



Reference Intervals - MGH Clinical Laboratories

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Effective Date: *Friday, May 26, 2006*

<i>Test name</i>	<i>Reference Interval</i>	<i>Laboratory</i>
25-OH Vitamin D	20-100 ng/ml	Chemistry (Immunodiagnosics)
3-Methylhistidine, urine	Age matched reference range and interpretation provided	Neurochemistry
5'NT (5' Nucleotidase)		Chemistry (Main Lab)
ABO/Rh Type		Blood Transfusion Service
Acetaminophen, theophylline, and salicylate drug screen, serum	Negative	Chemistry (Main Lab)
Acetone	Negative	Chemistry (Main Lab)
Acetylaspartate, urine	Interpretation provided	Neurochemistry
ACTH	6-76 pg/ml	Chemistry (Immunodiagnosics)
Activated partial thromboplastin time (APTT)	7 months-adult: 22.1-35.1 seconds 5-7 months: 22.1-37.0 seconds 2-5 months: 23.0-44.1 seconds day 18-2 months: 25.0-49.2 seconds day 4-17: 22.1-54.0 seconds day 0-3: 25.3-48.3 seconds	Hematology
Activated protein C resistance (factor V Leiden)	Normal > 2.0	Coagulation
Adenovirus antigen	Negative	Microbiology (Virology)
Adenylosuccinase deficiency, screen	Interpretation provided	Neurochemistry
Alanine, CSF	Interpretation and age-matched reference ranges provided.	Neurochemistry
Alanine, plasma	Interpretation and age-matched reference ranges provided.	Neurochemistry
Albumin	3.3-5.0 g/dl	Chemistry (Main Lab)
Alkaline phosphatase	Adults: male: 45-115 U/L female: 30-100 U/L <20 yrs.: 15-350 U/L	Chemistry (Main Lab)

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Alpha-1-antitrypsin (quantitation)	Adult normal range: 76-189 mg/dl	Immunology
Alpha-2-antiplasmin	80-130% Activity	Coagulation
Amine drug screen, serum	Negative	Chemistry (Main Lab)
Amino acid analysis, quantitative, amniotic fluid	Reference ranges provided with results.	Neurochemistry
Amino acid analysis, quantitative, CSF	Reported with results	Neurochemistry
Amino acid analysis, quantitative, fluid misc		Neurochemistry
Amino acid analysis, quantitative, plasma	Age matched; reported with results	Neurochemistry
Amino acid analysis, quantitative, urine	Age matched; reported with results	Neurochemistry
Amino acid analysis, quantitative, vitreous fluid	Reference ranges provided with results.	Neurochemistry
Amino acid screen, urine	Interpretation provided	Neurochemistry
Ammonia	12-48 umol/L	Chemistry (Main Lab)
Amylase	3-100 U/L	Chemistry (Main Lab)
Amylase, urine	3-460 U/L	Chemistry (Main Lab)
Anaerobic culture	No growth of anaerobic bacteria	Microbiology (Main Lab)
ANCA (Anti-Neutrophil Cytoplasmic Antibodies by indirect immunofluorescence and immunoassay)	Interpretation with results	Immunopathology
Antibody screen		Blood Transfusion Service
Anticardiolipin antibody (IgG and IgM)	IgG: 0-15 GPL IgM: 0-15 MPL	Coagulation
Anti-CCP IgG	Negative <20 units (Normal) Weak Positive 20-39 units Moderate Positive 40-59 units Strong Positive >60 units	Immunology
Anti-deoxyribonuclease B	Preschool: 0 - 60 units School ages: 0 - 170 units Adults: 0 - 85 units	Microbiology (Main Lab)
Anti-double stranded DNA	Negative at 1:10	Immunology
Anti-glomerular basement membrane antibody (ELISA)	Positive = >5 ELISA Units	Immunopathology
Anti-glomerular basement membrane antibody (western blot)	Negative	Immunopathology
Anti-Jo-1 antibody	Negative	Immunology
Anti-La antibody	Negative	Immunology
Antinuclear antibody (ANA screen on Hep 2)	Negative at 1:40 and 1:160	Immunology

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Antiphospholipid antibody panel	See individual tests	Coagulation
Anti-Ro antibody	Negative	Immunology
Anti-Scl-70 antibody	Negative	Immunology
Anti-Sm antibody	Negative	Immunology
Antithrombin III	> 6 months: 80-130%	Coagulation
Anti-Thyroid Antibodies (Anti-TPO)	Negative	Chemistry (Immunodiagnostics)
Anti-U1RNP antibody	Negative	Immunology
Arginase activity	Reference ranges and interpretation provided	Neurochemistry
Arginine, plasma	Interpretation and age-matched reference ranges provided.	Neurochemistry
Argininosuccinate lyase activity	Reference ranges and interpretation provided	Neurochemistry
Argininosuccinate, amniotic fluid	Normally not detectable	Neurochemistry
Argininosuccinate, plasma	Normally not detectable	Neurochemistry
Babesia, thick and thin smear	Negative	Microbiology (Parasitology)
Bacterial antigens	Negative	Microbiology (Main Lab)
Barbiturate screen, serum	Negative	Chemistry (Main Lab)
Basic Metabolic Panel	See individual tests	Chemistry (Main Lab)
Bence Jones protein, serum (qualitative serum free light chains)	No Bence Jones protein detected in serum	Immunology
Bence Jones protein, urine (qualitative urine free light chains)	No Bence Jones protein detected in 50x concentrated urine	Immunology
Benzodiazepine screen, serum	Negative	Chemistry (Main Lab)
Bilirubin (Pediatric Microchemistry)	0 to 1 month neonates: Direct: 0.5-3.5 mg/dl Total: 2-15 mg/dl	Chemistry (Pediatric Microchemistry)
Bilirubin, direct and total	Direct: 0-0.4 mg/dl Total: 0-1.0 mg/dl	Chemistry (Main Lab)
Blood culture	No growth	Microbiology (Main Lab)
Blood culture, special culture for mycobacteria or fungus	No growth	Microbiology (Main Lab)
Blood culture, special request for unusual, fastidious organisms (e.g., culture negative endocarditis)	No growth	Microbiology (Main Lab)
Blood gas profile (pO ₂ ,pCO ₂ ,pH) acute care lab	Refer to specific analyte	Chemistry (Acute Care Lab)

<i>Test name</i>	<i>Reference Interval</i>	<i>Laboratory</i>
Blood gas profile (pO ₂ ,pCO ₂ , pH)(Pediatric Microchemistry)	Refer to specific analyte	Chemistry (Pediatric Microchemistry)
Body cavity fluids, cytology	Negative	Cytopathology
Body fluid culture	No growth	Microbiology (Main Lab)
Bone marrow culture	No growth	Microbiology (Main Lab)
Bone marrow iron stain	None	Hematology
Bone marrow myeloperoxidase stain	None	Hematology
Bone marrow non-specific esterase stain	None	Hematology
Bone marrow transplant stem cell monitoring	Reported with results	Flow Cytometry
Bone marrow Wright stain	None	Hematology
Borrelia burgdorferi antibody	Seronegative	Microbiology (Main Lab)
Breast cyst aspiration	Negative	Cytopathology
Breast, smear of discharge	Negative	Cytopathology
Bronchial brushings cytology	Negative	Cytopathology
Bronchial wash/lavage cytology	Negative	Cytopathology
Bronchoalveolar lavage (BAL) quantitative culture		Microbiology (Main Lab)
Buffy coat preparation	None	Hematology
Buffy coats (immunopathology)	Interpretation with results	Immunopathology
C1 esterase inhibitor protein (quantitative)	12.4-24 mg/dl	Immunology
C3	Reference ranges for serum C3 levels Adult range: 86-184 mg/dl Ten years or younger: 10 y: 86-184 9 yr: 93-202 6 yr: 92-160 4 yr: 89-172 3 yr: 80-177 2 yr: 84-176 1 yr: 87-180 10 m: 76-186 7 m: 78-172 5 m: 77-177 4 m: 67-173 3 m: 64-181 2 m: 67-135 1 m: 61-154 1 d: 55-128 0: 59-119	Immunology

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C4	Reference ranges for serum C4 levels Adult range: 20-58 mg/dl Ten years or younger: 10 y: 20-58 9 yr: 13-51 6 yr: 16-41 4 yr: 17-41 3 yr: 13-46 2 yr: 12-44 1 yr: 16-56 10 m: 16-50 7 m: 12-47 5 m: 11-54 4 m: 9-46 3 m: 11-49 2 m: 11-34 1 m: 9-36 1 d: 9-32 0: 9-29	Immunology
CA 125	<35 U/ml	Chemistry (Immunodiagnosics)
CA 15-3	<30 U/ml	Chemistry (Immunodiagnosics)
Calcium, ionized	1.14-1.30 mmol/L	Chemistry (Acute Care Lab)
Calcium, serum	8.5-10.5 mg/dl	Chemistry (Main Lab)
Calcium, urine	up to 300 mg/24 hours	Chemistry (Main Lab)
Calculated bicarbonate (Pediatric Microchemistry)	> 1 year: 24-30 mEq/L 2 weeks-1 year: 22-27 mEq/L Newborn-2 weeks: 19-22 mEq/L	Chemistry (Pediatric Microchemistry)
Carbamazepine	Adult: 4-12 mcg/ml <18 yrs: 8-12 mcg/ml	Chemistry (Main Lab)
Carbon dioxide	Adult: 23-31.9 mmol/L Newborn: (<2 weeks): 19-22 mmol/L 2 weeks-1 year: 22-27 mmol/L	Chemistry (Main Lab)
Carbon monoxide	< 5% of total hemoglobin	Chemistry (Acute Care Lab)
Carcinoembryonic antigen (CEA)	< 3.4 ng/ml	Chemistry (Immunodiagnosics)
Cardiac markers (ED lab)	Negative	Emergency Department Lab
Carnitine, free and total, serum		Neurochemistry
Catheter tip culture	No growth	Microbiology (Main Lab)

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CBC	<p>WBC ADULT >21 YEARS: 4.5-11.0 th/cmm 16-21 YEARS: 4.5-13.0 th/cmm 8-16 YEARS: 4.5-13.5 th/cmm 6-8 YEARS: 5.0-14.5 th/cmm 4-6 YEARS: 5.5-15.5 th/cmm 2-4 YEARS: 6.0-17.0 th/cmm 6-24 MONTHS: 6.0-17.5 th/cmm 1-6 MONTHS: 5.0-19.5 th/cmm 14-30 DAYS: 5.0-20.0 th/cmm 7-14 DAYS: 5.0-21.0 th/cmm 1-7 DAYS: 9.4-34.0 th/cmm BIRTH-24 HOURS: 9.0-30.0 th/cmm</p> <p>RBC ADULT MALES >18 YEARS: 4.50-5.90 mil/cmm ADULT FEMALES >18 YRS: 4.00-5.20 mil/cmm MALE 12-18 YEARS: 4.50-5.30 mil/cmm FEMALE 12-18 YEARS: 4.10-5.10 mil/cmm ALL 6-12 YEARS: 4.00-5.20 mil/cmm ALL 2-6 YEARS: 3.90-5.30 mil/cmm ALL 6-24 MONTHS: 3.70-5.30 mil/cmm ALL 3-6 MONTHS: 3.10-4.50 mil/cmm ALL 2-3 MONTHS: 2.70-4.90 mil/cmm ALL 1-2 MONTHS: 3.00-5.40 mil/cmm ALL 14-30 DAYS: 3.60-6.20 mil/cmm ALL 7-14 DAYS: 3.90-6.30 mil/cmm ALL 3-7 DAYS: 4.00-6.60 mil/cmm ALL BIRTH-3 DAYS: 3.90-5.50 mil/cmm</p> <p>HGB ADULT MALES >18 YEARS: 13.5-17.5 gm/dl ADULT FEMALES >18 YRS: 12.0-16.0 gm/dl MALE 12-18 YEARS: 13.0-16.0 gm/dl FEMALE 12-18 YEARS: 12.0-16.0 gm/dl ALL 6-12 YEARS: 11.5-15.5 gm/dl ALL 2-6 YEARS: 11.5-13.5 gm/dl ALL 6-24 MONTHS: 10.5-13.5 gm/dl ALL 3-6 MONTHS: 9.5-13.5 gm/dl ALL 2-3 MONTHS: 9.0-14.0 gm/dl ALL 1-2 MONTHS: 10.0-18.0 gm/dl ALL 14-30 DAYS: 12.5-20.5 gm/dl ALL 7-14 DAYS: 13.5-21.5 gm/dl ALL 3-7 DAYS: 14.5-22.5 gm/dl ALL BIRTH-3 DAYS: 13.5-19.5 gm/dl</p> <p>HCT ADULT MALES >18 YEARS: 41.0-53.0 % ADULT FEMALES >18 YRS: 36.0-46.0 % MALE 12-18 YEARS: 37.0-49.0 % FEMALE 12-18 YEARS: 36.0-46.0 % ALL 6-12 YEARS: 35.0-45.0 % ALL 2-6 YEARS: 34.0-40.0 % ALL 6-24 MONTHS: 33.0-39.0 % ALL 3-6 MONTHS: 29.0-41.0 % ALL 2-3 MONTHS: 28.0-42.0 % ALL 1-2 MONTHS: 31.0-55.0 % ALL 14-30 DAYS: 39.0-63.0 % ALL 7-14 DAYS: 42.0-66.0 %</p>	Hematology

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	ALL 3-7 DAYS: 45.0-67.0 % ALL BIRTH-3 DAYS: 42.0-60.0 % MCV ALL ADULTS >18 YEARS: 80-100 fl MALE 12-18 YEARS: 78-98 fl FEMALE 12-18 YEARS: 78-102 fl ALL 6-12 YEARS: 77-95 fl ALL 2-6 YEARS: 75-87 fl ALL 6-24 MONTHS: 70-86 fl ALL 3-6 MONTHS: 74-108 fl ALL 2-3 MONTHS: 77-115 fl ALL 1-2 MONTHS: 85-123 fl ALL 14-30 DAYS: 86-124 fl ALL 7-14 DAYS: 88-126 fl ALL 3-7 DAYS: 95-121 fl ALL BIRTH-3 DAYS: 98-118 fl MCH ADULT >18 YEARS: 26.0-34.0 pg/rbc 12-18 YEARS: 25.0-35.0 pg/rbc 6-12 YEARS: 25.0-33.0 pg/rbc 2-6 YEARS: 24.0-30.0 pg/rbc 6-24 MONTHS: 23.0-31.0 pg/rbc 3-6 MONTHS: 25.0-35.0 pg/rbc 2-3 MONTHS: 26.0-34.0 pg/rbc 7 DAYS-2 MONTHS: 28.0-40.0 pg/rbc BIRTH-7 DAYS: 31.0-37.0 pg/rbc MCHC ALL >2 YEARS: 31.0-37.0 g/dl 3-24 MONTHS: 30.0-36.0 g/dl 1-3 MONTHS: 29.0-37.0 g/dl 7-30 DAYS: 28.0-38.0 g/dl 3-7 DAYS: 29.0-37.0 g/dl BIRTH-3 DAYS: 30.0-36.0 g/dl PLT > or = 18 years old: 150-350 th/cumm <18 years old: 150-450 th/cumm	
Cell count, CSF	Colorless, clear RBC: None WBC: 0-5/cumm	Hematology
Cell count, Non-CSF	Reported with results	Hematology
Cell surface markers for hematologic malignancy	Interpretation included with results.	Flow Cytometry
Ceruloplasmin	27-50 mg/dl	Immunology
Chem 7 panel		Chemistry (Main Lab)
Chimerism analysis	Not applicable	Histocompatibility
Chimerism analysis, additional sample	Not applicable	Histocompatibility
Chlamydia trachomatis and Neisseria gonorrhoeae nucleic acid amplification	Negative	Microbiology (Main Lab)
Chlamydia trachomatis immunofluorescence	Negative for Chlamydia	Microbiology (Virology)

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Chloride	Adult: 100-108 mmol/L < 1 year: 98-106 mmol/L	Chemistry (Main Lab)
Chloride, urine or CSF	CSF: 120-130 mmol/L; urine: diet dependent	Chemistry (Main Lab)
Cholesterol	Desirable: < 200 mg/dl Borderline-high: 200-239 mg/dl High: > or = 240 mg/dl	Chemistry (Main Lab)
Chromogenic factor X	60-140%	Coagulation
Chromosome analysis (karyotype) - blood lymphocytes	46 XX; 46 XY Call lab if questions, (617)-732-7981	Cytogenetics
Chromosome analysis (karyotype) - bone marrow, blood leukemias, myelodysplasia	46 XX; 46 XY Call lab with questions, (617)-732-7981	Cytogenetics
Citrulline, plasma	Age matched reference range and interpretation provided	Neurochemistry
Clomipramine, serum	150-450 mcg/L (sum of clomipramine and norclomipramine)	Chemistry (Main Lab)
Clostridium difficile toxin assay	Negative	Microbiology (Main Lab)
Cold agglutinins	normal: <1:16; borderline: 1:16-1:64; abnormal: >1:64	Blood Transfusion Service
Colony count, quantitative culture on sterile body fluids	# CFU/ml reported	Microbiology (Main Lab)
Compatibility test, adults		Blood Transfusion Service
Compatibility test, neonates		Blood Transfusion Service
Comprehensive Metabolic Panel	See individual tests	Chemistry (Main Lab)
Cortisol	5-25 ug/dl (8AM-12PM) <10 ug/dl (8PM-8AM) 5-15 ug/dl (12PM-8PM) <5.0 ug/dl (post dexamethasone)	Chemistry (Immunodiagnosics)
Cortisol stimulation test	5-25 ug/dl (8AM-12PM) <10 ug/dl (8PM-8AM) 5-15 ug/dl (12PM-8PM) <5.0 ug/dl (post dexamethasone)	Chemistry (Immunodiagnosics)
Cortisol, urinary	20-70 ug/24 hours	Chemistry (Immunodiagnosics)
C-reactive protein	< 8.0 mg/L	Chemistry (Main Lab)
C-reactive protein, high sensitivity	Quintile 1, Lowest risk: <0.7 mg/L Quintile 2, Low risk: 0.7-1.1 mg/L Quintile 3, Moderate risk: 1.2-1.9 mg/L Quintile 4, High risk: 2.0-3.8 mg/L Quintile 5, Highest risk: >3.8 mg/L When the result is >15.0 mg/L, risk analysis may be confounded by recent or acute inflammatory disease. In these cases the risk for coronary heart disease cannot be provided.	Chemistry (Main Lab)

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Creatine kinase (CPK)	Male: 60-400 U/L Female: 40-150 U/L	Chemistry (Main Lab)
Creatine kinase, isoenzymes	CK-MB: <7.0 ng/ml Relative index: < or = 3.5%	Chemistry (Immunodiagnosics)
Creatinine, serum	Adults: 0.6-1.5 mg/dl < 10 yrs: 0.3-1.0 mg/dl	Chemistry (Main Lab)
Creatinine, urine	15-25 mg/kg body weight/24 hours	Chemistry (Main Lab)
Cryocrit	None present	Immunology
Cryoproteins: detection and identification	None present	Immunology
Cryptococcal antigen	Negative	Microbiology (Main Lab)
CSF cytology	Negative	Cytopathology
CSF electrophoresis and quantitation of IgG and albumin	Electrophoresis: No banding seen in 80x concentrate. Adult range: IgG: 0-8.0 mg/dl. Albumin: 11.0-50.9 mg/dl Below 10 years of age: Normal range not defined.	Immunology
Cyclosporine	Dependent on type of transplant	Chemistry (Immunodiagnosics)
Cystathionine synthase, G307S/I278T mutations	Interpretation provided	Neurochemistry
Cystathionine, plasma	Interpretation and age-matched reference ranges provided.	Neurochemistry
Cystine amino acid panel, urine	Interpretation and age-matched reference ranges provided.	Neurochemistry
Cystine and homocystine screen, urine	Interpretation provided	Neurochemistry
Cystine, quantitative, urine	Interpretation and age-matched reference ranges provided.	Neurochemistry
Cytomegalovirus antibody (IgG)	Seronegative	Microbiology (Main Lab)
Cytomegalovirus antigenemia assay	Negative	Microbiology (Virology)
Cytomegalovirus culture	Negative for CMV	Microbiology (Virology)
Cytomegalovirus shell vial culture	Negative	Microbiology (Virology)
Cytotoxic antibody screen, ABC (PRA)	Not applicable	Histocompatibility
D-Dimer test	Negative (< 500 ng/ml)	Hematology
Desipramine	150-300 mcg/L	Chemistry (Main Lab)

<i>Test name</i>	<i>Reference Interval</i>	<i>Laboratory</i>
Differential count, peripheral blood	<p>DIFF-NEUTS ADULT >21 YEARS: 40-70% 16-21 YEARS: 40-62% 10-16 YEARS: 40-59% 8-10 YEARS: 33-59% 6-8 YEARS: 30-55% 4-6 YEARS: 27-55% 2-4 YEARS: 25-50% 1-2 YEARS: 25-49% 6-12 MONTHS: 17-49% 1-6 MONTHS: 20-46% 14-30 DAYS: 20-48% 7-14 DAYS: 30-48% 1-7 DAYS: 53-62% BIRTH-24 HOURS: 66-87%</p> <p>DIFF-BANDS ALL PATIENTS: <10%</p> <p>DIFF-LYMPHS ADULT >21 YEARS: 22-44% 16-21 YEARS: 27-40% 10-16 YEARS: 33-48% 8-10 YEARS: 33-50% 6-8 YEARS: 30-48% 4-6 YEARS: 36-52% 2-4 YEARS: 50-56% 1-2 YEARS: 60-67% 6-12 MONTHS: 67-77% 1-6 MONTHS: 50-85% 14-30 DAYS: 40-85% 7-14 DAYS: 40-81% 1-7 DAYS: 21-34% BIRTH-24 HOURS: 22-37%</p> <p>DIFF-MONOS ALL PATIENTS: 4-11%</p> <p>DIFF-EOS ALL PATIENTS: 0-8%</p> <p>DIFF-BASOS ALL PATIENTS: 0-3%</p>	Hematology
Digoxin	0.9-2.0 ng/ml	Chemistry (Main Lab)
Diphtheria culture	Negative	Microbiology (Main Lab)
Direct antiglobulin test		Blood Transfusion Service
DNA ploidy	Interpretation with results	Flow Cytometry
DNPH Test panel, urine	Interpretation provided	Neurochemistry
Doxepin	150-250 mcg/L	Chemistry (Main Lab)
Drug induced thrombocytopenia	Negative	Coagulation
Drugs of abuse, urine	Negative	Chemistry (Main Lab)
Duodenal aspirate culture		Microbiology (Main Lab)

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Electrolytes panel (Na, K, Cl, CO2)	See individual tests	Chemistry (Main Lab)
Erythrocyte sedimentation rate	Male: 0-17 mm/hr Female: 1-25 mm/hr	Hematology
Estradiol	Male: < 50 pg/ml Menstruating women: Follicular phase: < 20-145 pg/ml Ovulatory peak: 112-443 pg/ml Luteal phase: < 20-241 pg/ml Postmenopausal: < 59 pg/ml	Chemistry (Immunodiagnosics)
Estradiol, IVF	Normal female: Follicular phase < 20.0-145.0 pg/ml Ovulatory peak 112.0-443.0 pg/ml Luteal phase < 20.0-241.0 pg/ml Post menopausal < 59.0 pg/ml	Chemistry (Immunodiagnosics)
Ethanol	Clinical intoxication: > 1,000 mg/L	Chemistry (Main Lab)
Factor B	17-42 mg/dl	Immunology
Factor II activity	> 8 months: 60-140% Activity	Coagulation
Factor inhibitor assay	< 0.5 BU (Bethesda Units)	Coagulation
Factor IX activity	> 8 months: 60-140% Activity	Coagulation
Factor V activity	> 8 months: 60-140% Activity	Coagulation
Factor VII activity	> 8 months: 60-140% Activity	Coagulation
Factor VIII activity	> 8 months: 50-200% Activity	Coagulation
Factor X activity	> 8 months: 60-140% Activity	Coagulation
Factor XI activity	> 8 months: 60-140% Activity	Coagulation
Factor XII activity	> 8 months: 60-140% Activity	Coagulation
Factor XIII screen	No deficiency detected	Coagulation
Fecal leukocytes	Reported as PMNs present or PMNs absent	Microbiology (Main Lab)
Ferritin	Male: 30-300 ng/ml Female: 10-200 ng/ml	Chemistry (Immunodiagnosics)
Fetal fibronectin (Acute Care Lab)	Negative	Chemistry (Acute Care Lab)
Fetal Rh and cell screen		Blood Transfusion Service
Fibrinogen	150-400 mg/dl	Hematology
Fibroblast culture, skin biopsy		Neurochemistry
Fine needle aspirations	Negative	Cytopathology
Fine needle biopsies (aspirations) with cores	Negative	Cytopathology

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Fluoxetine, serum	Fluox: 50-450 mcg/L Norfluox: 50-450 mcg/L	Chemistry (Main Lab)
Folic acid	Deficient:< 2.2 ng/ml Borderline: 2.2-3.0 ng/ml Normal: 3.1-17.5 ng/ml Excess: > 17.5 ng/ml	Chemistry (Immunodiagnosics)
Follicle stimulating hormone (FSH)	Prepub. Girls: < 2.5 U/L Prepub. Boys: < 2.0 U/L Men: 1.0-10.5 Postmeno. women: 31.0-134.0. Menstruating women: Follic phase: 2.4-9.3 Ovul phase: 3.9-13.3 Luteal phase: 0.6-8.0	Chemistry (Immunodiagnosics)
Fumarase activity	Interpretation and age-matched reference ranges provided.	Neurochemistry
Fumarate hydratase mutation analysis	Interpretation provided	Neurochemistry
Fungal culture	Negative	Microbiology (Main Lab)
Fungal smear (wet prep)	Negative	Microbiology (Main Lab)
Gastric Occult Blood and Gastric pH	Occult blood: Negative	Chemistry (Acute Care Lab)
Gastroesophageal brush cytology	Negative	Cytopathology
Gastroesophageal wash cytology	Negative	Cytopathology
Genital culture	Negative for pathogens	Microbiology (Main Lab)
Gentamicin	Peak: 4-8 mcg/ml Trough: < 2.1 mcg/ml	Chemistry (Main Lab)
GGT, gamma glutamyl tranferase	Male: 8-61 U/L Female: 5-36 U/L	Chemistry (Main Lab)
Globulin	2.6-4.1 g/dl	Chemistry (Main Lab)
Glucose, blood	Fasting adults: 70-110 mg/dl Newborns (<2 weeks): 60-100 mg/dl	Chemistry (Main Lab)
Glucose, blood	Fasting adults: 70-110 mg/dl Newborns (<2 weeks): 60-100 mg/dl	Chemistry (Acute Care Lab)
Glucose, urine	< 0.05 g%	Chemistry (Main Lab)
Glutamine, CSF		Neurochemistry
Glycine, CSF	Reported with results	Neurochemistry
Glycine, plasma	Age matched; ratio of blood glycine/CSF glycine , >35	Neurochemistry
Gonococcal culture	Negative	Microbiology (Main Lab)

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Gram stain		Microbiology (Main Lab)
Group B streptococcus culture	Negative	Microbiology (Main Lab)
Gyrate atrophy test - plasma ornithine	Age matched reference range and interpretation provided	Neurochemistry
Haptoglobin	16-199 mg/dl	Immunology
Helicobacter pylori IgG antibody	H. pylori immune ratio: 0.0-0.9: Denotes a negative test for the presence of active H. pylori infection. 0.91–1.09: Denotes a positive antibody response to H. pylori. This is clinically equivocal in that this may or may not represent the presence of infection or immunity. Further testing by other methods may be necessary to substantiate the presence of active disease. Retesting in 2-4 weeks by the present method may also be useful. >1.09: Serologically associated with H. pylori infection.	Immunology
Helicobacter pylori urease (CLO test)	Negative	Microbiology (Main Lab)
Hematocrit (Hematology), manual	Adult males >18 years: 41.0-53.0 Adult females >18 years: 36.0-46.0 Male 12-18 years: 37.0-49.0 Female 12-18 years: 36.0-46.0 All 6-12 years: 35.0-45.0 All 2-6 years: 34.0-40.0 All 6-24 months: 33.0-39.0 All 3-6 months: 29.0-41.0 All 2-3 months: 28.0-42.0 All 1-2 months: 31.0-55.0 All 14-30 days: 39.0-63.0 All 7-14 days: 42.0-66.0 All 3-7 days: 45.0-67.0 All birth - 3 days: 42.0-67.0	Hematology
Hemoglobin (Acute Care Lab)	Reported with results	Chemistry (Acute Care Lab)
Hemoglobin (Pediatric Microchemistry)	Newborn: 47-66% Children: 32-42%	Chemistry (Pediatric Microchemistry)
Hemoglobin A1C	3.8-6.4%	Diabetes
Hemosiderin, urine or other fluids	Negative	Hematology
Heparin assay (anti-Xa activity assay)		Coagulation
Heparin induced thrombocytopenia (HIT)	Negative for heparin induced thrombocytopenia (type II)	Coagulation
Hepatic Panel	See individual tests	Chemistry (Main Lab)
Hepatitis B surface antibody - qualitative		Blood Transfusion Service
Hepatitis B surface antibody - quantitative		Blood Transfusion Service

<i>Test name</i>	<i>Reference Interval</i>	<i>Laboratory</i>
Hepatitis B surface antigen	Initially reactive samples will be reported as "Prelim POS" and repeated the next day of testing. The results of repeat testing will be reported as "POS" or "NEG." Samples which are repeat positive will be confirmed by neutralization. Confirmatory results will be available in one week.	Blood Transfusion Service
Hepatitis B viral DNA, quantitative	< 300 HBV DNA copies/ml	Microbiology (Main Lab)
Hepatitis C antibody	Negative	Blood Transfusion Service
Hepatitis C viral RNA, qualitative	Negative	Microbiology (Main Lab)
Hepatitis C viral RNA, quantitative	< 600 HCV IU/ml	Microbiology (Main Lab)
Hepatitis C virus genotyping		Microbiology (Main Lab)
Herpes simplex virus antigen detection (immunofluorescence)	"Positive" indicates presence of Herpes Simplex Virus antigen	Microbiology (Virology)
Herpes simplex virus culture	No virus isolated	Microbiology (Virology)
Herpes simplex virus nucleic acid amplification	Negative for HSV DNA types 1 and 2	Microbiology (Main Lab)
Heterophile antibody	Negative	Microbiology (Main Lab)
HHH Syndrome mutation analysis	Interpretation provided	Neurochemistry
High density lipoprotein cholesterol	Low < or = 40 mg/dl High > or = 60 mg/dl	Chemistry (Main Lab)
HIV viral load	< 400 HIV RNA copies/ml	Microbiology (Main Lab)
HIV viral load (ultrasensitive)	< 50 HIV RNA copies/ml	Microbiology (Main Lab)
HIV-1/2 antibody		Blood Transfusion Service
HLA antibody screen ELISA panel Class I	Not applicable	Histocompatibility
HLA antibody screen ELISA panel Class II	Not applicable	Histocompatibility
HLA antibody screen quick PRA	Not applicable	Histocompatibility
HLA molecular typing, B locus	Not applicable	Histocompatibility
HLA molecular typing, C locus	Not applicable	Histocompatibility
HLA molecular typing, single locus or allele	Not applicable	Histocompatibility
HLA-A,B, or C typing	Not applicable	Histocompatibility
HLA-ABC low resolution molecular typing	Not applicable	Histocompatibility
HLA-B27 antigen	Not applicable	Histocompatibility
HLA-DR DQ serology	Not applicable	Histocompatibility

<i>Test name</i>	<i>Reference Interval</i>	<i>Laboratory</i>
HLA-DR or DQ high resolution molecular typing	Not applicable	Histocompatibility
HLA-DR or DQ low resolution molecular typing	Not applicable	Histocompatibility
Homocitrulline, urine	Interpretation provided	Neurochemistry
Homocysteine, total, plasma	0-12 umol/L	Chemistry (Main Lab)
HPV typing, high risk	Negative	Cytopathology
HTLV-I/II antibody, human T-lymphotropic virus type I/II		Blood Transfusion Service
Human chorionic gonadotropin, quantitative, serum	< 6 IU/L negative 6-15 IU/L borderline >15 IU/L positive	Chemistry (Immunodiagnosics)
Human growth hormone	2-6 ng/ml (resting adult)	Chemistry (Immunodiagnosics)
Hypercoagulation panel	See individual tests	Coagulation
Hypersensitivity pneumonitis screening tests	Precipitating antibodies to hypersensitivity pneumonitis antigens: None detected.	Immunology
IGF-1 (Somatomedin-C)	Age and sex dependent. Range reported with result.	Chemistry (Immunodiagnosics)
Imipramine	150-250 mcg/L	Chemistry (Main Lab)
Immunodeficiency lymphocyte subsets	Interpretation with results	Flow Cytometry
Immunofixation	None	Immunology
Immunoglobulin A	Adult normal range: 60-309 mg/dl Other ages: 10 yrs: 60-309 9 yrs: 45-233 6 yrs: 33-199 4 yrs: 25-151 3 yrs: 22-156 2 yrs: 14-121 1 yrs: 14-105 10 m: 16-82 7 m: 11-88 5 m: 8-66 4 m: 8-82 3 m: 4-71 2 m: 5-45 1 m: 3-46 1 d: 2-52 0: 2-4	Immunology

<i>Test name</i>	<i>Reference Interval</i>	<i>Laboratory</i>
Immunoglobulin G	Adult normal range: 614-1295 mg/dl. Ten years or younger: 10 y: 614-1295 9 yr: 585-1509 6 yr: 609-1229 3 yr: 424-1090 2 yr: 408-1009 1 yr: 332-1164 10 m: 283-1026 7 m: 209-868 5 m: 207-676 4 m: 166-781 3 m: 189-536 2 m: 168-557 1 m: 199-577 1 d: 242-870 0: 611-1542	Immunology
Immunoglobulin M	Adult normal range: 53-334 mg/dl. Ten years or younger: 10 y:53-334 9 yr: 49-229 6 yr: 46-196 4 yr: 41-185 3 yr: 45-189 2 yr: 46-157 1 yr: 41-163 10 m: 39-141 7 m: 32-119 5 m: 33-96 4 m: 31-102 3 m: 26-95 2 m: 23-84 1 m: 16-99 1 d: 19-82 0: 6-23	Immunology
Indirect immunofluorescence for detection of Pemphigus or Pemphigoid antibodies	Negative	Immunopathology
Indirect platelet antibody	Negative	Coagulation
Influenza A and B virus antigen detection	Negative	Microbiology (Virology)
Iron binding capacity	228-428 mcg/dl	Chemistry (Main Lab)
Iron, serum	Male: 45-160 mcg/dl Female: 30-160 mcg/dl	Chemistry (Main Lab)
Joint fluid exam for crystals	No crystals seen	Immunology
Joint fluid exam for mucin	Type I mucin clot	Immunology
Lactate, CSF	0.5-2.2 mmol/L	Chemistry (Main Lab)
Lactic acid	0.5-2.2 mmol/L	Chemistry (Main Lab)
Lactic dehydrogenase	110-210 U/L	Chemistry (Main Lab)
Legionella culture	Negative	Microbiology (Main Lab)
Legionella urinary antigen	Negative	Microbiology (Main Lab)

<i>Test name</i>	<i>Reference Interval</i>	<i>Laboratory</i>
Leishmania (sp. donovani), blood smear examination	No parasites found	Microbiology (Parasitology)
Levothyroxine (L-T4) Therapy Monitor	TSH: 0.4-5.0 uU/ml	Chemistry (Immunodiagnosics)
Lipase	1.3-6.0 U/dl	Chemistry (Main Lab)
Lipid Panel	See individual tests	Chemistry (Main Lab)
Lithium	0.5-1.5 mmol/L	Chemistry (Main Lab)
Low dose ristocetin platelet aggregation	Interpretation provided by laboratory director	Coagulation
Luteinizing hormone (LH)	Prepub.children:< 0.5u/l Males: 1.0-8.4 u/l Postmeno. women: 15.0-64.0 u/l Menstruating women: Folic phase: 0.1-1.5 u/l Mid-Luteal: 3.8-28.0 Late Luteal: 2.5-28.0	Chemistry (Immunodiagnosics)
Lymphocytotoxic crossmatch T cell	Not applicable	Histocompatibility
Magnesium	1.4-2.0 mEq/L	Chemistry (Main Lab)
Malaria, thick and thin smear	Negative	Microbiology (Parasitology)
MCAD deficiency, DNA test for G-985 mutation	Interpretation provided	Neurochemistry
Measles antibody (IgG)	Seronegative	Microbiology (Main Lab)
Methemoglobin	0.4-1.5% of total hemoglobin	Chemistry (Acute Care Lab)
Methionine, plasma	Interpretation and age-matched reference ranges provided.	Neurochemistry
Methotrexate	24 hrs. post high dose infusion: < 10 micromol/L 48 hrs. post high dose infusion: < 1 micromol/L 72 hrs. post high dose infusion: < 0.4 micromol/L	Chemistry (Main Lab)
Methylenetetrahydrofolate reductase (MTHFR) DNA test for 677C > T and 1298A > C	Interpretation provided	Neurochemistry
Methylmalonic acid screen	Interpretation provided	Neurochemistry
Microfilaria, blood smear examination	No parasites found	Microbiology (Parasitology)
Microsatellite genotyping	Not applicable	Histocompatibility
Mitochondrial antibody	Negative at 1:20	Immunology
MRSA nasal culture	Negative	Microbiology (Main Lab)
MSUD amino acid panel, plasma	Interpretation and age-matched reference ranges provided.	Neurochemistry

<i>Test name</i>	<i>Reference Interval</i>	<i>Laboratory</i>
Mumps immunity	Seropositive	Microbiology (Main Lab)
Mycobacterial culture	Negative	Microbiology (Main Lab)
Mycobacterial smear (AFB smear)	Negative	Microbiology (Main Lab)
Mycobacterium tuberculosis nucleic acid amplification	Negative for Mycobacterium tuberculosis nucleic acid	Microbiology (Main Lab)
Mycoplasma culture, respiratory	Negative	Microbiology (Main Lab)
Mycoplasma culture, urogenital	Negative	Microbiology (Main Lab)
Mycoplasma pneumoniae nucleic acid amplification	Negative	Microbiology (Main Lab)
NaCl split skin assay by Indirect immunofluorescence (detection of bullous pemphoid vs. epidermolysis bullosa acquisita antibodies)	Negative	Immunopathology
Nasal culture	Negative	Microbiology (Main Lab)
Nortriptyline	50-150 mg/L	Chemistry (Main Lab)
N-Terminal pro-Brain Natriuretic Peptide	< 50 yrs: 0-450 pg/ml 50-75 yrs: 0-900 pg/ml > 75 yrs: 0-1500 pg/ml	Chemistry (Immunodiagnosics)
Organic acid analysis by GCMS, semi-quantitative	Interpretation provided	Neurochemistry
Ornithine disorders amino acid panel, plasma	Interpretation and age-matched reference ranges provided.	Neurochemistry
Ornithine incorporation assay	Interpretation provided	Neurochemistry
Ornithine, plasma	Age matched reference range and interpretation provided	Neurochemistry
Orotic acid, urine	< 45 nmols/mg creatinine	Neurochemistry
Osmolality, plasma or serum	Adult: 280-296 mOsm/kg Pedi (<1yr): 275-295 mOsm/kg	Chemistry (Main Lab)
Osmolality, plasma or serum (Acute Care Lab)	Adult: 280-296 mOsm/kg Pedi (<1yr): 275-295 mOsm/kg	Chemistry (Acute Care Lab)
Osmolality, plasma or serum (Pediatric Microchemistry)	Adult: 280-296 mOsm/kg water Pedi (<1yr): 275-295 mOsm/kg water	Chemistry (Pediatric Microchemistry)
Osmolality, urine	Diet dependent	Chemistry (Main Lab)
Ova and Parasites (O&P) examination, sputum	No parasites found	Microbiology (Parasitology)
Ova and parasites (O&P) examination, stool	No protozoa or helminth ova found	Microbiology (Parasitology)
Papanicolaou (Pap) test	Bethesda system-2001 No evidence of intra-epithelial lesion or malignancy	Cytopathology
Parainfluenza 1, 2 & 3 Antigen Detection	Negative	Microbiology (Virology)

<i>Test name</i>	<i>Reference Interval</i>	<i>Laboratory</i>
Parasite - identification		Microbiology (Parasitology)
Parasite examination of aspirated material, non-intestinal	No parasites found	Microbiology (Parasitology)
Parasite examination of tissue biopsy, non-intestinal	No parasites found	Microbiology (Parasitology)
Parasite examination, intestinal aspirate or biopsy	No parasites found	Microbiology (Parasitology)
Parathyroid hormone	10-60 pg/ml	Chemistry (Immunodiagnosics)
Parietal cell antibody	Negative at 1:20	Immunology
pCO2 (Acute Care Lab)	35-45 mmHg arterial 38-50 mmHg venous	Chemistry (Acute Care Lab)
pCO2 (Pediatric Microchemistry)	35-45 mmHg arterial or capillary 38-50 mmHg venous	Chemistry (Pediatric Microchemistry)
pH (Acute Care Lab)	7.35-7.45 arterial 7.32-7.42 venous	Chemistry (Acute Care Lab)
pH (Pediatric Microchemistry)	7.35-7.45 arterial and venous 7.32-7.42 capillary	Chemistry (Pediatric Microchemistry)
Phenobarbital	15-50 mcg/ml	Chemistry (Main Lab)
Phenylalanine, (PKU), blood	Age matched; reported with results	Neurochemistry
Phenytoin (Dilantin)	5.0-20.0 mcg/ml	Chemistry (Main Lab)
Phosphorus	Adults: 2.6-4.5 mg/dl 0-9.9 days: 4.5-9.0 mg/dl 10d-1.9yr: 4.5-6.7 mg/dl 2y-11.9yr: 4.5-5.5 mg/dl 12y-17.9yr: 3.0-4.5 mg/dl	Chemistry (Main Lab)
Phosphorus, urine	Depends on diet, average 1 g/24 hours	Chemistry (Main Lab)
Pinworm examination (anal prep)	No parasites found	Microbiology (Parasitology)
PKU carrier testing	Interpretation and age-matched reference ranges provided.	Neurochemistry
Plasminogen (functional assay)	80-130% Activity	Coagulation
Platelet aggregation	Interpretation provided by laboratory director	Coagulation
Platelet neutralization procedure (lupus anticoagulant)	Negative	Coagulation
Pneumocystis examination	Negative	Microbiology (Parasitology)
pO2 (Acute Care Lab)	arterial: >14 days: 80-100 mmHg 0-14 days: 60-80 mmHg venous: 35-50 mmHg	Chemistry (Acute Care Lab)

<i>Test name</i>	<i>Reference Interval</i>	<i>Laboratory</i>
pO2 (Pediatric Microchemistry)	80-100 mmHg arterial 35-50 mmHg venous 45-60 mmHg capillary	Chemistry (Pediatric Microchemistry)
Potassium, blood (Acute Care Lab)	< 1 month: 4.0-5.6 mEq/L > 1 month: 3.5-5.0 mEq/L	Chemistry (Acute Care Lab)
Potassium, serum/plasma	Adult: 3.4-4.8 mmol/L <1 month: 4.0-5.6 mmol/L	Chemistry (Main Lab)
Potassium, urine	Diet dependent	Chemistry (Main Lab)
Prekallikrein screen	No deficiency detected	Coagulation
Progesterone	Male: <0.2-1.4 ng/ml Menstruating women: Follicular phase: <0.2-1.5 ng/ml Ovulatory phase: 0.8-3.0 ng/ml Luteal phase: 1.7-27.0 ng/ml Postmenopausal women: < 0.2-1.4 ng/ml	Chemistry (Main Lab)
Prolactin	Men: 2.1-17.7 ng/ml Women: Non-pregnant: 2.8-29.2 ng/ml Pregnant: 9.7-208.5 ng/ml Post menopausal: 1.8-20.3 ng/ml	Chemistry (Immunodiagnosics)
Prolonged PT panel or mixing studies	See individual tests	Coagulation
Prolonged PTT panel or mixing studies	See individual tests	Coagulation
Prostate specific antigen (PSA), monitoring	< 0.2 ng/ml	Chemistry (Immunodiagnosics)
Prostate specific antigen (PSA), screening	Males: <0.2 to 4.0 ng/ml	Chemistry (Immunodiagnosics)
Protein C	> 8 months: 70-140%	Coagulation
Protein S	> 8 months: 70-140% Activity	Coagulation
Prothrombin gene mutation G20210A	Mutation not present	Coagulation
PT (prothrombin time)	PT 11.1-13.6 sec (age 6 months to adult) PT-INR values for Warfarin Anti-Coag Therapy: Standard Intensity 2.0-3.0 High Intensity 2.5-3.5	Hematology
PT mixing study		Coagulation
PTT mixing study		Coagulation
PTT-LA (lupus anticoagulant)	Negative	Coagulation
Quantitative urine kappa Bence Jones protein (free kappa light chains, quantitative)	< 2.5 mg/dl	Immunology
Quantitative urine lambda Bence Jones protein (free lambda light chains, quantitative)	< 5.0 mg/dl	Immunology

<i>Test name</i>	<i>Reference Interval</i>	<i>Laboratory</i>
Rapid influenza antigen A and B, qualitative (ED lab)	Presumptive negative	Emergency Department Lab
Rapid strep A antigen, qualitative (ED lab)	Presumptive negative	Emergency Department Lab
Reducing substances, urine	Interpretation provided	Neurochemistry
Renal Panel	See individual tests	Chemistry (Main Lab)
Reptilase time	16-24 sec	Coagulation
Respiratory syncytial virus antigen detection	Negative	Microbiology (Virology)
Reticulocyte count	0.5-2.5%	Hematology
Rheumatoid factor	< 30 IU/ml	Immunology
Ristocetin co-factor	Interpretation provided by laboratory director	Coagulation
Rotavirus antigen	"Positive" indicates presence of Rotavirus antigen	Microbiology (Virology)
Rubella immunity	Latex agglutination: Positive	Microbiology (Main Lab)
Schistosomes, stool egg count	# of eggs/gram of stool reported	Microbiology (Parasitology)
Schistosomes, urine examination	No parasites found	Microbiology (Parasitology)
Serologic test for syphilis, blood (RPR)	Non-Reactive	Microbiology (Main Lab)
Serologic test for syphilis, CSF (VDRL)	Non-reactive	Microbiology (Main Lab)
Sex hormone binding globulin	Adult Male: 11-71 nmol/L Adult Female (non pregnant); 12-139 nmol/L	Chemistry (Immunodiagnosics)
Sickle cell screening	Negative	Hematology
Smooth muscle antibody	Negative at 1:20	Immunology
Sodium	135-145 mmol/L	Chemistry (Main Lab)
Sodium (Acute Care Lab)	135-145 mmol/L	Chemistry (Acute Care Lab)
Sodium, urine	Diet dependent	Chemistry (Main Lab)
Special slide box		Hematology
Specific protozoan exam: Cryptosporidium	Negative	Microbiology (Parasitology)
Specific protozoan exam: Giardia	Negative	Microbiology (Parasitology)
Specific protozoan exam: Microsporidia	Negative	Microbiology (Parasitology)
SPEP and quantitation of immunoglobulins	IgG, IgA, IgM, see individual normal ranges; SPEP: normal pattern	Immunology
Sputum culture	Negative for pathogens	Microbiology (Main Lab)

<i>Test name</i>	<i>Reference Interval</i>	<i>Laboratory</i>
Sputum cytology	Negative	Cytopathology
Sputum for eosinophils	Negative	Hematology
Stool culture	Negative for enteric pathogens.	Microbiology (Main Lab)
Succinylpurine screen	Interpretation provided	Neurochemistry
Sugar screen (lactose, galactose, fructose), urine	Interpretation provided	Neurochemistry
Sulfite oxidase mutation analysis	Interpretation provided	Neurochemistry
Suspected transfusion reaction workup	Results phoned to floor, written report to follow in CAS/Notes.	Blood Transfusion Service
T cell subsets (CD4/CD8 counts)	Reported with results	Flow Cytometry
T cell subsets (therapeutic antibody monitoring for organ transplant)	Interpretation with results	Flow Cytometry
T3, Total	60-181 ng/dl	Chemistry (Immunodiagnosics)
T4, Free	0.9-1.8 ng/ml	Chemistry (Immunodiagnosics)
T4, Total	4.5-10.9 ug/dl	Chemistry (Immunodiagnosics)
Tacrolimus	Dependent on type of transplant	Chemistry (Immunodiagnosics)
Tau protein (beta transferrin)	Not detected in fluid other than CSF	Immunology
Testosterone	Males: 270-1070 ng/dl Females: < 86 ng/dl	Chemistry (Immunodiagnosics)
Thiosulfate, urine		Neurochemistry
Throat culture	Negative for beta strep.	Microbiology (Main Lab)
Thrombin time	16-24 sec	Coagulation
Thyroglobulin	<60 ng/ml	Chemistry (Immunodiagnosics)
Thyroglobulin Antibody Screen	< 1.1 U/ml	Chemistry (Immunodiagnosics)
Thyroid Screening Panel	TSH: 0.4-5.0 uU/ml	Chemistry (Immunodiagnosics)
Tobramycin	Trough level:<2 mcg/ml Peak level:4.0-8.0 mcg/ml	Chemistry (Main Lab)
TORCH titers	Negative	Microbiology (Main Lab)
Total complement, EIA	63-145 U/ml (reference range for serum only)	Immunology
Total eosinophils, blood		Hematology
Total eosinophils, urine	Reported with results	Hematology
Total protein, CSF	Lumbar: 15-45 mg/dl	Chemistry (Main Lab)
Total protein, plasma or serum	Adults: 6.0-8.3 g/dl	Chemistry (Main Lab)

<i>Test name</i>	<i>Reference Interval</i>	<i>Laboratory</i>
Total protein, urine	< 135 mg/L < 165 mg/24 hr	Chemistry (Main Lab)
Toxicology screen, basic	Negative	Chemistry (Main Lab)
Toxicology screen, serum (comprehensive)	Negative	Chemistry (Main Lab)
Toxoplasma gondii antibody (IgG), serum	Seronegative	Microbiology (Main Lab)
Toxoplasma gondii antibody (IgM), serum	Seronegative	Microbiology (Main Lab)
Transaminase, SGOT, AST	Adults: Male: 10-40 U/L; Female: 9-32 U/L Pedi (<10 days): 47-150 U/L 10d -2 yrs: 9-80 U/L	Chemistry (Main Lab)
Transaminase, SGPT, ALT	Male: 10-55 U/L Female: 7-30 U/L	Chemistry (Main Lab)
Transferrin saturation	15-50%	Chemistry (Main Lab)
Trichomonas vaginalis culture	Negative	Microbiology (Parasitology)
Triglyceride	< 150 mg/dl normal 150-199 mg/dl borderline high 200-499 mg/dl high > or = 500 mg/dl very high	Chemistry (Main Lab)
Troponin T	< 0.10 ng/ml	Chemistry (Immunodiagnosics)
Trypanosomes, blood smear examination	No parasites found	Microbiology (Parasitology)
Tryptophan, plasma	Interpretation and age-matched reference ranges provided.	Neurochemistry
TSH	0.4-5.0 uU/ml	Chemistry (Immunodiagnosics)
Tularemia agglutination test		Microbiology (Main Lab)
Type and screen		Blood Transfusion Service
Urea cycle disorders amino acid panel, plasma	Interpretation and age-matched reference ranges provided.	Neurochemistry
Urea cycle disorders amino acid panel, urine	Interpretation and age-matched reference ranges provided.	Neurochemistry
Urea nitrogen (BUN)	Adults: 8-25 mg/dl < 13 years: 5-20 mg/dl	Chemistry (Main Lab)
Uric acid, serum	Males: 3.6-8.5 mg/dl Females: 2.3-6.6 mg/dl	Chemistry (Main Lab)
Uric acid, urine	250-750 mg/24 hours	Chemistry (Main Lab)
Urinalysis	All patients: pH: 5.0-9.0 SPECIFIC GRAVITY: 1.001-1.035 CHEMICAL SCREENS: negative	Hematology
Urinalysis (ED lab)	Reported with results	Emergency Department Lab
Urine culture	No growth	Microbiology (Main Lab)

<i>Test name</i>	<i>Reference Interval</i>	<i>Laboratory</i>
Urine cytology	Negative	Cytopathology
Urine HCG (ED lab)	Negative	Emergency Department Lab
Urine microalbumin with creatinine ratio	0.0-2.0 mg/dl microalbumin/creatinine ratio < 30.0 mg/g creatinine	Chemistry (Main Lab)
Urine sediment	All patients: WBC: 0-2/HPF RBC: 0-2/HPF Hyaline Casts: 0-5/LPF Squamous cells: negative Bacteria: negative Bladder cells: negative Tubular cells: negative Granular casts: negative White cell casts: negative Epithelial cell casts: negative RBC casts: negative Waxy casts: negative Broad casts: negative Other casts: negative Crystals : negative Sperm: negative Trich: negative	Hematology
Urine urea nitrogen	6-17 g/24 hours	Chemistry (Main Lab)
Vaginal smear for maturation index		Cytopathology
Valproic acid	50-100 mcg/ml	Chemistry (Main Lab)
Vancomycin	Peak: 15-35 mcg/ml Trough: <10.1 mcg/ml	Chemistry (Main Lab)
Varicella-Zoster antibody	Seronegative	Microbiology (Main Lab)
Varicella-Zoster antigen detection (immunofluorescence)	Negative	Microbiology (Virology)
Viral culture	No virus isolated	Microbiology (Virology)
Viral respiratory panel	Negative	Microbiology (Virology)
Viscosity, serum	1.4-1.8 relative viscosity units	Immunology
Vitamin B12	Deficient: < 175 pg/ml Borderline:175-250 pg/ml Normal: > 250 pg/ml	Chemistry (Immunodiagnosics)
Volatile alcohol screen, serum	Negative	Chemistry (Main Lab)
von Willebrand factor	70-140% (Ranges vary according to blood type)	Coagulation
von Willebrand panel	See pathologist interpretation.	Coagulation
VRE Rectal Culture	Negative	Microbiology (Main Lab)
Wound culture	Depends on source of specimen	Microbiology (Main Lab)