

**The most current laboratory reference ranges are included in the laboratory report from the LJS.
Laboratory testing information is also available on the Laboratory Guide to Services Website: <https://clinicallabs.osumc.edu>**

This document applies all laboratory testing at OSU/WMC Clinical Laboratories. This includes:
 Polaris Care Laboratory: 2001 Polaris Pkwy, Innovations Centre Suite 1500, Columbus OH 43240
 Ackerman Laboratories: 680 Ackerman Rd Rm 429, Columbus OH 43202
 Morehouse Laboratory: 1st Fl Morehouse Medical Plaza Tower, 2050 Kenny Rd, Columbus OH 43221
 Spielman Laboratory: 1145 Olentangy River Rd Rm 2030, Columbus Oh 43212
 Clinical Laboratories (UH): 410 West 10th Avenue, Columbus OH 43210
 Clinical Laboratories (UHE): 181 Taylor Avenue, Columbus OH 43203

Analyte	Alternative Names	Methodology / Reaction Type	Instrument or Kit Manufacturer	Units	Reference Ranges	Critical Values	Source of Reference Range	Technical Range / AMR	Reportable Range / CRR
Arterial Blood Gas	ABG	Various	CCL: Radiometer RT: Siemens	Various	Various	Various	Various	Various	Various
Blood Gas Base Excess	Base Excess, Base Deficit	Calculation of the expression that approximates the amount of acid or base required to titrate one liter of blood back to a normal pH of 7.40.	CCL: Radiometer RT: Siemens	mmol/L	-3.0 to + 3.0	N/A	Contemporary Practice in Clinical Chemistry 3rd Ed 2016, Chapter 32, Table 32-1 p450	-30.0 - 30.0	-30.0 - 30.0
Blood Gas Bicarbonate (HCO ₃)	Bicarbonate, CO2 Whole Blood	Calculation	CCL: Radiometer RT: Siemens	mmol/L	>31 days: 22-26	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	Calculation	Calculation
Blood Gas Glucose Only	Whole Blood Glucose	Amperometric	CCL: Radiometer RT: Siemens	mg/dL	1+ years: 70-99	≥1 year: <50 and >400 <1 year: <40 and >200	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Sodin, 1999	CCL: 1-1030 RT: 30-700	CCL: 1-1030 RT: 30-700
Blood Gas HCT	N/A	Calculation	CCL: Radiometer RT: Siemens	%	>18 years Male: 39.6-48.8 Female: 34.9-44.3	N/A	Sysmex XN-9000 IFU (North American Edition) Code No. AC794819	Calculation	Calculation
Blood Gas HGB	N/A	Coximetry	CCL: Radiometer RT: Siemens	g/dL	>18 years Male: 13.4-16.8 Female: 11.4-15.2	≥12y: <7.0 and >22.0 8d-12y: <8.0 and >22.0 0d-7d: <11.0 and >22.0	Sysmex XN-9000 IFU (North American Edition) Code No. AC794819	CCL: 4.8-23.5 UH RT: 5.0-21.0	CCL: 4.8-23.5 UH RT: 5.0-21.0
Blood Gas Ionized Calcium Only	Ionized Calcium, Ionized Calcium SST (Tube Specific)	Potentiometric	CCL: Radiometer RT: Siemens	mg/dL	4.60-5.30	<3.40 and >6.20	Tietz Textbook of Clinical Chemistry and Molecular Diagnostics, 2006	CCL: 1.00-13.00 UH RT: 2.5-12.0 UHE RT: 1.0-12.0	CCL: 1.00-13.00 UH RT: 2.5-12.0 UHE RT: 1.0-12.0
Ionized Calcium (CRR)	Ionized Calcium, Continuous Renal Replacement Therapy (CRR)	Potentiometric	CCL: Radiometer RT: Siemens	mg/dL	1.00-2.00	N/A	TBD	CCL: 1.00-13.00 UH RT: 2.5-12.0 UHE RT: 1.0-12.0	CCL: 1.00-13.00 UH RT: 2.5-12.0 UHE RT: 1.0-12.0
Blood Gas Lactate Only	Lactic Acid	Amperometric	CCL: Radiometer RT: Siemens	mmol/L	Adult: 0.5 - 1.6 0-365 days: 40-90 ≥1 year: 94-98	≥5.0	ABL 800 Flex Reference Manual	CCL: 0.0-30.0 RT: 0.50-20.00	CCL: 0.0-30.0 RT: 0.50-20.00
Blood Gas O2Sat	O2 Saturation, O2 Sat	Visible absorption spectroscopy	CCL: Radiometer RT: Siemens	%	≥1 year: 94-98	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	5-100	5-100
Blood Gas pCO2	N/A	Potentiometric	CCL: Radiometer RT: Siemens	mmHg	>31 days Arterial: 32-48 Venous: 36-52	Arterial: <20 and >65 Venous: <24 and >64	Arterial: Clinical Guide to Laboratory Tests, Tietz, 1995 & Fundamentals of Clinical Chem, 1987 / Venous: Respiriology, 2014 Feb;19(2):168-75, doi:10.1111/resp.122225, Pub 2014 Jan 3	CCL: 5-115 UH RT: 13.0-142.0	CCL: 5-115 UH RT: 13.0-142.0
Blood Gas pH Only	N/A	Potentiometric	CCL: Radiometer RT: Siemens	pH	>31 days Arterial: 7.35-7.45 Venous: 7.32-7.42	Arterial: <7.20 and >7.55 Venous: <7.17 and >7.52	Arterial: Clinical Guide to Laboratory Tests, Tietz, 1995 & Fundamentals of Clinical Chem, 1987 / Venous: Respiriology, 2014 Feb;19(2):168-75, doi:10.1111/resp.122225, Pub 2014 Jan 3	CCL: 6.80-8.00 UH RT: 6.800-7.770	CCL: 6.80-8.00 UH RT: 6.800-7.770
Blood Gas pO2	N/A	Amperometric	CCL: Radiometer RT: Siemens	mmHg	Arterial: 83-108 Venous: 46-71	Arterial: 644 Venous: N/A	Arterial: Clinical Guide to Laboratory Tests, Tietz, 1995 & Fundamentals of Clinical Chem, 1987 / Venous: Respiriology, 2014 Feb;19(2):168-75, doi:10.1111/resp.122225, Pub 2014 Jan 3	CCL: 0-700 UH RT: 35.0-525.0	CCL: 0-700 UH RT: 35.0-525.0
Blood Gas Potassium Only	Whole Blood Potassium	Potentiometric	CCL: Radiometer RT: Siemens	mmol/L	18+ years: 3.5-5.0	1-18+ years: <3.0 and >6.0 ≤1 year: <3.0 and >7.0	Clinical Guide to Laboratory Tests, Tietz, 1995	CCL: 1.0-14.0 UH RT: 1.00-12.00	CCL: 1.0-14.0 UH RT: 1.00-12.00
Blood Gas Sodium Only	Whole Blood Sodium	Potentiometric	CCL: Radiometer RT: Siemens	mmol/L	1+ years: 133-143	<125 and >160	Internal study, 2012 (see file); Pediatric Reference Ranges, Sodin, 1999	CCL: 80-175 UH RT: 100.0-170.0	CCL: 80-175 UH RT: 100.0-170.0
Carboxy-Hgb	Carboxyhemoglobin, Carbon Monoxide	Coximetry	CCL: Radiometer RT: Siemens	%	0.5 - 1.5	N/A	ABL 800 Flex Reference Manual	0-50.0	0-50.0
Met-Hgb	Methemoglobin	Coximetry	CCL: Radiometer RT: Siemens	%	Adult: 0.0-1.5	N/A	ABL 800 Flex Reference Manual	0.0-30.0	0.0-30.0
O2-Hgb	Oxyhemoglobin	Coximetry	CCL: Radiometer RT: Siemens	%	Adult: 94-98	N/A	ABL 800 Flex Reference Manual	0-100	0-100
pCO2 Cord Blood Gas	pCO2, Cord Blood Arterial pCO2, Cord Blood Venous	Potentiometric	Radiometer	mmHg	Cord Blood Arterial: 41-58 Cord Blood Venous: 33-44	N/A	Tietz 4th Edition	5-115	5-115
pCO2, Fluid	Fluid pCO2 (by blood gas analyzer)	Potentiometric	Radiometer	mmHg	N/A	N/A	N/A	5-115	5-115
pH Cord Blood Gas	pH, Cord Blood Arterial pH, Cord Blood Venous	Potentiometric	Radiometer	pH	Cord Blood Arterial: 7.23-7.33 Cord Blood Venous: 7.30-7.40	N/A	Tietz 4th Edition	6.80-8.00	6.80-8.00
pH, Fluid	Fluid pH (by blood gas analyzer)	Potentiometric	Radiometer	pH	N/A	N/A	N/A	6.80-8.00	6.80-8.00
pO2 Cord Blood Gas	pO2, Cord Blood Arterial pO2, Cord Blood Venous	Amperometric	Radiometer	mmHg	Cord Blood Arterial: 12-24 Cord Blood Venous: 23-35	N/A	Tietz 4th Edition	0-700	0-700
pO2, Fluid	Fluid pO2 (by blood gas analyzer)	Amperometric	Radiometer	mmHg	N/A	N/A	N/A	0-700	0-700
Acetaminophen Level	Tylenol, Datriil, Tempra, Liquiprin, Tenlap	Enzyme Immunoassay	Beckman	mcg/mL	Therapeutic: 10.0 - 32.0	>150 after 4 hours of ingestion	Applied Pharmacokinetics: Principles of Therapeutic Drug Monitoring, 2nd Edition 2002 Applied Therapeutics, Inc. and Micromedex On OSU Intranet.	10.0-200.0	10.0-600.0
ALT	SGPT, Alanine Aminotransferase	Transfer of the amino group from alanine to L-oxoglutarate to form pyruvate and glutamate. The pyruvate enters a lactate dehydrogenase (LD) catalyzed reaction with NADH to produce lactate and NAD+. The decrease in absorbance due to the consumption of NADH is measured at 340nm and is proportional to the ALT activity in the sample.	Beckman	U/L	18+ years: Female: 9-48 Male: 10-52	N/A	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Sodin, 1999 (Lower end of reference range modified to agree with the linear limits.)	3-500	3-25,000

Acetone, Serum, Ketones	Beta Hydroxybutyrate	D-3 Hydroxybutyrate in the presence of NAD gets converted to acetoacetate and NADH. NADH produced reacts with INT in the presence of diaphorase to produce color at 505nm. Absorbance is proportional to B-hydroxybutyrate in sample.	Beckman	mmol/L	0.02-0.27	≥1.20	Stanbio - Package Insert	0.00-8.00	0.00-24.00
Albumin	N/A	This Albumin method is a modification of the Doumas and Rodkey procedures utilizing a different buffering system. At pH 4.2, bromocresol green reacts with albumin to form an intense green complex. The absorbance of the albumin-BCG complex is measured bichromatically (600/800nm) and is proportional to the albumin concentration in the sample.	Beckman	g/dL	19+ years: 3.5-5.0	N/A	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999 ; Synchro Performance Verification Manual AZ2219	1.5-6.0	1.5-18.0
Albumin, Body Fluid	N/A	See ALB	Beckman	g/dL	Peritoneal and Pleural: Differences between serum-fluid gradients of >1.2 g/dL indicate transudates while differences ≤1.2 g/dL indicate exudates.	N/A	Roth, B.J., et al. Chest, Vol 98, 546-549, 1990	1.5-6.0	1.5-18.0
Albumin, CSF	Microalbumin, CSF	Turbidimetry	Beckman	mg/dL	10.0-30.0	N/A	CCLM Vol 54 issue 2 p285-292 Feb 2016	1.0-45.0	1.0-450.0
Alcohol (Ethanol), Blood	Serum Alcohol	Based on an enzymatic reaction: 4 Reagent 1 contains the buffering system. Reagent 2 contains alcohol dehydrogenase (ADH), the coenzyme nicotinamide adenine dinucleotide (NAD), buffer, preservatives, and stabilizers. The ADH catalyzes the oxidation of ethyl alcohol to acetaldehyde. During this reaction, NAD is reduced to NADH. The increase in absorbance at 340 nm is proportional to the concentration of alcohol in the specimen.	Beckman	mg/dL	<10	≥300	N/A	10-600	10-600
Alk Phosphatase	ALP	This ALP procedure is based on the method developed by Bowers and McComb2 and has been formulated as recommended by the AACC and IFCC3. Alkaline phosphatase activity is determined by measuring the rate of conversion of p-nitrophenylphosphate (pNPP) in the presence of 2-amino-2-methyl-1-propanol (AMP) at pH 10.4.	Beckman	U/L	19+ years: 32-126	N/A	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999 ;Synchro Performance Verification Manual AZ2219	5-1,500	5-15,000
ALP, Fluid	N/A	See ALP	Beckman	U/L	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A	N/A	5-1,500	5-15,000
Alpha 1 Antitrypsin	N/A	Turbidimetry	Beckman	mg/dL	84-218	N/A	Package Insert	30-500	30-5,000
Ammonia	Ammonia, Venous	Direct enzymatic procedure based on the following reaction sequence:- Glutamate dehydrogenase (GLDH) NH4 + α-ketoglutarate + NADH → Glutamate + NAD + H2O. The reagent contains LDH in excess, to rapidly reduce endogenous pyruvate so that it does not interfere with the assay system; reagent also incorporates a patented stabilization process which renders the reagent stable in the liquid phase.	Beckman	umol/L	6.0-47.0	N/A	Package Insert	10-600	10-3,000
Ammonia, Arterial	N/A	Direct enzymatic procedure based on the following reaction sequence:- Glutamate dehydrogenase (GLDH) NH4 + α-ketoglutarate + NADH → Glutamate + NAD + H2O. The reagent contains LDH in excess, to rapidly reduce endogenous pyruvate so that it does not interfere with the assay system; reagent also incorporates a patented stabilization process which renders the reagent stable in the liquid phase.	Beckman	umol/L	6.0-47.0	N/A	Package Insert	10-600	10-3,000
Amylase	N/A	The release of 2-chloro-4-nitrophenol (CNP) from the substrate and the resulting absorbance increase per minute is directly related to the α-Amylase activity in the sample. The resulting increase in absorbance can be measured spectrophotometrically at 410/480nm.	Beckman	U/L	19+ years: 20-103	0-18 years: ≥400 19+ years: ≥500	OSU validated 48 outpatients from Family Practice See Method Validation binders. Pediatric Reference Ranges, Soldin, 1999	10-2,000	10-10,000
Amylase, 24 Hour Urine	N/A	See Amylase	Beckman	U/24 hrs	24 hour sample: 0-400	N/A	OSU validated 48 outpatients from Family Practice. See Method Validation binders.	N/A (calculation)	N/A (calculation)

Amylase, Body Fluid	N/A	See Amylase	Beckman	U/L	Pleural: Fluid amylase measurements greater than the reference interval for serum or a fluid to serum amylase ratio greater than 1.0 may suggest acute pancreatitis, chronic pancreatic pleural effusion, or esophageal leakage.	N/A	State of the art. The pleura Sahn SA Am Rev Respir Dis. 1988;138(1):184.	10-2,000	10-dilute to endpoint
Amylase, Urine Random	N/A	See Amylase	Beckman	U/L	None established	N/A	N/A	10-1,500	10-dilute to end point
Anion Gap	Gap	Calculation: ANION GAP=(NA+K)-(CL+CO2)	N/A	mmol/L	7-17	N/A	OSUWMC Study 2015	N/A	N/A
Anti Streptolysin O	N/A	Turbidimetry	Beckman	IU/ml	<250	N/A	Package Insert	100-1,000	100-20,000
AST	SGOT, Aspartate Aminotransferase	Catalyzes the transamination of aspartate and α-oxoglutarate, forming L-glutamate and oxalacetate. The oxalacetate is then reduced to L-malate by malate dehydrogenase, while NADH is simultaneously converted to NAD ⁺ . The decrease in absorbance due to the consumption of NADH is measured at 340 nm and is proportional to the AST activity in the sample.	Beckman	U/L	19+ years: 14-40	N/A	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999	3-1,000	3-50,000
Beta HCG Quant, Blood	Quantitative Serum Pregnancy Test	Two-site sandwich immunoassay using direct chemiluminometric technology with paramagnetic particles as the solid phase and acridinium ester as the label.	Siemens	mIU/mL	Non-pregnant: <10 Postmenopausal: <10 2-4 Weeks: 39.1 - 8,388 5-6 Weeks: 861 - 88,769 6-8 Weeks: 8,636 - 218,085 8-10 Weeks: 18,700 - 244,467 10-12 Weeks: 23,143 - 181,899 13-27 Weeks: 6,303 - 97,171 28-40 Weeks: 4,360 - 74,833	N/A	Advia Centaur Assay Manual, Total HCG 10634917_EN Rev. F, 2011-04	2-1,000	2-dilute to obtain numeric result
B-hCG Qualitative, Blood	Serum Pregnancy Test	Lateral-flow test using a monoclonal antibody specific to the beta subunit of hCG.	Alere	Qualitative	Non-pregnant = Negative Pregnant = Positive	N/A	Package Insert	Positive Negative	Positive Negative
Bicarbonate, Fluid	FCO2, CO2 Fluid	See CO2	Beckman	mmol/L	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A	N/A	2-45	2-dilute to endpoint
Bilirubin - Baby	Bilirubin, Total (Neonatal)	A stabilized diazonium salt, 3,5-dichlorophenyldiazonium tetrafluoroborate (DPD), reacts with bilirubin to form azobilirubin which absorbs at 570/660 nm.	Beckman	mg/dL	0 Days: 1.4-8.7 1 Day: 3.4-11.5 3 Days: 1.5-12.0 5 Days: 0.3-1.2 1 Year: <1.5	≤1 year ≥14.0	Clinical Guide to Laboratory Tests, Kaplin, 2003	0.0-30.0	0.0-90.0
Bilirubin Direct	BILD	Direct (conjugated) bilirubin couples directly with a diazonium salt of 3,5-dichloroaniline (DPD) in an acid medium to form azobilirubin. The direct bilirubin in serum is directly proportional to the color development of azobilirubin which is measured bichromatically at 570/660 nm.	Beckman	mg/dL	All: < 0.3	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	0.0-10.0	0.0-30.0
Bilirubin Total	BILT	A stabilized diazonium salt, 3,5-dichlorophenyldiazonium tetrafluoroborate (DPD), reacts with bilirubin to form azobilirubin which absorbs at 570/660 nm.	Beckman	mg/dL	Adult: <1.5	N/A	Clinical Guide to Laboratory Tests, Kaplin, 2003	0.0-30.0	0.0-90.0
Bilirubin, Direct, Fluid	FBILD	Direct (conjugated) bilirubin couples directly with a diazonium salt of 3,5-dichloroaniline (DPD) in an acid medium to form azobilirubin. The direct bilirubin in serum is directly proportional to the color development of azobilirubin which is measured bichromatically at 570/660 nm.	Beckman	mg/dL	Peritoneal: Elevated peritoneal bilirubin may suggest bile within the abdomen.	N/A	Ascetic fluid bilirubin concentration as a key to choleperitoneum. Runyon BA J Clin Gastroenterol. 1987;9(5):543.	0.0-10.0	0.0-30.0
Bilirubin, Total, Fluid	FBILT	A stabilized diazonium salt, 3,5-dichlorophenyldiazonium tetrafluoroborate (DPD), reacts with bilirubin to form azobilirubin which absorbs at 570/660 nm.	Beckman	mg/dL	Peritoneal: Elevated peritoneal bilirubin may suggest bile within the abdomen.	N/A	Ascetic fluid bilirubin concentration as a key to choleperitoneum. Runyon BA J Clin Gastroenterol. 1987;9(5):543.	0.0-30.0	0.0-90.0
B-Type Natriuretic Peptide	BNP	Two site sandwich immunoassay using direct chemiluminescent technology which uses constant amounts of two monoclonal antibodies.	Siemens	pg/mL	All: 0-100	N/A	Advia Centaur Assay Manual, BNP 10629823_EN Rev. P, 2011-07	2-4,500	2-4,500
BUN	N/A	Urea is hydrolyzed enzymatically by urease to yield ammonia and carbon dioxide. The ammonia and α-oxoglutarate are converted to glutamate in a reaction catalyzed by L-glutamate dehydrogenase (GLDH). Simultaneously, a molar equivalent of reduced NADH is oxidized. 3,4,5 Two molecules of NADH are oxidized for each molecule of urea hydrolyzed. The rate of change in absorbance at 340 nm, due to the disappearance of NADH, is directly proportional to the BUN concentration in the sample.	Beckman	mg/dL	All: 7-22	>100.0	OSUWMC Reference Range Study effective 12.11.2013	2-130	2-650

C Reactive Protein	N/A	Measurement of the rate of decrease in light intensity transmitted (increase in absorbance) through particles suspended in solution is the result of complexes formed during the immunological reaction between the CRP of the patient serum and rabbit anti-CRP-antibodies coated on latex particles.	Beckman	mg/L	All: <10.00	N/A	Clinical Guide to Laboratory Tests, Tietz, 2005	1.00-480.00	1.00-1,440.00
C Reactive Protein For Cardiac Risk	CRPR, CRP High Sensitivity	Measurement of the rate of decrease in light intensity transmitted (increase in absorbance) through particles suspended in solution is the result of complexes formed during the immunological reaction between the CRP of the patient serum and rabbit anti-CRP-antibodies coated on latex particles.	Beckman	mg/L	All: Non Specific: >10.00 High: >3.00 Average: 1.00-3.00 Low: <1.00	N/A	Beckman Coulter CRP Latex package insert; BAOSR6x99.04, 1.2012	0.20-80.00	0.20-80.00
C3 Complement	C3	Turbidimetry	Beckman	mg/dL	87-200	N/A	Package Insert. Verified by OSU Study.	15-500	15-1,500
C4 Complement	C4	Turbidimetry	Beckman	mg/dL	18-52	N/A	OSU Study	8-150	8-450
CA 125	CA125N	Competitive chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	U/mL	All: ≤30	N/A	Advia Centaur Assay Manual, CA 125H 128516 Rev. H, 2009-02	2-600	<2-dilute to obtain numeric result
CA 19-9	N/A	Sandwich chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	U/mL	All: ≤37.00	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995; see Source link for additional Reference Range information	15.00-700.00	15.00 - dilute to obtain numeric result
CA27.29 (Breast Care Assoc Ag)	CA2729	Competitive chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	U/mL	All: 0.0-38.6	N/A	Advia Centaur Assay Manual, BR (CA 27.29) 116751 Rev. J, 2009-07	3.5-450.0	3.5-450.0
Calcium	CA	Calcium ions (Ca ²⁺) reacting with Arsenazo III (2,2'-[1,8-Dihydroxy-3,6-disulphonaphthylene-2,7-bisazo]-bisbenzenearsonic acid) to form an intense purple colored complex. Absorbance of the Ca-Arsenazo III complex is measured bichromatically at 660/700 nm.	Beckman	mg/dL	19+ years: 8.6-10.5	<6.0 and >12.0	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999	4.0-18.0	4.0-18.0
Calcium, Fluid	FCA	See Calcium	Beckman	mg/dL	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A	N/A	4.0-18.0	4.0-18.0
Calcium, Urine 24HR	N/A	See Calcium	Beckman	mg/24 hours	100.0-300.0	N/A	N/A	N/A (Calculation)	N/A (Calculation)
Calcium/Creat Ratio, Random Urine	CALCR	See Calcium / Creatinine	Beckman	Ca mg/Creat mg	0-6 months: <0.86 7-18 months: <0.60 19 months-2 years: <0.42 >3years: <0.22	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
Calculated LDL Cholesterol	LDL, Low-Density Lipoprotein Cholesterol	Calculation: CHOL - [(TRIG/5)+HDL]	N/A	mg/dL	Adult optimal : <100	N/A	NCEP Guidelines	N/A	N/A
Carbamazepine Total Level	CARB	Competition between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH) for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change.	Beckman	mcg/mL	All: 4.0-12.0 (Therapeutic Range)	>15.0	Applied Clinical Pharmacokinetics, 2001 Micromedex, OSU Intranet	2.0-20.0	2-100.0
CEA	N/A	Sandwich chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	ng/mL	All: ≤5.0	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995. See source link for additional Reference Range information.	0.5-100.0	0.5 - dilute to obtain numeric result
CEA, Fluid	FCEA	Sandwich chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	ng/mL	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995; see Source link for additional Reference Range information	0.5-100.0	0.5 - dilute to obtain numeric result
Ceruloplasmin	CERP	Turbidimetry	Beckman	mg/dL	20-60	N/A	OSU Study	6-200	6-4,000
Chloride	CL	The ISE module for Na ⁺ , K ⁺ , and Cl ⁻ employs crown ether membrane electrodes for sodium and potassium and a molecular oriented PVC membrane for chloride that are specific for each ion of interest in the sample. An electrical potential is developed according to the Nernst Equation for a specific ion. When compared to the Internal Reference Solution, this electrical potential is translated into voltage and then into the ion concentration of the sample.	Beckman	mmol/L	18+ years: 98-108	<75 and >130	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999	50-200	50-200

Chloride, 24 Hr Urine	UCL, 24	See Chloride	Beckman	mmol/24hrs	110-250	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
Chloride, Fluid	FCL	See Chloride	Beckman	mmol/L	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A	N/A	50-200	50-200
Chloride, Random Urine	UCLR	See Chloride	Beckman	mmol/L	Random: None established	N/A	N/A	15-400	15-400
Cholesterol Total	CHOL	Cholesterol esters in serum are hydrolyzed by cholesterol esterase (CHE). The free cholesterol produced is oxidized by cholesterol oxidase (CHO) to cholest-4-en-3-one with the simultaneous production of hydrogen peroxide (H2O2), which oxidatively couples with 4-aminopyridine and phenol in the presence of peroxidase to yield a chromophore. The red quinonimine dye formed can be measured spectrophotometrically at 540/600 nm as an increase in absorbance.	Beckman	mg/dL	19+ years: <200	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999	25-700	25-2,100
Cholesterol, Body Fluid	FCHOL	See Cholesterol	Beckman	mg/dL	Pleural: A pleural cholesterol measurement greater than 45 mg/dL is one component of the diagnostic criteria for exudates.	N/A	Diagnostic value of tests that discriminate between exudative and transudate pleural effusions. Primary Study Investigators Heffner JE, Brown LK, Barbieri CA Chest. 1997;111(4):970.	25-700	25-2,100
CK	Creatine Kinase, CKB	CK reversibly catalyzes the transfer of a phosphate group from creatine phosphate to (ADP) to give creatine and (ATP) as products. The ATP formed is used to produce glucose-6-phosphate and ADP from glucose. This reaction is catalyzed by hexokinase (HK) which requires magnesium ions for maximum activity. The glucose-6-phosphate is oxidized by the action of the enzyme glucose-6-phosphate dehydrogenase (G6P-DH) with simultaneous reduction of the coenzyme nicotinamide adenine dinucleotide (NADP) to give NADPH and 6-phosphogluconate. The rate of increase of absorbance at 340/660 nm due to the formation of NADPH is directly proportional to the activity of CK in the sample.	Beckman	U/L	19+ years: Female: 30-184 Male: 30-220	≥500 (Outpatient Only)	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999	10-2,000	10-200,000
CO2 Total	CO2	Bicarbonate (HCO3 ⁻) and phosphoenolpyruvate (PEP) are converted to oxaloacetate and phosphate in the reaction catalyzed by phosphoenolpyruvate carboxylase (PEPC). Malate dehydrogenase (MD) catalyzes the reduction of oxaloacetate to malate with the concomitant oxidation of reduced nicotinamide adenine dinucleotide (NADH). This oxidation of NADH results in a decrease in absorbance of the reaction mixture measured bichromatically at 380/410 nm proportional to the Bicarbonate content of the sample.	Beckman	mmol/L	3+ years: 22-30	<10 and >40	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999	2-45	2-45
Cortisol	ACTH Stimulation, CORT	Competitive chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	mcg/dL	All: 3.09-22.40	N/A	Advia Centaur Assay Manual, Cortisol 04670726 Rev. G, 2009-12	1.20-70.00	1.20-3,570 (Max Dilution 51)
Creatinine	CREA	This Creatinine procedure is a kinetic modification of the Jaffe procedure, in which creatinine reacts with picric acid at alkaline pH to form a yellow orange complex. The rate of change in absorbance at 520/800nm is proportional to the creatinine concentration in the sample.	Beckman	mg/dL	19+ years: Female: 0.50-1.20 Male: 0.70-1.30	>10.00	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999	0.20-25.00	0.20-25.00
Creatinine, 24 HR Urine	UCRE, 24	See Creatinine	Beckman	g/24 hrs	18+ years male: 0.80-2.00 18+ years female: 0.60-1.80	N/A	NKDEP traceable <Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999	N/A (Calculation)	N/A (Calculation)
Creatinine, 8 Hour Urine	8UCR	See Creatinine	Beckman	N/A	N/A	N/A	N/A	1.00-300.00	1.00-900.00
Creatinine, Body Fluid	FLCREA	See Creatinine	Beckman	mg/dL	Peritoneal: Peritoneal fluid urea nitrogen and creatinine levels that are greater than serum levels may imply intraperitoneal leakage of urine outside of the urinary tract. Normal reference intervals for peritoneal creatinine and urea are thought to be equivalent to those of serum.	N/A	Peritoneal fluid urea nitrogen and creatinine reference values. Obstet Gynecol. Manahan KJ, Fanning J. 1999 May;93 (5 Pt 1):780-2.	0.20-25.00	0.20-25.00

Creatinine, Random Urine	UCRER	See Creatinine	Beckman	mg/dL	N/A	N/A	N/A	1.00-300.00	1.00-900.00
Digoxin Level	Lanoxin, DIG	Enzyme Immunoassay	Beckman	ng/mL	0.5-1.0 (Therapeutic Range)	>2.0	Applied Clinical Pharmacokinetics, Bauer, 2001	0.3-5.0	0.3-10.0
Estradiol Enhanced	eE2	Standardization traceable to Isotope Dilution Gas Chromatography-Mass Spectrometry (ID GC-MS). Competitive chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and monoclonal antibody labeled with acridinium ester as the chemiluminescent label.	Siemens	pg/mL	Male: 19+ years: <11.8-39.8 Adult Female: Follicular Phase: 19.5-144.2 Midcycle Phase: 63.9-356.7 Luteal Phase: 55.8-214.2 Post Menopausal: <11.8-32.2	N/A	Advia Centaur Assay Manual, Enhanced Estradiol (eE2) 10491467 Rev. C, 2010-09; Pediatric Reference Ranges, Soldin, 1999	11.8-2,600.0	11.8-2,600.0
Ferritin	FERIB	Two-site sandwich chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	ng/mL	Female 20+ years: 10-291 Male 20+ years: 22-322	N/A	Advia Centaur Ferritin package insert 111653 Rev. L, 2008-09; Pediatric Reference Ranges, Soldin, 1999	0.5-1,650.0	0.5 -dilute to obtain numeric result
Folate, Serum	FOLSB	Competitive chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	ng/mL	19+ years: >5.38	N/A	Advia Centaur Assay Manual, Folate 119514 Rev. P, 2010-01; Pediatric Reference Ranges, Soldin, 1999	0.35-24.00	0.35 - 24.00 dilute to obtain numeric result for specimens from Children's Hospital
FSH	Follicle stimulating hormone	Sandwich chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	mIU/mL	Male: <18.1 Female, follicular: 2.5-10.2 Female, midcycle: 3.4-33.4 Female, luteal: 1.5-9.1 Female, pregnant: <0.3 Female, post-menopausal: 23.0-116.3	N/A	Advia Centaur Assay Manual, FSH package insert, 111741 Rev. J, 2008-09	0.3-200.0	0.3-200.0
GGT	Gamma Glutamyl Transferase	A modification of the Szasz procedure. 2,3 GGT catalyzes the transfer of the gamma-glutamyl group from the substrate, gamma-glutamyl-3-carboxy-4-nitroimidate, to glycylglycine, yielding 5-amino-2-nitrobenzoate. The change in absorbance at 410/480 nm is due to the formation of 5-amino-2-nitrobenzoate and is directly proportional to the GGT activity in the sample.	Beckman	U/L	19+ years: 8-64	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999 (Lower end of reference range modified to agree with the linear limits)	3-1,200	3-6,000
Glucose	GLUC	Glucose is phosphorylated by hexokinase (HK) in the presence of adenosine triphosphate (ATP) and magnesium ions to produce glucose-6-phosphate (G-6-P) and adenosine diphosphate (ADP). Glucose-6-phosphate dehydrogenase (G6P-DH) specifically oxidizes G-6-P to 6-phosphogluconate with the concurrent reduction of nicotinamide adenine dinucleotide (NAD+) to nicotinamide adenine dinucleotide, reduced (NADH). The change in absorbance at 340/660 nm is proportional to the amount of glucose present in the sample.	Beckman	mg/dL	1+ years: 70-99	>1year: <50 and >400 <1 year: <40 and >200	ADA Standards October 2012, Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999	10-800	10-2,400
Glucose, Body Fluid	FGLUC	See Glucose	Beckman	mg/dL	Peritoneal: Peritoneal glucose concentrations generally remain >50 mg/dL (2.8 mmol/L) in spontaneous bacterial peritonitis but frequently fall below this level in secondary bacterial peritonitis. Pericardial: Pericardial fluid glucose to serum glucose ratios may be useful in identifying bacterial infection. Fluid to serum ratios <1.0 are seen in bacterial infection and tuberculous.	N/A	Ascitic fluid chemical analysis before, during and after spontaneous bacterial peritonitis. Runyon BA, Hoefs JC Hepatology. 1985;5(2):257 Ben-Horin S, Shinfield A, Kachel E, et al. The composition of normal pericardial fluid and its implications for diagnosing pericardial effusions. Am J Med 2005;118:636-40. Meyers DG, Meyers RE, Prendergast TW.	10-800	10-2,400
Glucose, CSF	CFG	See Glucose	Beckman	mg/dL	All: 40-70	<30 and >300	Clinical Guide to Laboratory Tests, Tietz, 1995	10-800	10-2,400
Haptoglobin	HAP	Turbidimetry	Beckman	mg/dL	44-215	N/A	Package Insert	30-400	30-10,000
hCG Qualitative, Urine	Urine Pregnancy Test	Lateral-flow test using a monoclonal antibody specific to the beta subunit of hCG.	Alere	Qualitative	Non-pregnant = Negative Pregnant = Positive	N/A	Package Insert	Positive Negative	Positive Negative
hCG, Quant (Tumor Marker)	HCGTM	Two-site sandwich immunoassay using direct chemiluminometric technology with paramagnetic particles as the solid phase and acridinium ester as the label.	Siemens	mIU/mL	<10.0	N/A	Advia Centaur Assay Manual, Total HCG 10634917, EN Rev. F, 2011-04	2.0-1,000.0	2.0-dilute to obtain numeric result

HDL Cholesterol	HDL	In phase one, free cholesterol in non-HDL-lipoproteins is solubilized and consumed by cholesterol oxidase, peroxidase, and DSBmT to generate a colorless end product. In phase two a unique detergent selectively solubilizes HDL-lipoproteins. The HDL cholesterol is released for reaction with cholesterol esterase, cholesterol oxidase and a chromogen system to yield a blue color complex which can be measured bichromatically at 600/700nm. The resulting increase in absorbance is directly proportional to the HDL-C concentration in the sample.	Beckman	mg/dL	20+ years: 240	N/A	NCEP Guidelines	3-200	3-600
Homocysteine	HOMCYS	Competitive chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	umol/L	All: 3.7-13.9	N/A	Advia Centaur Assay Manual, HCY 124489 Rev. G, 2008-10	0.5-65.0	0.5-65.0
IgA	Immunoglobulin A	Turbidimetry	Beckman	mg/dL	Adult 19-60Y: 66-433	N/A	Package Insert	10-700	10-35,000
IgG	Immunoglobulin G	Turbidimetry	Beckman	mg/dL	Adult 19-60Y: 600-1,714	N/A	OSU/WMC Immunoglobulin Reference Range Study	75-3,000	75-60,000
IgM	Immunoglobulin M	Turbidimetry	Beckman	mg/dL	Adult 19-60Y: 45-281	N/A	Package Insert	20-500	20-50,000
Inorganic Phosphate, Fluid	FIP	See Phosphorus	Beckman	mg/dL	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A	N/A	1.0-20.0	1.0-60.0
Iron	N/A	TPTZ [2,4,6-Tri-(2-pyridyl)-5-triazine] as the chromogen. In an acidic medium, transferrin-bound iron dissociates into free ferric ions and apo-transferrin. Hydrochloric acid and sodium ascorbate reduce the ferric ions to the ferrous state. The ferrous ions then react with TPTZ to form a blue colored complex which can be measured bichromatically at 600/800 nm. The increase in absorbance is directly proportional to the amount of transferrin bound iron present.	Beckman	mcg/dL	19+ years: 40-174	N/A	OSU/WMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999	10-1,000	10-2,000
Lactate Dehydrogenase	LD	Utilizes the forward reaction of lactate to pyruvate. Lactate and NAD are converted to pyruvate and NADH catalyzed by LD. NADH strongly absorbs light at 340 nm, whereas NAD does not. The rate of change of absorbance at 340 nm is directly proportional to the LD activity in the sample.	Beckman	U/L	19+ years: 100-190	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999	25-1,200	25-60,000
Lactate Dehydrogenase Body Fluid	FLLD	See Lactate Dehydrogenase (LD)	Beckman	U/L	Contamination with red blood cells can falsely increase LDH measurements. Elevated LDH in CSF specimens may indicate a non-specific immune process. CSF LDH measurements above 40 U/L may be associated with Creutzfeldt-Jakob Disease, Bacterial meningitis, Neurosyphilis, or tumors of the central nervous system. A fluid LDH Serum LDH ratio greater than 0.6 or a fluid LDH value two-thirds the upper limit of the serum LDH reference interval suggest an exudate.	N/A	Clinical Utility of Biochemical Analysis of Cerebrospinal Fluid Clinical Chemistry 1995 Watson MA The usefulness of diagnostic tests on pericardial fluid. Chest 1997;111:1213-21. Pleural effusions: the diagnostic separation of transudates and exudates. Light RW, Macgregor MI, Lubasinger PC, Ball WC Jr Am Intern Med. 1972;77(4):507.	25-1,200	25-60,000
Lactate, Blood	Lactate, Plasma	L-lactate is oxidized to pyruvate and hydrogen peroxide by lactate oxidase (LOD). A colored product is produced by the reaction of peroxidase (POD), hydrogen peroxide, 4-aminopyrene and a hydrogen donor (TOOS). The colored product is measured photometrically. The color intensity is proportional to the concentration of lactate in the sample under examination.	Beckman	mmol/L	All: 0.5-2.2	25.0	Beckman Coulter Literature (IFU) which cites, Tietz, N. W., Clinical Guide to Laboratory Tests, 3rd Edition, W. B. Saunders, Philadelphia, PA (1995).	0.2-10.0	0.2-30.0
Lactate, CSF	CSLACT	See Lactate	Beckman	mmol/L	Adult: <2.8	N/A	Beckman Coulter literature which cites Clinical Guide to Laboratory Tests, Tietz, 1995	0.2-10.0	0.2-30.0
Lactate, Fluid	FLACT	See Lactate	Beckman	mmol/L	Pleural fluid lactate may be elevated in bacterial empyema or other conditions such as rheumatoid arthritis.	N/A	Diagnostic significance of pleural fluid lactate concentrations. Petterson T, Ojala K, Weber TH. Infection. 1985 Nov-Dec;13(6):257-9.	0.2-10.0	0.2-30.0

LDL, Direct Measure	LDLB, Low-Density Lipoprotein Cholesterol	Cholesterol is consumed by cholesterol esterase, cholesterol oxidase, peroxidase and 4- aminoantipyrine to generate a colorless end product. In phase two a second detergent in reagent 2 releases cholesterol from the LDL – lipoproteins. This cholesterol reacts with cholesterol esterase, cholesterol oxidase and a chromogen system to yield a blue color complex which can be measured bichromatically at 540/660nm. The resulting increase in absorbance is directly proportional to the LDL-C concentration in the sample.	Beckman	mg/dL	Adult optimal : <100	N/A	NCEP Guidelines	7-400	7-1200
LH	Luteinizing Hormone	Two-site sandwich chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	mIU/mL	Male 20-70 years: 1.5-9.3 Male >70 years: 3.1-4.6 Children: <0.1-6.0 Female, follicular phase: 1.9-12.5 Female, mid cycle: 8.7-76.3 Female, luteal: 0.5-16.9 Female, pregnant: <0.1-1.5 Female, post-menopausal: 15.9-54.0 Female on Contraceptives: 0.7-5.6	N/A	Advia Centaur Assay Manual, LH 111736 Rev. L, 2008-09; Pediatric Reference Ranges, Soldin, 1999	0.7-200.0	0.7-200.0
Lipase	LIPA	Colorimetric method of Imamura, et al.1 Pancreatic lipase hydrolyzes esters of long chain fatty acids from their triglycerides. The enzyme activity requires the presence of co-lipase. 1,2-Diglyceride is hydrolyzed to 2-monoglyceride and fatty acid. The 2-monoglyceride is then measured by coupled enzyme reactions catalyzed by monoglyceride lipase (MGLP), glycerol kinase (GK), glycerol phosphate oxidase (GPO) and peroxidase (POD).	Beckman	U/L	19+ years: 11-82	N/A	Beckman Coulter Chemistry Information Sheet, 12/1998; Pediatric Reference Ranges, 1999	3-600	3-6,000
Lipase, Fluid	N/A	See Lipase	Beckman	U/L	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A	N/A	3-600	3-dilute to endpoint
Lipid Panel With Reflex To Measured LDL	Lipid Screen, LIPDR	See individual testing methodology	See individual testing methodology	Varies	Varies	N/A	N/A	N/A	N/A
Lithium Level	LI	A spectrophotometric method which can be readily adapted to automated clinical chemistry analyzers. Lithium present in the sample reacts with a substituted porphyrin compound at an alkaline pH, resulting in a change in absorbance which is directly proportional to the concentration of Lithium in the sample.	Beckman	mmol/L	All: 0.60-1.20 (Therapeutic Range)	≥2.00	Applied Clinical Pharmacokinetics, Bauer, 2001; Clinical Pharmacokinetics, Eilers, 1995;29-442-50	0.10-5.00	0.10-5.00
Magnesium	MG	Utilizes a direct method in which magnesium forms a colored complex with xylydyl blue in a strongly basic solution, where calcium interference is eliminated by glycoetherdiamine-N,N,N',N'-tetraacetic acid (GEDTA).3,4,5 The color produced is measured bichromatically at 520-800 nm and is proportional to the magnesium concentration.	Beckman	mg/dL	19+ years: 1.6-2.6	<1.0 and >4.4	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999	0.5-8.0	0.5-24.0
Magnesium, 24Hr Urine	UMG, 24	See Magnesium	Beckman	mg/24hrs	72.9-121.5	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
Magnesium, Urine, Random	N/A	See Magnesium	Beckman	mg/dL	N/A	N/A	N/A	0.5-10.0	0.5-100.0
Microalbumin, Random Urine	MALBR	Turbidimetry	Beckman	mg/L	N/A	N/A	Package Insert	7.0-450.0	7.0-4,500.0
Microalbumin, 24HR Urine	N/A	Turbidimetry	Beckman	mg/24 hours	≤30	N/A	Package Insert	N/A (Calculation)	N/A (Calculation)
Microalbumin/Creatinine Ratio	N/A	Turbidimetry	Beckman	N/A	≤30	N/A	Package Insert	N/A (Calculation)	N/A (Calculation)
Mononucleosis Screen	Mononucleosis Testing, Rapid	One-step antibody test using solid-phase immunoassay technology for the qualitative detection of infectious mononucleosis heterophile antibodies.	Alera Aceveva	Qualitative	All: Negative	N/A	Alera Aceveva Mono Package Insert	Positive / Negative	Positive / Negative
Osmolality	Osmolality, Serum	Freezing point depression.	Advanced Instrument Osmometer	mOsm/kg	278 - 305	<250 and >325	OSU, In House Reference Range Validation, 2017	50-2,000	50-2,000
Osmolality, Fluid	FOSMO	Freezing point depression.	Advanced Instrument Osmometer	mOsm/kg	N/A	N/A	N/A	50-2,000	50-2,000
Osmolality, Serum (Calculated)	Osmolality	Calculation (1.86 (Na +K) + 1.15 (Glucose/18) + (Urea/2.8) + 14	Beckman	mOsm/kg	278-305	N/A	OSU, In House Reference Range Validation, 2015	N/A	N/A
Osmolality, Urine	UOSMR	Freezing point depression.	Advanced Instrument Osmometer	mOsm/kg	All: 300-900	N/A	Clinical Guidelines for Laboratory Tests, Tietz, 1995	50-2,000	50-2,000

Phenobarbital Level, Random	PHNO	The assay is based on competition between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH) for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	All: 15.0-40.0 (Therapeutic Range)	≥45.0	Applied Clinical Pharmacokinetics, 2001	5.0-80.0	5.0-240.0
Phenytoin Total Level	PTN	The assay is based on competition between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH) for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	All: 10.0-20.0 (Therapeutic Range)	≥22.0	Applied Clinical Pharmacokinetics, 2001	2.5-40.0	2.5-200.0
Phosphate, Inorganic	IP	Inorganic phosphate reacts with molybdate to form a heteropolyacid complex. The use of a surfactant eliminates the need to prepare a protein free filtrate. The absorbance at 340/380 nm is directly proportional to the Inorganic Phosphorus level in the sample.	Beckman	mg/dL	19+ years: 2.2-4.6	<1.0 and >10.0	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999	1.0-20.0	1.0-60.0
Phosphorus, 24Hr	UIP, 24	See Phosphorus	Beckman	g/24hrs	0.4-1.3	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
Phosphorus, Random Urine	UIPR	See Phosphorus	Beckman	mg/dL	N/A	N/A	N/A	10.0-200.0	10.0-1,000.0
Potassium	K	The ISE module for Na ⁺ , K ⁺ , and Cl ⁻ employs crown ether membrane electrodes for sodium and potassium and a molecular oriented PVC membrane for chloride that are specific for each ion of interest in the sample. An electrical potential is developed according to the Nernst Equation for a specific ion. When compared to the Internal Reference Solution, this electrical potential is translated into voltage and then into the ion concentration of the sample.	Beckman	mmol/L	18+ years: 3.5-5.0	>18Y: <3.0 and >6.0 1-18Y: <3.0 and >6.0 <1Y: <3.0 and >7.0	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999	1.0-10.0	1.0-10.0
Potassium Body Fluid	FK	See Potassium	Beckman	mmol/L	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A	N/A	2.0-200.0	2.0-200.0
Potassium, 24 Hr Urine	UK, 24	See Potassium	Beckman	mmol/24hrs	25-125	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
Potassium, Random Urine	UKR	See Potassium	Beckman	mmol/L	N/A	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	2.0-200.0	2.0-200.0
Prealbumin	PALB	Turbidimetry	Beckman	mg/dL	17-34	N/A	Package Insert	3-80	3.0-1,600
Progesterone	PROG	Competitive chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	ng/mL	Male: 0.28-1.22 Female, follicular: Not detected-1.40 Female, luteal: 3.34-25.56 Female, mid-luteal: 4.44-28.03 Female, post-menopausal: Not detected-0.73	N/A	Advia Centaur Assay Manual, Progesterone 118696 Rev. P, 2010-06	0.21-60.00	0.21-300.00
Prolactin	PROL	Two-site sandwich chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	ng/mL	Male: 2.1-17.7 Female, nonpregnant: 2.8-29.2 Female, pregnant: 9.7-208.5 Female, postmenopausal: 1.8-20.3 All: <2 years: 3.3-14.7 2-6 years: 1.0-12.8 6-11 years: 1.2-11.4 11-18 years: 1.4-14.3	N/A	Advia Centaur Assay Manual, Prolactin 111746 Rev. N, 2008-09; Pediatric Reference Intervals, 5th ed Soldin, 2005	0.3-200.0	0.3 - Dilute to Obtain Numeric Result
Protein Total	TP	Cupric ions in an alkaline solution react with proteins and polypeptides containing at least two peptide bonds to produce a violet colored complex. The absorbance of the complex at 540/660nm is directly proportional to the concentration of protein in the sample.	Beckman	g/dL	19+ years: 6.4-8.3	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999	3.0-12.0	3.0-24.0
Protein, 24 Hr Urine	UPRO	See Total Protein CSF (M-TP)	Beckman	mg/24hrs	40-225	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)

Protein, CSF	CFP	The Urinary/CSF Protein reagent is a colorimetric method. Pyrogallol red is combined with molybdate to form a red complex with a maximum absorbance at 470nm. The assay is based on the shift in absorbance that occurs when the pyrogallol red-molybdate complex binds basic amino groups of protein molecules. Under the conditions of the test in the presence of protein, a blue-purple complex is formed with a maximum absorbance at 600nm.	Beckman	mg/dL	31+ Days: 15-45	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999	4-200	4-5,000
Protein, Fluid	FLP	See Protein, CSF	Beckman	mg/dL	Most transudates have total protein concentrations below 3.0 g/dL.	N/A	4th Edition of Tietz	4-200	4-5,000
Protein, Random Urine	UPROR	See Total Protein CSF (M-TP)	Beckman	mg/dL	N/A	N/A	N/A	4-200	4-5,000
PSA, Screening	PSA, EPSA	Two-site sandwich chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	ng/mL	All: <4.00	N/A	Advia Centaur Assay Manual, PSA 119746 Rev. N, 2009-11	0.04-100.00	0.04 - dilute to obtain numeric result
Rheumatoid Factor	RF	Turbidimetry	Beckman	IU/mL	≤14	N/A	Package Insert. Verified by OSU Study.	10-120	10-3,000
Salicylate Level	Aspirin	Serum or plasma is mixed with Reagent 1, which contains antibodies to salicylic acid and the coenzyme nicotinamide adenine dinucleotide (NAD). Subsequently, Reagent 2, which contains salicylic acid labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH), is added. Salicylic acid in the sample and salicylic acid-labeled G6PDH compete for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the salicylic acid concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized NAD to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mg/dL	Therapeutic: 20.0-30.0	>30.0	Applied Pharmacokinetics: Principles of Therapeutic Drug Monitoring, 2nd Edition 2002 Applied Therapeutics, Inc. and Micromedex. On OSU Intranet.	5.0-80.0	5.0-240.0
Sodium	Na+	The ISE module for Na+, K+, and Cl- employs crown ether membrane electrodes for sodium and potassium and a molecular oriented PVC membrane for chloride that are specific for each ion of interest in the sample. An electrical potential is developed according to the Nernst Equation for a specific ion. When compared to the Internal Reference Solution, this electrical potential is translated into voltage and then into the ion concentration of the sample.	Beckman	mmol/L	1+ years: 133-143	<125 and >160	Internal study, 2012 (see file); Pediatric Reference Ranges, Soldin, 1999	50-200	50-200
Sodium Body Fluid	FNA	See Sodium	Beckman	mmol/L	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A	N/A	50-200	50-200
Sodium, 24 Hr Urine	UNA, 24	See Sodium	Beckman	mmol/24hrs	40-220	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
Sodium, Random Urine	UNAR	See Sodium	Beckman	mmol/L	N/A	N/A	N/A	10-400	10-400
T3 Free	FT3	Competitive chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	pg/mL	19+ years: 2.3-4.2	N/A	Advia Centaur Assay Manual, FT3 10629863_EN Rev. J, 2011-03	1.4-20.0	1.4-20.0
T3 Total (Triiodothyronine)	T3, T3RIA	Competitive chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	ng/mL	19+ years: 0.60-1.81	N/A	Advia Centaur Assay Manual, T3 111634 Rev. L, 2008-09	0.10-8.00	0.10-8.00
T4	Thyroxine, Total	Competitive chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	mcg/dL	19+ years: 4.5-10.9	N/A	Advia Centaur Assay Manual, FT4 04662499 Rev. D, 2009-06; Pediatric Reference Ranges, Soldin, 1999	0.4-30.0	0.4-30.0
T4 Free	Thyroxine, Free FT4	Competitive chemiluminescent immunological reaction with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	ng/dL	19+ years: 0.89-1.76	≥4.50 (ED Only)	Advia Centaur Assay Manual, FT4 04662499 Rev. D, 2009-06; Pediatric Reference Ranges, Soldin, 1999	0.40-6.00	0.40-6.00
Testosterone	TESTOS	Chemiluminescent	Siemens	ng/dL	Male: 87-814 Female: <7.48 (Female free testosterone = 0.08-0.5 ng/dL)	N/A	Advia Centaur Assay Manual, Testosterone II 10998603_EN Rev. B, 2016-07	7-1,500	7-7,500

Theophylline Level	THEO	Based on competition between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH) for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	Adult: 10.0-20.0 (Therapeutic Range)	≥20.0	Applied Clinical Pharmacokinetics, 2001	2.5-40.0	2.5-200.0
Tobramycin Level, Peak (Post Drug Level)	TOBRPK	This assay is based on competition for antibody binding sites between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH). Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	All: 10.0-15.0 (Therapeutic Range)	≥20.0 Peak	Antimicrobial Stewardship Program, 2013	0.6-10.0	0.6-50.0
Tobramycin Level, Trough (Pre Drug Level)	TOBRTR	This assay is based on competition for antibody binding sites between drug in the sample and drug labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH). Enzyme activity decreases upon binding to the antibody, so the drug concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized nicotinamide adenine dinucleotide (NAD) to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	All: <1.0 (Therapeutic Range)	≥1.0 Trough	Antimicrobial Stewardship Program, 2013	0.6-10.0	0.6-50.0
Total Iron Binding Capacity	Transferrin/Iron Binding	Calculation: See information for Transferrin	Beckman	mcg/dL	19+ years: 250-425	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995; Pediatric Reference Ranges, Soldin, 1999	112-1,118	112-1,118
Transferrin	TRANB	In the procedure, the measurement of the decrease in light transmitted (increase in absorbance) through particles suspended in solution as a result of complexes formed during the antigen-antibody reaction, is the basis of this assay.	Beckman	mg/dL	200-400	N/A	Fundamentals of Clinical Chemistry, Tietz 4th ed	75-750	75-2,250
Triglycerides	TRIG	The glycerol is phosphorylated by adenosine triphosphate (ATP) in the presence of glycerol kinase (GK) to produce glycerol-3-phosphate. The glycerol-3-phosphate is oxidized by molecular oxygen in the presence of GPO (glycerol phosphate oxidase) to produce hydrogen peroxide (H2O2) and dihydroxyacetone phosphate. The formed H2O2 reacts with 4-aminophenazone and N,N-bis(4-sulfobutyl)-3,3'-dimethylaniline, disodium salt (MADB) in the presence of peroxidase (POD) to produce a chromophore, which is read at 660/800nm. The increase in absorbance at 660/800 nm is proportional to the triglyceride content of the sample.	Beckman	mg/dL	Desirable: <150 Borderline: 150-199 High: 200-499 Very High: ≥500	N/A	National Cholesterol Education Project (NCEP) Adult Treatment Protocol (ATP-III) (Circulation, 2002;106:3143-3421)	10-1,000	10-10,000
Triglycerides, Body Fluid	FTRIG	See TG	Beckman	mg/dL	Fluid triglyceride values greater than 110 mg/dL have been suggested for diagnosis of lymphatic fluid accumulation. Measurement may also be useful in distinguishing cirrhotic versus malignant origins.	N/A	The lipoprotein profile of chyloous and nonchyloous pleural effusions: Staats BA, Ellefson RD, Budahn LL, Dines DE, Prakash UB, Offord K. Mayo Clin Proc. 1980;55(11):700. Value of ascitic lipids in the differentiation between cirrhotic and malignant ascites. Jungst D, Gerbes AL, Martin R, Faumgartner G. Hepatology. 1986;6(2):239.	10-1,000	10-10,000
Troponin-I	TROP	Three-site sandwich immunoassay using direct chemiluminometric technology with paramagnetic particles as the solid phase and acridinium ester as the label.	Siemens	ng/mL	All: <0.11	Call abnormal ED >0.49 only -AND- ≥ 5.0 first time in 24 hours	Advia Centaur Assay Manual, Tnl 1062900_EN Rev. J, 2011-04; Normal Range study 2006	0.01-50.00	0.01-500.00 (Max Dilution 10)

TSH	Thyroid Stimulating Hormone, TSH High Sensitivity	The ADVIA Centaur TSH3- Ultra assay is a third-generation assay that employs anti-FITC monoclonal antibody covalently bound to paramagnetic particles, an FITC-labeled anti-TSH capture monoclonal antibody, and a tracer consisting of a proprietary acridinium ester and an anti-TSH mAb antibody conjugated to bovine serum albumin (BSA) for chemiluminescent detection.	Siemens	uIU/mL	18+ years: 0.550-4.780	Call abnormal ED only ≥150.000	Advia Centaur Assay Manual, TSH3-UL 10629909, EN Rev. E, 2011-07; Wu AHB Tietz Clinical Guide to Laboratory Tests, 4th edition, Elsevier-Saunders, St. Louis, 2006, p.1040. Range information. □	0.008-150.000	0.008-150.000
TSH w/ FT4 Reflex	TSHQR	The ADVIA Centaur TSH3- Ultra assay is a third-generation assay that employs anti-FITC monoclonal antibody covalently bound to paramagnetic particles, an FITC-labeled anti-TSH capture monoclonal antibody, and a tracer consisting of a proprietary acridinium ester and an anti-TSH mAb antibody conjugated to bovine serum albumin (BSA) for chemiluminescent detection.	Siemens	uIU/mL	18+ years: 0.550-4.780	Call abnormal ED only ≥150.000	Advia Centaur Assay Manual, TSH3-UL 10629909, EN Rev. E, 2011-07; Wu AHB Tietz Clinical Guide to Laboratory Tests, 4th edition, Elsevier-Saunders, St. Louis, 2006, p.1040. Range information. □	0.008-150.000	0.008-150.000
Urea Nitrogen	FBUN, Urea Nitrogen Fluid	See BUN	Beckman	mg/dL	Peritoneal: Peritoneal fluid urea nitrogen and creatinine levels that are greater than serum levels may imply intraperitoneal leakage of urine outside of the urinary tract. Normal reference intervals for peritoneal creatinine and urea are thought to be equivalent to those of serum.	N/A	Peritoneal fluid urea nitrogen and creatinine reference values. Obstet Gynecol. Manahan KJ, Fanning J. 1999 May;93(5 Pt 1):780-2.	2-130	2-650
Urea Nitrogen, 24 Hr Urine	UUREA	See BUN	Beckman	g/24hrs	10.0-20.0	N/A	Clinical Guide to Laboratory Tests, Tietz, 2012	N/A (Calculation)	N/A (Calculation)
Uric Acid	URICB, UA	Uric acid is converted by uricase to allantoin and hydrogen peroxide. Hydrogen peroxide reacts with 4-aminoantipyrine (4-AAP) in the presence of N,N-bis(4-sulfobutyl)-3,5-dimethylamine, disodium salt (MADB) to produce a chromophore which is read bichromatically at 660/800 nm. The amount of dye formed is proportional to the uric acid concentration in the sample.	Beckman	mg/dL	19+ years: Female: 2.8-6.0 Male: 3.5-7.0	N/A	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999	1.5-30.0	1.5-60.0
Uric Acid (Spec Handling)	N/A	Uric acid is converted by uricase to allantoin and hydrogen peroxide. Hydrogen peroxide reacts with 4-aminoantipyrine (4-AAP) in the presence of N,N-bis(4-sulfobutyl)-3,5-dimethylamine, disodium salt (MADB) to produce a chromophore which is read bichromatically at 660/800 nm. The amount of dye formed is proportional to the uric acid concentration in the sample.	Beckman	mg/dL	19+ years: Female: 2.8-6.0 Male: 3.5-7.0	N/A	OSUWMC Reference Range Study effective 12.11.2013; Pediatric Reference Ranges, Soldin, 1999	1.5-30.0	1.5-60.0
Uric Acid, 24Hr	UURIC, 24	See Uric Acid	Beckman	g/24hrs	0.3-0.8	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	N/A (Calculation)	N/A (Calculation)
Uric Acid, Fluid	FURIC	See Uric Acid	Beckman	mg/dL	The reference range and other method performance specifications have not been established for this fluid specimen.	N/A	N/A	1.5-30.0	1.5-60.0
Uric Acid, Random, Urine	UURICR	See Uric Acid	Beckman	mg/dL	N/A	N/A	N/A	1.0-100	1.0-300
Urine Calcium	Calcium, Random Urine	See Calcium	Beckman	mg/dL	N/A	N/A	N/A	0.1-40.0	0.1-120.0
Urine Urea Nitrogen - Random	UREAR	See BUN	Beckman	mg/dL	N/A	N/A	Clinical Guide to Laboratory Tests, Tietz, 1995	20-1,300	20-13,000
Vancomycin Level, Trough (Pre Drug Level)	VANCTR	Serum or plasma is mixed with Reagent 1, which contains vancomycin labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH). Subsequently, Reagent 2, which contains antibodies to vancomycin and the coenzyme nicotinamide adenine dinucleotide (NAD), is added. Vancomycin in the sample and vancomycin-labeled G6PDH compete for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the vancomycin concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized NAD to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	All: 10.0-20.0 (Therapeutic Range)	≥25.0 Trough	Applied Clinical Pharmacokinetics, 2001 Clinical Pharmacotherapy, 1995; 15:85-91, Antimicrobial Stewardship Program, 2013	2.0-50.0	2.0-250.0

Vancomycin, Peak (Post Drug Level)	VANCPK	Serum or plasma is mixed with Reagent 1, which contains vancomycin labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH). Subsequently, Reagent 2, which contains antibodies to vancomycin and the coenzyme nicotinamide adenine dinucleotide (NAD), is added. Vancomycin in the sample and vancomycin-labeled G6PDH compete for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the vancomycin concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized NAD to NADH, resulting in an absorbance change that is measured spectrophotometrically.	Beckman	mcg/mL	All: 20.0-40.0 (Therapeutic Range)	N/A	Applied Clinical Pharmacokinetics, 2001; Clinical Pharmacotherapy, 1995; 15:85-91	2.0-50.0	2.0-250.0
Vitamin B12	B12	Competitive chemiluminescent immunoassay with para-magnetic particles as the solid phase, and acridinium ester as the chemiluminescent label.	Siemens	pg/mL	19+ years: 211-911	N/A	Advia Centaur Assay Manual, VB12 111658 Rev. N, 2008-09; Pediatric Reference Ranges, Soldin, 1999	45-2,000	45-2,000
ADAMTS13 Activity and Inhibitor	AD13A	SELDI-TOF-MS	BioRad SELDI-TOF	% / BU	Activity: ≥68.0% Inhibitor: <0.5 BU	N/A	Biomarker Ref. Lab	Activity: 2.5-100.0% Inhibitor: 0.5-2.0 BU	Activity: 2.5-100.0% Inhibitor: 0.5-2.0 BU
Alternative Activation Pathway	Bb Complemen	ELISA	VersaMax Plate Reader, Quidel kit	ng/mL	695-1,974	N/A	Biomarker Ref. Lab	See Quidel kit values (lot number specific)	See Quidel kit values (lot number specific)
EM Platelet (Electron Microscopy)	Tissue Exam	Whole mount	N/A	dg/plt	3.68-6.24	N/A	Old journal articles; lab derived	N/A	N/A
SC5b-9 Complement	Terminal Activation Pathway	ELISA	VersaMax Plate Reader, Quidel kit	ng/mL	SC5b-9: 6-598	N/A	Biomarker Ref. Lab	See Quidel kit values (lot number specific)	See Quidel kit values (lot number specific)
Anti-Cardiolipin Ab, IgG	ACA; ACL; APA; Anti-Phospholipid Antibody IgG	Chemiluminescent two-step immunoassay with paramagnetic microparticles as the solid phase, and a derivative of isoluminol as the chemiluminescent molecule.	Inova	CU	0.0-20.0	N/A	Inova Quanta-Flash Package Insert Verified in house	10.0-500.0	10.0-10,000.0
Anti-Cardiolipin Ab, IgM	ACA; APA; ACL; Anti-Phospholipid Antibody IgM	Chemiluminescent two-step immunoassay with paramagnetic microparticles as the solid phase, and a derivative of isoluminol as the chemiluminescent molecule.	Inova	CU	0.0-20.0	N/A	Inova Quanta-Flash Package Insert Verified in house	10.0-200.0*	10.0-4,000.0*
Antithrombin III	AT3	Chromogenic measurement system consisting of a beam of monochromatic light at 405nm. This is a two step thrombin neutralization process.	Stago	%	17+ years: 85-118	N/A	OSU Inhouse Study 02/2004; Blood, Vol 80, 1998-2005; Andrew, 1992; Amer. Jour. Ped. Hematol. Oncol, Vol 12, 95-104, Andrew, 1990	See Stago Unicalibrator assayed values (lot number specific)	9-200
Anti-Xa for LMWH Heparin, 4hr Post Dose	anti-xa for LMWH, Peak Dose, AXMLPK	Chromogenic measurement system consisting of a beam of monochromatic light at 405nm.	Stago	IU/mL	0.60-1.00 (Therapeutic Range: applies to 4 hour post dose collections)	N/A	Chest, vol. 119, issue 1, January 2001, pgs. 64S-75S.	0.10-1.60	0.10-1.60
Anti-Xa for LMWH Heparin, Random	Anti Xa for low molecular weight heparin	Chromogenic measurement system consisting of a beam of monochromatic light at 405nm.	Stago	IU/mL	0.60-1.00 (Therapeutic Range: applies to 4 hour post dose collections)	N/A	Chest, vol. 119, issue 1, January 2001, pgs. 64S-75S.	0.10-1.60	0.10-1.60
Beta-2 Glycoprotein 1 Ab, IgG	Beta 2 Glycoprotein 1 IgG Antibody	Chemiluminescent two-step immunoassay with paramagnetic microparticles as the solid phase, and a derivative of isoluminol as the chemiluminescent molecule.	Inova	CU	0.0-20.0	N/A	Inova Quanta-Flash Package Insert Verified in house	10.0-500.0	10-10,000.0
Beta-2 Glycoprotein 1 Ab, IgM	B2GPI1, IgM, Beta 2 Glycoprotein 1 IgM Antibody	Chemiluminescent two-step immunoassay with paramagnetic microparticles as the solid phase, and a derivative of isoluminol as the chemiluminescent molecule.	Inova	CU	0.0-20.0	N/A	Inova Quanta-Flash Package Insert Verified in house	10.0 - 200.0*	10.0 - 4,000.0*
Beta-2 Glycoprotein 1, Domain 1	Beta2 GPI Domain 1, B2GPI Dm1, B2GPI Domain 1, B2GPI Dm1	Chemiluminescent two-step immunoassay with paramagnetic microparticles as the solid phase, and a derivative of isoluminol as the chemiluminescent molecule.	Inova	CU	0.0-19.9	N/A	Inova Quanta-Flash Package Insert Verified in house	10.0-200.0*	10.0-2,000.0*
D-Dimer, Quantitative	HSDDI	Immunoturbidimetric - photometric measurement system consisting of a beam of monochromatic light at 540nm passing through a solution of antibody coated microlatex particles.	Stago	mcg/mL FEU	<0.50	N/A	OSU Lab Normal Range Study (08/2007)	0.27-4.00	0.27-20.00
DIC Workup	DIC Panel Includes: Platelet Count, PT, PTT, Fib, TT, D-Dimer, PTT/TT Mixing Studies (as appropriate) and Pathologist Interpretation	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests
Dilute Russell Venom Time	DRVVT	Mechanical Clot Detection	Stago	Ratio	Screen ratio: <1.10 Normalized ratio: <1.18	N/A	OSU/WMC, in-house reference range study performed yearly	N/A	N/A
Factor Antibody	Factor Inhibitor, FACTAB	Mechanical Clot Detection Bethesda Assay	Stago	Bethesda units	Negative (0 Bethesda units)	N/A	N/A	N/A	0 - dilute to endpoint
Factor II Activity	Prothrombin Activity, FA2	Mechanical Clot Detection	Stago	% Activity	17+ years: 60-150	<5	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998; 2005; Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago Unicalibrator assayed values (lot number specific)	3-500

Factor IX Activity	Christmas Factor, FA9	Mechanical Clot Detection	Stago	% Activity	17+ years: 77-147	<5	OSU Inhouse Study 02/2004; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago Unicalibrator assayed values (lot number specific)	1-500
Factor IX Inhibitor	Factor IX Antibody, FAC9AB	Mechanical Clot Detection Bethesda Assay	Stago	Bethesda units	Negative (0 Bethesda units)	N/A	N/A	N/A	0 - dilute to endpoint
Factor V Activity	Labile Factor, FA5	Mechanical Clot Detection	Stago	% Activity	17+ years: 50-150	<5	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998- 2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago Unicalibrator assayed values (lot number specific)	3-500
Factor VII Activity	FA7	Mechanical Clot Detection	Stago	% Activity	17+ years: 65-135	<5	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998- 2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago Unicalibrator assayed values (lot number specific)	3-1000
Factor VIII Activity	Anti Hemophilic Factor, FA8	Mechanical Clot Detection	Stago	% Activity	17+ years: 75-220	<5	OSU Inhouse Study 02/2004; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago Unicalibrator assayed values (lot number specific)	1-500
Factor VIII Inhibitor	Factor VIII Antibody	Mechanical Clot Detection Bethesda Assay	Stago	Bethesda units	Negative (0 Bethesda units)	N/A	N/A	N/A	0 - dilute to endpoint
Factor X Activity	Stuart Prower Factor, FA10	Mechanical Clot Detection	Stago	% Activity	17+ years: 60-130	<5	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998- 2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago Unicalibrator assayed values (lot number specific)	3-500
Factor XI Activity	Hemophilia C, FA11	Mechanical Clot Detection	Stago	% Activity	17+ years: 65-135	<5	Clinical Guide to Laboratory Tests, Tietz, 1995; Blood, Vol 80, 1998- 2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago Unicalibrator assayed values (lot number specific)	1 - 500
Factor XIII Activity	Fibrin Stabilization Factor, FA13	Solubility	N/A	N/A	present	N/A	N/A	N/A	Present Absent
Fibrinogen, Clottable	FIB	Mechanical Clot Detection	Stago	mg/dL	220-410	<75	OSU Lab Normal Range Study (05/2003)	60-900	60-900
Heparin Anti-Xa Unfractionated	HEPAS	Chromogenic measurement system consisting of a beam of monochromatic light at 405nm.	Stago	IU/mL	0.30-0.70 (Therapeutic Range: applies to 4 hour post dose collections)	N/A	Chest, vol. 119, issue 1, January 2001, pgs. 64S- 75S.	0.10-0.80	0.10-1.60
Heparin Platelet Factor 4 (HIT Screen) With Reflex To SRA	PF4IGP	ELISA, IgG	Immucor	O.D. % Heparin Inhibition	O.D. <0.400 Heparin Inhibition <50%	N/A	Immucor LIFE CODES® PF4 IgG Assay Package Insert	0.000-3.000	0.000-3.000
Hexagonal PL Neutralization	Hexagonal PL Neutralization; STACLOT- LA	Mechanical Clot Detection	Stago	seconds	≤10.8	N/A	OSUWMC, in-house reference range study performed yearly	N/A	N/A
INR	N/A	Calculated from PT value, the ISI and the geometric mean value of the PT normal reference range.	Stago	(ratio)	0.9-1.1	Oral Anticoagulant Therapy Target Ranges: Standard Therapy 2.0-3.0 High Dose 7.5-11.5	OSUWMC in-house reference range, verified yearly	0.5 - 14.9	0.5 - 14.9
Lupus Anticoagulant	Lupus Workup Package includes PT, INR, TT, DRVVT Screen, PTT- LA, Mixing Studies, DRVVT Confirm and or Hexagonal Phase Phospholipid Neutralization (as appropriate)	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests
Platelet Aggregation	N/A	Platelet aggregometry / turbidimetric measurement of a solution.	Helena	%	ADP 2.5 micromol/L: 64.8-112.4 ADP 10.0 micromol/L: 78.3-100.8 Arachidonic Acid: 1.64 mM: 78.5-104.6 Collagen, 2 mcg/mL: 74.1-105.4 Collagen, 10 mcg/mL: 74.1-105.4 Epinephrine: 1.0 micromol/L: 75.9-103.9 83.4-101.6 Ristocetin, 1.5 mg/mL: 0.0-14.0 Ristocetin, 0.5 mg/mL: 0.0-14.0 Thromboxane Analogue, U46619, 2.0 micromol/L: 78.1-103.4 Pathologist Interpretation: Normal Aggregation.	N/A	OSUWMC In-house Reference Range Study (03-2015)	N/A	N/A
Platelet Function Test	Platelet Function Assay, PFA	Instrument PFA-100 Closure Time: The time measured from the start of the test until a platelet to close aperture after exposure to agonist	Siemens	seconds	Collagen/ADP: 53-111 Platelet function interpretation: Normal Function	N/A	OSU Normal Range Study (07/2004)	31-300	31-300
Platelet P2Y12 Inhibition Test	P2Y12 Inhibition Test; Verify Now PRU Test	Platelet Aggregation is a self contained test device	Verify Now	PRU	194 - 418	N/A	Accometrics, verified at OSU	1-999	1-999
Protein C Activity	PROTC	Mechanical Clot Detection	Stago	% Activity	17+ years: 72-220	N/A	OSU Inhouse Study; Blood, Vol 80, 1998-2005, Andrew, 1992; Amer. Jour. Ped. Hematol. Oncol, Vol 12, 95-104, Andrew, 1990	See Stago Unicalibrator assayed values (lot number specific)	10-300
Protein S Activity	PROTS	Mechanical Clot Detection	Stago	% Activity	17+ years: 50-168	N/A	OSU Inhouse Study; Blood, Vol 80, 1998-2005, Andrew, 1992; Amer. Jour. Ped. Hematol. Oncol, Vol 12, 95-104, Andrew, 1990	See Stago Unicalibrator assayed values (lot number specific)	10 - 300
PT	Protine-INR	Mechanical Clot Detection	Stago	seconds	11.9 - 14.2	N/A	OSUWMC in-house reference range, verified yearly	7.0 - 112.0	7.0 - 112.0
PT and PT Mixing Study	Prothrombin Time Mixing Study Protine Mixing Study	Mechanical Clot Detection	Stago	seconds	N/A	N/A	N/A	N/A	N/A
PT Mix w/ Normal Plasma	N/A	Mechanical Clot Detection	Stago	seconds	N/A	N/A	N/A	7.0 - 112.0	7.0 - 112.0

PTT	APTT Partial Thromboplastin Time	Mechanical Clot Detection	Stago	seconds	24.0-34.3 Heparin Therapeutic Range (HTR): 77.0 - 91.0	Inpatient: >150.0 Outpatient: >60.0	OSU/WMC, in-house reference range study performed yearly	20.0 - 180.0	20.0 - 180.0
PTT Mix w/ Normal Plasma	N/A	Mechanical Clot Detection	Stago	seconds	N/A	N/A	N/A	20.0 - 180.0	20.0 - 180.0
PTT with Mixing Study	N/A	Mechanical Clot Detection	Stago	seconds	N/A	N/A	N/A	20.0 - 180.0	20.0 - 180.0
PTT-LA	LA-PTT, PTT- Lupus Sensitive, Includes PTT-LA Mixing Study	Mechanical Clot Detection	Stago	seconds	30.6-42.5	N/A	OSU/WMC, in-house reference range study performed yearly	20.0-180.0	20.0-180.0
Ristocetin CoFactor	Von Willebrand Factor Activity	Platelet Agglutination Light Transmittance Aggregometry	Helena	% Activity	40-200	N/A	OSU Normal Range Study	See Helena SARP calibrator assayed value (lot number specific)	13-400
Thrombin Time	Thrombin Clotting Time	Mechanical Clot Detection	Stago	seconds	13.0-20.0	N/A	OSU Lab Normal Range Study	10.0-120.0	10.0-120.0
TT Mix w/ Normal Plasma (Not individually orderable. Order Lupus Anticoagulant Workup)	Thrombin Clotting Time	Mechanical Clot Detection	Stago	seconds	13.0-20.0	N/A	OSU Lab Normal Range Study	10.0-120.0	10.0-120.0
TT Mix w/ Protamine Sulfate (Not individually orderable. Order Lupus Anticoagulant Workup)	Thrombin Time with Heparin Neutralization	Mechanical Clot Detection	Stago	seconds	13.0-20.0	N/A	OSU Lab Normal Range Study	10.0-120.0	10.0-120.0
Von Willebrand Battery Agn + Factor VIII	Von Willebrand Workup Includes: PTT, Factor VIII, VWF Antigen, Ristocetin Cofactor, and a Von Willebrand Multimeric (as applicable)	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests
Von Willebrand Factor Ag	VWFAG	Immunoturbidimetric-photometric measurement system consisting of a beam of monochromatic light at 540nm passing through a solution of antibody coated microlatex particles.	Stago	%	17+ years: 50-180	N/A	OSU Inhouse Study; Blood, Vol 80, 1998-2005, Andrew, 1992; Blood, Vol 70, 165-172, Andrew, 1987	See Stago VWF: Ag Calibrator assayed value (lot number specific)	3-400
Band Neutrophils	N/A	Manual Differential	N/A	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0
Band/Band + Seg Ratio	BANDR	Calculation: BANDS/(Segs+BANDS)	N/A	N/A	N/A	≥0.25 (Neonates)	N/A	0.00-1.00	0.00-1.00
Basophil Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Basophils %	N/A	Flow Cytometry/ Manual differential	Sysmex	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0
Basophils Absolute	N/A	Calculation	Sysmex	x10 ³ /uL -OR- K/uL	≥18 years: Male: 0.00-0.09 Female: 0.00-0.15	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	Electronic: 0.04-440.00 Manual: 0.00-440.00	Electronic: 0.04-dilute to obtain numeric result Manual: 0.00-dilute to obtain numeric result
Basophils Relative (CSF)	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Blast Absolute	N/A	Calculation	N/A	x10 ³ /uL -OR- K/uL	All ages: 0.00	N/A	N/A	0.00-440.00	0.00-dilute to obtain numeric result
Blasts	N/A	Manual Differential	N/A	%	All ages: 0.0	N/A	N/A	0.0-100.0	0.0-100.0
Blasts Relative (CSF)	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Blasts Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Body Fluid Cell Count	N/A	Hemocytometer Counts / Iris instrument	CCL: Iris RRL: N/A	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests
Body Fluid Cell Count with Diff	Body Fluid Battery	Hemocytometer Counts / Iris instrument/ Manual Differential	CCL: Iris RRL: N/A	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests
Bone Marrow Collection (Assist)	N/A	Manual	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CBC, EDIF, Platelet	CBC, Electronic Diff with Platelets	See individual analytes	Sysmex	Varies	Varies	Varies	Varies	Varies	Varies
CBC, Platelets	Complete Blood Count, Hemogram	See individual analytes	Sysmex	Varies	Varies	Varies	Varies	Varies	Varies
Cell Count & Diff, CSF	Spinal Fluid Cell Count and Differential	Hemocytometer Counts / Iris instrument/ Manual Differential	CCL: Iris RRL: N/A	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests
Crystals, Fluid	N/A	Unstained synovial fluid slides reviewed by polarized microscope.	N/A	N/A	Negative	N/A	N/A	N/A	Positive / Negative
CSF Fluid Count Only	Spinal Fluid Cell Count	Hemocytometer Counts / Iris instrument	CCL: Iris RRL: N/A	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests	See individual tests
Eosinophils %	N/A	Flow Cytometry/ Manual differential	Sysmex	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0
Eosinophils Absolute	N/A	Calculation	Sysmex	x10 ³ /uL -OR- K/uL	≥18 years: Male: 0.00-0.48 Female: 0.00-0.42	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	Electronic: 0.04-440.00 Manual: 0.00-440.00	Electronic: 0.04-dilute to obtain numeric result Manual: 0.00-dilute to obtain numeric result
Eosinophils Relative (CSF)	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Eosinophils Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Extended Reticulocyte Panel	Panel includes: Ret%, Retf, IRF and RET-HE	Flow Cytometry, Calculation	Sysmex	Varies	Varies	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	Varies	Varies
Hairy Cells	N/A	Manual Differential	N/A	%	All ages: 0.0	N/A	N/A	0.0-100.0	0.0-100.0
Hairy Cells Absolute	N/A	Calculation	N/A	x10 ³ /uL -OR- K/uL	All ages: 0.00	N/A	N/A	0.00-440.00	0.00-dilute to obtain numeric result
Hematocrit	HCT	Cumulative Pulse Height Detection	Sysmex	%	≥18years: Male: 39.6-48.8 Female: 34.9-44.3	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCPress, 2011.	0.1-75.0	0.1-dilute to obtain numeric result
Hematocrit, Fluid	Fluid HCT, Fluid PCV	Manual Spun Hematocrit	N/A	%	N/A	N/A	N/A	5.0-60.0	5.0-60.0

Hemoglobin	HGB	Photometrically measured	Sysmex	g/dL	≥18years: Male: 13.4-16.8 Female: 11.4-15.2	>12y: <7.0 and >22.0 84-12y: <8.0 and >22.0 0d-7d: <11.0 and >22.0	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.2-26.0	0.2-dilute to obtain numeric result
Immature Granulocytes %	N/A	Flow Cytometry	Sysmex	%	N/A	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.0-100.0	0.0-100.0
Immature Granulocytes Absolute	IG	Calculation	Sysmex	x10 ³ /uL -OR- K/uL	≥18 years: <0.08	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	<u>Electronic:</u> 0.04-440.00	<u>Electronic:</u> 0.04-dilute to obtain numeric result
Immature Platelet Fraction	IPF	Calculation	Sysmex	%	≥18 years: Male: 0.0-9.0 Female: 0.0-8.6	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.0-100.0	0.0-100.0
Immature Reticulocyte Fraction	IRF	Calculation	Sysmex	%	≥18 years: Male: 0.2-16.3 Female: 1.1-16.2	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.0-100.0	0.0-100.0
Lymphocytes Relative (CSF)	Spinal fluid cell differential	Manual Differential	N/A	%	<3m: 35-50 >3m 40-80	N/A	Body Fluids 3rd ed. Kielland, Knight 1993	0-100	0-100
Lymphocytes %	N/A	Flow Cytometry/ Manual differential	Sysmex	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0
Lymphocytes Absolute	N/A	Calculation	Sysmex	x10 ³ /uL -OR- K/uL	≥18 years: Male: 0.83-3.57 Female: 1.16-3.51	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	<u>Electronic:</u> 0.04-440.00 <u>Manual:</u> 0.00-440.00	<u>Electronic:</u> 0.04-dilute to obtain numeric result <u>Manual:</u> 0.00-dilute to obtain numeric result
Lymphocytes Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Lymphoma Cells	N/A	Manual Differential	N/A	%	All ages: 0.0	N/A	N/A	0.0-100.0	0.0-100.0
Lymphoma Cells Absolute	N/A	Calculation	N/A	x10 ³ /uL -OR- K/uL	All ages: 0.00	N/A	N/A	0.00-440.00	0.00-dilute to obtain numeric result
Lymphoma Cells Relative (CSF)	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Lymphoma Cells Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Malaria Prep	Parasite Screen / ID Blood, MPB	Giemsa Stain	N/A	N/A	NOPO - No parasitic organism seen, including plasmodium organisms	N/A	N/A	N/A	N/A
Malignant Cells Relative (CSF)	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Malignant Cells Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Manual Retic	N/A	Manual/Miller Disk	N/A	%	≥18 years: Male: 0.68-2.64 Female: 0.74-2.54	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.25-30.00	0.25-30.00
MCH	Red Cell Indices	HGB x 10 ³ /RBC	Sysmex	pg	≥18 years: Male: 26.1-33.3 Female: 25.9-33.9	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	N/A	N/A
MCHC	Red Cell Indices	HGB x 100/HCT	Sysmex	g/dL	≥18 years: Male: 31.9-36.5 Female: 31.4-35.9	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	N/A	N/A
MCV	Red Cell Indices	HCT x10 ³ /RBC	Sysmex	fL	≥18 years: Male: 79.0-94.5 Female: 79.6-97.7	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	N/A	N/A
Mesothelial Cells Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Metamyelocytes	N/A	Manual Differential	N/A	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0
Metas Absolute	N/A	Calculation	N/A	x10 ³ /uL -OR- K/uL	≥18 years: Male: <0.08 Female: <0.09	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.00-440.00	0.00-dilute to obtain numeric result
Monocytes %	N/A	Flow Cytometry/ Manual differential	Sysmex	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0

Monocytes / Macrophages Relative (CSF)	Spinal fluid cell differential	Manual Differential	N/A	%	<3m 50-90 >3m 15-45	N/A	Body Fluids 3rd ed. Kiehlbreck, Knight 1993	0-100	0-100
Monocytes / Macrophages Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Monocytes Absolute	N/A	Calculation	Sysmex	x10 ³ /uL -OR- K/uL	≥18 years: Male: 0.24-0.93 Female: 0.22-0.87	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	Electronic: 0.04-440.00 Manual: 0.00-440.00	Electronic: 0.04-dilute to obtain numeric result Manual: 0.00-dilute to obtain numeric result
MPV	N/A	Derived from the PLT histogram.	Sysmex	fL	≥18 years: Male: 8.7-12.3 Female: 8.5-12.2	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	N/A	N/A
Myelocytes	N/A	Manual Differential	N/A	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0
Myelos Absolute	N/A	Calculation	N/A	x10 ³ /uL -OR- K/uL	≥18 years: Male: <0.08 Female: <0.09	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.00-440.00	0.00-dilute to obtain numeric result
Neutrophils %	N/A	Flow Cytometry/ Manual differential	Sysmex	%	N/A	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.0-100.0	0.0-100.0
Neutrophils Relative (CSF)	Spinal fluid cell differential	Manual Differential	N/A	%	<3m: 0-8 >3m: 0-6	N/A	Body Fluids 3rd ed. Kiehlbreck, Knight 1993	0-100	0-100
Neutrophils Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
NRBC	N/A	Flow Cytometry	Sysmex	/100 WBC	≥18 years: 0.0-0.2	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.0-600.0	0.0-600.0
NRBCs Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Nucleated RBCs Relative (CSF)	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Other Cells	N/A	Manual Differential	N/A	%	All ages: 0.0	N/A	N/A	0.0-100.0	0.0-100.0
Other Cells Absolute	N/A	Calculation	N/A	x10 ³ /uL -OR- K/uL	All ages: 0.00	N/A	N/A	0.00-440.00	0.00-dilute to obtain numeric result
Other Cells Relative (CSF)	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Other Cells Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Peripheral Smear for Pick up by Physician for Review	N/A	Manual	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Plasma Cells	N/A	Manual Differential	N/A	%	All ages: 0.0	N/A	N/A	0.0-100.0	0.0-100.0
Plasma Cells Absolute	N/A	Calculation	N/A	x10 ³ /uL -OR- K/uL	All ages: 0.00	N/A	N/A	0.00-440.00	0.00-dilute to obtain numeric result
Plasma Cells Relative (CSF)	Spinal fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Plasma Cells Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
Platelet Count	N/A	Electronic Resistance Detection	Sysmex	x10 ³ /uL	≥18 years: Male: 146-337 Female: 150-393	<30 and >1,000	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	5-5,000	5-dilute to obtain numeric result
Platelet Count - fluorescent	N/A	Flow Cytometry		K/uL	<10 and >1,000				
Prolymphs	N/A	Manual Differential	N/A	%	All ages: 0.0	N/A	N/A	0.0-100.0	0.0-100.0
Prolymphs Absolute	N/A	Calculation	N/A	x10 ³ /uL -OR- K/uL	All ages: 0.00	N/A	N/A	0.00-440.00	0.00-dilute to obtain numeric result
Promyelocytes	N/A	Manual Differential	N/A	%	N/A	N/A	N/A	0.0-100.0	0.0-100.0
Promyelocytes Absolute	N/A	Calculation	N/A	x10 ³ /uL -OR- K/uL	≥18 years: Male: <0.08 Female: <0.09	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.00-440.00	0.00-dilute to obtain numeric result
RBC (CSF)	Spinal fluid cell count	Hemocytometer Counts/ Iris instrument	CCL: Iris RRL: N/A	/uL	All Ages: <3	N/A	Body Fluids 3rd ed. Kiehlbreck, Knight 1993	3-50,000	3-dilute to endpoint
RBC Fluid	Body fluid cell count	Hemocytometer Counts/ Iris instrument	CCL: Iris RRL: N/A	/uL	N/A	N/A	N/A	3-50,000	3-dilute to endpoint
RDW	Red Cell Indices	Derived from RBC histogram. Representative of CV% of the histogram.	Sysmex	%	≥18 years: Male: 10.9-14.3 Female: 10.8-14.9	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	N/A	N/A

Red Blood Cell Count	RBC	Electronic Resistance Detection	Sysmex	x10 ⁶ /uL -OR- M/uL	≥18years: Male: 4.38-5.83 Female: 3.91-5.04	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.05-8.60	0.05-dilute to obtain numeric result
Retic Absolute	N/A	Calculation: Ret% x RBC	Sysmex	x10 ⁶ /uL -OR- M/uL	<u>Automated:</u> ≥18 years: Male: 0.0317-0.1377 Female: 0.0324-0.1142 <u>Manual:</u> ≥18 years: Male: 0.0317-0.1377 Female: 0.0324-0.1142	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	<u>XN:</u> 0.0500-0.7200 <u>XN-L:</u> 0.0500-0.4576 <u>Manual:</u> 0.0000-8.6000	<u>XN:</u> 0.0500-dilute to obtain numeric result <u>XN-L:</u> 0.0500-dilute to obtain numeric result <u>Manual:</u> 0.0000-dilute to obtain numeric result
Retic Count	N/A	Flow Cytometry	Sysmex	%	≥18 years: Male: 0.68-2.64 Female: 0.74-2.54	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.25-30.00	0.25-30.00
Retic HGB Equivalent	RET-HE	Calculation	Sysmex	pg	≥18 years: Male: 29.9-38.7 Female: 28.8-39.9	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	N/A	N/A
Sedimentation Rate, Automated	ESR	Photometric Rheology	Alcor	mm/hr	<u>Male:</u> >85Y: <30 50-85Y: <20 0-49Y: <15 <u>Female:</u> >85Y: <42 50-85Y: <30 0-49Y: <20	N/A	JB Henry, <i>Clinical Diagnosis & Mgmt.</i> , 19th Ed., 1996, pg. 1460	1-130	1-130
Segs + Bands Absolute	ANC	Calculation: WBC x (NE% + Bands%)	Sysmex	x10 ³ /uL -OR- K/UI	≥18 years: Male: 1.57-6.19 Female: 1.64-7.28	N/A	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	Electronic: 0.04-440.00 Manual: 0.00-440.00	Electronic: 0.04-dilute to obtain numeric result Manual: 0.00-dilute to obtain numeric result
Sperm pH	YFER, YSEMB	pH paper	N/A	N/A	>7.0 Refer to Mayo	N/A	WHO laboratory manual for the Examination and Processing of Human Semen, 5th Ed	5.0-10.0 Refer to Mayo	5.0-10.0 Refer to Mayo
Synovial Lining Cells Relative (Fluid)	Body fluid cell differential	Manual Differential	N/A	%	N/A	N/A	N/A	0-100	0-100
White Blood Count	WBC	Flow Cytometry	Sysmex	x10 ³ /uL -OR- K/uL	≥18years: Male: 3.73-10.10 Female: 3.99-11.19	<1.50 and >35.00 Oncology: <0.50 and >35.00	OSU Internal Normal Range Study, October 2018 Sysmex XN-9000 IFU (North American Edition) Code No. AC794819 Soldin, Steven J. <i>Pediatric Reference Intervals</i> . 7th ed., AACCC Press, 2011.	0.30-440.00	0.30-dilute to obtain numeric result
WBC (CSF)	Spinal fluid cell count	Hemocytometer Counts / Iris instrument	CCL: Iris RRL: N/A	/uL	<1Y: <31 1-4Y: <21 ≥5Y: <6	≥41	Body Fluids 3rd ed. Kjeldsberg, Knight 1993	3-2,500	3-dilute to endpoint
WBC Fluid	Body fluid cell count	Hemocytometer Counts / Iris instrument	CCL: Iris RRL: N/A	/uL	N/A	N/A	N/A	3-2,500	3-dilute to endpoint
Urine Screen	Urine dipstick	Various	Siemens Clinitek	N/A	Various	Various	Various	Various	Various
Bacteria	N/A	Microscopic Examination of Urine Sediment, CCL has Urine Particle Counter (UF1000)	CCL: Sysmex RRL: James, MMPP, SSCBC: N/A	N/A	Absent	N/A	Urinalysis and Body Fluid, Ringsrud 1995	Microscopic: Absent, Trace, Present CCL: Absent (0-499/uL), Trace (500-1199/uL), Present (≥1200/uL)	Microscopic: Absent, Trace, Present CCL: Absent (0-499/uL), Trace (500-1199/uL), Present (≥1200/uL)
Blood Urine	N/A	The peroxidase-like activity of hemoglobin catalyzes the reaction of diisopropylbenzene dihydroperoxide and 3,3',5,5'-tetramethylbenzidine to produce a color from orange to green.	Siemens Clinitek	NA	Negative	Manufacturer's sensitivity is 0.015-0.062 mg/dL hemoglobin	Urinalysis and Body Fluid, Ringsrud 1995	Negative, Trace, Small, Moderate, Large	Negative, Trace, Small, Moderate, Large
Appearance	Clarity	CCL: measuring the transmission and scattering of light that passes through the specimen.	CCL: Siemens Clinitek Novus James, RRL, MMPP, SSCBC: N/A	N/A	Clear	N/A	Urinalysis and Body Fluid, Ringsrud 1995	N/A	N/A
Color	N/A	Manual and reflectance spectrophotometer	CCL: Siemens Clinitek Novus James, RRL, MMPP, SSCBC: N/A	N/A	Yellow	N/A	Urinalysis and Body Fluid, Ringsrud 1995	N/A	N/A

Glucose Urine	N/A	Glucose oxidase catalyzes the breakdown of glucose into gluconic acid and hydrogen peroxide. CCL: This test is based on a double sequential enzyme reaction. One enzyme, glucose oxidase, catalyzes the formation of gluconic acid and hydrogen peroxide from the oxidation of glucose. A second enzyme, peroxidase, catalyzes the oxidative coupling of 4-amino-antipyrine and 4-methylcatechol by hydrogen peroxide. RRL, James, MMMP, SSCBC: Peroxidase catalyzes the reaction of hydrogen peroxide with a potassium iodide chromogen to oxidize the chromogen to colors ranging from green to brown.	Siemens Clinitek	mg/dL	Negative Manufacturer's sensitivity level is 75-125 mg/dL	N/A	Urinalysis and Body Fluid, Ringsrud 1995	Negative, 100, 250, 500, ≥1000	Negative, 100, 250, 500, ≥1000
Hemosiderin, Urine	HSID	Potassium Ferrocyanide in the Prussian Blue stain reacts with ionic iron in urine sediment to form a blue color which is visible under bright field microscopy.	N/A	N/A	Negative	N/A	Wet Urinalysis by Schumann GB, 2003 pages 49-5; 57	N/A	Negative, Positive
Ketones Urine	N/A	Acetoacetic acid reacts with nitroprusside to produce a maroon color.	Siemens Clinitek	N/A	Negative Manufacturer's sensitivity level is 5-10 mg/dL acetoacetic acid	N/A	Urinalysis and Body Fluid, Ringsrud 1995	Negative, Trace, 15 (Small), 40 (Moderate), ≥80 (Large)	Negative, Trace, 15 (Small), 40 (Moderate), ≥80 (Large)
Leukocyte Esterase	N/A	Esterases contained in granulocytes catalyze the hydrolysis of the derivatized pyrrole amino acid ester to liberate 3-hydroxy-5-phenyl pyrrole which then reacts with a diazonium salt to produce a purple color.	Siemens Clinitek	N/A	Negative Manufacturer's sensitivity is 5-15 white blood cells/hpf	N/A	Urinalysis and Body Fluid, Ringsrud 1995	Negative, Trace, Small, Moderate, Large	Negative, Trace, Small, Moderate, Large
Myoglobin Urine	Urine Myoglobin Screening	The peroxidase-like activity of hemoglobin catalyzes the reaction of diisopropylbenzene dihydroperoxide and 3,3',5,5'-tetramethylbenzidine to produce a color from orange to green.	Siemens Clinitek	N/A	Negative Manufacturer's sensitivity is 0.015-0.062 mg/dL hemoglobin and myoglobin	N/A	Urinalysis and Body Fluid, Ringsrud 1995	Negative, Trace, Small, Moderate, Large	Negative / Reflex to send out
Nitrites Urine	N/A	At the acid pH of the reagent area, nitrite in the urine reacts with p-arsanilic acid to form a Diazonium compound which couples with 1,2,3,4-tetrahydrobenzo(h)quinolin-3-ol to produce a pink color.	Siemens Clinitek	NA	Negative Manufacturer's sensitivity is 0.06-0.1 mg/dL nitrite ion	N/A	Urinalysis and Body Fluid, Ringsrud 1995	Negative, Positive	Negative, Positive
Occult Blood, Fecal-Immunological	FIQB	Immunological Fecal Occult Blood Test is a rapid, immunoassay for the rapid qualitative detection of human hemoglobin (HGB) in feces.	Hemosure	N/A	Negative	N/A	N/A	N/A	Negative, Positive
Occult Blood, Gastric	Gastroccult	Developing solution (stabilized mixture of hydrogen peroxide and denatured alcohol) creates a reaction between hemoglobin and guaiac to produce a blue color.	Gastroccult Beckman	N/A	Negative	N/A	N/A	N/A	Negative, Positive
Occult Blood, Stool	Occult Blood, Fecal Hemocult	Developing solution (stabilized mixture of hydrogen peroxide and denatured alcohol) creates a reaction between hemoglobin and guaiac to produce a blue color.	Hemocult Beckman	N/A	Negative	N/A	N/A	N/A	Negative, Positive
pH Urine	N/A	Double indicator principle to cover the range of urinary pH range. Colors range from orange through yellow and green to blue.	Siemens Clinitek	N/A	5.0-7.0	N/A	Urinalysis and Body Fluid, Ringsrud 1995	CCL, RRL, James: 5.0 - ≥9.0 SSCBC/MMMP: 5.0 - 8.5	CCL, RRL, James: 5.0 - ≥9.0 SSCBC/MMMP: 5.0 - 8.5
Protein Urine	N/A	Based on the protein-error-of-indicators principle where at a constant pH, the development of any green color is due to the presence of protein.	Siemens Clinitek	mg/dL	Negative Manufacturer's sensitivity is 15-30mg/dL albumin	N/A	Urinalysis and Body Fluid, Ringsrud 1995	Negative, Trace, 30mg/dL, 100mg/dL, ≥300mg/dL	Negative, Trace, 30mg/dL, 100mg/dL, ≥300mg/dL
RBC Casts	N/A	Microscopic Examination of Urine Sediment	N/A	/pF	Negative	Any seen	Urinalysis and Body Fluid, Ringsrud 1995	When reported: 0-2, 3-5, 6-9, 10-20, >20	When reported: 0-2, 3-5, 6-9, 10-20, >20
RBC Urine	N/A	Microscopic Examination of Urine Sediment. CCL has Urine Particle Counter (UF1000)	CCL: Sysmex RRL, James, MMMP, SSCBC: N/A	/hpf	0-2	N/A	Urinalysis and Body Fluid, Ringsrud 1995	0-2, 3-5, 6-9, 10-20, >20	0-2, 3-5, 6-9, 10-20, >20
Specific Gravity Urine	N/A	CCL: Fiber optic refractive index method RRL, James, MMMP, SSCBC: pKa change of pretreated polyelectrolyte in relation to ionic concentration	Siemens Clinitek	N/A	1.001-1.035	N/A	Urinalysis and Body Fluid, Ringsrud 1995	CCL Clinitek Novus: 1.001-1.045 CCL, RRL, James, SSCBC, MMMP Clinitek Advantus: ≤1.005, 1.010, 1.015, 1.020, 1.025, ≥1.030	CCL Clinitek Novus: 1.001-1.045 CCL, RRL, James, SSCBC, MMMP Clinitek Advantus: ≤1.005, 1.010, 1.015, 1.020, 1.025, ≥1.030
Squamous/Epithelial Cells	N/A	Microscopic Examination of Urine Sediment. CCL has Urine Particle Counter (UF1000)	CCL: Sysmex RRL, James, MMMP, SSCBC: N/A	/hpf	0-5/hpf (1- and 2+)	N/A	Urinalysis and Body Fluid, Ringsrud 1995	None 1/hpf (1+) 2-5/hpf (2+) 6-8/hpf (3+) ≥8/hpf (4+)	None 1/hpf (1+) 2-5/hpf (2+) 6-8/hpf (3+) ≥8/hpf (4+)
Urinalysis	U/A with Microscopic	Various	Siemens Clinitek and Sysmex	N/A	Various	Various	Various	Various	Various
Urinalysis Reflex to Culture	UTI workup for general population	Various	Siemens Clinitek and Sysmex	N/A	Various	Various	Various	Various	Various
Urine Dipstick with Reflex Microscopy	LIASR	Various	Siemens Clinitek and Sysmex if it is Positive	N/A	Various	Various	Various	Various	Various

Urobilinogen Urine	N/A	Ehrlich Reaction, in which p-diethylaminobenzaldehyde in conjunction with a color enhancer reacts with urobilinogen in a strongly acid medium to produce a pink-red color.	Siemens Clinitek	E.U./dL	0.2, 1.0	N/A	Urinalysis and Body Fluid, Ringsrud 1995	0.2, 1.0, 2.0, 4.0, ≥8.0	0.2, 1.0, 2.0, 4.0, ≥8.0
WBC Casts	N/A	Microscopic Examination of Urine Sediment	N/A	/pf	Negative	Any seen	Urinalysis and Body Fluid, Ringsrud 1995	When reported: 0-2, 3-5, 6-9, 10-20, >20	When reported: 0-2, 3-5, 6-9, 10-20, >20
WBC Urine	N/A	Microscopic Examination of Urine Sediment, CCL has Urine Particle Counter (UF1000)	CCL: Sysmex RRL, James, MAMP, SSCBC; N/A	/hpf	0-5	N/A	Urinalysis and Body Fluid, Ringsrud 1995	0-5, 6-9, 10-20, >20	0-5, 6-9, 10-20, >20
Acetone, Blood	N/A	Gas chromatography	Agilent GC	mg/dL	<10	≥10	N/A	10-300	10-300
Amikacin Level, Trough (Pre Drug Level)	N/A	Turbidimetric immunoassay	Beckman	mcg/mL	Therapeutic Range: < 6.0	≥6.0	OSU Pharmacy	3.0-50.0	3.0-150.0
Amikacin Level, Peak (Post Drug Level)	N/A	Turbidimetric immunoassay	Beckman	mcg/mL	Therapeutic Range: 30.0-60.0	≥60.0	OSU Pharmacy	3.0-50.0	3.0-150.0
Amikacin Level, Random	Amikin	Turbidimetric immunoassay	Beckman	mcg/mL	Therapeutic Peak: 30.0-60.0 Trough: < 6.0	≥60.0	OSU Pharmacy	3.0-50.0	3.0-150.0
Amphetamine Confirmation, Urine	N/A	LC/MS/MS	SCIEX 3200 QTRAP	Negative / Positive	None Detected	N/A	N/A	N/A	N/A
Barbiturate Confirmation, Urine	N/A	Gas chromatography / Mass spectrometry	Agilent GC/MS	Negative / Positive	None Detected	N/A	N/A	N/A	N/A
Barbiturates Screen, Serum	N/A	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	1000 ng/mL cutoff	N/A
Benzodiazepine Confirmation - Urine Qualitative	N/A	LC/MS/MS	SCIEX 3200 QTRAP	Negative / Positive	None Detected	N/A	N/A	N/A	N/A
BKR Amphetamine / Methamphetamine	Amphetamines Screen - Urine	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	500 ng/mL	N/A
BKR Barbiturates	Barbiturates Screen - Urine	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	200 ng/mL cutoff	N/A
BKR Benzodiazepines	Benzodiazepines Screen - Urine	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	200 ng/mL cutoff	N/A
BKR Buprenorphine	Buprenorphine Screen - Urine	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	5 ng/mL cutoff	N/A
BKR Cocaine	Cocaine - Urine	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	150 ng/mL cutoff	N/A
BKR Drug Screen Creatinine, Urine	Creatinine - Urine Adulteration Screen	Modified Jaffe	Beckman	mg/dL	≥20	N/A	SAMSHA	5-300	5-300
BKR Glutaraldehyde	Glutaraldehyde - Urine Adulteration Screen	Colorimetric	Beckman	ng/mL	None Detected	N/A	SAMSHA	1000ng/mL cutoff	N/A
BKR Methadone	Methadone Screen - Urine	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	300ng/mL cutoff	N/A
BKR Opiate	Opiate Screen - Urine	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	300ng/mL cutoff Industrial: 2000 ng/mL cutoff	N/A
BKR Oxidants	Oxidants-Urine Adulteration Screen	Colorimetric	Beckman	Negative / Positive	None Detected	N/A	SAMSHA	50mcg/mL cutoff	N/A
BKR Oxycodone	Oxycodone Screen-Urine	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	100ng/mL cutoff	N/A
BKR pH (Drug Screen)	pH - Urine Adulteration Screen	Colorimetric	Beckman	N/A	4.5-9.0	N/A	SAMSHA	4.5 - 9.0	3.0-11.0 (confirmation)
BKR Phencyclidine	PCP Screen - Urine	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	25ng/mL cutoff	N/A
Buprenorphine, Meconium	N/A	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	5 ng/mL cutoff	N/A
Cannabinoids, Quant (Urine) THC Confirmation	N/A	Gas chromatography/ Mass spectrometry	Agilent GC/MS	ng/mL	None Detected	N/A	N/A	5-500	5-500
Cocaine Confirmation, Urine	N/A	Gas chromatography / Mass spectrometry	Agilent GC/MS	ng/mL	None Detected	N/A	N/A	50 - 10000	50 - 500,000
Confirmation Buprenorphine and Norbuprenorphine, Urine	Suboxone, Buprenorphine metabolic	LC/MS/MS	Agilent QQQ LCMS	ng/mL	<3.1	N/A	N/A	3.1-5,000.0	3.1-25,000.0
Cyclic Citrullinated Peptide Ab	Anti-CCP	Chemiluminescent microparticle immunoassay	Abbott	U/mL	<5.0	N/A	Abbott	0.5 >200.0	0.5 - 4,000.0
Cyclosporine Level, Trough (Pre Drug Level)	CSAN	Chemiluminescent microparticle immunoassay	Abbott	ng/mL	Therapeutic Range: 70-320	N/A	OSU Pharmacy	30-1,500	30-3,000
Cyclosporine Level, 2HR	CSAN2	Chemiluminescent microparticle immunoassay	Abbott	ng/mL	Therapeutic Range: 320 - 960	N/A	OSU Pharmacy	30-1,500	30-3,000
Drugs of Abuse Screen 10, Meconium	10MECO	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	N/A	N/A
Drugs of Abuse Screen 10, Urine	10DRUG	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	N/A	N/A
Ethanol (Alcohol), Urine	Alcohol-Ethyl	Enzymatic	TOX: Beckman RRL; Beckman	mg/dL	<10	≥300	N/A	10-600	10-600
Ethyl Alcohol, Blood	Alcohol-Ethyl, ETOH	Gas chromatography	Agilent GC	mg/dL	<10	≥300	N/A	10-500	10-500
Everolimus, Trough (Pre Drug Level)	Afinitor Zortress	Particle-enhanced turbidimetric immunoassay	Beckman	ng/mL	Therapeutic range not established	N/A	Microgenics Corp. Thermo Scientific QMS Everolimus IFU	2.0-20.0	2.0-40.0
Fentanyl, Urine, Qualitative	N/A	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	2 ng/mL cutoff	N/A
Fentanyl, Urine, Quantitative	Fentanyl Urine Confirmation	LC/MS/MS	Agilent QQQ LCMS	ng/mL	N/A	N/A	N/A	3.1-5,000.0	3.1-25,000.0
Gentamicin Level, Peak (Post Drug Level)	N/A	Enzyme immunoassay	Beckman	mcg/mL	3.0-15.0 (Therapeutic Range)	≥20.0	OSU Pharmacy	0.3-10.0	0.3-20.0
Gentamicin Level, Trough (Pre Drug Level)	N/A	Enzyme immunoassay	Beckman	mcg/mL	≤1.0 (Therapeutic Range)	>1.0	OSU Pharmacy	0.3-10.0	0.3-20.0
Isopropanol, Blood	2-propanol	Gas chromatography	Agilent GC	mg/dL	<10	≥10	N/A	10-500	10-500
Lidocaine Level	N/A	Enzyme immunoassay	Beckman	mcg/mL	Therapeutic Range: 1.5-5.0	≥6.0	OSU Pharmacy	0.5-12.0	0.5-36.0
Methadone Confirm, Urine	N/A	LC/MS/MS	SCIEX 3200 QTRAP	Negative / Positive	None Detected	N/A	N/A	N/A	N/A
Methanol, Blood	Alcohol-Methyl	Gas chromatography	Agilent GC	mg/dL	<10	≥10	N/A	10-100	10-100
Methotrexate Level	N/A	Homogeneous enzyme immunoassay	Beckman	umol/L	Due to different protocols using this drug, contact the primary attending physician	N/A	OSU Pharmacy	0.04-1.2	0.04-1,200
Nicotine Screen Urine	Cotinine	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	500ng/mL cutoff	N/A
Opiate Compliance Confirmation	Drug Compliance Panel	LC/MS/MS	SCIEX 3200 QTRAP	Negative / Positive	N/A	N/A	N/A	N/A	N/A
Opiate Confirmation - Urine	N/A	LC/MS/MS	SCIEX 3200 QTRAP	Negative / Positive	None Detected	N/A	N/A	N/A	N/A
Pain Management Screening and Confirmation, Urine	LCMS Quant, Quantitative Testing	Liquid Chromatography	Agilent QQQ LCMS	ng/mL	N/A	N/A	N/A	3.1-5,000	3.1-25,000
Pentobarbital Level	Nembutal	Gas chromatography	Agilent GC	ug/mL	Intracranial pressure therapy: 30-40	≥45	OSU Pharmacy	5-50	5-50
Phencyclidine Confirmation	PCP Confirmation-Urine	LC/MS/MS	SCIEX 3200 QTRAP	Negative / Positive	None Detected	N/A	N/A	N/A	N/A
Phenytoin Free Level	Dilantin, Free	Chemiluminescent microparticle immunoassay	Abbott	mcg/mL	0.6-2.4 (Therapeutic Range)	≥3.0	OSU Pharmacy	0.5-40.0	0.5-40.0
Procalcitonin	PROCAL	Chemiluminescent microparticle immunoassay	Abbott	ng/mL	All: 0.00-0.50	N/A	Package insert	0.02-100.00	0.02 - 1,000.00
Propoxyphene Confirmation - Urine	N/A	LC/MS/MS	SCIEX 3200 QTRAP	Negative / Positive	None Detected	N/A	N/A	100 ng/mL cutoff	N/A
Propoxyphene Screen, Urine	Darvon	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	300 ng/mL cutoff	N/A
Qualitative Ethylene Glycol	Ethylene Glycol Level	Enzymatic UV	Beckman	mg/dL	None Detected	≥10 (Presumptive Positive)	N/A	N/A	N/A
Quantitative Ethylene Glycol	N/A	Gas chromatography	Agilent GC	mg/dL	<10	≥10	N/A	10-250	10-250

Sirolimus (Rapamycin) Level, Random	Rapamycin	Chemiluminescent microparticle immunoassay	Abbott	ng/mL	Bone Marrow Transplant: 4.0-12.0 Therapeutic: 5.0-30.0	N/A	OSU Pharmacy	1.5-30.0	2.0-60.0
Specific Gravity - Urine Adulteration Screen	N/A	refractometer	Refractometer	N/A	1.003-1.030	N/A	SAMSHA	1.000-1.060	1.000-1.060
Tacrolimus, Random	Prograf	Chemiluminescent microparticle immunoassay	Abbott	ng/mL	Bone Marrow Transplant: 4.0-12.0 Therapeutic: 5.0-15.0	N/A	OSU Pharmacy	2.0-30.0	2.0-60.0
Talbot Hall Drug Screen With Alcohol And Creat, Urine	N/A	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	N/A	N/A
THC Screen - Urine	N/A	Enzyme immunoassay	Beckman	Negative / Positive	None Detected	N/A	N/A	50ng/mL cutoff	N/A
Toxicology Drug Screen, Serum	SDRG	LC/MS/MS, Enzyme immunoassay	SCIEX 3200 QTRAP	Negative / Positive	None Detected	N/A	N/A	N/A	N/A
Toxicology Screen Urine - UDRG	UDRG	LC/MS/MS, Enzyme immunoassay	SCIEX 3200 QTRAP	Negative / Positive	None Detected	N/A	N/A	N/A	N/A
Toxicology, Umbilical Cord Segment	Cord Drugs of Abuse	Immunoassay, liquid chromatography, Mass spectrometry	SCIEX 3200 QTRAP	Negative / Positive	None Detected	N/A	OSU Toxicology	N/A	N/A
Valproic Acid, Free	FVPA	Chemiluminescent microparticle immunoassay	Abbott	mcg/mL	5-25 (Therapeutic Range)	>30	OSU Pharmacy	2-150	2-150
Valproic Acid, Total	VPA	TOX: Chemiluminescent microparticle immunoassay RRL: Serum or plasma is mixed with Reagent 1, which contains antibodies to valproic acid and the coenzyme nicotinamide adenine dinucleotide (NAD). Subsequently, Reagent 2, containing valproic acid labeled with the enzyme glucose-6-phosphate dehydrogenase (G6PDH), is added. Valproic acid in the sample and valproic acid labeled G6PDH compete for antibody binding sites. Enzyme activity decreases upon binding to the antibody, so the valproic acid concentration in the sample can be measured in terms of enzyme activity. Active enzyme converts oxidized NAD to NADH, resulting in an absorbance change that can be measured spectrophotometrically.	TOX: Abbott RRL: Beckman	mcg/mL	50-120 (Therapeutic Range)	≥150	Applied Clinical Pharmacokinetics, 2001 Clinical Pharmacokinetics, 1995;29:442-50	TOX: 2-150 RRL: 10-150	TOX: 2-1,500 RRL: 10-750
Cytogenetic Studies	Cytogenetics, karyotype Chromosome Analysis	Manual	N/A	N/A	See report	N/A	N/A	N/A	N/A
MDS FISH Panel	N/A	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH D7S486-CEP7	7q31-7centromere, -7, 7q-	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CEP 8	8 centromere	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH D20S108	20q12, 20q-	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
CLL FISH Panel	N/A	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH REL-DIRC1	N/A	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH SEC6/MYB	6q21	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CDKN2A, CEP 9	9p21-9 centromere	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH D12Z3-D13S119	12 centromere-13q14.3	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
MM Panel	N/A	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CDKN2C-CKS1B	1p36.3-1q21	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH BCL6	3q27	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CSF1R-D5S23-D5S721	5q33-5p15.2, 5q-	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH MYC break-apart	8q24.21	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH ATM-TP53	11q22.3-17p13.1	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH ETV6-RUNX1	12p13-21q22, t(12;21), TEL-AML1	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH RB-1, LAMP1	13q14.2	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH IGH-CCND1	14q32.3-11q13, t(11;14), Mantle cell lymphoma FISH	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH MYB	6q23	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH MYC single color	8q24	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH NMYC	2p23-34	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH NUP98	11p15	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH P2RY8	Yp11.23	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH PBX1-TCF3	1q23-19p13.3, t(1;19)	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH PDGFR	5q33	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A

FISH PML-RARA	15q24-17q21, t(15;17)	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH RARA	17q21	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH RUNX1	21q22.12	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH RUNX1-RUNX1T1	21q22-8q22, t(8;21), ETO-AML1	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH SCFD2-LNX-PDGFR-Kit	4q12	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH SS18	18q11.2, SYT	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH TCF3	19p13	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH TCL1	14q32	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH TRA-D	14q11	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH TRB	7q34	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH XY	xy	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH 7Q TRICOLOR	7q	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH ALK	2p23	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH BCL3	19p13	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH BCR-ABL1	22q11.2-9q34, t(9;22), Philadelphia chromosome	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH BIRC3-MALT1	11q21-18q21, t(11;18)	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CBFB	16q22, inv(16)	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CBFB/MYH11	16p13	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CEP 10	10 centromere	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CEP 16	16 centromere	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CEP 17	17 centromere	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CEP 20	20 centromere	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CEP 3	3 centromere	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CEP 4	4 centromere	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CEP 6	5 centromere	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CEP 9	9 centromere	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH CRLF2	Xp22.3/YP11.32	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH DDT3	12q13, CHOP	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH DEK/NUP214	6p22.9p34	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH EGRI-DSS23-DSS721	5q31-5p15.2, 5q-	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH ETV6	12p13	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH EWSR1	22q12, Ewings	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH EWSR1-ERG	22q12-21q22	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH FGFR1	8p12	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH FLI1/EWSR1	11q24.3,22q12.1-q12.2	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH FOXO1	13q14, FKHR	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH IGH	14q32.3	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH IGH/CND3	14q32.33,6p21	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH IGH-BCL2	14q32.2-18q21, t(14;18), Follicular lymphoma FISH	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH IGH-FGFR3	14q32.3-4p16, t(4;14)	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH IGH-MAF	14q32.3-16q23, t(14;16)	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH IGH-MAFB	14q32.3-20q12, t(14;20)	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH IGH-MYC-CEP8	14q32.3-8q24 centromere, t(8;14), Burkitt lymphoma FISH	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH IGK	2p11.2	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH IGL	22q11.21-q11.23	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH JAK2	9p24.1	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A

FISH KMT2A	11q23.3	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
FISH MECOM	3q26.2	Fluorescent in situ Hybridization (FISH)	N/A	N/A	See report or contact lab at 614-293-9898 for current reference range	N/A	N/A	N/A	N/A
Acid Fast Bacilli Culture and Smear	Acid Fast Culture	Culture; Susceptibility testing performed based on established lab guidelines	Bactec/Bruker Daltonics MicroFlex	N/A	Collect time is required for each specimen submission. Normal is negative.	Presence of Acid-Fast Bacilli	N/A	N/A	N/A
Acid Fast Bacilli Smear	AFB Smear	Smear	N/A	N/A	Collect time is required for each specimen submission. Normal is negative.	Presence of Acid-Fast Bacilli	N/A	N/A	N/A
Acid Fast Bacilli Susceptibility Testing	N/A	MGIT Method	Bactec	N/A	N/A	N/A	N/A	N/A	N/A
Acinetobacter Culture	N/A	Surveillance Culture	Vitek	N/A	Negative	N/A	N/A	N/A	N/A
Actinomycetes, Screen	N/A	Gram stain	N/A	N/A	Negative	N/A	N/A	N/A	N/A
Affirm Test (Vaginits DNA Probe) ED Only	Affirm	DNA Probe	BD Microprobe Processor	N/A	Candida = negative Gardnerella = negative Trichomonas = negative	N/A	N/A	N/A	Negative / Positive
Anaerobe ID	Anaerobic Identification	Culture	Bruker Daltonics MicroFlex	N/A	N/A	N/A	N/A	N/A	N/A
Anaerobic Culture	Anaerobe Culture	Culture; Susceptibility testing performed based on established lab guidelines	Bruker Daltonics MicroFlex	N/A	Collect time is required for each specimen submission	N/A	N/A	N/A	N/A
Atypical Bacterial Pneumonia, PCR	Atypical Bacterial Pneumonia Panel	PCR	BioFire	N/A	Not Detected	N/A	Package Insert	N/A	N/A
Autoclave Spore Check	Autoclave Spore Check Assert	Steam sterilization	N/A	N/A	Negative	N/A	N/A	N/A	N/A
Bacterial Culture and Direct Smear, Lesion, Tissue, Device	Routine Culture and Smear	Smear; Culture; Susceptibility testing performed based on established lab guidelines	BD MAX	N/A	No growth	See critical call list for organisms requiring notification.	Validation	N/A	N/A
Beta Strep, Vaginal Screen	Group B Streptococcus Testing by PCR	Concentration in LJM broth for > 18 hours followed by real-time PCR testing for GBS DNA sequence	BD MAX	N/A	Negative	N/A	Validation	N/A	Negative / Positive
Beta Strep, Vaginal Screen, Reflex Susceptibility for Penicillin Allergy	GBS, Streptococcus agalactiae	Concentration in LJM broth for > 18 hours followed by real-time PCR testing for GBS DNA sequence	BD MAX	N/A	Negative	N/A	Validation	N/A	Negative / Positive
BK Virus DNA PCR, Quant, Urine	N/A	Real-Time PCR	3M Integrated Cycler	copies/mL	<500	N/A	Validation	500-10,000,000,000	500-endpoint
BK Virus DNA On, PCR, Plasma	BKBP	Real-Time PCR	3M Integrated Cycler	copies/mL	<500	N/A	Validation	500-5,000,000	500-5,000,000
BKR C Difficile NAP 1	NAP1	PCR	GeneXpert	N/A	Negative	Positive	Package Insert; Reference Materials	N/A	N/A
Blood Culture, AFB, Mycobacteria	Blood, acid fast	Culture; Susceptibility testing performed based on established lab guidelines	Bruker Daltonics MicroFlex	N/A	Reference Range-Negative Collect time is required for each specimen submission.	Growth	N/A	N/A	N/A
Blood Culture, Fungus	N/A	Culture; Susceptibility testing performed based on established lab guidelines	Bruker Daltonics MicroFlex	N/A	Reference Range-Negative. Collect time is required for each specimen submission	Growth	N/A	N/A	N/A
Blood Culture, Pediatric	N/A	Culture; Susceptibility testing performed based on established lab guidelines	Bruker Daltonics MicroFlex, Bactec FX, Vitek	N/A	No growth	Growth	N/A	N/A	N/A
Blood Culture	N/A	Culture; Susceptibility testing performed based on established lab guidelines	Bruker Daltonics MicroFlex, Bactec FX, Vitek	N/A	No growth	All first time positive blood cultures are called with organism morphology details. Any additional positives after 48 hours requires an additional call. If Gram negative resistance marker or vanA, vanB is detected on Nanosphere an additional call is made.	N/A	N/A	N/A
Blood Product Protocol	N/A	Culture	Bactec	N/A	Negative	Growth	N/A	N/A	N/A
Blood, Transfusion Reaction	Transfusion Reaction, Blood Product Culture	Culture	Bactec	N/A	Negative	Growth	N/A	N/A	N/A
BMTCDP	BMT C. diff by PCR	PCR	GeneXpert	N/A	Negative	N/A	Package insert; in-house validation; literature	N/A	N/A
Body Fluid Culture and Direct Smear	Sterile fluid culture	Culture; Susceptibility testing performed based on established lab guidelines	Vitek/Bruker Daltonics MicroFlex	N/A	N/A	N/A	N/A	N/A	N/A
C difficile by PCR (Clostridium difficile toxin)	N/A	PCR	BD MAX	N/A	Negative	N/A	N/A	N/A	N/A
Candida auris Screen	N/A	Culture	N/A	N/A	No growth	Positive for Candida auris	Literature	N/A	N/A
CAPD Fluid Bacterial Culture	N/A	Culture; Susceptibility testing performed based on established lab guidelines	Vitek/Bruker Daltonics MicroFlex	N/A	Collect time is required for each specimen submission.	N/A	N/A	N/A	N/A
Catheter Tip Culture	N/A	Culture	Vitek/Bruker Daltonics MicroFlex	N/A	Negative. Vascular Catheter tip cultures are interpreted in conjunction with blood culture results.	Growth	N/A	N/A	N/A
Chlamydia and Gonorrhea Amplified Probe	Chlamydia trachomatis & Neisseria gonorrhoeae NAAT Testing	Real-Time PCR	Abbott	N/A	Negative	N/A	Validation	N/A	N/A
CMV by PCR, Quantitative, Blood	CMV Viral Load, CMV PCR	Real-Time PCR	Abbott	IU/mL	<50	N/A	Literature / History	50-156,000,000	50-156,000,000
EBV by PCR, Quantitative, Blood	EBV Viral Load, EBV PCR	Real-Time PCR	3M Integrated Cycler	IU/mL	<1,000	>10,000	Validation	1,000-5,000,000	1,000-5,000,000
EBV Rapid PCR, CSF Only	EBV PCR, EBV CSF	Real-Time PCR	3M Integrated Cycler	IU/mL	Not Detected	>10,000	Validation	1-10,000	Not Detected, Detected <10,000, Detected >10,000
Fungal Susceptibility Testing	N/A	TREK panel	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fungus Culture	N/A	Culture; Susceptibility testing performed based on established lab guidelines	N/A	N/A	Collect time is required for each specimen submission. No growth.	Growth	N/A	N/A	N/A
Fungus Culture (Skin, Hair, Nails)	N/A	Culture	N/A	N/A	Collect time is required for each specimen submission.	N/A	N/A	N/A	N/A
Fungus Smear	Calcofluor White fluorescent stain	Smear	N/A	N/A	Negative	Positive for fungal elements	N/A	N/A	N/A
Genital Culture, Bacterial	Vaginal, Cervical, Urethral	Smear when indicated; Culture; Susceptibility testing performed based on established lab guidelines	Vitek/Bruker Daltonics MicroFlex	N/A	Normal flora or no growth, depending on site	See critical call list for organisms that require a call.	N/A	N/A	N/A
Gram Stain	N/A	Smear	N/A	N/A	Negative	See Critical Call procedure for list of sources that are called to physician/nurse	N/A	N/A	N/A
H. Pylori Urea Breath Test	UBT for H. pylori, BreathTek	Infrared Spectrophotometry	Otsuka UBTi POCone	N/A	Cut-off value is 2.4 for adults and 10.0 for children 3-17 years	N/A	Package Insert	N/A	N/A
Hepatitis B DNA	HBV Viral Load	Real-Time PCR	Abbott	IU/mL and log units	<10 IU/mL (<1.00 log unit)	N/A	Validation / Package Insert	10-1,000,000,000 IU/mL (1.00-9.00 log units)	10-1,000,000,000 IU/mL (1.00-9.00 log units)
Hepatitis C by PCR, Quant	HCV Viral Load	Real-Time PCR	Abbott	IU/mL and log units	<12 IU/mL (1.08 log units)	N/A	Validation / Package Insert	12-100,000,000 IU/mL (1.08-8.00 log units)	12-100,000,000 IU/mL (1.08-8.00 log units)

HIV Viral Load RNA PCR Quant	HIV Viral Load	Real-Time PCR	Abbott	copies/mL and log units	<40 copies/mL (<1.60 log units)	N/A	Validation / Package Insert	40-10,000,000 copies/mL (1.60-7.00 log units)	40-10,000,000 copies/mL (1.60-7.00 log units)
HSV by PCR, Fluid/Lesion	Herpes Simplex Virus 1 and 2 Testing by PCR	Real-Time PCR	Applied Biosystems	N/A	Negative	Positive in CSF or sterile body fluid	Validation	N/A	Negative / Positive
Immunocompromised Respiratory Panel	BioFire RP2	Film Array PCR	BioFire	N/A	Not Detected	N/A	Package Insert / Literature	N/A	Detected / Not Detected
Influenza A/B Rapid Molecular	Rapid Flu	Isothermal Nucleic Acid Amplification	Alere	Detected / Not detected / Indeterminate	Not Detected	Detected	Alere-1 Influenza A+B package insert	Detected / Not Detected	Detected / Not Detected
Influenza A/B, RSV by PCR	Flu PCR, RSV PCR	PCR	3M Integrated Cycler	N/A	Not Detected	Detected	Validation	N/A	Detected / Not Detected
Lactoferrin, Qualitative, Stool	Fecal Leukocytes, Stool for WBCs	Immunochromatographic	Alere LEUKO EZ VUE	N/A	Negative	N/A	Package Insert	N/A	Negative / Positive
Legionella Culture	N/A	Culture	Bruker Daltonics MicroFlex	NA	Collect time is required for each specimen submission.	N/A	N/A	N/A	N/A
Legionella Environ	Environmental Culture for Legionella	Culture	Bruker Daltonics MicroFlex	cfu/mL	Collect time is required for each specimen submission.	N/A	N/A	N/A	N/A
Lower Respiratory Culture, Bacterial	RES	Culture; Susceptibility testing performed based on established lab guidelines	Bruker Daltonics MicroFlex	N/A	normal flora	N/A	N/A	N/A	N/A
M Tuberculosis Complex by PCR	TB PCR, MTB, M. tuberculosis	Real-Time PCR	GeneXpert	N/A	Negative (Not Detected)	Positive (Detected)	Package Insert / Reference Materials	N/A	N/A
Macroscopic, Parasite	Worm	Macroscopic Exam	N/A	N/A	Negative	N/A	N/A	N/A	N/A
Macroscopic, Arthropod	Amblypod	Macroscopic Exam	N/A	N/A	Negative	N/A	N/A	N/A	N/A
Meningitis / Encephalitis Panel, CSF	BioFire Meningitis / Encephalitis Panel	Film Array PCR	BioFire	N/A	Not Detected	Detected	Package Insert	N/A	N/A
MRSA Screening Culture Panel, Nares, Axilla, Groin/Wound	MRSA Screen	Culture	N/A	N/A	Negative for MRSA	N/A	N/A	N/A	N/A
Molecular Enteric Panel, Stool	Gastrointestinal Panel	Molecular - real time PCR	BD MAX	N/A	Negative	N/A	N/A	N/A	Negative / Positive
Molecular Stool Parasite Panel	O&P	Real-Time PCR	BD MAX	N/A	Negative	Positive	Package insert; Microbiology Reference material	N/A	N/A
Neisseria-gonococcus Screen	GC Screen	Culture on selective agar for N. gonorrhoeae and N. meningitidis	N/A	N/A	Negative	N/A	N/A	N/A	N/A
Outside Fungal ID	Dermatophyte Identification	Culture	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Mold Identification		Bruker Daltonics MicroFlex	N/A	N/A	N/A	N/A	N/A	N/A
	Yeast Identification		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Outside Mycobacterial ID	Mycobacterium Identification	Culture	Bruker Daltonics MicroFlex	NA	NA	NA	N/A	N/A	N/A
Pinworm Exam	N/A	Microscopic exam	N/A	N/A	Negative	N/A	N/A	N/A	N/A
Plesiomonas/Aeromonas Screen, Stool	Aeromonas / Plesiomonas Screen	Culture	Vitek/Bruker Daltonics MicroFlex	N/A	Negative	N/A	N/A	N/A	N/A
Quantitative Tissue Culture	N/A	Tissue is weighed, serially diluted, and cultured for exact colony count.	Vitek/Bruker Daltonics MicroFlex	colony forming units/gram	No growth	N/A	N/A	N/A	N/A
Rapid HIV-1/HIV-2 Ab With P24 Antigen	Rapid HIV, Alere Determination HIV 1/2 Ag/Ab Combo	Qualitative Immunoassay / Immunochromatographic test for simultaneous and qualitative detection of free HIV-1 p24 antigen and antibodies to HIV-1 and HIV-2	Alere Determine	N/A	All: nonreactive	N/A	Package Insert	Reactive / Nonreactive / Prereactive	Reactive / Nonreactive / Prereactive
Rapid Strep A, Molecular	Rapid Strep, Strep A	Molecular in vitro diagnostic test utilizing isothermal nucleic acid amplification	Abbott	N/A	Negative	N/A	N/A	Negative / Positive	Negative / Positive
Rectal Screening for Cipro Resistance	Ciprofloxacin Resistance Screening	Culture	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Screen VRE	Vancomycin Resistant Enterococcus Screen	Culture on selective agar.	N/A	N/A	Negative for Vancomycin Resistant Enterococcus.	N/A	N/A	N/A	N/A
Screen, Yeast	N/A	Culture	Bruker Daltonics MicroFlex	N/A	Negative	N/A	N/A	N/A	N/A
Screen-MRSA - Baby	NICU MRSA	Culture	N/A	N/A	Negative	N/A	N/A	N/A	N/A
Screen: MRSA/MSSA	Respiratory Staphylococcus Screen, Staph Screen	Real-Time PCR	BD MAX	N/A	Not Detected	N/A	Package Insert	N/A	N/A
Sterility Check	N/A	Culture	Vitek/Bruker Daltonics MicroFlex	N/A	Negative	LOOP Specimens will be called to the coordinator	N/A	N/A	N/A
Strep Pneumoniae Antigen, Urine	N/A	Immunochromatographic membrane assay.	Binx NOW	All	Negative	N/A	Binx NOW Package Insert	N/A	Negative / Positive
Susceptibility	Susceptibility and Identification	N/A	Vitek/Bruker Daltonics MicroFlex	N/A	N/A	N/A	N/A	N/A	N/A
Upper Respiratory Culture, Bacterial	Throat Culture, RESN	Culture	Bruker Daltonics MicroFlex	N/A	Normal flora	N/A	N/A	N/A	N/A
Urine Culture	N/A	Culture; Susceptibility testing performed based on established lab guidelines	N/A	CFU/mL	Culture includes colony count. Collect time is required for each specimen submission.	N/A	N/A	N/A	N/A
Vaginitis DNA Probes	DNA Probe, Vaginal	DNA Probe	BD Microprobe Processor	N/A	Negative	N/A	N/A	N/A	N/A
Varicella Zoster By PCR, Skin, CSF	VZVPCR	PCR	Applied Biosystems	N/A	Negative	Positive in CSF only	N/A	N/A	N/A
Yersinia Screen	N/A	Extended culture with cold enrichment	N/A	N/A	Negative	N/A	N/A	N/A	N/A
ABO / Rh(D) Typing	Blood Type, ABORH	Agglutination	Manual: N/A Automated: Ortho	N/A	A, B, O, or AB and Rh positive or Rh Negative	N/A	N/A	N/A	N/A
ABORH Type Reconfirmation	Confirmatory Type	Agglutination	Manual: N/A Automated: Ortho	N/A	A, B, O, or AB and Rh positive or Rh negative	N/A	N/A	N/A	N/A
Antibody ID	N/A	Agglutination	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Antibody Screen	Indirect Antiglobulin Test, ABS	Agglutination	Manual: N/A Automated: Ortho	N/A	Negative / Positive	N/A	N/A	N/A	N/A
Antibody Titer [LAB275]	ABTTT	Agglutination	N/A	N/A	Reciprocal of serial dilution	All antigens but K have a critical value of 32. K has a critical value of 8.	Alloimmunization Committee	N/A	N/A
Antigen Typing, Red Cell	N/A	Agglutination	N/A	N/A	Negative / Positive	N/A	N/A	N/A	N/A
Autoadsorption, RBC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Baby Type and DAT (Direct Antiglobulin Test)	HEELS, Heelstick Evaluation	Agglutination	N/A	N/A	For type-A, B, O, or AB and Rh positive or Rh Negative, Antibody Screen Positive or Negative, DAT Positive or Negative	Positive DAT	N/A	N/A	N/A
Cold Agglutinin Titer	N/A	Agglutination	N/A	N/A	Reciprocal of serial dilution	N/A	N/A	N/A	N/A
Cord Blood Evaluation	N/A	Agglutination	N/A	N/A	For types-A, B, O, or AB and Rh positive or Rh Negative, DAT Positive or Negative	Positive DAT	N/A	N/A	N/A
Crossmatch	N/A	Agglutination	N/A	N/A	Compatible, Incompatible, Least incompatible	N/A	N/A	N/A	N/A
Direct Antiglobulin Test (DAT)	DAT, Direct Antiglobulin	Agglutination	N/A	N/A	Negative / Positive	N/A	N/A	N/A	N/A
Donor unit retype	Reconfirmation of donor units	Agglutination	Manual: N/A Automated: Ortho	N/A	A, B, O, or AB and Rh positive or Rh Negative	N/A	N/A	N/A	N/A
Euate	Elation, RBC	Agglutination	N/A	N/A	N/A	New antibody identified in Euate	N/A	N/A	N/A
Fetal Screen Workup	N/A	Agglutination	Immucor	N/A	Negative / Positive	N/A	N/A	N/A	N/A
Kleihauer-Betke Stain	KB	Agglutination	N/A	N/A	Number of fetal cells per 2000 adult cells, percent fetal bleed in mL's and number of vials of Rhogol if applicable	Positive	N/A	N/A	N/A
RHOIG Evaluation	Rhogam Evaluation	Agglutination	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Transfusion Reaction Battery	N/A	Agglutination	N/A	N/A	N/A	All transfusion reactions	N/A	N/A	N/A

Type and Screen	N/A	Agglutination	Manual: N/A Automated: Ortho	N/A	For type- A, B, O, or AB and Rh positive or Rh Negative, Antibody Screen Positive or Negative	N/A	N/A	N/A	N/A
Type and Screen-Not for Transfusion	N/A	Agglutination	Manual: N/A Automated: Ortho	N/A	For type- A, B, O, or AB and Rh positive or Rh Negative, Antibody Screen Positive or Negative	N/A	N/A	N/A	N/A
Type and Screen - Preadmission	N/A	Agglutination	Manual: N/A Automated: Ortho	N/A	For type- A, B, O, or AB and Rh positive or Rh Negative, Antibody Screen Positive or Negative	N/A	N/A	N/A	N/A
ACTH	Adrenocortico-trophic Hormone	Chemiluminescent	Immulate XPi	pg/mL	9.0-50.0	N/A	Textbooks, package insert	5.0-1.250.0	5.0-1.250.0
AIC - DCA	HA1CI	Latex immunoagglutination inhibition	DCA Vantage	%	4.7-5.6	N/A	Textbook	2.5-14.0	2.5-14.0
AFP Tumor Marker	AFPTMR	Two-site sequential chemiluminescent immunometric assay	Immulate XPi	ng/mL	Female: <8.5 Male: <8.5	N/A	Package insert, textbook, operators manual	0.2-363.0	0.2 - dilute to endpoint
Aldosterone (Plasma)	ALDOS	Chemiluminescent Immunoassay	Diasorin Liason XL	ng/dL	Upright (serum) <3.00-39.20 Supine (serum) <3.00-23.20 Upright (EDTA) <3.00-35.30 Supine (EDTA) <3.00-23.60	N/A	Package insert	3.00-100.00	3.00-1.000.00
ANA Multiplex Screen	N/A	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
ANA Multiplex Scrn With Reflex	N/A	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
ANA Screen IFA	ANAB	Indirect Fluorescent Antibody	Euroimmun	Negative / Positive	Negative is Normal	N/A	Textbooks	N/A	N/A
ANA Titer*	N/A	Indirect Fluorescent Antibody	Euroimmun	N/A	Negative is Normal	N/A	Textbooks	N/A	1:40 - >1,280
Anti Microsomal Antibody	MIAN	Chemiluminescent Immunoassay	Immulate XPi	IU/mL	<35.0	N/A	Package insert	10-1,000	10-Dilute to Endpoint
Anti Mitochondrial Antibody	AMA	Indirect Fluorescent Antibody	Bio-Rad Kallestad	Negative / Positive	Negative is Normal	N/A	Textbook	N/A	1:20 - ≥320
Anti Neutrophil Cytoplasmic Antibody	ANCA	Indirect Fluorescent Antibody	Euroimmun	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	1:10 - ≥160
Anti Parietal Antibody	Parietal Cell Antibody	Indirect Fluorescent Antibody	Bio-Rad Kallestad	Negative / Positive	Negative is Normal	N/A	Textbook	N/A	1:20 - ≥320
Anti Smooth Muscle Antibody	SMA	Indirect Fluorescent Antibody	Bio-Rad Kallestad	Negative / Positive	Negative is Normal	N/A	Textbook	N/A	1:20 - ≥320
Anti-Proteinase 3 Ab	Anti-PR3	Multiplex ImmunoFlow Assay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Instructions for use manual	N/A	N/A
Anti-Scleroderma Ab (Scl70)	SCL70T	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
Auto Immune Abs, Multiplex	BPRAB	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
Beta 2 Microglobulin Serum	B2M	Two-site chemiluminescent immunometric assay	Immulate XPi	mg/L	0.60-2.11	N/A	Package insert, Operators manual, Textbook	0.00-0.50	0.00-50.00
BKR Free Testosterone	N/A	Calculation	Centaur CXP1	TESTF = ng/dL TESTP = %	Male TESTF = 1.74-15.20 Female TESTF = 0.084-0.81 Male TESTP = 0.90-2.80 Female TESTP = 0.40-3.00	N/A	Customer Bulletin	N/A	N/A
CA 15-3N	CA153N	Two-site chemiluminescent immunometric assay	Immulate XPi	U/mL	Female: 0.0-38.0 Male: 0.0-38.0 (use not defined)	N/A	Package insert, Operators manual, Textbook	1.0-300.0	1.0-30,000.0
Calcitonin	CALCT	Two-site Chemiluminescent Immunometric Assay	Immulate XPi	pg/mL	Male: <8.4 Female: <5.0	N/A	Kit Range	2.0-2,000.0	2.0-2,000,000.0
Centromere B Antibody	CENTT	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
Chromatin Antibody	N/A	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
CMV IgG Ab	CMVG	Two-step immunoassay	Immulate XPi	Negative / Positive	Negative is Normal	N/A	Textbooks, Package insert.	N/A	N/A
CMV IgM Ab	CMVM	Solid phase enzyme-labeled chemiluminescent immunometric assay	Immulate XPi	Negative / Positive	Negative is Normal	N/A	Package insert	N/A	N/A
C-Peptide	CPEP	Chemiluminescent	Immulate XPi	ng/mL	0.2-2.7	N/A	OSU validated Range	0.1-20.0	0.1-20,000.0
Cryptococcal Antigen	CRAG	Lateral Flow Assay	Immuno-Mycologies Inc.	Negative / Positive	Negative is Normal	N/A	Package Insert	N/A	N/A
Cryptococcus Antigen, CSF	FCRAG	Lateral Flow Assay	Immuno-Mycologies Inc.	Negative / Positive	Negative is Normal	N/A	Package Insert	N/A	N/A
DHEA-Sulfate	DHES	Chemiluminescent Immunoassay	Immulate XPi	µg/dL	Female: 35-430 Male: 80-560	N/A	Package insert, textbook	15-1,000	15-1,000
DS DNA Ab, Quant	N/A	Multiplex flow immunoassay	Bioplex 2200	IU/mL (Negative / Positive)	Negative: ≤4 Indeterminate: 5-9 Positive: ≥10	N/A	Package insert	1-300	1-30,000
dsDNA Antibody	N/A	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
EBV VCA IgG Ab	EBVG	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package Insert	N/A	N/A
EBV VCA IgM Ab	EBVM	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package Insert	N/A	N/A
ENA Battery (SSA, SSB, Sm, RNP)	ENAB	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
Free Hemoglobin, Plasma	N/A	Photometric	HemoCue	mg/dL	0.0-5.0	N/A	HemoCue Operating Manual	30.0-2,100.0	30.0-Dilute to endpoint
G6PD, Qualitative	G6PD	Visual Fluorescence	Trinity Biotech	Present / Absent	Present is Normal	N/A	Package Insert	N/A	N/A
Gastrin - Drug Stimulated	GSTRDS	Chemiluminescent	Immulate XPi	pg/mL	0-122	N/A	OSU validated range	10-1,000	10-1,000,000
Gastrin - Non-Stimulated	GSTR	Chemiluminescent	Immulate XPi	pg/mL	0-122	N/A	OSU validated Range	10-1,000	10-1,000,000
Growth Hormone	GRHR	Two-site chemiluminescent immunometric assay	Immulate XPi	ng/mL	Female: <8.00 Male: <3.00	N/A	Package insert, operators manual, textbook	0.05-40.00	0.05-dilute to endpoint
H. Pylori Ab IgG, Serum	HPAB	Solid phase enzyme-labeled chemiluminescent immunometric assay	Immulate XPi	Negative / Positive	Negative is Normal	N/A	package insert	N/A	N/A
Hemoglobin A1C	A1CB	HPLC	Bio-Rad D-100	%	4.7-5.6	N/A	Textbook	5.5-15.0	5.5-15.0
Hemoglobin A2	HA2	HPLC	Variant II	%	2.1-3.3	N/A	Package Insert, Textbook	1.0-7.0	1.0-7.0
Hemoglobin Plasma, Screen	HGBPSC	Photometric	HemoCue	mg/dL	<30	N/A	Operators Manual	30-2,100	30-Dilute to endpoint
Hemoglobin, Fetal	HF	HPLC	Variant II	%	<1.0	N/A	Package Insert, Textbook	1.0-40.0	1.0-40.0
Hemoglobinopathy Eval	Abnormal HGB Detection, HEPB	HPLC	Variant II	%	Hemoglobin A: ≥95 Hemoglobin A2: 2.1-3.3 Hemoglobin F: <1.0 Hemoglobin C: 0.0 Hemoglobin S: 0.0	N/A	Package Insert, Textbook	N/A	N/A
Hep A Ab, Total (IgG+IgM)	HAABG	Direct Chemiluminescent	Centaur XP7	Negative / Positive	Negative is Normal	N/A	Technical Document	N/A	N/A
Hep B Core Ab, Total (IgG+IgM)	HBCBG	Two wash antigen sandwich immunoassay	Centaur XP7	Negative / Positive	Negative is Normal	N/A	Package Insert, Technical document Textbooks	N/A	N/A
Hep B Surf Ag Neutralization	HBAGN	Magnetic particle chemiluminescent immunoassay	Centaur XP8	Negative / Positive	Negative is Normal	N/A	Package Insert	N/A	N/A
Hepatitis A IgM Ab	HAABM	IgM Capture Immunoassay	Centaur XP7	Negative / Positive	Negative is Normal	N/A	Technical Bulletin	N/A	N/A
Hepatitis B Core IgM Ab	HBCBM	IgM Capture Immunoassay	Centaur XP7	Negative / Positive	Negative is Normal	N/A	Package insert, Textbooks	N/A	N/A
Hepatitis B Surface Antibody	HBSAB	Sandwich immunoassay using direct chemiluminescent technology	Centaur XP7	Negative / Positive	Negative is Normal	N/A	Technical Document	N/A	N/A
Hepatitis B Surface Antigen	HBSAG	Magnetic particle chemiluminescent immunoassay	Centaur XP7	Negative / Positive	Negative is Normal	N/A	Package Insert	N/A	N/A
Hepatitis Be Antibody	HBEB	ELISA	Diasorin	Negative / Positive	Negative is Normal	N/A	Package Insert	N/A	N/A

Hepatitis Be Antigen	HBEG	Two wash antigen sandwich immunoassay	Centaaur XP8	Negative / Positive	Negative is Normal	N/A	Package Insert	N/A	N/A
Hepatitis C Antibody	HCAB	Indirect two wash sandwich immunoassay	Centaaur XP7	Negative / Positive	Negative is Normal	N/A	Package Insert	N/A	N/A
HIV 1 and 2 Antibodies	HIV	Two wash antigen / antibody sandwich immunoassay	Centaaur XP7	Reactive / Nonreactive	Nonreactive is normal	N/A	Package Insert	N/A	N/A
HIV-1/HIV-2 Differentiation	HIV12C	Immunochromatographic Assay	Bio-Rad Genius	Nonreactive / Reactive	Nonreactive is normal	N/A	Package Insert	N/A	N/A
HPV, High Risk, DNA	High Risk HPV with Genotyping	PCR	Cobas	Negative / Positive	Negative is Normal	N/A	Package Insert	N/A	N/A
HSV 1 And 2 IgG Antibody	HSVGI2	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Textbooks, HSV-1.&2 IgG procedure, Package Insert	N/A	N/A
HSV IgM Antibody	HSVIM	ELISA - Manual	Diamdix	Negative / Positive	Negative is Normal	N/A	Textbooks, HSV-1.&2 IgG procedure, Package Insert	N/A	N/A
Immunofixation, Serum	SIMFXB	Electrophoresis	Sebia Capillarys 2 - Instrument 2	N/A	N/A	N/A	Package Insert	N/A	N/A
Immunoglobulin IgE	IgE, Total	Two-site sandwich immunoassay	Centaaur XP8	IU/mL	1.5-165.3	N/A	Package Insert	1.5-3,000.0	1.5-3,000.0
Insulin	N/A	Two-step immunoassay	Immulate XP6	µIU/mL	2.0-29.1	N/A	OSU established	2.0-300.0	2.0-300.0
Insulin Glucose Tolerance: 10 Minutes	INSUL5	Two-step immunoassay	Immulate XP6	µIU/mL	N/A	N/A	OSU established	2.0-300.0	2.0-300.0
Insulin Glucose Tolerance: 2 Minutes	INSUL3	Two-step immunoassay	Immulate XP6	µIU/mL	N/A	N/A	OSU established	2.0-300.0	2.0-300.0
Insulin Glucose Tolerance: 5 Minutes	INSUL4	Two-step immunoassay	Immulate XP6	µIU/mL	N/A	N/A	OSU established	2.0-300.0	2.0-300.0
Insulin Glucose Tolerance: 30 Minutes	INSUL6	Two-step immunoassay	Immulate XP6	µIU/mL	N/A	N/A	OSU established	2.0-300.0	2.0-300.0
Insulin Glucose Tolerance: 0 Minutes	INSUL2	Two-step immunoassay	Immulate XP6	µIU/mL	N/A	N/A	OSU established	2.0-300.0	2.0-300.0
Insulin Growth Factor 1	Somatomedin C, IGF1	Solid phase enzyme-labeled chemiluminescent immunoassay	Immulate XP6	ng/mL	Age Dependent	N/A	Package Insert	25.0-1,000.0	25.0-1,000.0
Intact PTH (Intraoperative)	Intact PTH Rapid, RPTH	Two-site sandwich immunoassay	SF: Centaur XP7 RRL: IRL34581240	pg/mL	14.0-72.0	N/A	Package insert, assay manual	6.3-2,000.0	6.3-10,000.0
JO-1 Antibody	ANA Screen	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
Kappa Free Light Chains	Immunoglobulin Free Chains	Turbidimetry	The Binding Site Optilite	mg/L	3.9-26.0	N/A	2017 OSU Study	2.9-127.0	0.6-65,500.0
Kappa/Lambda Ratio	Immunoglobulin Free Chains	Turbidimetry	The Binding Site Optilite	N/A	0.51-1.72	N/A	2017 OSU Study	N/A	N/A
Lambda Free Light Chains	Immunoglobulin Free Chains	Turbidimetry	The Binding Site Optilite	mg/L	6.4-22.1	N/A	2017 OSU Study	5.2-139.0	1.3-139,000.0
Legionella Serogroup 1 Urinary Antigen	Legionella Urinary Ag	EIA	Bifax Kit / Dynex DS2	Negative / Positive	Negative is Normal	N/A	Package Insert	N/A	N/A
Liver-Kidney Microsomal Ab	N/A	ELISA - Manual	Inova Diagnostics	Negative / Positive	Negative is Normal	N/A	Package Insert	N/A	N/A
Lyme Ab	N/A	Chemiluminescent immunoassay	DiaSorin	Negative / Positive	Negative is Normal	N/A	Package Insert	N/A	N/A
M Tuberculosis By Quantiferon	QFT, M. Tuberculosis Antigen	ELISA	Dynex DSX	Negative / Positive / Indeterminate	N/A	N/A	Package Insert	N/A	N/A
Monoclonal Light Chain, Quantitative, Urines	Monoclonal Prot Immfx, Urine - Random	Electrophoresis	Hydrasys 2	N/A	Negative is Normal	N/A	Package Insert	N/A	N/A
Monoclonal Prot Immuno, Serum	Serum Monoclonal Protein	Capillary Electrophoresis	Capillarys 2	N/A	Negative is Normal	N/A	Package Insert	N/A	N/A
Mumps IgG Ab, Immune Status	Mumps Ab, IgG	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative-The absence of detectable IgG-class	N/A	BioPlex2200 MMRV IgG Procedure March 2010	N/A	N/A
Myeloperoxidase Antibodies	N/A	Multiplex ImmunoFlow Assay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Instructions for use manual	N/A	N/A
Protein Electrophoresis	Serum Electrophoresis	Electrophoresis	Capillarys 2	g/dL	Albumin: 3.5-5.0 g/dL Alpha 1: 0.2-0.4 g/dL Alpha 2: 0.5-1.0 g/dL Beta: 0.5-1.1 g/dL Gamma: 0.6-1.5 g/dL	N/A	Package Insert	N/A	N/A
PTH Intact	IPTH	Two-site sandwich immunoassay	SF: Centaur XP7 RRL: IRL34581240	pg/mL	14.0-72.0	N/A	Package insert, assay manual	6.3-2,000.0	6.3-10,000.0
Quant. Cryptococcus Antigen, Blood	N/A	Lateral Flow Assay	Immuno-MycoLogics Inc.	N/A	Negative is Normal	N/A	Package Insert	N/A	1:1 - ≥1:2560
Quant RPR, Response To Therapy Only	RPR, Therapy	Multiplex flow immunoassay	Bioplex 2200	Nonreactive / Reactive	Nonreactive is Normal	N/A	Package insert	N/A	1:1 - ≥1:2048
Quantitative RPR	N/A	Multiplex flow immunoassay	Bioplex 2200	N/A	Nonreactive is Normal	N/A	Package insert	N/A	1:1 - ≥1:2048
Renin	Renin, Direct	Chemiluminescent Immunoassay	Diasorin Liaison XL	pg/mL	Upright: <40: 4.2-52.2 ≥40: 3.6-81.6 Supine: <41: 3.2-33.2 ≥40: 2.5-45.1	N/A	Package insert	2.1-300.0	2.1-3,000.0
Ribosomal P Antibody	RIBOPT	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
RNP Antibody	RNPT	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
RPR	Rapid Plasma Reagin	Multiplex flow immunoassay	Bioplex 2200	Nonreactive / Reactive	Nonreactive is Normal	N/A	Package insert	N/A	1:1 - ≥1:2048
RPR - Baby	RPR, Neonatal	Multiplex flow immunoassay	Bioplex 2200	Nonreactive / Reactive	Nonreactive is Normal	N/A	Package insert	N/A	1:1 - ≥1:2048
Rubella Immune Status IgG Antibody	RUBAB	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Positive	N/A	BioPlex2200 MMRV IgG Procedure March 2010	N/A	Negative-The absence of detectable IgG-class antibodies to measles, mumps, rubella, VZV suggest no prior exposure to these viruses or the lack of a specific immune response to immunization. Indeterminate- RESULT INDETERMINATE: RECOMMEND THAT TEST BE REPEATED. Submit an additional sample for testing in 10 to 14 days to demonstrate IgG seroconversion if recently vaccinated or if otherwise clinically indicated. Positive-The presence of detectable IgG-class antibodies to these viruses indicates prior exposure through infection or immunization. Individuals testing positive for IgG-class antibodies to measles, mumps, rubella, or VZV are considered immune.

Rubella IgG Ab (Immune Status)	RUBOIB	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative-The absence of detectable IgG-class antibodies to measles, mumps, rubella, VZV suggest no prior exposure to these viruses or the lack of a specific immune response to immunization. Indeterminate- RESULT INDETERMINATE: RECOMMEND THAT TEST BE REPEAT-ED. Submit an additional sample for testing in 10 to 14 days to demonstrate IgG seroconversion if recently vaccinated or if otherwise clinically indicated. Positive- The presence of detectable IgG-class antibodies to these viruses indicates prior exposure through infection or immunization. Individuals testing positive for IgG-class antibodies to measles, mumps, rubella, or VZV are considered immune.	N/A	BioPlex2200 MMRV IgG Procedure March 2010	N/A	N/A
Sex Hormone Binding Globulin	SHBG	Solid phase, two-site chemiluminescent immunometric assay	Immulate XP	nmol/L	Male: 10-57 Female (non-pregnant): 18-144	N/A	Package Insert	2-180	2-180
Sickle Cell Screen	Sickle Hemoglobin Solubility	Modified Nalbandin Procedure-Solubility	SickleScreen® Sicking Hemoglobin Screening Kit	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
Sm Antibody	Smith Antibody	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
Sm/RNP Antibody	N/A	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
SS-A/RO Antibody	SSA Antibody	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
SS-B/LA Antibody	SSB Antibody	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Negative is Normal	N/A	Package insert, textbook	N/A	N/A
Syphilis Ab w/Reflex RPR	Syphilis IgG/IgM Antibody with Reflex RPR	Multiplex flow immunoassay	Bioplex 2200	Nonreactive / Reactive	Nonreactive is Normal	N/A	Package insert, CDC	N/A	N/A
Thyroglobulin	Thyroglobulin & Thyroglobulin Ab	Chemiluminescence	Dxl 600	ng/mL	1.6-50.0	N/A	Package insert, textbook	0.1-450.0	0.1-45,000.0
Thyroglobulin Antibody	N/A	Chemiluminescence	Dxl 600	IU/mL	<=4.0	N/A	Package insert, textbook	0.9-2.250.0	0.9-2.250.0
Thyroid-Stimulating Immunoglobulin	TSI	Chemiluminescent Immunoassay	Siemens Immulite 2000 XP	IU/L	<=0.55	N/A	Package insert	0.10-40.00	0.10-40.00
Toxoplasma IgG Antibody	TOXOG	IgG capture sandwich immunoassay with direct chemiluminescent technology.	Centaur XP7	Negative / Positive	Negative is Normal	N/A	Technical document, assay manual, textbook	N/A	N/A
Toxoplasma IgM Antibody	TOXOM	IgM capture sandwich immunoassay with direct chemiluminescent technology.	Centaur XP7	Negative / Positive	Negative is Normal	N/A	Package insert, assay manual, textbook	N/A	N/A
Urine Immunofixation, Random	Monoclonal Prot Immfx, Urine - Random	Electrophoresis	Sebia Hydrazys 2	N/A	N/A	N/A	Package Insert	N/A	N/A
Varicella IgG Ab (Immune Status)	VZISB	Multiplex flow immunoassay	Bioplex 2200	Negative / Positive	Positive is Normal	N/A	BioPlex2200 MMRV IgG Procedure March 2010	N/A	N/A
Vitamin D (25-Hydroxy, Total)	Vitamin D, Total	Immunoassay Chemiluminescent	Diasorin Liason XL	ng/mL	30.0-100.0	N/A	Diasorin	4.0-150.0	4.0-150.0
Vitamin D, (1,25 Dihydroxy)	1,25 Dihydroxy Vitamin D	Modified 3 step sandwich chemiluminescent immunoassay	Diasorin Liaison XL	pg/mL	20.0-79.0	N/A	Package Insert	5.0-200.0	5.0-600.0
FISH, 1p19q (glioma), Sign-out	1p19q - FISH	Fluorescent In Situ Hybridization	Biowiew	N/A	Negative for deletion	N/A	N/A	N/A	1p loss, FISH: Detected, Not Detected, Not Indicated, Indeterminate 19q loss, FISH: Detected, Not Detected, Not Indicated, Indeterminate
FISH, 3p (tumor), Sign-out	3p/3q - FISH	Fluorescent In Situ Hybridization	Biowiew	N/A	Negative for deletion	N/A	N/A	N/A	Chr 3n loss: Detected, Not Detected, Not Indicated, Indeterminate
FISH, ALK Rearrangement, Sign-out	ALK - FISH	Fluorescent In Situ Hybridization	Biowiew	N/A	Negative for breakapart	N/A	N/A	N/A	positive/negative for breakapart
FISH, BCL2 Rearrangement, Sign-out	BCL2 - FISH	Fluorescent In Situ Hybridization	Biowiew	N/A	Negative for breakapart	N/A	N/A	N/A	positive/negative for breakapart
FISH, BCL6 Rearrangement, Sign-out	BCL6 - FISH	Fluorescent In Situ Hybridization	Biowiew	N/A	Negative for breakapart rearrangement	N/A	N/A	N/A	positive/negative for breakapart rearrangement
BCR/ABL, T(9;22), QUANT	BCRSCR, BCR-ABL, (9;22), CML	Real Time PCR	7500 Fast Dx	% BCR-ABL1/ABL1	P190 transcript: Not Detected P210 transcript: Not Detected BCR-ABL1/ABL1 %: 0.000	N/A	N/A	0.000-100.000	0.000-100.000
Hairy Cell Leukemia BRAF V600E Mutation	B-RAF, BRAF V600E	Pyrosequencing	Applied Biosystems GeneAmp PCR System + Qiagen Pyromark	N/A	Not detected	N/A	N/A	N/A	BRAF Mutation: Detected, Not Detected, Not Indicated, Indeterminate
BTK and PLCG2, Comprehensive Mutation Profiling	BTK and PLCG2 Full Sequencing	Next Generation Sequencing	Ion Torrent S5	N/A	N/A	N/A	N/A	N/A	N/A
BTK Resistance Mutation	BTKR C481S	Digital droplet PCR	Raindance Technology	% mutant/total events	<100	N/A	Validation	N/A	0.1-100.0
Calr Mutation Analysis, Myeloproliferative Neoplasm MPN	Calreticulin Mutation Detection	Fluorescent fragment analysis, sequence analysis (non-NGS).	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Not detected	N/A	N/A	N/A	CALR mutation detected/not detected
FISH, CCND1 (cyclin D1) Rearrangement, Sign-out	CCND1 - FISH	Fluorescent In Situ Hybridization	Biowiew	N/A	Negative for breakapart	N/A	N/A	N/A	positive/negative for breakapart
CEBPA Mutation	CEBPA alpha, CEBPAa	Sequence analysis (non-NGS), fluorescent fragment analysis	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Not detected	N/A	N/A	N/A	CEBPA mutation detected/not detected
FISH, DDIT3 (CHOP) Rearrangement	CHOP - FISH, DDIT3 - FISH	Fluorescent In Situ Hybridization	Biowiew	N/A	Negative for breakapart	N/A	N/A	N/A	positive/negative for breakapart
Comprehensive Hematology Panel with Germline Assessment	550+ Gene Panel, Extended NGS Heme Panel	Next Generation Sequencing	Illumina NextSeq	N/A	Negative for pathogenic mutation at the target VAF level	N/A	N/A	N/A	N/A
FISH, MET Amplification, Sign-out	CMET - FISH	Fluorescent In Situ Hybridization	Biowiew	N/A	Negative for amplification	N/A	N/A	N/A	positive/negative for amplification
Colon Cancer Mutation Panel, Sign-out	COLMOL	Next Generation Sequencing	Ion Torrent S5	N/A	Not detected	N/A	N/A	N/A	mutation(s)detected/not detected
EGFR Mutation Analysis (exons 19 & 21), Sign-out	Epidermal growth factor receptor, L858R, exon 19, exon 21	Fluorescent fragment analysis, restriction fragment length polymorphism	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Not detected	N/A	N/A	N/A	EGFR mutation detected/not detected
FISH, EGFR Amplification (glioma), Sign-out	EGFR - FISH	Fluorescent In Situ Hybridization	Biowiew	N/A	positive/negative for amplification	N/A	N/A	N/A	positive/negative for amplification
EGFR T790M Mutation Analysis (Resistance), Sign-out	EGFR T790M	DNA sequencing (non-NGS)	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Not detected	N/A	N/A	N/A	EGFR T790M mutation detected/not detected

Extended RAS Mutation Panel, Sign-out	NRAS	Pyrosequencing	Pyromark	N/A	KRAS, BRAF, NRAS mutations not detected	N/A	N/A	N/A	KRAS, BRAF, NRAS mutations not detected/detected
FISH, EWSR1 Rearrangement, Sign-out	EWSR1 - FISH	Fluorescent In Situ Hybridization	Bioview	N/A	Negative for break apart	N/A	N/A	N/A	positive/negative for break apart
FISH, FGFR1 Amplification, Sign-out	FGFR1 - FISH	Fluorescent In Situ Hybridization	Bioview	N/A	Negative for amplification	N/A	N/A	N/A	positive/negative for amplification
Factor V Mutation FAVC Leiden	Leiden, G1691A, R506Q	Fluorescent Capillary Fragment analysis, restriction fragment length polymorphism	Applied Biosystems GeneAmp PCR system + Genetic Analyzer	N/A	Wild type, Heterozygous, Homozygous	N/A	Gene Reviews	N/A	Wild type, Heterozygous, Homozygous
FLT3, ITD & TK Mutation	FLT3	PCR and capillary electrophoresis	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Not detected	N/A	N/A	N/A	ITD, TKD mutations Not detected/Detected
Hematologic Neoplasm/Disorder Mutation Panel	LMPNGS, MYLNGS, T-cell mutation, T-LGL mutation, CLL mutation panel	Next Generation Sequencing	LifeTech S5	N/A	N/A	N/A	N/A	0.5% VAF	0.5-100.0% VAF
Hereditary Hemochromatosis, (Gene Analysis, Common Variants)	HFE, C282Y, H63D, Iron Overload Disease	PCR	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	N/A	N/A	N/A	N/A	N/A
FISH, HER2, Sign-out	HER-2, HER2/neu, test	Fluorescent In Situ Hybridization	Bioview	N/A	N/A	N/A	N/A	N/A	N/A
Huntington's Disease	Huntington chorea, HTT Gene	Polymerase chain reaction, fluorescent capillary fragment analysis	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Normal Allele; Normal Mutable Allele; HD Allele with reduced penetrance; HD Allele with full penetrance	N/A	Gene Reviews	N/A	Normal Allele; Normal Mutable Allele; HD Allele with reduced penetrance; HD Allele with full penetrance
IDH1 and IDH2 Mutations	IDH1	Pyrosequencing	Applied Biosystems GeneAmp PCR System + Qiagen Pyromark	N/A	IDH1 and IDH2 mutation not detected	N/A	Normal controls	N/A	detected/not detected
B Cell Gene Rearrangement	IGH gene rearrangement, B cell Clonality, Igh PCR	Polymerase Chain Reaction	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Negative	N/A	N/A	N/A	positive/negative for clonal IGH gene rearrangement
IGVH Mutation Analysis	IGH mut sequencing, IGVH, Ig mutation analysis, CLL, IGVH	Clonal amplification, fluorescent fragment analysis, sequence analysis (non-NGS)	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	N/A	N/A	N/A	N/A	mutated/unmutated
JAK2 V617 Mutation Detection	JAK	Pyrosequencing	Applied Biosystems GeneAmp PCR System + Genetic Analyzer Qiagen Pyromark	N/A	Not detected	N/A	N/A	N/A	JAK2 V617 not detected, detected (1-100%)
Extended RAS Mutation Panel, Data Entry	K-RAS, Ki-RAS	Pyrosequencing	Applied Biosystems GeneAmp PCR System + Genetic Analyzer Qiagen Pyromark	N/A	Not detected	N/A	N/A	N/A	KRAS mutation detected/not detected
Lung Cancer Mutation Panel	PULMOL	Next Generation Sequencing	Ion Torrent S5	N/A	No pathogenic mutations detected	N/A	N/A	N/A	mutation(s)detected/not detected
Lymphoid Neoplasm Mutation Panel with BTK/PLCG2	LMPNGS, LYMOL	Next Generation Sequencing	Ion Torrent S5	N/A	No pathogenic mutations detected	N/A	N/A	N/A	No mutations detected; pathogenic mutation(s) detected; variant(s) of indeterminate significance detected
FISH, MALT1 Rearrangement, Sign-out	MALT1 - FISH	Fluorescent In Situ Hybridization	Bioview	N/A	Negative for breakapart	N/A	N/A	N/A	positive/negative for breakapart
FISH, MDM2 Amplification, Sign-out	MDM2 - FISH	Fluorescent In Situ Hybridization	Bioview	N/A	Negative for breakapart	N/A	N/A	N/A	positive/negative for amplification
MTFHR (Methylene Tetrahydrofolate Red)	NADPH, 677C>T, MTFHR	Fluorescent capillary fragment analysis, restriction fragment length polymorphism	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Wild type, Heterozygous, Homozygous	N/A	Gene Reviews	N/A	Wild type, Heterozygous, Homozygous
MGMT Promoter Methylation, Tumor	MGMT1, 06-Methylguanine DNA methyltransferase	Pyrosequencing	PyroMark + Applied Biosystems GeneAmp PCR System	N/A	N/A	N/A	N/A	N/A	promoter hypermethylation absent/present
MLH1 Promoter Methylation	MLH1, Lynch syndrome, HNPCC	Methylation / Pyrosequencing	Applied Biosystems GeneAmp PCR System + Genetic Analyzer Qiagen Pyromark	N/A	N/A	N/A	N/A	N/A	promoter hypermethylation absent/present
Microsatellite Instability (MSI) Analysis, Tumor	MSI, mismatch repair, HNPCC, non-polyposis colon cancer, MMR, Lynch syndrome	multiplex polymerase chain reaction, fluorescent fragment analysis	Applied Biosystems GeneAmp PCR System + Thermal Cycler, PCR System	N/A	N/A	N/A	N/A	N/A	Microsatellite stable/high microsatellite instability (MSI-H), low/equivocal microsatellite instability (MSI-L)
MYCF FISH	MYC - FISH	Fluorescent In Situ Hybridization	Bioview	N/A	Negative for breakapart or extra chromosome 8 signals	N/A	N/A	N/A	positive/negative for breakapart
Myeloid Neoplasm Sequencing Panel	AML NGS, AML Sequencing, MDS sequencing	Next Generation Sequencing	Miseq Illumina	N/A	No pathogenic mutations detected	N/A	N/A	N/A	No mutations detected; pathogenic mutation(s) detected; variant(s) of indeterminate significance detected
Myotonic Dystrophy	DMPK Gene	Polymerase chain reaction, fluorescent capillary fragment analysis	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Negative; Premutation; Full Mutation	N/A	Gene Reviews	N/A	Negative; Premutation; Full Mutation
NPM1 Mutation Analysis, Quant	nucleophosmin, NPM exon 12 mutation	PCR	Raindance Technology	% mutant/total events	<0.02% or less than 5 (A) or 20 (B,D) mutant events	N/A	Validation	0.02 - 100.00	Detected Result: 0.1-100% mutant/total events percent ratio in a case with a discrete cluster of at least 5 (A) or 20 (B,D) mutant events. Not mutant/total events percent ratio after rounding or fewer than 5 (A) or 20 (B,D) mutant events
NRAS Mutation	NRAS codon 12, 13, 61	Pyrosequencing	Applied Biosystems GeneAmp PCR system + Qiagen Pyromark	N/A	Not detected	N/A	N/A	N/A	NRAS mutation detected/not detected
Oral Rinse Sample (Molecular)	NGS normal, molecular normal, comprehensive genomic panel	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pancreatic Fluid, Mutation Analysis, Request	cyst fluid mutation analysis	NGS	Ion GeneStudio	N/A	N/A	N/A	N/A	N/A	2% for hotspot mutations, 4% for other mutations
Prothrombin A20120G Mutation	G20210A, Prothrombin Mutation	Fluorescent capillary fragment analysis, restriction fragment length polymorphism	Applied Biosystems GeneAmp PCR system + Genetic Analyzer	N/A	Wild type, Heterozygous, Homozygous	N/A	Gene Reviews	N/A	Wild type, Heterozygous, Homozygous
PML-RARA, APL, Quant PCR	15:17, PML, APL, retinoic acid	Real-time PCR	ABI Fast 7500	NCN = % PML-RARA/ABL1	N/A	N/A	Blood samples with no history of AML-M3	NCN > 1	0-100
PTEN Gene - Mutation	Cowden syndrome, Bamayan-Riley-Ruvalcaba syndrome (BRR), Multiple hamartoma syndrome, Phosphatase and Tensin Homolog (PTEN)	Fluorescent fragment analysis, sequence analysis (non-NGS)	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Negative; Mutation Present	N/A	Gene Reviews	N/A	Negative; Mutation Present
RET Rearrangement	RET FISH - FISH	Fluorescent In Situ Hybridization	Bioview	N/A	Negative for breakapart	N/A	N/A	N/A	positive/negative for breakapart
ROSI Rearrangement	ROSI - FISH	Fluorescent In Situ Hybridization	Bioview	N/A	Negative for breakapart	N/A	N/A	N/A	positive/negative for breakapart
SMN1/SMN2 DNA Sequencing	Survival of Motor Neuron 1 (SMN1)	PCR, chain-termination sequencing, capillary electrophoresis	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	Negative; Mutation Present	N/A	Gene Reviews	N/A	Negative; Mutation Present
Spinal Musc Atrophy Dosage - Carrier Study	SMA Carrier test, SMA compound heterozygote testing, SMN1 gene	Semi-quantitative PCR, fluorescent capillary fragment analysis, restriction fragment length polymorphism	Applied Biosystems GeneAmp PCR System + Genetic Analyzer	N/A	1 copy; 2 copy	N/A	Gene Reviews	N/A	1 copy; 2 copy

Spinal Muscular Atrophy - Diagnostic	Werdnig-Hoffman, Kugelberg-Welander, SMN1 gene	Semi-quantitative PCR, fluorescent capillary fragment analysis, restriction fragment length polymorphism	Applied Bioystems GeneAmp PCR System + Genetic Analyzer	N/A	Negative, Homozygous deletion	N/A	Gene Reviews	N/A	1 copy, 2 copy Negative; Homozygous deletion
Tumor Hotspot Mutation Panel	Solid Tumor Mutation Panel (Cancer Hotspot)	Next Generation Sequencing	Ion Torrent S5	N/A	No pathogenic mutations detected	N/A	N/A	N/A	mutation(s) detected/not detected
FISH, SS18 (SYT1) Rearrangement, Sign-out	SYT-FISH, SS18-FISH	Clonal amplification, fluorescent fragment analysis, multiplex polymerase chain reaction	Bioview	N/A	Negative for breakapart	N/A	N/A	N/A	positive/negative for breakapart
T Cell Receptor Gene Rearrangement	T-cell clonality, TCR beta, T-cell PCR	Polymerase Chain Reaction	Applied Bioystems GeneAmp PCR System + Genetic Analyzer	N/A	Negative	N/A	N/A	N/A	negative / oligoclonal / clonal TCRB rearrangements
TCRG, PCR	T-cell clonality, TCR gamma, T-cell PCR	Polymerase Chain Reaction	Applied Bioystems GeneAmp PCR System + Genetic Analyzer	N/A	Negative	N/A	N/A	N/A	negative / oligoclonal / clonal TCRG rearrangements
FISH, XY, Sign-out	XY FISH - FISH	Pyrosequencing	Bioview	N/A	Negative for deletion	N/A	N/A	N/A	positive/negative for deletion
CD1a	Thymocyte Viability	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
7AAD	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
Alpha/Beta	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
cCD3	T-CELL	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
cCD79a	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD10	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD103	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD107a	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD107b	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD117	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD11b	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD11c	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD123	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD127	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD13	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD134	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD138	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD14	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD15	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD158b	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD159a	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD16	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD16-/CD56-/CD3-/CD117-	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	5.2-23% 163-619 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD16-/CD56-/CD3+/CD117-	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	57.2-82.8% 570-2430 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD16-/CD56-/CD3+/CD117+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-0.0% 0.0 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD16-/CD56+/CD3-/CD117-	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.2-1.1% 3-24 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD16-/CD56+/CD3-/CD117+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-0.0% 0.0 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD16-/CD56+/CD3+/CD117-	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-7.0% 0-157 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD16-/CD56+/CD3+/CD117+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-0.0% 0-0 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD16+/CD56-/CD3-/CD117-	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-5.2% 0-122 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD16+/CD56-/CD3+/CD117-	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-1.6% 0-36 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD16+/CD56-/CD3+/CD117+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-0.0% 0.0 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD16+/CD56+/CD3-/CD117-	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-17.9% 0-446 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD16+/CD56+/CD3-/CD117+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-0.0% 0-0 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD16+/CD56+/CD3+/CD117-	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-2.1% 0-49 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD16+/CD56+/CD3+/CD117+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-0.0% 0-0 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD183	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD19	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD19	N/A	Flow Cytometry	Navios Flow Cytometer	% / absolutes	0.2-1.0% 17-750 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD19+/CD80-	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	3.6-20.5% 121-557 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD19+/CD80-/CD86-	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	3.2-19.8% 114-534 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD19+/CD80+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-0.4% 0-11 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD19+/CD80+/CD86+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-0.0% 0-0 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD19+/CD86-	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	2.9-20.7% 113-554 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD19+/CD86+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-0.5% 0-14 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD193	CCR3	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD194	CCR4	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD2	T11	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD2	T11	Flow Cytometry	Navios Flow Cytometer	% / absolutes	70.0-92.0% 580-3250 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD20	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD20	N/A	Flow Cytometry	Navios Flow Cytometer	% / absolutes	2.0-21.0% 20-1008 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD22	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD23	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD235	Glycophorin A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD24	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD25	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD26	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD27	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD28	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD29	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD294	N/A	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD3	T-CELL	Flow Cytometry	Navios Flow Cytometer	% / absolutes	N/A	N/A	N/A	N/A	0.0-100.0%
CD3	T-CELL	Flow Cytometry	Navios Flow Cytometer	%	N/A	N/A	N/A	N/A	0.0-100.0%
CD3	T-CELL	Flow Cytometry	Navios Flow Cytometer	% / absolutes	59.0-92.0% 490-3284 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD3-/CD5616-/CD314+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-0.2% 0-6 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD3-/CD5616-/CD63+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.2-2.1% 0-48 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD3-/CD5616-/CD69+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-0.2% 0-5 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD3-/CD5616+/CD107a107b+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-0.0% 0-0 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD3-/CD5616+/CD158b+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.7-1.1% 0-178 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD3-/CD5616+/CD159a+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-11.6% 0-0 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD3-/CD5616+/CD159a+/CD107a107b+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-0.0% 0-0 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD3-/CD5616+/CD314+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-14.8% 0-356 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD3-/CD5616+/CD63+/CD314+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-0.2% 0-48 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%
CD3-/CD5616+/CD69+	N/A	Flow Cytometry	Navios Flow Cytometer	% / ABS	0.0-1.1% 0-24 ABS/mm ³	N/A	OSU Flow Lab established	N/A	0.0-100.0%

