LABORATORY REFERENCE RANGES December 2016

Test Name	Sex	Age	Normal Range	UNITS	Critical Value(s)
KEY: SEX: B = Both, F = Female, M = Male // **AGE**: ages represent ranges for a patient who is that age and older, but less than the next highest age (Example: Ages listed- 0,10,16 : 0 represents age 0-9, 10 represents age 10 -15, 16 represents age 16 and up) If only 0 is entered for age, then ranges apply to any age. Cells highlighted in Orange have additional interpretive text that follows the worksheet.					
A/G, ALBUMIN/GLOBULIN RATIO	B	0	1.0-2.0	None	
ACETAMINOPHEN	B	0	10-30	UG/ML	< 31
ALBUMIN	B	0	3.5-5.0	GM/DL	
ACETONE	B	0	Negative	None	
ALCOHOL, SERUM	B	0	neg=<10	MG/DL	
ALCOHOL, URINE	B	0	Negative	None	
ALKALINE PHOSPHATASE	B	0	38-126	U/L	
ALPHA FETOPROTEIN TUMOR MRKR, Serum	B	0	<7.51	NG/ML	
ALT, SGPT	B	0	10-69	U/L	
AMMONIA	B	0	9.0-30	UMOL/L	
AMNIO STAT-FETAL LUNG MATURITY	F	0	See Note	None	
AMPHETAMINES, URINE	B	0	Negative	NG/ML	
AMYLASE	B	0	30.0-110	U/L	
AMYLASE/CREATININE RATIO	B	0	1.3-4.3	None	
AMYLASE/Hour, Urine	B	0	1-17	U/Hour	
AMYLASE, URINE RANDOM	B	0	None established	U/L	
AMYLASE, URINE 24 HOUR	B	0	None established	U/HR	
ANA SCREEN	B	0	NEG <1:80	None	
ANION GAP, Serum or Plasma	B	0	5-15	None	
ANION GAP, Point of Care , Whole Blood	B	0	5-11	None	
AST, SGOT	B	0	15-59	U/L	
BARBITURATES, URINE	B	0	Negative	NG/ML	
BENZODIAZEPINE, URINE	B	0	Negative	NG/ML	
BILIRUBIN, Conjugated	B	0	0-0.0	MG/DL	
BILIRUBIN, DIRECT	B	0	0.0-0.4	MG/DL	
BILIRUBIN, NEONATAL	B	1Y	1.0-10.5	MG/DL	>20.1
BILIRUBIN, TOTAL	B	0	0.2-1.3	MG/DL	>20.1
BILIRUBIN, UNCONJUGATED	B	1	0.0-10.5	MG/DL	
BILIRUBIN, UNCONJUGATED	B	16	0.0-1.1	MG/DL	
BNP, N-TERMINAL PRO BNP	B	0	0.00-300.00	PG/ML	
BUN	F	0	7-17	MG/DL	>71
BUN	M	0	9-20	MG/DL	>71
BUN - Point Of Care	B	0	8-20	MG/DL	>71
BUPRENORPHINE, URINE	B	0	Negative <10	NG/ML	
C-PEPTIDE	B	0	0.9-7.1	NG/ML	
C-REACTIVE PROTEIN (Acute Infection)	B	28D	0-0.9	MG/DL	>5.1
C-REACTIVE PROTEIN (Acute Infection)	B	0	0-0.10	MG/DL	
C-REACTIVE PROTEIN HIGHLY SENSITIVE, Cardio CR	B	0	See Note	MG/L	
CA 125, Cancer Antigen CA125	B	0	<=35	U/ML	
CALCIUM	B	0	8.4-10.2	MG/DL	<6.9, >13.1
CALCIUM, IONIZED Whole Blood (Point of Care)	B	28D	1.12-1.32	MMOL/L	<0.89, >1.71
CALCIUM, IONIZED Whole Blood (Point of Care)	B	500	1.12-1.32	MMOL/L	<0.79, >1.55
CALCIUM, URINE 24 HR	B	0	100-300	MG/24H	
CANNABINOIDS, URINE (Marijuana)	B	0	Negative	NG/ML	
CARBAMAZAPINE	B	0	4.0-12.0	UG/ML	>15.1

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CEA	B	0	See Note	NG/ML	
CEA, Fluid	B	0	None established	ng/mL	
CHLORIDE	B	0	98-107	MMOL/L	
CHLORIDE - Point of Care, Whole Blood	B	0	98-110	MMOL/L	
CHOLESTEROL	B	0	120-200	MG/DL	
CK	F	0	30-135	U/L	
CK	M	0	55-170	U/L	
CKMB	B	0	0.22-4.50	NG/ML	
CKMB PERCENT	B	0	0.0-2.5	%	
COCAINE, URINE	B	0	Negative	NG/ML	
CO2, Carbon Dioxide, Serum or plasma	B	0	22-32	MMOL/L	<9, >61
CO2, Carbon Dioxide, Point of Care, Whole Blood	B	0	22-32	MMOL/L	<9, >61
CORTISOL, AM	B	0	4.46-22.7	UG/DL	
CORTISOL, PM	B	0	1.7-14.1	UG/DL	
CORTISOL, Random	B	0	None established	UG/DL	
COSYINTROPIN STIMULATION -Baseline	B	0	See note	UG/DL	
COSYINTROPIN STIMULATION -Post	B	0	See note	UG/DL	
CREATININE CLEARANCE 24 Hour	B	0	70-130	ML/MIN	
CREATININE, Serum	F	0	0.52-1.04	MG/DL	>4.01
CREATININE, Serum	M	0	0.66-1.25	MG/DL	>4.01
CREATININE , Whole Blood (Point of Care)	B	0	0.6-1.3	MG/DL	>4.1
CREATININE, URINE 24 HR	F	0	0.8-1.8	GM/24 HR	
CREATININE, URINE 24 HR	M	0	1.0-2.0	GM/24 HR	
DHEA-S	F	0	35-430	UG/DL	
DHEA-S	M	0	80-560	UG/DL	
DIGOXIN	B	0	0.8-2.0	NG/ML	>3.1
DILANTIN	B	0	10.0-20.0	UG/ML	>30
ESTRADIOL	B	0	See Note	PG/ML	
FERRITIN	F	50	6.24-137.0	NG/ML	
FERRITIN	F	51-500	11.10-264.0	NG/ML	
FERRITIN	M	0	17.9-464.0	NG/ML	
FETAL FIBRONECTIN	F	22-35 Weeks Pregnancy	Negative	None	
FOLATE	B	0	>2.79	NG/ML	
FSH, FOLLICLE STIMULATING HORMONE	B	0	See Note	MIU/ML	
GASTROCCULT	B	0	Negative		
GENTAMYCIN, PEAK	B	0	5.0-8.0	UG/ML	>12.1
GENTAMYCN, TROUGH	B	0	0.0-2.0	UG/ML	>2.1
GGT	F	0	12-43	U/L	
GGT	M	0	15-73	U/L	
GFR, GLOMERULAR FILTRATION RATE	B	0	See note	NONE	
GLUCOSE, Estimated Plasma from A1c	B	0	None established	MG/DL	
GLUCOSE, Non-Fasting	B	0	65-99	MG/DL	<34, >451
GLUCOSE, Non-Fasting	B	2D	70-99	MG/DL	<34, >451
GLUCOSE, Non-Fasting	B	500	70-99	MG/DL	<49, >451
GLUCOSE, FASTING (Tolerance panels)	B	0	74-106	MG/DL	<49, >451

CHEMISTRY

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GLUCOSE, 2 HR POST PRANDIAL	B	0	70-140	MG/DL	<49, >451
GLUCOSE, 1 HR OB	F	0	65-140	MG/DL	<49, >451
GLUCOSE, CSF	B	0	40-70	MG/DL	<34, >451
GLUCOSE - Point of Care	B	500	70-99	MG/DL	<49, >451
GLUCOSE - Point of Care	B	2 Day	70-99	MG/DL	<34, >451
GLUCOSE - Point of Care	B	0 Day	65-99	MG/DL	<34, >451
GLUCOSE TOLERANCE, FASTING	B	0	74-106	MG/DL	<49, >451
GLUCOSE TOLERANCE 1/2 HR	B	0	None established	MG/DL	<49, >451
GLUCOSE TOLERANCE 1 HR	B	0	None established	MG/DL	<49, >451
GLUCOSE TOLERANCE 1 1/2 HR	B	0	None established	MG/DL	<49, >451
GLUCOSE TOLERANCE 2 HR	B	0	65-139	MG/DL	<49, >451
GLUCOSE TOLERANCE 3 HR	B	0	None established	MG/DL	<49, >451
GLUCOSE TOLERANCE 4 HR	B	0	None established	MG/DL	<49, >451
GLUCOSE TOLERANCE 5 HR	B	0	None established	MG/DL	<49, >451
GLUCOSE TOLERANCE 6 HR	B	0	None established	MG/DL	<49, >451
GLUCOSE TOLERANCE OB, FASTING (75 Gram Loading dos	F	0	65-92	MG/DL	<49, >451
GLUCOSE TOLERANCE OB, 1 HR (75 Gram Loading dose)	F	0	65-180	MG/DL	<49, >451
GLUCOSE TOLERANCE OB, 2 HR (75 Gram Loading Dose)	F	0	65-153	MG/DL	<49, >451
GLUCOSE TOLERANCE OB, FASTING (100 Gram Loading do	F	0	65-95	MG/DL	<49, >451
GLUCOSE TOLERANCE OB, 1 HR (100 Gram Loading dose)	F	0	65-180	MG/DL	<49, >451
GLUCOSE TOLERANCE OB, 2 HR (100 Gram Loading Dose)	F	0	65-155	MG/DL	<49, >451
GLUCOSE TOLERANCE OB, 3 HR (100 Gram Loading dose)	F	0	70-140	MG/DL	<49, >451
GLUCOSE, URINE 24 HR	B	0	20-500	MG/24 Hr	
GLUCOSE, URINE RANDOM	B	0	None established	MG/DL	
H. PYLORI ANTIBODY IgG	B	0	Negative	None	
HCG QUALITATIVE, Serum	F	0	Negative	None	
HCG QUALITATIVE, Rapid, Serum or Plasma	F	0	Negative	None	
HCG QUALITATIVE, Urine	F	1	Negative	None	
HCG QUANTITATIVE, Serum	F	0	See Note	MIU/ML	
HDL CHOLESTEROL	B	0	40-60	MG/DL	
HEPATITIS A AB, IGM	B	0	NON REAC	None	
HEPATITIS B CORE AB, IGM	B	0	NON REAC	None	
HEPATITIS B CORE AB, TOTAL	B	0	NON REAC	None	
HEPATITIS B SURFACE AB	B	0	NON REAC	None	
HEPATITIS B SURFACE AG	B	0	NON REAC	None	
HEPATITIS C ANTIBODY	B	0	NON REAC	None	
HEMOGLOBIN A1C	B	0	<5.7	%	
HIV 1 & 2 ANTIBODY SCREEN (As part of 3rd Gen Ab/Ag Panel)	B	0	NON REAC	None	
HIV P24 ANTIGEN (As part of 3rd Gen Ab/Ag Panel)	B	0	NON REAC	None	
HOMOCYSTEINE	F	0	4.7-12.6	UMOL/L	
HOMOCYSTEINE	M	0	6.6-14.8	UMOL/L	
INSULIN, FASTING	B	0	Less than 29.10	MU/L	
INSULIN, RANDOM	B	0	None established	MU/L	
IRON BINDING SATURATION	B	0	20-50	%	
IRON BINDING, TOTAL, TIBC	F	0	265-497	UG/DL	

CHEMISTRY

LABORATORY REFERENCE RANGES December 2016

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IRON BINDING, TOTAL, TIBC	M	0	261-462	UG/DL	
IRON	F	0	37-170	UG/DL	
IRON	M	0	49-181	UG/DL	
LDH, Lactate Dehydrogenase	B	0	313-618	U/L	
LDH, Lactate Dehydrogenase, Body Fluid	B	0	None established	U/L	
LACTIC ACID, FLUID	B	0	None established	MMOL/L	
LACTIC ACID, SERUM	B	0	0.7-2.1	MMOL/L	
LDL Cholesterol, CALCULATED	B	0	50-129	MG/DL	
LIPASE	B	0	23-300	U/L	
LITHIUM	B	0	0.6-1.2	MMOL/L	>1.7
MAGNESIUM	B	0	1.6-2.3	MG/DL	<0.9, >4.1
METHADONE, URINE	B	0	Negative	NG/ML	
METHAQUALONE, URINE	B	0	Negative	NG/ML	
MICROALBUMIN, URINE 24 HR	B	0	0-30	MG/24H	
MICROALBUMIN, URINE RANDOM	B	0	None established	MG/DL	
MICROALBUMIN/CREAT RATIO	B	0	0-30	UG/MG	
MICROALBUMIN/MINUTE	B	0	0-20	UG/MIN	
MONO TEST	B	0	Negative	None	
MYOGLOBIN	F	0	0.0-61.5	NG/ML	
MYOGLOBIN	M	0	0.0-121.0	NG/ML	
OCCULT BLOOD, FECAL - GUAIC	B	0	Negative	None	
OCCULT BLOOD, FECAL - IMMUNOCHEMICAL	B	0	Negative	None	
OPIATES, URINE	B	0	Negative	NG/ML	
OSMOLALITY, SERUM	B	0	275-295	mOsm/kg	
OSMOLALITY, URINE	B	0	500-850	mOsm/kg	
PHENCYCLIDINE, PCP URINE	B	0	Negative	NG/ML	
PHOSPHORUS	B	0	2.5-4.5	MG/DL	<0.9, >8.1
POTASSIUM, Serum	B	0	3.5-5.1	MMOL/L	<2.8, >6.6
POTASSIUM, Whole Blood (Point of Care)	B	0	3.5-4.9	MMOL/L	<2.9, >6.6
POTASSIUM, 24 HOUR URINE	B	0	25.0-125.0	MMOL/24HR	
POTASSIUM, Urine	B	0	None established	MMOL/L	
PREALBUMIN, Serum	B	0	17.6-36.0	MG/DL	
PROGESTERONE	B	0	See Note	NG/ML	
PROPOXYPHENE, URINE	B	0	Negative	NG/ML	
PROTEIN, URINE 24 HR	B	0	42-225	MG/24 HR	
PROTEIN/CREAT RATIO	B	0	None established	NONE	
PROTEIN CSF	B	6M	12-60 See Note	MG/DL	
PROTEIN, FLUID	B	0	None established	GM/DL	
PROTEIN, TOTAL	B	0	6.3-8.2	GM/DL	
PSA	B	0	<4.0	NG/ML	
PSA, FREE	M	0	None established	NG/ML	
PSA, Percent Free	M	0	None established	%	
PTH - Intact	B	0	12-65	PG/ML	
PTH - Intraoperative	B	0	8.0-54.0	PG/ML	
QuantiFERON-Gold TB Screen	B	0	Negative	None	

CHEMISTRY

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RHEUMATOID FACTOR	B	0	<12	IU/ML	
RUBELLA, IGG	B	0	See Note	IU/ML	
SALICYLATE	B	0	See Note	MG/DL	>31
SEX HORMONE BINDING GLOBULIN	F	0	18-144	NMOL/L	
SEX HORMONE BINDING GLOBULIN	M	0	10-57	NMOL/L	
SODIUM, Serum	B	0	137-146	MMOL/L	<119, >161
SODIUM, Whole Blood (Point of Care)	B	0	138-146	MMOL/L	<119, >161
SODIUM, URINE 24 HR	B	0	40-220	MMOL/24 HRS	
SODIUM, URINE RANDOM	B	0	None established	MMOL/L	
SODIUM, URINE	B	0	None established	MMOL/24 HR	
SYPHILIS SCREEN	B	0	Non-Reactive	NONE	
T3, FREE	B	0	2.77-5.27	PG/ML	
T3, TOTAL	B	16	0.97-1.69	NG/ML	
T3, TOTAL	B	10	0.94-2.41	NG/ML	
T3, TOTAL	B	5	1.05-2.69	NG/ML	
T3, TOTAL	B	12M	1.02-2.64	NG/ML	
T3, TOTAL	B	4W	0.99-3.10	NG/ML	
T3, TOTAL	B	6D	1.00-3.80	NG/ML	
T4	B	16	5.53-11.0	NG/DL	<2.99, >25.01
T4	B	15	5.60-11.70	UG/DL	<2.99, >25.01
T4	B	10	6.40-13.30	UG/DL	<2.99, >25.01
T4	B	5	7.30-15.00	UG/DL	<2.99, >25.01
T4	B	12M	7.20-15.60	UG/DL	<2.99, >25.01
T4	B	4W	8.20-16.60	UG/DL	<2.99, >25.01
T4	B	6D	11.00-21.50	UG/DL	<2.99, >25.01
T4, FREE	B	16	0.85-1.93	NG/DL	
T4, FREE	B	80	0.78-2.44	NG/DL	
T4, FREE	B	60	0.64-1.79	NG/DL	
T4, FREE	B	40	0.79-2.35	NG/DL	
T4, FREE	B	20	0.78-2.49	NG/DL	
T4, FREE	B	10D	0.60-2.0	NG/DL	
TESTOSTERONE	B	0	See note	NG/DL	
TESTOSTERONE, FREE Percent (Over Age 18)	F	0	0.328-2.250	%	
TESTOSTERONE, FREE Percent (Over Age 18)	M	0	1.47-3.210	%	
THEOPHYLLINE	B	0	10-20.0	UG/ML	>25.1
THYROGLOBULIN ANTIBODY	B	0	0.0-40	IU/ML	
THYROGLOBULIN QUANTITATIVE	B	0	1.6-59.9	NG/ML	
THYROID PEROXIDASE ANTIBODY	B	0	0.0-35.0	IU/ML	
TOBRAMYCIN, PEAK	B	0	5.0-8.0	UG/ML	>12.1
TOBRAMYCIN, TROUGH	B	0	0.0-2.0	UG/ML	>2.1
TOBRAMYCIN, RANDOM	B	0	None established	UG/ML	
TRANSFERIN	B	0	206-381	MG/DL	
TROPONIN	B	0	0.00-0.40	NG/ML	
TRIGLYCERIDE	B	0	0-150	MG/DL	
TRIGLYCERIDE, FLUID	B	0	None established	MG/DL	

CHEMISTRY

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TSH, ULTRA SENSITIVE 3rd Generation	B	16	0.465-4.680	MIU/ML	
TSH, ULTRA SENSITIVE 3rd Generation	B	15	0.600-6.300	MIU/ML	
TSH, ULTRA SENSITIVE 3rd Generation	B	4W	0.600-10.000	MIU/ML	
TSH, ULTRA SENSITIVE 3rd Generation	B	6D	2.500-13.300	MIU/ML	
URIC ACID, Serum or plasma	F	0	2.5-6.2	MG/DL	
URIC ACID, Serum of plasma	M	0	3.5-8.5	MG/DL	
URIC ACID, RASBURICASE	F	0	2.5-6.2	MG/DL	
URIC ACID, RASBURICASE	M	0	3.5-8.5	MG/DL	
UREA NITROGEN,URINE 24 HR	B	0	12-20	GM/24 HR	
UREA NITROGEN,URINE RANDOM	B	0	None established	MG/DL	
VALPROIC ACID	B	0	50-120	UG/ML	>151
VANCOMYCIN, PEAK	B	0	30-40	UG/ML	>40.1
VANCOMYCIN, RANDOM	B	0	None established	UG/ML	
VANCOMYCIN, TROUGH	B	0	10.0-20.0	UG/ML	>20.1
VITAMIN B-12	B	0	239-931	PG/ML	
VITAMIN D, 25-HYDROXY	B	0	30.0-100.0	NG/ML	>100.1
VLDL, LIPOPROTEIN Calculated	B	0	10-31	MG/DL	

LABORATORY REFERENCE RANGES December 2016

Cell: E4
Comment: ACETAMINOPHEN:
If acute acetaminophen
toxicity is suspected, correlation of levels with hours after
ingestion is required for interpretation (using the
Rumack-Matthew nomogram). In general, a value of 200 ug/ml
within 4 hours of ingestion or >50 ug/ml at 12 hours predicts
severe liver damage, and treatment with acetylcysteine is
suggested.

Cell: E10
Comment: AFP:
AFP values should not be used as absolute evidence of the
presence or absence of disease.

Values from different labs cannot be used interchangeably
because of difference in assay methods.

Cell: E13
Comment: AMNIO STAT:
A POSITIVE RESULT IS OBTAINED WHEN PG IS PRESENT AT APPROXIMATELY
2 UG/ML OR GREATER; WHICH IS REPORTED TO BE 100% PREDICTIVE OF
MATURITY.

A NEGATIVE RESULT IS OBTAINED WHEN PG IS ABSENT OR PRESENT AT CONCENTRATIONS ASSOCIATED WITH A SIGNIFICANT RISK OF RDS. HOWEVER DEVELOPMENT OF THE CONDITION IS NOT INEVITABLE.

A "WEAK POSITIVE" RESULT IS OBTAINED AT INTERMEDIATE CO
NCENTRATIONS WHICH APPEAR TO BE INDICATIVE OF A RAPIDLY MATURING FETAL LUNG. THIS RESULT MUST BE INTERPRETED WITH CAUTION ESPECIALLY IN CASES OF DIABETIC MELLITUS WHERE THE TRACE PRESENCE OF PG HAS BEEN ASSOCIATED WITH A LOW RISK OF RDS.

Cell: E14
Comment: Amphetamines, Urine:
A negative result indicates a drug level that
is below the cut-off concentrations:

Amphetamines 1000 ng/mL

Cell: E20
Comment: ANA Screen:
Reference range:

<1:80 Negative
>1:80 Positive

Positive values will have reported pattern.

Cell: E24

Comment: Barbiturates, Urine:
A negative result indicates a drug level that
is below the cut-off concentrations:

Barbiturates 200 ng/mL

Cell: E25
Comment: Benzodiazepine, Urine:
A negative result indicates a drug level that
is below the cut-off concentrations:
Benzodiazepines 200 ng/mL

Cell: E32
Comment: BNP:
The recommended cut points for symptomatic patients:
CHF unlikely
Age <50 years 0-300 pg/ml (98% NPV)
Age 50-75 years 0-300 pg/ml (98% NPV)
Age >75 years 0-300 pg/ml (98% NPV)

CHF possible
Age <50 years 300-450 pg/ml
Age 50-75 years 300-900 pg/ml
Age >75 years 300-1800 pg/ml

CHF likely
Age <50 years >450 pg/ml (76% PPV)
Age 50-75 years >900 pg/ml (83% PPV)
Age >75 years >1800 pg/ml (92% PPV)

COMMENT: NPV is Negative Predictive Value, PPV is Positive Predictive Value.

Among patients with dyspnea, NT-proBNP is highly sensitive for the detection of acute congestive heart failure. Following an individual patient's NT-proBNP range over time may be more useful than using a single test result for every patient. An NT-proBNP <300 pg/mL effectively rules out acute congestive heart failure with a 98% negative predictive value.

The "CHF possible" category is a gray zone category, and clinical correlation is suggested. Triage and treat as appropriate.

Marked elevations in NT-proBNP levels may be observed in states other than left ventricular congestive failure, including acute coronary syndromes, right heart strain/failure (including pulmonary embolism and cor pulmonale), critical illness, renal failure, as well as advanced age. Falsely low NT-proBNP in congestive heart failure patients may be observed with increasing body-mass index.

Januzzi, J., et al. The American Journal of Cardiology. Vol 101, Num. 3, 2008.

LABORATORY REFERENCE RANGES December 2016

Cell: E36
Comment: BUPRENORPHINE, URINE:
The cut-off for Buprenorphine is 10 ng/mL.
A sample is considered positive if the level exceeds 10 ng/mL.

Disclaimers/comments:
The Buprenorphine Single Drug Test provides only a qualitative, preliminary analytical result.

Adulterants, such as bleach and/or alum, in urine specimens may produce erroneous results regardless of the analytical method used.

Test does not distinguish between drugs of abuse and certain medications.

Cell: E40
Comment: C-Reactive Protein-Highly Sensitive:
Low Risk <1.0
Average Risk 1.0-3.0
High Risk >3.0
Reference: Paul Ridker, MD. Clinical Chem. 49(4):2003

High sensitive c-reactive protein may be used as an aid in the identification and stratification of individuals at risk for future cardiovascular disease.

Cell: E46
Comment: Cannabinoids, Urine:
A negative result indicates a drug level that is below the cut-off concentrations:
Cannabinoids 20 ng/mL

Cell: E48
Comment: CEA:
Reference range:
Non-Smoker 0.0 - 3.0 (80%)
Smoker 0.0 - 5.0 (16%)

Cell: E57
Comment: Cocaine, Urine:
A negative result indicates a drug level that is below the cut-off concentrations:
Cocaine 300 ng/mL

Cell: E63
Comment: Cosyntropin Stimulation Baseline:
Cortisol Reference Ranges:
AM: (Before 10am) 4.46-22.7 ug/dL
PM: (After 5pm) 1.7-14.1 ug/dL

Cell: E64
Comment: Cosyntropin Stimulation Post Dose:
Cortisol Reference Ranges:

AM: (Before 10am) 4.46-22.7 ug/dL
PM: (After 5pm) 1.7-14.1 ug/dL

Cell: E75
Comment: ESTRADIOL:
Interpretation:

Males: 5.37-65.9 pg/mL

Postmenopausal Females: 5.37-38.4 pg/mL

Ovulating Females:
Follicular: 26.6-161 pg/mL
Pre-ovulatory Peak: 187-382 pg/mL
Luteal Phase: 32.7-201 pg/mL

Cell: E80
Comment: Folate:
Interpretation:

0.00 - 2.79 ng/mL = Deficient
2.79 - >20 ng/mL = Normal

Cell: E81
Comment: FSH:
Interpretation:

Adult Males: Age 19-65 1.55-9.74

Adult Females: Follicular 1.98-11.6
Mid-Cycle 5.14-23.4
Luteal 1.38-9.58
Postmenopausal 21.5-131

Cell: E87
Comment: GFR:
To estimate the glomerular filtration rate for African Americans, multiply the result provided by 1.21. The equation used to estimate the glomerular filtration rate has only been validated for patients 18 to 70 years of age.

Glomerular filtration rate ranges in mL/min/1.73 m2:

>90 Normal
60-89 Mildly Reduced
30-59 Moderately Reduced
15-29 Severely Reduced
<15 Renal Failure

This estimate of renal function assumes steady state and is

not useful if the renal function is changing rapidly or if
the patient is on dialysis

Cell: E88
Comment: Estimated Plasma Glucose:
The estimated mean plasma glucose was calculated using the
equation: 35.6 * %HA1c - 77.3.

Mean plasma glucose levels will generally be ten to twenty
percent higher than mean whole blood glucose levels.

Cell: G91
Comment: GLUCOSE: Inpatient Values for Tight Glycemic Control: Critical value is <70, >451

Cell: E96
Comment: Glucose- Point of Care:
Target goals:

ICU & Non ICU: Pre-meal: 110 -140 mg/dL
Random: 180 mg/dL maximum
Hypoglycemia: Blood glucose below 70 mg/dL

Diabetes Diagnosis Criteria

Fasting mg/dL	Diagnosis
Less than 100	Normal
101-125	Prediabetic
126 and over	Diabetic

Non-fasting mg/dL	Diagnosis
Less than 140	Normal
141-199	Prediabetic
200 and over	Diabetic

Cell: E97
Comment: Glucose - Point of Care:
Target goals:

ICU & Non ICU: Pre-meal: 110 -140 mg/dL
Random: 180 mg/dL maximum
Hypoglycemia: Blood glucose below 70 mg/dL

Diabetes Diagnosis Criteria

Fasting mg/dL	Diagnosis
Less than 100	Normal
101-125	Prediabetic
126 and over	Diabetic

Non-fasting mg/dL	Diagnosis
Less than 140	Normal
141-199	Prediabetic
200 and over	Diabetic

Cell: E98
Comment: Glucose- Point of Care:
Target goals:

ICU & Non ICU: Pre-meal: 110 -140 mg/dL
Random: 180 mg/dL maximum
Hypoglycemia: Blood glucose below 70 mg/dL

Diabetes Diagnosis Criteria

Fasting mg/dL	Diagnosis
Less than 100	Normal
101-125	Prediabetic
126 and over	Diabetic

Non-fasting mg/dL	Diagnosis
Less than 140	Normal
141-199	Prediabetic
200 and over	Diabetic

Cell: E121
Comment: HCG Quant :
Normal Range: Non Pregnant Females <5 mIU/mL

Gestational age:

1-10 weeks:	45 - 256,740 mIU/mL
11-15 weeks:	11,560 - 265,380 mIU/mL
16-22 weeks:	7,480 - 111,955 mIU/mL
23-40 weeks:	1,531 - 101,565 mIU/mL

Cell: E123
Comment: Hepatitis A IgM:
A reactive result indicates an acute or recent Hepatitis A infection.

Cell: E130
Comment: HIV 1 & 2 Antibody Screen:
Tests reported as positive are preliminary positive and will be sent out to a reference lab for confirmatory testing.

Cell: E131
Comment: HIV P24 Antigen Screen:

Reference Range: not detected

Tests reported as positive are preliminary positive and will be sent out to a reference lab for confirmatory testing.

A test that is preliminary positive for HIV-1 P24 Antigen in the absence of reactivity for HIV-1 or HIV-2 Antibodies may indicate an acute HIV-1 infection.

Cell: E149
Comment: Methadone, Urine:
A negative result indicates a drug level that is below the cut-off concentrations:
Methadone 300 ng/mL

Cell: E150
Comment: Methaqualone, Urine
A negative result indicates a drug level that is below the cut-off concentrations:
Methaqualone 300 ng/mL

Cell: E160
Comment: OPIATES, URINE:
A negative result indicates a drug level that is below the cut-off concentrations:
Opiates 300 ng/mL

Cell: E163
Comment: Phencyclidine, Urine:
A negative result indicates a drug level that is below the cut-off concentrations:
Phencyclidine 25 ng/mL

Cell: E170
Comment: PROGESTERONE: Interpretation:
Males: 0.21-1.54
Ovulating Females:
Follicular: 0.14-2.03
Periovulatory: 0.40-4.47
Mid-Luteal: 5.22-22.7
Luteal: 1.42-16.6
Postmenopausal Females: 0.15-1.04
Pregnant Females:
1st Trimester: 6.57-40.3
2nd Trimester: 9.66-62.3
3rd Trimester: 24.5-334

Cell: E171
Comment: PROPOXYPHENE, URINE:

A negative result indicates a drug level that
is below the cut-off concentrations:
Propoxyphene 300 ng/mL

Cell: E174
Comment: PROTEIN CSF:

In comparison with older children and adults,
newborns have relatively high CSF protein leveL

These levels compare with adults only after at
least 3 to 6 months of age.

A study of high-risk neonates without meningit
is showed a mean level of 90 mg/dl for term and
115 mg for pre-term infants, with an upper level
of 170 mg/dl and 150 mg/dl, respectively.

Altered permeability of the blood-CSF barrier
is the favored explanation.

Cell: E179
Comment: PSA, Percent Free:
Valid only when total PSA is in the range of 4 - 10 ng/mL.

Cell: E181
Comment: Intraoperative PTH:
A 50% decline in PTH concentration from the baseline indicates the affected gland was removed. This occurred in 122 Of 125 cases.
AM.J. CLIN. PATH 2004 122:704-712

Cell: E184
Comment: RUBELLA, IGG:
Interpretation:

less than 5 = Non-reactive = Non-immune
5-9.9 = Equivocal*
greater than 10 = Reactive = Immune

*For specimens in the equivocal range, a repeat specimen is
suggested. Antibody levels in the equivocal range for this
assay may be insufficient to protect against clinical illness
upon exposure to the rubella virus.

Cell: E185
Comment: Salicylate:
No standard reference range. Refer to Salicylate
concentration/time course graph, such as Horwanitz 1984, for
interpretation.

LABORATORY REFERENCE RANGES December 2016

Cell: E214
Comment: TESTOSTERONE:
Interpretation:

Females:
Ovulating: 0-73 ng/dL
Post Menopausal: 0-43 ng/dL

Males:
20-49 years: 72-853 ng/dL
>50 years: 129-767 ng/dL

Cell: E225
Comment: TROPONIN:
The upper reference limit (URL) of 0.034 ng/mL is the 99th percentile of a healthy reference population with this methodology (Ortho Vitros). A result above the URL is one of the conditions to be met for a diagnosis of acute myocardial infarction (AMI), but is non-specific. Serial troponin testing may be indicated. A result above 0.120 mg/mL has a sensitivity of 95% and specificity of 93% for AMI.

NOTE: Values from Ortho Vitros methodology SHOULD NOT be compared to values from alternate methodologies, e.g. Siemens Stratus CS.

Cell: E243
Comment: Vitamin D, 25 Hydroxy:

Vitamin D Status	Vitamin D, 25-Hydroxy
Deficiency	< 10 ng/mL
Insufficiency	10-29 ng/mL
Sufficiency	30-100 ng/mL
Toxicity	>100 ng/mL

LABORATORY REFERENCE RANGES December 2016

Test Name	Sex	Age	Normal Range	UNITS	Critical Value(s)
KEY: SEX: B = Both, F = Female, M = Male // **AGE**: ages represent ranges for a patient who is that age and older, but less than the next highest age (Example: Ages listed- 0,10,16 : 0 represents age 0-9, 10 represents age 10 -15, 16 represents age 16 and up) If only 0 is entered for age, then ranges apply to any age.					
WBC	B	16	4.8-10.8	TH/UL	<0.9, >50.1
WBC	B	16	5.0-13.5	TH/UL	<0.9, >50.1
WBC	B	10	5.0-14.5	TH/UL	<0.9, >50.1
WBC	B	6	5.5-15.5	TH/UL	<0.9, >50.1
WBC	B	2	5.5-17.0	TH/UL	<0.9, >50.1
WBC	B	1	5.5-17.5	TH/UL	<0.9, >50.1
WBC	B	6M	5.0-19.5	TH/UL	<0.9, >50.1
WBC	B	1M	5.0-20.0	TH/UL	<0.9, >50.1
WBC	B	14D	5.0-21.0	TH/UL	<0.9, >50.1
WBC	B	7D	9.4-38.0	TH/UL	<0.9, >50.1
WBC	B	1D	9.0-30.0	TH/UL	<0.9, >50.1
RBC	F	100+	4.20-5.40	MILL/UL	
RBC	F	16	4.10-5.10	MILL/UL	
RBC	F	10	4.00-5.20	MILL/UL	
RBC	F	6	2.70-4.90	MILL/UL	
RBC	F	2	3.70-5.30	MILL/UL	
RBC	F	1	3.10-4.50	MILL/UL	
RBC	F	6M	2.70-4.90	MILL/UL	
RBC	F	2M	3.00-5.40	MILL/UL	
RBC	F	1M	3.60-6.20	MILL/UL	
RBC	F	14D	3.90-6.30	MILL/UL	
RBC	F	7D	4.00-6.00	MILL/UL	
RBC	F	1D	3.90-5.90	MILL/UL	
RBC	M	16	4.50-5.30	MILL/UL	
RBC	M	16	4.50-5.30	MILL/UL	
RBC	M	10	4.00-5.20	MILL/UL	
RBC	M	6	2.70-4.90	MILL/UL	
RBC	M	2	3.70-5.30	MILL/UL	
RBC	M	1	3.10-4.50	MILL/UL	
RBC	M	6M	2.70-4.90	MILL/UL	
RBC	M	2M	3.00-5.40	MILL/UL	
RBC	M	1M	3.60-6.20	MILL/UL	
RBC	M	14D	3.90-6.30	MILL/UL	
RBC	M	7D	4.00-6.00	MILL/UL	
RBC	M	1D	3.90-5.90	MILL/UL	
HGB	F	100+	12.0-16.0	GM/DL	<6.9, >20.1
HGB	F	16	13.0-16.0	GM/DL	<6.9, >20.1
HGB	F	10	11.5-15.5	GM/DL	<6.9, >20.1
HGB	F	6	11.5-13.5	GM/DL	<6.9, >20.1

LABORATORY REFERENCE RANGES December 2016

Test Name	Sex	Age	Normal Range	UNITS	Critical Value(s)
HGB	F	2	10.5-13.5	GM/DL	<6.9, >20.1
HGB	F	1	9.5-13.5	GM/DL	<6.9, >20.1
HGB	F	6M	9.0-14.0	GM/DL	<6.9, >20.1
HGB	F	2M	10.0-18.0	GM/DL	<6.9, >20.1
HGB	F	1M	12.5-20.5	GM/DL	<6.9, >20.1
HGB	F	14D	13.5-21.5	GM/DL	<6.9, >20.1
HGB	F	7D	14.5-21.9	GM/DL	<6.9, >20.1
HGB	F	1D	13.6-19.6	GM/DL	<6.9, >20.1
HGB	M	16	13.6-17.4	GM/DL	<6.9, >20.1
HGB	M	16	13.0-16.0	GM/DL	<6.9, >20.1
HGB	M	10	11.5-15.5	GM/DL	<6.9, >20.1
HGB	M	6	11.5-13.5	GM/DL	<6.9, >20.1
HGB	M	2	10.5-13.5	GM/DL	<6.9, >20.1
HGB	M	1	9.5-13.5	GM/DL	<6.9, >20.1
HGB	M	6M	9.0-14.0	GM/DL	<6.9, >20.1
HGB	M	2M	10.0-18.0	GM/DL	<6.9, >20.1
HGB	M	1M	12.5-20.5	GM/DL	<6.9, >20.1
HGB	M	14D	13.5-21.5	GM/DL	<6.9, >20.1
HGB	M	7D	14.5-21.9	GM/DL	<6.9, >20.1
HGB	M	1D	13.6-19.6	GM/DL	<6.9, >20.1
HGB - Point of Care- Calculated	B	0	12.0-17.0	GM/DL	<7.9, >18.0
HCT	F	99	37.0-47.0	%	<20.9, >60.1
HCT	F	16	36.0-47.0	%	<20.9, >60.1
HCT	F	10	35.0-45.0	%	<20.9, >60.1
HCT	F	6	34.0-40.0	%	<20.9, >60.1
HCT	F	2	33.0-39.0	%	<20.9, >60.1
HCT	F	1	29.0-41.0	%	<20.9, >60.1
HCT	F	6M	28.0-42.0	%	<20.9, >60.1
HCT	F	2M	31.0-51.0	%	<20.9, >60.1
HCT	F	1M	39.0-63.0	%	<30.9, >70.1
HCT	F	14D	42.0-62.0	%	<30.9, >70.1
HCT	F	7D	45.0-67.0	%	<30.9, >70.1
HCT	F	1D	42.0-60.0	%	<30.9, >70.1
HCT	M	16	42.0-52.0	%	<20.9, >60.1
HCT	M	16	37.0-49.0	%	<20.9, >60.1
HCT	M	10	35.0-45.0	%	<20.9, >60.1
HCT	M	6	34.0-40.0	%	<20.9, >60.1
HCT	M	2	33.0-39.0	%	<20.9, >60.1
HCT	M	1	29.0-41.0	%	<20.9, >60.1
HCT	M	6M	28.0-42.0	%	<20.9, >60.1
HCT	M	2M	31.0-51.0	%	<20.9, >60.1
HCT	M	1M	39.0-63.0	%	<30.9, >70.1

LABORATORY REFERENCE RANGES December 2016

Test Name	Sex	Age	Normal Range	UNITS	Critical Value(s)
HCT	M	14D	42.0-62.0	%	<30.9, >70.1
HCT	M	7D	45.0-67.0	%	<30.9, >70.1
HCT	M	1D	42.0-60.0	%	<30.9, >70.1
MCV	F	16	81.0-97.0	FL	
MCV	F	16	78.0-102.0	FL	
MCV	F	10	77.0-95.0	FL	
MCV	F	6	75.0-87.0	FL	
MCV	F	2	70.0-86.0	FL	
MCV	F	1	74.0-108.0	FL	
MCV	F	6M	77.0-117.0	FL	
MCV	F	2M	85.0-123.0	FL	
MCV	F	1M	86.0-124.0	FL	
MCV	F	14D	88.0-126.0	FL	
MCV	F	7D	95.0-121.0	FL	
MCV	F	1D	98.0-118.0	FL	
MCV	M	16	80.0-94.0	FL	
MCV	M	16	78.0-98.0	FL	
MCV	M	10	77.0-95.0	FL	
MCV	M	6	75.0-87.0	FL	
MCV	M	2	70.0-86.0	FL	
MCV	M	1	74.0-108.0	FL	
MCV	M	6M	77.0-117.0	FL	
MCV	M	2M	85.0-123.0	FL	
MCV	M	1M	86.0-124.0	FL	
MCV	M	14D	88.0-126.0	FL	
MCV	M	7D	95.0-121.0	FL	
MCV	M	1D	98.0-118.0	FL	
MCH	B	99	27.0-31.0	PG	
MCH	B	16	25.0-35.0	PG	
MCH	B	10	25.0-33.0	PG	
MCH	B	6	24.0-30.0	PG	
MCH	B	2	23.0-30.0	PG	
MCH	B	1	25.0-35.0	PG	
MCH	B	6M	26.0-34.0	PG	
MCH	B	2M	28.0-40.0	PG	
MCH	B	7D	31.0-38.0	PG	
MCHC	B	16	32.0-36.0	G/DL	
MCHC	B	16	31.0-36.0	G/DL	
MCHC	B	10	30.0-36.0	G/DL	
MCHC	B	6M	29.0-36.0	G/DL	
MCHC	B	1M	28.0-38.0	G/DL	
MCHC	B	7D	30.0-36.0	G/DL	

LABORATORY REFERENCE RANGES December 2016

Test Name	Sex	Age	Normal Range	UNITS	Critical Value(s)
PLT	B	0	150-450	TH/UL	<19
MPV	B	0	7.4-10.4	FL	
NEUTROPHIL % (AUTOMATED)	B	16	40.0-70.0	%	
NEUTROPHIL % (AUTOMATED)	B	16	31.0-69.0	%	
NEUTROPHIL % (AUTOMATED)	B	10	30.0-60.0	%	
NEUTROPHIL % (AUTOMATED)	B	2	26.0-60.0	%	
NEUTROPHIL % (AUTOMATED)	B	6M	27.0-53.0	%	
NEUTROPHIL % (AUTOMATED)	B	2M	28.0-60.0	%	
NEUTROPHIL % (AUTOMATED)	B	1M	28.0-62.0	%	
NEUTROPHIL % (AUTOMATED)	B	7D	32.0-80.0	%	
LYMPHOCYTE % (AUTOMATED)	B	99	21.0-52.0	%	
LYMPHOCYTE % (AUTOMATED)	B	16	25.0-45.0	%	
LYMPHOCYTE % (AUTOMATED)	B	10	20.0-50.0	%	
LYMPHOCYTE % (AUTOMATED)	B	6	25.0-50.0	%	
LYMPHOCYTE % (AUTOMATED)	B	2	40.0-60.0	%	
LYMPHOCYTE % (AUTOMATED)	B	1	35.0-61.0	%	
LYMPHOCYTE % (AUTOMATED)	B	6M	33.0-63.0	%	
LYMPHOCYTE % (AUTOMATED)	B	1M	20.0-50.0	%	
LYMPHOCYTE % (AUTOMATED)	B	7D	25.0-35.0	%	
LYMPHOCYTE % (AUTOMATED)	B	1D	20.0-30.0	%	
MONOCYTE % (AUTOMATED)	B	16	0-9.0	%	
MONOCYTE % (AUTOMATED)	B	6M	0-12.0	%	
MONOCYTE % (AUTOMATED)	B	7D	0-9.0	%	
EOSINIPHIL % (AUTOMATED)	B	100+	0-4.0	%	
EOSINIPHIL % (AUTOMATED)	B	16	0-3.0	%	
BASOPHIL % (AUTOMATED)	B	0	0-3.0	%	
NEUTROPHIL ABSOLUTE (AUTOMATED)	B	16	1.8-7.7	TH/UL	
NEUTROPHIL ABSOLUTE (AUTOMATED)	B	16	1.7-8.0	TH/UL	
NEUTROPHIL ABSOLUTE (AUTOMATED)	B	6	1.5-8.0	TH/UL	
NEUTROPHIL ABSOLUTE (AUTOMATED)	B	2	1.5-8.5	TH/UL	
NEUTROPHIL ABSOLUTE (AUTOMATED)	B	1	1.0-8.5	TH/UL	
NEUTROPHIL ABSOLUTE (AUTOMATED)	B	6M	1.9-9.0	TH/UL	
NEUTROPHIL ABSOLUTE (AUTOMATED)	B	2M	1.0-9.0	TH/UL	
NEUTROPHIL ABSOLUTE (AUTOMATED)	B	1M	1.0-9.5	TH/UL	
NEUTROPHIL ABSOLUTE (AUTOMATED)	B	14D	1.5-10.0	TH/UL	
NEUTROPHIL ABSOLUTE (AUTOMATED)	B	7D	5.0-21.0	TH/UL	
NEUTROPHIL ABSOLUTE (AUTOMATED)	B	0	6.0-26.0	TH/UL	
LYMPHOCYTE ABSOLUTE (AUTOMATED)	B	16	1.2-3.4	TH/UL	
LYMPHOCYTE ABSOLUTE (AUTOMATED)	B	16	1.2-5.2	TH/UL	
LYMPHOCYTE ABSOLUTE (AUTOMATED)	B	10	1.5-6.5	TH/UL	
LYMPHOCYTE ABSOLUTE (AUTOMATED)	B	6	1.5-7.0	TH/UL	
LYMPHOCYTE ABSOLUTE (AUTOMATED)	B	2	3.0-9.5	TH/UL	
LYMPHOCYTE ABSOLUTE (AUTOMATED)	B	1	4.0-13.5	TH/UL	
LYMPHOCYTE ABSOLUTE (AUTOMATED)	B	6M	2.5-16.5	TH/UL	
LYMPHOCYTE ABSOLUTE (AUTOMATED)	B	1M	2.0-17.0	TH/UL	
LYMPHOCYTE ABSOLUTE (AUTOMATED)	B	7D	2.0-11.5	TH/UL	
LYMPHOCYTE ABSOLUTE (AUTOMATED)	B	0	2.0-11.0	TH/UL	
MONOCYTE ABSOLUTE (AUTOMATED)	B	100+	0-0.5	TH/UL	
MONOCYTE ABSOLUTE (AUTOMATED)	B	16	0-0.4	TH/UL	

LABORATORY REFERENCE RANGES December 2016

Test Name	Sex	Age	Normal Range	UNITS	Critical Value(s)
MONOCYTE ABSOLUTE (AUTOMATED)	B	6	0-0.5	TH/UL	
MONOCYTE ABSOLUTE (AUTOMATED)	B	1	0-0.6	TH/UL	
MONOCYTE ABSOLUTE (AUTOMATED)	B	6M	0-0.7	TH/UL	
MONOCYTE ABSOLUTE (AUTOMATED)	B	2M	0-1.4	TH/UL	
MONOCYTE ABSOLUTE (AUTOMATED)	B	1M	0-1.0	TH/UL	
MONOCYTE ABSOLUTE (AUTOMATED)	B	0	0-1.8	TH/UL	
EOSINOPHIL ABSOLUTE (AUTOMATED)	B	16	0-0.5	TH/UL	
EOSINOPHIL ABSOLUTE (AUTOMATED)	B	16	0-0.2	TH/UL	
EOSINOPHIL ABSOLUTE (AUTOMATED)	B	6	0-0.3	TH/UL	
EOSINOPHIL ABSOLUTE (AUTOMATED)	B	1M	0-0.4	TH/UL	
EOSINOPHIL ABSOLUTE (AUTOMATED)	B	7D	0-0.7	TH/UL	
EOSINOPHIL ABSOLUTE (AUTOMATED)	B	0	0-0.6	TH/UL	
BASOPHIL ABSOLUTE (AUTOMATED)	B	16	0-0.2	TH/UL	
BASOPHIL ABSOLUTE (AUTOMATED)	B	16	0-0.1	TH/UL	
BASOPHIL ABSOLUTE (AUTOMATED)	B	2M	0-0.2	TH/UL	
BASOPHIL ABSOLUTE (AUTOMATED)	B	7D	0-0.7	TH/UL	
BASOPHIL ABSOLUTE (AUTOMATED)	B	0	0-0.6	TH/UL	
RDW	B	16	11.5-14.5	%	
RDW	B	7D	11.5-16.5	%	
SEG NEUTROPHILS (Manual Differential)	B	16	40-70	%	
SEG NEUTROPHILS (Manual Differential)	B	16	31-69	%	
SEG NEUTROPHILS (Manual Differential)	B	10	30-60	%	
SEG NEUTROPHILS (Manual Differential)	B	2	26-60	%	
SEG NEUTROPHILS (Manual Differential)	B	6M	27-53	%	
SEG NEUTROPHILS (Manual Differential)	B	2M	28-60	%	
SEG NEUTROPHILS (Manual Differential)	B	1M	28-62	%	
SEG NEUTROPHILS (Manual Differential)	B	14D	30-62	%	
SEG NEUTROPHILS (Manual Differential)	B	7D	32-80	%	
BAND (Manual Differential)	B	16	0-10	%	
BAND (Manual Differential)	B	1	0-12	%	
BAND (Manual Differential)	B	6M	0-14	%	
BAND (Manual Differential)	B	7D	0-18	%	
LYMPHOCYTE (Manual Differential)	B	16	21-52	%	
LYMPHOCYTE (Manual Differential)	B	16	25-45	%	
LYMPHOCYTE (Manual Differential)	B	10	20-50	%	
LYMPHOCYTE (Manual Differential)	B	6	25-50	%	
LYMPHOCYTE (Manual Differential)	B	2	40-60	%	
LYMPHOCYTE (Manual Differential)	B	1	35-61	%	
LYMPHOCYTE (Manual Differential)	B	6M	33-63	%	
LYMPHOCYTE (Manual Differential)	B	1M	20-50	%	
LYMPHOCYTE (Manual Differential)	B	7D	25-35	%	
LYMPHOCYTE (Manual Differential)	B	1D	20-30	%	
MONOCYTE (Manual Differential)	B	16	0-9	%	
MONOCYTE (Manual Differential)	B	6M	0-12	%	
MONOCYTE (Manual Differential)	B	7D	0-9	%	
EOSINOPHIL (Manual Differential)	B	16	0-4	%	
EOSINOPHIL (Manual Differential)	B	16	0-3	%	
BASOPHIL (Manual Differential)	B	0	0-3	%	
NEUTROPHILS ABSOLUTE (Manual Differential)					
LYMPHOCYTES ABSOLUTE (Manual Differential)					

LABORATORY REFERENCE RANGES December 2016

Test Name	Sex	Age	Normal Range	UNITS	Critical Value(s)
MONOCYTES ABSOLUTE (Manual Differential)					
EOSINIPHILS ABSOLUTE (Manual Differential)					
BASOPHILS ABSOLUTE (Manual Differential)					
METAMYELOCYTE (Manual Differential)	B	0	0	%	
MYELOCYTE (Manual Differential)	B	0	0	%	
PROMYELOCYTE (Manual Differential)	B	0	0	%	
BLAST (Manual Differential)	B	0	0	%	
REACTIVE LYMPHOCYTES (Manual Differential)	B	0	0	%	
NUCLEATED RBC'S	B	0	0	/100	
EOSINOPHIL, NASAL SMEAR	B	0	Negative	None	
EOSINOPHIL, URINE	B	0	0	%	
HEMATOCRIT, FLUID	B	0	None established	%	
MALARIA SMEAR	B	0	Negative	NONE	
RBC, FLUID	B	0	None established	/UL	
RETICULOCYTE COUNT, Corrected	B	16	0.5-2.0	%	
RETICULOCYTE COUNT, Corrected	B	6M	0.5-3.1	%	
RETICULOCYTE COUNT, Corrected	B	7D	2.5-6.5	%	
SED RATE, WESTERGREN-Automated	F	0	0-17	MM/HR	>200
SED RATE, WESTERGREN-Automated	M	0	0-14	MM/HR	>200
SED RATE, Non-Automated	F	0	0-20	MM	>200
SED RATE, Non-Automated	M	0	0-12	MM	>200
SEMEN ANALYSIS - VOLUME	M	0	>1.9	ML	
SEMEN ANALYSIS - PH	M	0	7.0-14.0	PH	
SEMEN ANALYSIS - MOTILITY 1 HR	M	0	>49	%	
SEMEN ANALYSIS - SPERM COUNT	M	0	60.0-150.0	MILL/ML	
SEMEN ANALYSIS - SPERM COUNT, Post Vasecto	M	0	None seen	MILL/ML	
SEMEN ANALYSIS - Sperm Head, Neck, Tail Defects	M	0	None established	%	
SEMEN ANALYSIS - Sperm Normal Ovoid Forms	M	0	16-100	%	
SPUN HEMATOCRIT (MICROHEMATOCRIT)	F	16	37-47	%	<20, >61
SPUN HEMATOCRIT (MICROHEMATOCRIT)	M	16	42-52	%	<20, >61
SPUN HEMATOCRIT (MICROHEMATOCRIT)	F	16	36-47		
SPUN HEMATOCRIT (MICROHEMATOCRIT)	M	16	37-49	%	<20, >61
SPUN HEMATOCRIT (MICROHEMATOCRIT)	B	10	35-45	%	<20, >61
SPUN HEMATOCRIT (MICROHEMATOCRIT)	B	6	34-40	%	<20, >61
SPUN HEMATOCRIT (MICROHEMATOCRIT)	B	2	33-39	%	<20, >61
SPUN HEMATOCRIT (MICROHEMATOCRIT)	B	1	29-41	%	<20, >61
SPUN HEMATOCRIT (MICROHEMATOCRIT)	B	6M	28-42	%	<20, >61
SPUN HEMATOCRIT (MICROHEMATOCRIT)	B	2M	31-51	%	<20, >61
SPUN HEMATOCRIT (MICROHEMATOCRIT)	B	1M	39-63	%	<30, >71
SPUN HEMATOCRIT (MICROHEMATOCRIT)	B	14D	42-62	%	<30, >71
SPUN HEMATOCRIT (MICROHEMATOCRIT)	B	7D	45-67	%	<30, >71
SPUN HEMATOCRIT (MICROHEMATOCRIT)	B	1D	42-60	%	<30, >71
WBC , FLUID (CSF)	B	0	0-5	/UL	
WBC , FLUID (Non-CSF)	B	0	None established	/UL	

LABORATORY REFERENCE RANGES December 2016

Test Name	Sex	Age	Normal Range	UNITS	Critical Value(s)
KEY: SEX: B = Both, F = Female, M = Male // **AGE**: ages represent ranges for a patient who is that age and older, but less than the next highest age (Example: Ages listed- 0,10,16 : 0 represents age 0-9, 10 represents age 10 -15, 16 represents age 16 and up) If only 0 is entered for age, then ranges apply to any age.					
ACT - POINT OF CARE (Activated	B	0	74-137	SEC	
APTT	B	0	24.1-37.4	SEC	>45.1
APTT (Pt. on Heparin)	B	0	70-104	SEC	
APTT 1:1 Mix	B	0	See note		
BLEEDING TIME	B	0	0.5-9.5	MIN	
D-Dimer	B	0	0-500	NG/ML	
FIBRINOGEN	B	0	219-481	MG/DL	<60, >1500
FIBRIN DEGRADATION PRODUCTS	B	0	<10	UG/ML	
Heparin, Anti-Xa - Low Molecular Weight	B	0	0.50-1.10	IU/mL	
Heparin, Anti-Xa - UF	B	0	0.30-0.70	IU/mL	
PROTIME	B	0	11.6-14.3	SEC	
PROTIME, INR	B	0	0.83-1.21	None	<0.19, >5.01
PROTIME 1:1 Mix	B	0	See note	SEC	

Cell: D6
Comment: APTT 1:1 Mix:
A correction of the patient PTT with the addition of normal plasma to within normal range is indicative of a factor VIII, IX, X, XI or XIII deficiency. A patient with a factor deficiency may have a bleeding tendancy.

A partial correction of the patient PTT (within <5 sec), no correction or a longer PTT result is indicative of a lupus like inhibitor. A patient with an inhibitor can be at risk for thrombotic episodes.

The presence of anticoagulant drugs such as heparin or direct thrombin inhibitors cannot be excluded.

Cell: D8
Comment: D-Dimer:
Patients with a low to intermediate clinical probability of DVT or PE and a D-Dimer of less than 500 ng/ml are unlikely to have venous thromboembolism.

An elevated result is not specific for a diagnosis of thromboembolism and may be secondary to numerous clinical conditions.

Cell: D10
Comment: FIBRIBRIN DEGRADATION PRODUCTS:
Fibrin degradation products are found at low levels in the sera of all healthy individuals because of normal fibrinolytic mechanisms. The mean normal levels in resting adults is 4.9 +/- 2.8 ug/mL.

Cell: D14
Comment: PROTIME INR:
Lamellar body counts on amniotic fluid have been correlated with L/S ratio and PG levels and clinical outcomes for fetal lung maturity in diabetic and non-diabetic patients.

A result of less than 13000/uL is correlated with pulmonary immaturity.

A result between 13000 and 45000/uL is correlated with transitional lung maturity.

A result of greater than 45000/uL is correlated with pulmonary maturity.

Cell: D15

Comment: Protime 1:1 Mix:

A correction of the patient PT with the addition of normal plasma to within normal range is indicative of a factor II, V, VII, or X deficiency. A patient with a factor deficiency may have a bleeding tendancy.

A partial correction of the patient PT (within <5 sec), no correction or a longer PT result is indicative of an inhibitor. A patient with an inhibitor can be at risk for thrombotic episodes.

The presence of anticoagulant drugs such as heparin or direct thrombin inhibitors cannot be excluded.

LABORATORY REFERENCE RANGES December 2016

Test Name	Sex	Age	Normal Range	UNITS	Critical Value(s)
KEY: SEX: B = Both, F = Female, M = Male // **AGE**: ages represent ranges for a patient who is that age and older, but less than the next highest age (Example: Ages listed- 0,10,16 : 0 represents age 0-9, 10 represents age 10 -15, 16 represents age 16 and up) If only 0 is entered for age, then ranges apply to any age.					
CLARITY	B	0	CLEAR		
COLOR	B	0	YELLOW		
SPECIFIC GRAVITY	B	0	1.001-1.035	NONE	
PH	B	0	5.0-8.0	NONE	
PROTEIN	B	0	NEGATIVE	MG/DL	
GLUCOSE	B	0	NEGATIVE	MG/DL	
KETONES	B	0	NEGATIVE	MG/DL	
BILIRUBIN	B	0	NEGATIVE	MG/DL	
HEMOGLOBIN	B	0	NEGATIVE	/UL	
NITRITES	B	0	NEGATIVE	NONE	
UROBILINOGEN	B	0	0.2-1.0	E.U/DL	
LEUKOCYTES	B	0	NEGATIVE	NONE	
RBCs	B	0	0-5	/HPF	
WBCs	B	0	0-5	/HPF	
BACTERIA	B	0	NONE SEEN	/HPF	
AMORPHOUS	B	0	NONE SEEN		
CRYSTALS	B	0	0	/LPF	
MUCUS	B	0	0	/LPF	
REDUCING SUBSTANCES	B	0-3	NEGATIVE	%	>= 1/4
SMALL ROUND CELLS	B	0	0	/HPF	
SQUAMOUS EPITHELIAL CELLS	B	0	0	/HPF	
YEAST LIKE CELLS	B	0	0	/HPF	
CASTS, HYALINE	B	0	0-3	/HPF	
CASTS, PATHOLOGICAL	B	0	0	/LPF	
SPERM	B	0	0	/HPF	

LABORATORY REFERENCE RANGES December 2016

Test Name	Reference Value	Critical Value(s)
AFB Smear	No Acid Fast Bacilli Seen	Positive
Chlamydia RNA Probe	Negative	
C. difficile Toxin A and B	No toxigenic Clostridium difficile detected	
Cryptococcal Antigen, Blood	Negative	
Cryptococcal Antigen, CSF	Negative	Positive
Cryptosporidium Antigen	Negative for Cryptosporidium antigen	
GC RNA Probe	Negative	
Culture, AFB	No AFB recovered after 5 week/s of incubation	Positive
Culture, Anaerobe	No anaerobes isolated in 3 days	
Culture, Blood or Bone marrow	No growth after 5 days of incubation	Positive
Culture, Bone marrow	No growth after 30 days of incubation	Positive
Culture, Fluid	No Growth in 3 Days	
Culture, Fungus	No Fungus isolated after 2 weeks of incubation	
Culture, Genital	#+ Mixed Genital Flora	
Culture, Neiserria Screen	No Neisseria gonorrhoeae isolated	
Culture, Group A Strep	No Group A Beta Streptococci isolated	
Culture, Group B Strep	No Group B Beta Strep isolated	
Culture, Non-Sterile Body Sources	No growth in 3 days	
Culture, Respiratory	#+ Mixed respiratory flora	
Culture, Staph Screen	No Staphylococcus aureus isolated	
Culture, Sterile Body Sources	No growth in 3 days	Positive
Culture, Stool	No Salmonella, Shigella, Campylobacter or	
Culture, Yeast	No Yeast recovered	
Giardia Antigen	Negative for Giardia Antigen	
Group A Strep, Rapid Ag	NEGATIVE for group A Streptococcus antigen	
Group B Strep Antigen, Blood	NEGATIVE for Group B Strep antigen	
Group B Strep Antigen, CSF or Urine	NEGATIVE for Group B Strep antigen	Positive, CSF
Herpes Culture	Negative for Herpes simplex in 5 days	
H. pylori stool antigen	NEGATIVE for Helicobacter pylori stool antigen.	
Influenza A & B antigens, Rapid Test	NEGATIVE for the presence of Influenza A/B antigens	
Meningitis Antigen Panel, Blood	NEGATIVE for Haemophilus influenzae, Neisseria	
Meningitis Antigen Panel, CSF or Urine	NEGATIVE for Haemophilus influenzae, Neisseria meningitidis, Streptococcus pneumoniae, Group B Streptococcus and E.coli K1 antigens	Positive CSF
MRSA Screen	Negative MRSA Screen	
Ova and Parasites	No Ova or Parasites Seen	
Parasite Examination, Macroscopic	Identification of ecto parasite or larval form	
Pinworm	Negative for Enterobius vermicularis	
Rotavirus, Rapid Ag	NEGATIVE for rotavirus	
RSV, Rapid Ag	NEGATIVE for presence of respiratory syncytial virus	
Shiga Toxin 1 & 2 Identificatipn	NEGATIVE for Shiga 1 and/or Shiga 2 Toxin	
Strep pneumoniae Antigen	Presumptively NEGATIVE for Streptococcus	
Quick FISH ID, Gram Negative Rod	NEGATIVE	Positive

LABORATORY REFERENCE RANGES December 2016

Test Name	Reference Value	Critical Value(s)
Quick FISH ID, Enterococcus	NEGATIVE	Positive
Quick FISH ID, Staph	NEGATIVE	Positive
Wet Prep for Yeast and Trichomonas	No trichomonas, yeast or clue cells seen	
Worm ID	Identification of ecto parasite or larval form	

LABORATORY REFERENCE RANGES December 2016

Test Name	Reference Value			Critical Value(s)
ABO-Rh				The ABO system still remains the most significant system in terms of transfusion reaction if the wrong blood type is administered to a patient.
		Frequency of Blood Types in the United States:		
	O Rh Positive	1 person in 3	37.40%	
	O Rh Negative	1 person in 15	6.60%	
	A Rh Positive	1 person in 3	35.70%	
	A Rh Negative	1 person in 16	6.30%	
	B Rh Positive	1 person in 12	8.50%	
	B Rh Negative	1 person in 67	1.50%	
	AB Rh Positive	1 person in 29	3.40%	
	AB Rh Negative	1 person in 167	0.60%	