after collection and during transport  
TUBE OR CONTAINER: Micro-Test Multi-Microbe  
TURNAROUND TIME: 1-2 weeks  
CLINICAL INFORMATION: Ureaplasma has been indicated as a cause of infertility and should be considered in an infertility workup

**Total Tests: 1736**