

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
<b>CHEMISTRY</b>						
ALBUMIN	B	DAY	1	2.4	4.8	g/dL
ALBUMIN	B	DAY	60	2.9	4.5	g/dL
ALBUMIN	B	YEAR	5	3.4	5.1	g/dL
ALBUMIN	B	YEAR	15	3.4	5.2	g/dL
ALBUMIN	B	YEAR	199	3.4	5.0	g/dL
ALKALINE PHOSPHATASE	B	YEAR	1	50	380	U/L
ALKALINE PHOSPHATASE	B	YEAR	9	55	350	U/L
ALKALINE PHOSPHATASE	B	YEAR	14	55	400	U/L
ALKALINE PHOSPHATASE	F	YEAR	19	33	190	U/L
ALKALINE PHOSPHATASE	M	YEAR	19	33	210	U/L
ALKALINE PHOSPHATASE	F	YEAR	59	33	110	U/L
ALKALINE PHOSPHATASE	M	YEAR	59	33	120	U/L
ALKALINE PHOSPHATASE	B	YEAR	199	33	136	U/L
ALT	F	YEAR	199	7	54	U/L
ALT	M	YEAR	199	10	65	U/L
AMYLASE	B	YEAR	2	0	115	U/L
AMYLASE	B	YEAR	199	25	115	U/L
AST	B	DAY	1	10	105	U/L
AST	B	DAY	60	10	100	U/L
AST	B	YEAR	1	10	60	U/L
AST	B	YEAR	5	10	60	U/L
AST	B	YEAR	18	10	60	U/L
AST	B	YEAR	199	10	37	U/L
BICARBONATE	B	YEAR	17	18	27	mmol/L
BICARBONATE	B	YEAR	199	21	32	mmol/L
BILIRUBIN, DIRECT	B	YEAR	199	0.0	0.3	mg/dL
BILIRUBIN, TOTAL	B	DAY	1	0.0	5.9	mg/dL
BILIRUBIN, TOTAL	B	DAY	2	0.0	7.9	mg/dL
BILIRUBIN, TOTAL	B	DAY	5	0.0	11.9	mg/dL
BILIRUBIN, TOTAL	B	DAY	29	0.0	2.4	mg/dL
BILIRUBIN, TOTAL	B	YEAR	199	0.0	1.2	mg/dL
CALCIUM	B	DAY	1	6.9	11.0	mg/dL
CALCIUM	B	DAY	7	6.9	11.0	mg/dL
CALCIUM	B	YEAR	19	8.5	10.7	mg/dL
CALCIUM	B	YEAR	199	8.5	10.1	mg/dL
CHLORIDE	B	YEAR	199	98	107	mmol/L
CHOLESTEROL	B	DAY	1	40	150	mg/dL
CHOLESTEROL	B	DAY	60	40	145	mg/dL
CHOLESTEROL	B	YEAR	19	80	150	mg/dL
CHOLESTEROL	B	YEAR	20	80	180	mg/dL
CHOLESTEROL	B	YEAR	30	80	200	mg/dL
CHOLESTEROL	B	YEAR	199	80	200	mg/dL
CREATINE KINASE	B	DAY	10	0	580	U/L

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
CREATINE KINASE	B	YEAR	1	0	290	U/L
CREATINE KINASE	B	YEAR	9	0	240	U/L
CREATINE KINASE	F	YEAR	15	0	210	U/L
CREATINE KINASE	M	YEAR	15	0	215	U/L
CREATINE KINASE	F	YEAR	199	0	215	U/L
CREATINE KINASE	M	YEAR	199	0	232	U/L
CREATININE	B	DAY	60	0.2	0.8	mg/dL
CREATININE	B	YEAR	2	0.2	0.8	mg/dL
CREATININE	B	YEAR	5	0.3	1.1	mg/dL
CREATININE	B	YEAR	12	0.3	1.1	mg/dL
CREATININE	B	YEAR	15	0.5	1.2	mg/dL
CREATININE	B	YEAR	199	0.6	1.3	mg/dL
GGT	B	DAY	14	0	246	U/L
GGT	B	DAY	60	0	160	U/L
GGT	B	YEAR	15	0	20	U/L
GGT	F	YEAR	199	5	55	U/L
GGT	M	YEAR	199	15	85	U/L
GLUCOSE	B	DAY	2	20	90	mg/dL
GLUCOSE	B	YEAR	12	60	110	mg/dL
GLUCOSE	B	YEAR	199	74	106	mg/dL
GLUCOSE,FASTING	B	YEAR	18	60	100	mg/dL
GLUCOSE,FASTING	B	YEAR	199	74	106	mg/dL
LD	B	DAY	1	614	2045	U/L
LD	B	DAY	30	494	1080	U/L
LD	B	YEAR	4	153	528	U/L
LD	B	YEAR	12	108	295	U/L
LD	B	YEAR	60	100	190	U/L
LD	B	YEAR	199	110	210	U/L
MAGNESIUM	B	YEAR	1	1.30	2.70	mg/dL
MAGNESIUM	B	YEAR	15	1.60	2.40	mg/dL
MAGNESIUM	B	YEAR	199	1.80	2.40	mg/dL
PHOSPHORUS (Inorganic)	B	DAY	2	3.5	9.5	mg/dL
PHOSPHORUS (Inorganic)	B	YEAR	5	3.8	6.5	mg/dL
PHOSPHORUS (Inorganic)	B	YEAR	12	3.0	6.0	mg/dL
PHOSPHORUS (Inorganic)	B	YEAR	15	3.0	5.5	mg/dL
PHOSPHORUS (Inorganic)	B	YEAR	199	2.5	4.5	mg/dL
POTASSIUM	B	DAY	7	3.2	5.7	mmol/L
POTASSIUM	B	MONTH	1	3.4	6.2	mmol/L
POTASSIUM	B	MONTH	6	3.5	5.8	mmol/L
POTASSIUM	B	YEAR	1	3.5	6.3	mmol/L
POTASSIUM	B	YEAR	12	3.3	4.7	mmol/L
POTASSIUM	B	YEAR	199	3.5	5.3	mmol/L
SODIUM	B	YEAR	1	131	144	mmol/L
SODIUM	B	YEAR	199	136	145	mmol/L

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
TOTAL PROTEIN	B	DAY	1	4.0	7.5	g/dL
TOTAL PROTEIN	B	DAY	7	4.5	7.5	g/dL
TOTAL PROTEIN	B	DAY	60	4.5	7.1	g/dL
TOTAL PROTEIN	B	YEAR	1	4.6	7.0	g/dL
TOTAL PROTEIN	B	YEAR	5	5.6	8.1	g/dL
TOTAL PROTEIN	B	YEAR	199	6.4	8.2	g/dL
TRIGLYCERIDES	B	DAY	7	19	174	mg/dL
TRIGLYCERIDES	B	YEAR	1	33	340	mg/dL
TRIGLYCERIDES	B	YEAR	19	33	135	mg/dL
TRIGLYCERIDES	B	YEAR	199	33	150	mg/dL
UREA NITROGEN	B	DAY	60	4	15	mg/dL
UREA NITROGEN	B	YEAR	199	6	23	mg/dL
URIC ACID	B	YEAR	12	1.8	6.4	mg/dL
URIC ACID	F	YEAR	199	2.1	6.4	mg/dL
URIC ACID	M	YEAR	199	3.2	7.2	mg/dL
<b>CHEMISTRY-THERAPEUTIC DRUGS</b>						
ACETAMINOPHEN	B	YEAR	18	5.0	20.0	mg/L
ACETAMINOPHEN	B	YEAR	199	10.0	30.0	mg/L
AMIKACIN,PEAK	B	YEAR	199	20.0	30.0	ug/mL
AMIKACIN,TROUGH	B	YEAR	199	1.0	8.0	ug/mL
CAFFEINE	B	DAY	13	3.0	10.0	mg/L
CAFFEINE	B	YEAR	1	0.0	15.0	mg/L
CARBAMAZEPINE	B	YEAR	199	6.0	10.0	ug/mL
CYCLOSPORINE , TDx	B	YEAR	199	100	250	ng/mL
DIGOXIN	B	DAY	180	1.10	2.90	ng/mL
DIGOXIN	B	YEAR	199	0.50	2.00	ng/mL
FK506	B	YEAR	199	9.8	19.0	ng/mL
GENTAMICIN,PEAK	B	YEAR	199	5.0	12.0	ug/mL
GENTAMICIN,TROUGH	B	YEAR	199	0.0	2.0	ug/mL
LIDOCAINE	B	YEAR	199	1.0	5.0	mg/L
LITHIUM	B	YEAR	199	0.60	1.20	mmol/L
PHENOBARBITAL	B	YEAR	199	10.0	40.0	ug/mL
PRIMIDONE	B	YEAR	199	5.0	10.0	ug/mL
PRIMIDONE+PHENOBARBITAL	B	YEAR	199	15.0	40.0	ug/mL
PHENYTOIN	B	YEAR	199	10.0	20.0	ug/mL
PHENYTOIN,FREE	B	YEAR	199	1.00	2.00	ug/mL
PROCAINAMIDE	B	YEAR	199	4.0	10.0	ug/mL
N-ACETYL PROCAINAMIDE	B	YEAR	199	10.0	30.0	ug/mL
PROCAINAMIDE+NAPA	B	YEAR	199	10.0	30.0	ug/mL
SALICYLATE	B	YEAR	199	4	20	mg/dL
THEOPHYLLINE	B	DAY	14	6.0	11.0	ug/mL
THEOPHYLLINE	B	YEAR	199	10.0	20.0	ug/mL
TOBRAMYCIN,PEAK	B	YEAR	199	5.0	12.0	ug/mL
TOBRAMYCIN,TROUGH	B	YEAR	199	0.0	2.0	ug/mL

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
VALPROIC ACID	B	YEAR	199	50	100	ug/mL
VANCOMYCIN,PEAK	B	YEAR	199	30.0	40.0	ug/mL
VANCOMYCIN,TROUGH	B	YEAR	199	5.0	10.0	ug/mL
<b>CHEMISTRY-MISCELLANEOUS</b>						
ALPHA-1-ANTITRYPSIN	B	YEAR	199	90	200	mg/dL
AFP	B	YEAR	Adult	0	20	ug/L
AMMONIA	B	DAY	7	15	110	umol/L
AMMONIA	B	DAY	14	15	90	umol/L
AMMONIA	B	YEAR	199	11	32	umol/L
ANGIOTENSIN CONV ENZYME	B	YEAR	199	8	89	U/L
ASO	B	YEAR	199	0	200	IU/mL
BETA 2 MICROGLOBULIN	B	YEAR	199	0.7	2.2	mg/L
BETA-HYDROXYBUTYRATE	B	YEAR	199	0.02	0.27	mmol/L
BNP	B	YEAR	199	0	100	pg/mL
C3 COMPLEMENT	B	YEAR	199	90	180	mg/dL
C4 COMPLEMENT	B	YEAR	199	10	40	mg/dL
CALCIUM,IONIZED	B	DAY	1	1.08	1.37	mmol/L
CALCIUM,IONIZED	B	DAY	3	1.00	1.27	mmol/L
CALCIUM,IONIZED	B	YEAR	60	1.13	1.32	mmol/L
CALCIUM,IONIZED	B	YEAR	199	1.14	1.39	mmol/L
CERULOPLASMIN	B	MONTH	3	5	18	mg/dL
CERULOPLASMIN	B	YEAR	199	20	60	mg/dL
C-REACTIVE PROTEIN	B	YEAR	199	0.00	1.50	mg/dL
CREATININE CLEARANCE	B	YEAR	1	40	75	mL/min
CREATININE CLEARANCE	B	YEAR	3	50	110	mL/min
CREATININE CLEARANCE	B	YEAR	5	70	130	mL/min
CREATININE CLEARANCE	F	YEAR	60	70	125	mL/min
CREATININE CLEARANCE	M	YEAR	60	70	135	mL/min
CREATININE CLEARANCE	F	YEAR	199	50	105	mL/min
CREATININE CLEARANCE	M	YEAR	199	50	115	mL/min
CRP, HIGH SENSITIVITY	B	YEAR	199	0.00	1.10	mg/dL
HAPTOGLOBIN	B	YEAR	199	30	200	mg/dL
HDL-CHOLESTEROL	B	YEAR	2	12	60	mg/dL
HDL-CHOLESTEROL	F	YEAR	7	16	62	mg/dL
HDL-CHOLESTEROL	M	YEAR	7	26	68	mg/dL
HDL-CHOLESTEROL	F	YEAR	12	26	77	mg/dL
HDL-CHOLESTEROL	M	YEAR	12	28	76	mg/dL
HDL-CHOLESTEROL	F	YEAR	16	28	79	mg/dL
HDL-CHOLESTEROL	M	YEAR	16	22	73	mg/dL
HDL-CHOLESTEROL	F	YEAR	19	24	74	mg/dL
HDL-CHOLESTEROL	M	YEAR	19	28	72	mg/dL
HDL-CHOLESTEROL	B	YEAR	199	<40 Inc Risk C<60 Dec Risk CHI		mg/dL
HEMOGLOBIN A1C	B	YEAR	199	3.6	6.8	%
HOMOCYSTEINE	B	YEAR	199	5	13.9	umol/L

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
IGA	B	DAY	30	0	12	mg/dL
IGA	B	DAY	90	0	19	mg/dL
IGA	B	DAY	180	2	35	mg/dL
IGA	B	DAY	420	10	50	mg/dL
IGA	B	YEAR	3	17	70	mg/dL
IGA	B	YEAR	6	23	116	mg/dL
IGA	B	YEAR	12	43	208	mg/dL
IGA	B	YEAR	199	70	400	mg/dL
IGE	B	DAY	60	0	15	IU/mL
IGE	B	YEAR	2	0	29	IU/mL
IGE	B	YEAR	3	0	17	IU/mL
IGE	B	YEAR	4	0	69	IU/mL
IGE	B	YEAR	7	0	161	IU/mL
IGE	B	YEAR	14	0	195	IU/mL
IGE	B	YEAR	199	0	150	IU/mL
IGG	B	DAY	1	468	1287	mg/dL
IGG	B	DAY	30	273	1287	mg/dL
IGG	B	DAY	90	117	507	mg/dL
IGG	B	DAY	180	109	390	mg/dL
IGG	B	DAY	420	211	741	mg/dL
IGG	B	YEAR	3	335	975	mg/dL
IGG	B	YEAR	6	429	1131	mg/dL
IGG	B	YEAR	12	546	1170	mg/dL
IGG	B	YEAR	199	700	1600	mg/dL
IGG1	B	DAY	1	470	1170	mg/dL
IGG1	B	DAY	60	235	536	mg/dL
IGG1	B	DAY	150	154	426	mg/dL
IGG1	B	DAY	240	205	409	mg/dL
IGG1	B	YEAR	2	309	734	mg/dL
IGG1	B	YEAR	8	313	961	mg/dL
IGG1	B	YEAR	12	313	1026	mg/dL
IGG1	B	YEAR	14	313	1188	mg/dL
IGG1	B	YEAR	199	490	1140	mg/dL
IGG2	B	DAY	1	133	421	mg/dL
IGG2	B	DAY	240	21	155	mg/dL
IGG2	B	YEAR	2	28	304	mg/dL
IGG2	B	YEAR	6	65	456	mg/dL
IGG2	B	YEAR	14	102	456	mg/dL
IGG2	B	YEAR	199	150	640	mg/dL
IGG3	B	DAY	1	37	200	mg/dL
IGG3	B	DAY	60	5	32	mg/dL
IGG3	B	DAY	150	5	85	mg/dL
IGG3	B	DAY	240	11	85	mg/dL
IGG3	B	YEAR	6	11	125	mg/dL

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
IGG3	B	YEAR	12	16	140	mg/dL
IGG3	B	YEAR	14	25	140	mg/dL
IGG3	B	YEAR	199	20	110	mg/dL
IGG4	B	DAY	1	1	26	mg/dL
IGG4	B	DAY	60	1	20	mg/dL
IGG4	B	DAY	150	1	14	mg/dL
IGG4	B	DAY	240	1	20	mg/dL
IGG4	B	YEAR	2	1	33	mg/dL
IGG4	B	YEAR	10	1	70	mg/dL
IGG4	B	YEAR	14	1	100	mg/dL
IGG4	B	YEAR	199	8	140	mg/dL
IGM	B	DAY	1	0	18	mg/dL
IGM	B	DAY	30	10	45	mg/dL
IGM	B	DAY	90	9	71	mg/dL
IGM	B	DAY	180	14	66	mg/dL
IGM	B	DAY	420	20	100	mg/dL
IGM	B	YEAR	3	22	124	mg/dL
IGM	B	YEAR	6	25	136	mg/dL
IGM	B	YEAR	12	26	170	mg/dL
IGM	B	YEAR	199	40	230	mg/dL
IRON	B	DAY	7	100	250	ug/dL
IRON	B	DAY	60	30	100	ug/dL
IRON	B	YEAR	2	30	100	ug/dL
IRON	B	YEAR	15	25	150	ug/dL
IRON	B	YEAR	199	35	150	ug/dL
TIBC	B	DAY	7	55	200	ug/dL
TIBC	B	DAY	60	65	300	ug/dL
TIBC	B	YEAR	3	75	425	ug/dL
TIBC	B	YEAR	199	240	445	ug/dL
% SATURATION	B	YEAR	199	25	45	%
LACTATE	B	MONTH	2	1.00	3.50	mmol/L
LACTATE	B	YEAR	1	1.00	3.30	mmol/L
LACTATE	B	YEAR	18	1.00	2.40	mmol/L
LACTATE	B	YEAR	199	0.40	2.00	mmol/L
LDL	B	YEAR	19	100	125	mg/dL
LDL	B	YEAR	29	110	150	mg/dL
LDL	B	YEAR	39	130	180	mg/dL
LDL	B	YEAR	199	Desirable <130		mg/dL
LEAD,CAPILLARY	B	YEAR	15	0.0	9.9	ug/dL
LEAD,CAPILLARY	B	YEAR	199	0.0	19.9	ug/dL
LEAD,VENOUS	B	YEAR	15	0.0	9.9	ug/dL
LEAD,VENOUS	B	YEAR	199	0.0	19.9	ug/dL
LIPASE	B	YEAR	199	114	286	U/L
MYOGLOBIN	B	YEAR	199	0	110	ug/L

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
OSMOLALITY, SERUM	B	YEAR	199	280	300	mOsm/kg H2O
OSMOLALITY,SERUM	B	YEAR	199	280	300	mOsm/kg H2O
OSMOLALITY,URINE	B	YEAR	1	50	600	mOsm/kg
OSMOLALITY,URINE	B	YEAR	199	200	1200	mOsm/kg
OSMOLALITY,URINE SPOT	B	YEAR	1	50	600	mOsm/kg
OSMOLALITY,URINE SPOT	B	YEAR	199	200	1200	mOsm/kg
PREALBUMIN	B	DAY	5	8.6	23.2	mg/dL
PREALBUMIN	B	YEAR	1	9.6	32.0	mg/dL
PREALBUMIN	B	YEAR	5	16.4	32.0	mg/dL
PREALBUMIN	B	YEAR	9	17.3	34.9	mg/dL
PREALBUMIN	B	YEAR	14	22.2	37.8	mg/dL
PREALBUMIN	B	YEAR	199	18.0	40.0	mg/dL
RHEUMATOID FACTOR	B	YEAR	199	0	15	IU/mL
TRANSFERRIN	B	YEAR	199	200	360	mg/dL
VLDL	B	YEAR	199	0	40	mg/dL

### CHEMISTRY-CSF

ANGIOTEN CONV ENZ-CSF	B	YEAR	199	0	6	U/L
ALBUMIN,CSF	B	YEAR	199	9.6	28.8	mg/dL
GLUCOSE,CSF	B	DAY	1	40	70	mg/dL
GLUCOSE,CSF	B	YEAR	17	50	75	mg/dL
GLUCOSE,CSF	B	YEAR	199	50	75	mg/dL
IGG,CSF	B	YEAR	199	0	4.6	mg/dL
LACTATE,CSF	B	YEAR	199	0.60	2.20	mmol/L
LD,CSF	B	YEAR	199	21	105	U/L
TOTAL PROTEIN,CSF	B	DAY	7	40	120	mg/dL
TOTAL PROTEIN,CSF	B	DAY	30	20	80	mg/dL
TOTAL PROTEIN,CSF	B	YEAR	199	15	45	mg/dL

### AMI PROFILE

CKMB	B	YEAR	199	Interpretive Range:		ng/mL
CKMB <7 and RI <4% :Negative						
CKMB <7 and RI >4% :Equivocal						
CKMB >=7 and RI <4% :Equivocal						
CKMB >=7 and RI >4% :Positive						
RELATIVE INDEX	B	YEAR	199			%MB OF CK
TROPONIN I	B	YEAR	199	Interpretive Range:		ng/mL
<0.07-Negative						
0.07-0.5 - Consistent with possible Cardiac Damage						
>0.50-Consistent with Cardiac Damage						

### CHEMISTRY-URINE

ALBUMIN/CREAT RATIO	B	YEAR	199	0	30	ug/mg crt
AMYLASE,URINE 24HR	B	YEAR	199	0	499	U/24h
CALCIUM,URINE 24HR	B	YEAR	12	80	160	mg/24h
CALCIUM,URINE 24HR	B	YEAR	199	100	300	mg/24h
CHLORIDE,URINE 24HR	B	YEAR	1	2	10	mmol/24h

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
CHLORIDE,URINE 24HR	B	YEAR	5	15	40	mmol/24h
CHLORIDE,URINE 24HR	B	YEAR	17	40	250	mmol/24h
CHLORIDE,URINE 24HR	B	YEAR	199	110	250	mmol/24h
CREATININE, 24HR	B	YEAR	5	0.1	1.0	g/24h
CREATININE, 24HR	B	YEAR	9	0.5	1.2	g/24h
CREATININE, 24HR	F	YEAR	15	0.5	1.2	g/24h
CREATININE, 24HR	M	YEAR	15	0.6	1.6	g/24h
CREATININE, 24HR	F	YEAR	199	0.8	1.2	g/24h
CREATININE, 24HR	M	YEAR	199	1.2	1.8	g/24h
GLUCOSE,URINE 24HR	B	YEAR	18	0.0	0.1	g/24h
GLUCOSE,URINE 24HR	B	YEAR	199	0.0	0.4	g/24h
MAGNESIUM,URINE 24HR	B	YEAR	199	1.0	20.0	mEq/24h
PHOSPHORUS, 24HR	B	YEAR	199	400	1300	mg/24h
POTASSIUM,URINE 24HR	B	YEAR	199	25	125	mmol/24h
SODIUM,URINE 24HR	B	DAY	14	16	44	mmol/24h
SODIUM,URINE 24HR	B	YEAR	12	40	180	mmol/24h
SODIUM,URINE 24HR	B	YEAR	199	80	220	mmol/24h
TOTAL PROTEIN,24HR	B	YEAR	199	0	149	mg/24h
UREA NITROGEN,24HR	B	YEAR	199	7.0	20.0	g/24h
URIC ACID,URINE 24HR	B	YEAR	199	150	990	mg/24h
<b>THYROID</b>						
FREE T3 INDEX	B	DAY	3	95	447	
FREE T3 INDEX	B	DAY	7	95	337	
FREE T3 INDEX	B	DAY	30	95	314	
FREE T3 INDEX	B	DAY	60	95	299	
FREE T3 INDEX	B	YEAR	1	95	285	
FREE T3 INDEX	B	YEAR	5	95	261	
FREE T3 INDEX	B	YEAR	10	76	219	
FREE T3 INDEX	B	YEAR	20	67	209	
FREE T3 INDEX	B	YEAR	199	57	190	
FREE T4 INDEX	B	DAY	3	9.4	21.3	
FREE T4 INDEX	B	DAY	7	8.9	19.0	
FREE T4 INDEX	B	DAY	30	8.4	16.7	
FREE T4 INDEX	B	DAY	60	7.0	15.3	
FREE T4 INDEX	B	YEAR	1	5.7	14.0	
FREE T4 INDEX	B	YEAR	10	5.2	11.2	
FREE T4 INDEX	B	YEAR	60	4.5	11.0	
FREE T4 INDEX	B	YEAR	199	4.0	11.0	
T3 UPTAKE	B	YEAR	199	0.72	1.23	
THYROXINE	B	DAY	3	9.4	21.3	ug/dL
THYROXINE	B	DAY	7	8.9	19.0	ug/dL
THYROXINE	B	DAY	30	8.4	16.7	ug/dL
THYROXINE	B	DAY	60	7.0	15.3	ug/dL
THYROXINE	B	YEAR	1	5.7	14.0	ug/dL

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
THYROXINE	B	YEAR	10	5.2	11.2	ug/dL
THYROXINE	B	YEAR	60	4.5	11.0	ug/dL
THYROXINE	B	YEAR	199	4.0	11.0	ug/dL
THYROXINE,FREE	B	YEAR	199	0.60	1.50	ng/dL
TRIIODOTHYRONINE	B	DAY	3	100	470	ng/dL
TRIIODOTHYRONINE	B	DAY	7	100	355	ng/dL
TRIIODOTHYRONINE	B	DAY	30	100	330	ng/dL
TRIIODOTHYRONINE	B	DAY	60	100	315	ng/dL
TRIIODOTHYRONINE	B	YEAR	1	100	300	ng/dL
TRIIODOTHYRONINE	B	YEAR	5	100	275	ng/dL
TRIIODOTHYRONINE	B	YEAR	10	80	230	ng/dL
TRIIODOTHYRONINE	B	YEAR	20	70	220	ng/dL
TRIIODOTHYRONINE	B	YEAR	199	60	200	ng/dL
TSH	B	DAY	2	0.70	11.00	mIU/L
TSH	B	DAY	14	0.35	6.50	mIU/L
TSH	B	YEAR	199	0.35	5.50	mIU/L
TSH, HIGH SENSITIVITY	B	DAY	2	0.700	11.000	mIU/L
TSH, HIGH SENSITIVITY	B	DAY	14	0.350	6.500	mIU/L
TSH, HIGH SENSITIVITY	B	YEAR	199	0.350	5.500	mIU/L
<b>HORMONES/MISC</b>						
ACTH	B	YEAR	199	0	46	pg/mL
C PEPTIDE	B	YEAR	199	1.1	5.0	ng/mL
CA19-9	B	YEAR	199	0.00	30.90	U/mL
CA27.29 (CA15-3)	B	YEAR	199	0.0	38.6	U/mL
CANCER AG 125	B	YEAR	199	0	24	U/mL
CORTISOL - A.M.	B	DAY	30	2.0	10.0	ug/dL
CORTISOL - A.M.	B	YEAR	1	3.0	23.0	ug/dL
CORTISOL - A.M.	B	YEAR	5	3.0	21.0	ug/dL
CORTISOL - A.M.	B	YEAR	16	4.0	20.0	ug/dL
CORTISOL - A.M.	B	YEAR	199	5.0	20.0	ug/dL
CORTISOL - P.M.	B	DAY	30	1.0	5.0	ug/dL
CORTISOL - P.M.	B	YEAR	1	1.5	11.5	ug/dL
CORTISOL - P.M.	B	YEAR	5	1.5	10.0	ug/dL
CORTISOL - P.M.	B	YEAR	16	2.0	10.0	ug/dL
CORTISOL - P.M.	B	YEAR	199	2.5	10.0	ug/dL
CORTISOL,UNSPECIFIED	B	DAY	30	1.0	10.0	ug/dL
CORTISOL,UNSPECIFIED	B	YEAR	1	1.5	23.0	ug/dL
CORTISOL,UNSPECIFIED	B	YEAR	5	1.5	20.0	ug/dL
CORTISOL,UNSPECIFIED	B	YEAR	16	2.0	20.0	ug/dL
CORTISOL,UNSPECIFIED	B	YEAR	199	2.5	20.0	ug/dL
CORTISOL-FREE,URINE	B	YEAR	10	2	30	ug/24h
CORTISOL-FREE,URINE	B	YEAR	20	5	60	ug/24h
CORTISOL-FREE,URINE	B	YEAR	199	24	100	ug/24h
DHEA SULFATE	F	DAY	15	10	248	ug/dL

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
DHEA SULFATE	M	DAY	15	12	254	ug/dL
DHEA SULFATE	F	YEAR	5	5	55	ug/dL
DHEA SULFATE	M	YEAR	5	1	41	ug/dL
DHEA SULFATE	F	YEAR	9	2	140	ug/dL
DHEA SULFATE	M	YEAR	9	2	145	ug/dL
DHEA SULFATE	F	YEAR	11	12	160	ug/dL
DHEA SULFATE	M	YEAR	11	15	115	ug/dL
DHEA SULFATE	F	YEAR	17	20	535	ug/dL
DHEA SULFATE	M	YEAR	17	20	555	ug/dL
DHEA SULFATE	F	YEAR	30	65	395	ug/dL
DHEA SULFATE	M	YEAR	30	108	640	ug/dL
DHEA SULFATE	F	YEAR	50	12	379	ug/dL
DHEA SULFATE	M	YEAR	50	95	530	ug/dL
DHEA SULFATE	F	YEAR	60	30	260	ug/dL
DHEA SULFATE	M	YEAR	60	70	310	ug/dL
DHEA SULFATE	F	YEAR	199	13	130	ug/dL
DHEA SULFATE	M	YEAR	199	28	290	ug/dL
ESTRADIOL		EARLY FOLLICULAR		10	150	ng/L
		MID CYCLE		250	600	ng/L
		LATE FOLLICULAR		5	300	ng/L
		LUTEAL PHASE		50	300	ng/L
		POSTMENOPAUSE		0	20	ng/L
		PREPUBERTY		0	20	ng/L
		FEMALE 10-18Y		8	110	ng/L
		MALE 10-18Y			<20	ng/L
		ADULT MALE		10	50	ng/L
FERRITIN	F	YEAR	199	20	120	ug/L
FERRITIN	M	YEAR	199	20	300	ug/L
FOLATE	B	YEAR	199		> 5.0	ng/mL
FOLATE-RBC	B	YEAR	199	69	207	ng/mL
FSH		FOLLICULAR 2-12				
		MID-CYCLE 12-25				
		LUTEAL PHASE 2-12				
		MENOPAUSE 30-150				
		PREPUBERTY 50% ADULT				
		ADULT MALE 2-10				
		INFANTS 0-1				
HCG		NON-PREGNANT FEMALE			< 10	IU/L
		INDETERMINATE		10	30	IU/L
		PREGNANT			> 30	IU/L
		MALE			< 10	F
PROLACTIN	B	DAY	7	30	300	ug/L
PROLACTIN	B	DAY	30	10	100	ug/L
PROLACTIN	B	DAY	60	5	30	ug/L

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
PROLACTIN	F	YEAR	199	6	20	ug/L
PROLACTIN	M	YEAR	199	4	18	ug/L
PROSTATIC SPECIFIC AG	F	YEAR	199	0.00	0.10	ng/mL
PROSTATIC SPECIFIC AG	M	YEAR	199	0.00	4.00	ng/mL
TESTOSTERONE	F	DAY	5	10	65	ng/dL
TESTOSTERONE	M	DAY	5	75	400	ng/dL
TESTOSTERONE	M	DAY	60	60	400	ng/dL
TESTOSTERONE	M	DAY	90	30	350	ng/dL
TESTOSTERONE	M	DAY	150	20	200	ng/dL
TESTOSTERONE	M	DAY	210	10	60	ng/dL
TESTOSTERONE	F	YEAR	9	0	30	ng/dL
TESTOSTERONE	M	YEAR	9	0	30	ng/dL
TESTOSTERONE	F	YEAR	17	0	45	ng/dL
TESTOSTERONE	M	YEAR	17	0	970	ng/dL
TESTOSTERONE	F	YEAR	199	0	70	ng/dL
TESTOSTERONE	M	YEAR	199	300	1000	ng/dL
TESTOSTERONE,FREE	F	DAY	15	0.10	0.30	ng/dL
TESTOSTERONE,FREE	M	DAY	15	0.10	1.15	ng/dL
TESTOSTERONE,FREE	M	DAY	90	0.15	1.50	ng/dL
TESTOSTERONE,FREE	M	DAY	150	0.05	0.50	ng/dL
TESTOSTERONE,FREE	M	DAY	210	0.00	0.20	ng/dL
TESTOSTERONE,FREE	F	YEAR	10	0.00	0.10	ng/dL
TESTOSTERONE,FREE	M	YEAR	10	0.00	0.05	ng/dL
TESTOSTERONE,FREE	F	YEAR	17	0.00	0.70	ng/dL
TESTOSTERONE,FREE	M	YEAR	17	0.05	10.00	ng/dL
TESTOSTERONE,FREE	F	YEAR	199	0.10	0.80	ng/dL
TESTOSTERONE,FREE	M	YEAR	199	2.50	10.50	ng/dL
% FREE TESTOSTERONE	F	DAY	15	0.59	1.59	%
% FREE TESTOSTERONE	M	DAY	15	0.35	1.00	%
% FREE TESTOSTERONE	F	DAY	90	0.39	1.10	%
% FREE TESTOSTERONE	M	DAY	90	0.45	1.25	%
% FREE TESTOSTERONE	F	DAY	150	0.39	1.10	%
% FREE TESTOSTERONE	M	DAY	150	0.15	0.63	%
% FREE TESTOSTERONE	F	DAY	210	0.39	1.10	%
% FREE TESTOSTERONE	M	DAY	210	0.15	0.57	%
% FREE TESTOSTERONE	F	YEAR	10	0.39	1.10	%
% FREE TESTOSTERONE	M	YEAR	10	0.15	0.52	%
% FREE TESTOSTERONE	F	YEAR	17	0.49	1.39	%
% FREE TESTOSTERONE	M	YEAR	17	0.15	1.75	%
% FREE TESTOSTERONE	F	YEAR	199	0.59	1.59	%
% FREE TESTOSTERONE	M	YEAR	199	0.62	1.75	%
THYROGLOBULIN	B	YEAR	199	1.7	56.0	ng/mL
VITAMIN B12	B	YEAR	199	211	911	pg/mL

**UNIVERSITY HOSPITALS**

**LABORATORY SERVICES**

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
ANTICARDIOLIPIN AB IGG	B	YEAR	199		NEGATIVE <10, EQUIVOCAL 10- 11.9, POSITIVE >11.9	GPL U/mL
ANTICARDIOLIPIN AB I IGM	B	YEAR	199		NEGATIVE <10, EQUIVOCAL 10- 11.9, POSITIVE >11.9	MPL U/mL
ANTICARDIOLIPIN AB IGA	B	YEAR	199		NEGATIVE <8, EQUIVOCAL 8 - 9.9, POSITIVE >=10	APL U/mL

**HEMATOLOGY**

ESR-WESTERGREN	B	DAY	60	0	6	mm/h
ESR-WESTERGREN	B	YEAR	16	0	13	mm/h
ESR-WESTERGREN	F	YEAR	50	0	20	mm/h
ESR-WESTERGREN	M	YEAR	50	0	10	mm/h
ESR-WESTERGREN	F	YEAR	199	0	30	mm/h
ESR-WESTERGREN	M	YEAR	199	0	20	mm/h
HCT	B	DAY	30	45	65	%
HCT	B	DAY	60	31	55	%
HCT	B	DAY	180	29	41	%
HCT	B	YEAR	2	33	39	%
HCT	B	YEAR	5	34	40	%
HCT	B	YEAR	6	34	40	%
HCT	B	YEAR	12	35	45	%
HCT	F	YEAR	18	36	46	%
HCT	M	YEAR	18	37	49	%
HCT	F	YEAR	199	36	46	%
HCT	M	YEAR	199	41	52	%
HGB	B	DAY	30	14.5	22.0	g/dL
HGB	B	DAY	60	10.0	18.0	g/dL
HGB	B	DAY	180	9.5	13.5	g/dL
HGB	B	YEAR	2	10.5	13.5	g/dL
HGB	B	YEAR	5	11.5	13.5	g/dL
HGB	B	YEAR	6	11.5	13.5	g/dL
HGB	B	YEAR	12	11.5	15.5	g/dL
HGB	F	YEAR	18	12.0	16.0	g/dL

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
HGB	M	YEAR	18	13.0	16.0	g/dL
HGB	F	YEAR	199	12.0	16.0	g/dL
HGB	M	YEAR	199	13.5	17.5	g/dL
MCH	B	DAY	30	31	37	pg
MCH	B	DAY	60	28	40	pg
MCH	B	DAY	180	23	35	pg
MCH	B	YEAR	2	23	31	pg
MCH	B	YEAR	5	24	30	pg
MCH	B	YEAR	6	24	30	pg
MCH	B	YEAR	12	25	33	pg
MCH	B	YEAR	18	25	35	pg
MCH	B	YEAR	199	26	34	pg
MCHC	B	DAY	30	30	36	g/dL
MCHC	B	DAY	60	29	37	g/dL
MCHC	B	DAY	180	30	36	g/dL
MCHC	B	YEAR	2	30	36	g/dL
MCHC	B	YEAR	5	31	37	g/dL
MCHC	B	YEAR	18	31	37	g/dL
MCHC	B	YEAR	199	32	36	g/dL
MCV	B	DAY	30	98	118	fL
MCV	B	DAY	60	85	123	fL
MCV	B	DAY	180	74	108	fL
MCV	B	YEAR	2	70	86	fL
MCV	B	YEAR	5	75	87	fL
MCV	B	YEAR	6	75	87	fL
MCV	B	YEAR	12	77	95	fL
MCV	F	YEAR	18	78	102	fL
MCV	M	YEAR	18	78	98	fL
MCV	B	YEAR	199	80	100	fL
MPV	B	YEAR	199	7.2	11.1	fL
PLT	B	YEAR	18	150	400	X10E9/L
PLT	B	YEAR	199	150	450	X10E9/L
RBC	B	DAY	12	4.0	5.2	X10E12/L
RBC	B	DAY	30	3.9	5.5	X10E12/L
RBC	B	DAY	60	3.0	5.4	X10E12/L
RBC	B	DAY	180	3.1	4.5	X10E12/L
RBC	B	YEAR	2	3.7	5.3	X10E12/L
RBC	B	YEAR	5	3.9	5.3	X10E12/L
RBC	B	YEAR	6	3.9	5.3	X10E12/L
RBC	B	YEAR	12	4.0	5.2	X10E12/L
RBC	F	YEAR	18	4.1	5.1	X10E12/L
RBC	M	YEAR	18	4.5	5.3	X10E12/L
RBC	F	YEAR	199	4.0	5.2	X10E12/L
RBC	M	YEAR	199	4.5	5.9	X10E12/L

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
RDW-CV	B	YEAR	199	11.5	14.5	%
RDW-SD	B	YEAR	199	18	60	fL
RETIC #	B	DAY	2	0.080	0.440	x10E12/L
RETIC #	B	DAY	13	0.040	0.310	x10E12/L
RETIC #	B	DAY	27	0.000	0.060	x10E12/L
RETIC #	B	DAY	150	0.000	0.050	x10E12/L
RETIC #	F	YEAR	65	0.020	0.080	x10E12/L
RETIC #	M	YEAR	65	0.020	0.120	x10E12/L
RETIC #	B	YEAR	199	0.020	0.110	x10E12/L
RETIC %	B	YEAR	199	0.5	2.0	%
WBC	B	DAY	7	9.0	30.0	X10E9/L
WBC	B	DAY	30	5.0	21.0	X10E9/L
WBC	B	DAY	60	5.0	19.5	X10E9/L
WBC	B	YEAR	5	6.0	17.5	X10E9/L
WBC	B	YEAR	10	6.0	17.5	X10E9/L
WBC	B	YEAR	18	4.5	13.5	X10E9/L
WBC	B	YEAR	199	4.4	11.3	X10E9/L

See below for  
 why no RR for  
 %'s

### HEMATOLOGY - DIFFERENTIAL

BAND NEUTROPHIL	B	DAY	1	1.60	4.70	X10E9/L
BAND NEUTROPHIL	B	DAY	7	0.80	1.40	X10E9/L
BAND NEUTROPHIL	B	DAY	28	1.00	1.40	X10E9/L
BAND NEUTROPHIL	B	DAY	60	0.90	1.20	X10E9/L
BAND NEUTROPHIL	B	YEAR	4	0.80	1.10	X10E9/L
BAND NEUTROPHIL	B	YEAR	5	0.00	0.70	X10E9/L
BAND NEUTROPHIL	B	YEAR	70	0.00	0.70	X10E9/L
BAND NEUTROPHIL	B	YEAR	199	0.00	0.50	X10E9/L
BASOPHIL	B	DAY	1	0.00	0.60	x10E9/L
BASOPHIL	B	DAY	7	0.00	0.30	x10E9/L
BASOPHIL	B	DAY	28	0.00	0.20	x10E9/L
BASOPHIL	B	DAY	60	0.00	0.10	x10E9/L
BASOPHIL	B	YEAR	5	0.00	0.10	x10E9/L
BASOPHIL	B	YEAR	199	0.00	0.10	x10E9/L
EOSINOPHIL	B	DAY	1	0.40	0.90	x10E9/L
EOSINOPHIL	B	DAY	7	0.30	0.90	x10E9/L
EOSINOPHIL	B	DAY	28	0.30	0.90	x10E9/L
EOSINOPHIL	B	DAY	60	0.10	0.80	x10E9/L
EOSINOPHIL	B	YEAR	4	0.10	0.80	x10E9/L
EOSINOPHIL	B	YEAR	5	0.00	0.70	x10E9/L
EOSINOPHIL	B	YEAR	70	0.00	0.70	x10E9/L
EOSINOPHIL	B	YEAR	199	0.00	0.40	x10E9/L
LYMPHOCYTE	B	DAY	1	2.00	17.00	x10E9/L
LYMPHOCYTE	B	DAY	7	2.30	12.00	x10E9/L

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
LYMPHOCYTE	B	DAY	28	3.00	10.00	x10E9/L
LYMPHOCYTE	B	DAY	60	3.00	10.00	x10E9/L
LYMPHOCYTE	B	YEAR	4	2.50	8.00	x10E9/L
LYMPHOCYTE	B	YEAR	5	2.00	4.80	x10E9/L
LYMPHOCYTE	B	YEAR	70	1.20	4.80	x10E9/L
LYMPHOCYTE	B	YEAR	199	0.80	3.00	x10E9/L
LYMPH-ATYPICAL	B	DAY	1	0.00	1.70	x10E9/L
LYMPH-ATYPICAL	B	DAY	7	0.00	1.50	x10E9/L
LYMPH-ATYPICAL	B	DAY	28	0.00	1.30	x10E9/L
LYMPH-ATYPICAL	B	DAY	60	0.00	1.10	x10E9/L
LYMPH-ATYPICAL	B	YEAR	4	0.00	0.90	x10E9/L
LYMPH-ATYPICAL	B	YEAR	5	0.00	0.70	x10E9/L
LYMPH-ATYPICAL	B	YEAR	70	0.00	0.50	x10E9/L
LYMPH-ATYPICAL	B	YEAR	199	0.00	0.30	x10E9/L
MONOCYTE	B	DAY	1	0.40	1.70	X10E9/L
MONOCYTE	B	DAY	7	0.70	1.20	X10E9/L
MONOCYTE	B	DAY	28	0.70	1.20	X10E9/L
MONOCYTE	B	DAY	60	0.50	1.00	X10E9/L
MONOCYTE	B	YEAR	4	0.50	1.00	X10E9/L
MONOCYTE	B	YEAR	5	0.10	1.00	X10E9/L
MONOCYTE	B	YEAR	70	0.10	1.00	X10E9/L
MONOCYTE	B	YEAR	199	0.05	0.80	X10E9/L
NEUTROPHIL	B	DAY	1	3.20	18.20	X10E9/L
NEUTROPHIL	B	DAY	7	2.20	6.80	X10E9/L
NEUTROPHIL	B	DAY	28	3.60	6.40	X10E9/L
NEUTROPHIL	B	DAY	60	1.90	5.20	X10E9/L
NEUTROPHIL	B	YEAR	4	1.80	4.60	X10E9/L
NEUTROPHIL	B	YEAR	5	1.20	7.70	X10E9/L
NEUTROPHIL	B	YEAR	70	1.20	7.70	X10E9/L
NEUTROPHIL	B	YEAR	199	1.60	5.50	X10E9/L
SEG NEUTROPHIL	B	DAY	1	1.60	14.50	X10E9/L
SEG NEUTROPHIL	B	DAY	7	1.40	5.40	X10E9/L
SEG NEUTROPHIL	B	DAY	28	2.60	5.00	X10E9/L
SEG NEUTROPHIL	B	DAY	60	1.00	4.00	X10E9/L
SEG NEUTROPHIL	B	YEAR	4	1.00	3.50	X10E9/L
SEG NEUTROPHIL	B	YEAR	5	1.20	7.00	X10E9/L
SEG NEUTROPHIL	B	YEAR	70	1.20	7.00	X10E9/L
SEG NEUTROPHIL	B	YEAR	199	1.60	5.00	X10E9/L
<b>COAGULATION-ROUTINE</b>						
ACTIVATED CLOTTING TIME	B	YEAR	199	102	142	sec
APTT	B	DAY	1	31	54	sec
APTT	B	DAY	5	25	60	sec
APTT	B	DAY	30	32	55	sec
APTT	B	DAY	90	29	50	sec

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS	
APTT	B	DAY	180	28	43	sec	
APTT	B	YEAR	199	24	30	sec	As of 11/11/08
FIBRINOGEN	B	DAY	1	167	399	mg/dL	
FIBRINOGEN	B	DAY	5	162	462	mg/dL	
FIBRINOGEN	B	DAY	30	162	378	mg/dL	
FIBRINOGEN	B	DAY	90	150	379	mg/dL	
FIBRINOGEN	B	DAY	180	150	387	mg/dL	
FIBRINOGEN	B	YEAR	199	140	400	mg/dL	
PROTHROMBIN TIME	B	DAY	1	10.1	15.9	sec	
PROTHROMBIN TIME	B	DAY	5	10.0	15.3	sec	
PROTHROMBIN TIME	B	DAY	30	10.0	14.3	sec	
PROTHROMBIN TIME	B	DAY	180	10.0	14.2	sec	
PROTHROMBIN TIME	B	YEAR	199	9.9	11.7	sec	As of 11/11/08
PT, INR	B	DAY	1	0.53	1.62		
PT, INR	B	DAY	5	0.53	1.48		
PT, INR	B	DAY	90	0.53	1.26		
PT, INR	B	DAY	180	0.61	1.17		
PT, INR	B	YEAR	199	0.9	1.1		As of 11/3/03
<b>COAGULATION-SPECIAL</b>							
ACT. PROTEIN C RESIST. R	B	YEAR	199	2.0	3.5		
ANTITHROMBIN	PEDIATRIC			CALL LAB			
ANTITHROMBIN	B	YEAR	199	80.0	120.0	%Activity	
ANTI-FACTOR Xa	B	YEAR	199	0.3	0.7	IU/mL	
D-DIMER	B	YEAR	199		<1.0	mg/L	
FACTOR II	B	DAY	1	26	70	%	
FACTOR II	B	DAY	5	33	93	%	
FACTOR II	B	DAY	30	34	102	%	
FACTOR II	B	DAY	90	45	105	%	
FACTOR II	B	DAY	180	60	116	%	
FACTOR II	B	YEAR	199	50	150	%	
FACTOR IX	B	DAY	5	15	91	%	
FACTOR IX	B	DAY	30	21	81	%	
FACTOR IX	B	DAY	90	21	113	%	
FACTOR IX	B	DAY	180	36	136	%	
FACTOR IX	B	YEAR	199	50	150	%	
FACTOR V	B	DAY	1	34	108	%	
FACTOR V	B	DAY	5	45	145	%	
FACTOR V	B	DAY	30	62	134	%	
FACTOR V	B	DAY	90	48	132	%	
FACTOR V	B	DAY	180	55	127	%	
FACTOR V	B	YEAR	199	50	150	%	
FACTOR VII	B	DAY	1	28	104	%	
FACTOR VII	B	DAY	5	35	143	%	
FACTOR VII	B	DAY	30	42	138	%	

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
FACTOR VII	B	DAY	90	39	143	%
FACTOR VII	B	DAY	180	47	127	%
FACTOR VII	B	YEAR	199	50	150	%
FACTOR VIII	B	DAY	1	50	178	%
FACTOR VIII	B	DAY	5	50	154	%
FACTOR VIII	B	DAY	30	50	157	%
FACTOR VIII	B	DAY	90	50	125	%
FACTOR VIII	B	DAY	180	50	109	%
FACTOR VIII	B	YEAR	199	50	150	%
FACTOR X	B	DAY	1	12	68	%
FACTOR X	B	DAY	5	19	79	%
FACTOR X	B	DAY	30	31	87	%
FACTOR X	B	DAY	90	35	107	%
FACTOR X	B	DAY	180	38	118	%
FACTOR X	B	YEAR	199	50	150	%
FACTOR XI	B	DAY	1	10	66	%
FACTOR XI	B	DAY	5	23	87	%
FACTOR XI	B	DAY	30	27	79	%
FACTOR XI	B	DAY	90	41	97	%
FACTOR XI	B	DAY	180	49	134	%
FACTOR XI	B	YEAR	199	50	150	%
FACTOR XII	B	DAY	1	13	93	%
FACTOR XII	B	DAY	5	11	83	%
FACTOR XII	B	DAY	30	17	81	%
FACTOR XII	B	DAY	90	25	109	%
FACTOR XII	B	DAY	180	39	115	%
FACTOR XII	B	YEAR	199	50	150	%
LUPUS ANTICOAGULANT	B	YEAR	199	<44 = NEGATIVE		sec
PROTEIN S ACTIVITY	B	YEAR	199	BY REPORT		
<b>FLOW CYTOMETRY CD4/CD8</b>						
CD3+CD4+ %	B	YEAR	199	29	57	%
CD3+CD4+ ABSOLUTE	B	DAY	60	0.730	7.700	X10E9/L
CD3+CD4+ ABSOLUTE	B	YEAR	5	0.650	3.650	X10E9/L
CD3+CD4+ ABSOLUTE	B	YEAR	199	0.350	2.740	X10E9/L
CD3+CD8+ %	B	YEAR	199	7	31	%
CD3+CD8+ ABSOLUTE	B	DAY	60	0.180	4.190	X10E9/L
CD3+CD8+ ABSOLUTE	B	YEAR	5	0.160	1.980	X10E9/L
CD3+CD8+ ABSOLUTE	B	YEAR	199	0.080	1.490	X10E9/L
CD4/CD8 RATIO	B	YEAR	199	1.00	3.50	
CD19 %	B	YEAR	199	6	19	%
CD19 ABSOLUTE	B	DAY	60	0.120	3.230	X10E9/L
CD19 ABSOLUTE	B	YEAR	5	0.150	1.520	X10E9/L
CD19 ABSOLUTE	B	YEAR	199	0.070	0.910	X10E9/L
CD3 %	B	YEAR	199	59	87	%

**UNIVERSITY HOSPITALS**

**LABORATORY SERVICES**

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
CD3 ABSOLUTE	B	DAY	60	1.180	14.790	X10E9/L
CD3 ABSOLUTE	B	YEAR	5	1.180	6.960	X10E9/L
CD3 ABSOLUTE	B	YEAR	199	0.710	4.180	X10E9/L
<b>URINALYSIS</b>						
pH	B	YEAR	199	5	8	
SPECIFIC GRAVITY	B	DAY	30	1.000	1.010	
SPECIFIC GRAVITY	B	DAY	60	1.000	<b>1.010</b>	
SPECIFIC GRAVITY	B	YEAR	3	1.000	1.020	
SPECIFIC GRAVITY	B	YEAR	5	1.020	1.020	
SPECIFIC GRAVITY	B	YEAR	199	1.020	1.020	
UROBILINOGEN	B	YEAR	199	0.2	1.0	
UROBILINOGEN	B	YEAR	199	0.2	1.0	EU/dL
PROTEIN				NEGATIVE		
GLUCOSE				NEGATIVE		
BLOOD/HEMOGLOBIN				NEGATIVE		
KETONE				NEGATIVE		
BILIRUBIN				NEGATIVE		
NITRITE/BACTERIA				NEGATIVE		
LEUKOCYTE ESTERASE/WBC				NEGATIVE		
<b>URINE MICROSCOPIC</b>						
WBC				NONE		/HPF
RBC				NONE		/HPF
CASTS				NONE		/HPF
<b>SERUM PROTEIN ELECTROPHORESIS</b>						
TOTAL PROTEIN	B	DAY	1	4	7.5	g/dL
TOTAL PROTEIN	B	DAY	7	4.5	7.5	g/dL
TOTAL PROTEIN	B	DAY	60	4.5	7.1	g/dL
TOTAL PROTEIN	B	YEAR	1	4.6	7	g/dL
TOTAL PROTEIN	B	YEAR	5	5.6	8.1	g/dL
TOTAL PROTEIN	B	YEAR	199	6.4	8.2	g/dL
ALBUMIN	B	DAY	1	2.4	4.8	g/dL
ALBUMIN	B	DAY	60	2.9	4.5	g/dL
ALBUMIN	B	YEAR	5	3.4	5.1	g/dL
ALBUMIN	B	YEAR	15	3.4	5.2	g/dL
ALBUMIN	B	YEAR	199	3.4	5	g/dL
ALPHA 1 GLOBULIN	B	YEAR	199	0.2	0.6	g/dL
ALPHA 2 GLOBULIN	B	DAY	7	0.3	0.7	g/dL
ALPHA 2 GLOBULIN	B	DAY	60	0.3	0.8	g/dL
ALPHA 2 GLOBULIN	B	DAY	120	0.3	0.9	g/dL
ALPHA 2 GLOBULIN	B	YEAR	5	0.4	1	g/dL
ALPHA 2 GLOBULIN	B	YEAR	199	0.4	1.1	g/dL
BETA GLOBULIN	B	DAY	60	0.3	0.8	g/dL
BETA GLOBULIN	B	YEAR	1	0.4	1	g/dL
BETA GLOBULIN	B	YEAR	5	0.5	1.1	g/dL

**UNIVERSITY HOSPITALS**

**LABORATORY SERVICES**

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
BETA GLOBULIN	B	YEAR	199	0.5	1.2	g/dL
GAMMA GLOBULIN	B	DAY	14	0.5	1.4	g/dL
GAMMA GLOBULIN	B	DAY	150	0.2	0.9	g/dL
GAMMA GLOBULIN	B	YEAR	2	0.4	1.1	g/dL
GAMMA GLOBULIN	B	YEAR	6	0.4	1.2	g/dL
GAMMA GLOBULIN	B	YEAR	199	0.5	1.4	g/dL

**URINE PROTEIN ELECTROPHORESIS**

TOTAL PROTEIN	B	YEAR	199	0	120	mg/L
ALBUMIN	B	YEAR	199	0	39	mg/L
ALPHA 1 GLOBULIN	B	YEAR	199	0	11.1	mg/L
ALPHA 2 GLOBULIN	B	YEAR	199	0.9	14.1	mg/L
BETA GLOBULIN	B	YEAR	199	0	15.9	mg/L
GAMMA GLOBULIN	B	YEAR	199	0	12.5	mg/L

**VIRAL MARKERS**

Hepatitis B Surface Ag	B	YEAR	199	Nonreactive		
Hepatitis B Surface Ab	B	YEAR	199	Nonreactive		
HCV Ab	B	YEAR	199	Nonreactive		
HIV Ab	B	YEAR	199	Nonreactive		
CMV	B	YEAR	199	<0.9 = Negative, 0.9-1.0 = Equivocal; >= 1.1 = Positive		

**URINE DRUG SCREEN**

AMPHETAMINES	B	YEAR	199	NEGATIVE		
BARBITURATES	B	YEAR	199	NEGATIVE		
BENZODIAZAPINE	B	YEAR	199	NEGATIVE		
CANNABINOIDS	B	YEAR	199	NEGATIVE		
COCAINE	B	YEAR	199	NEGATIVE		
METHADONE	B	YEAR	199	NEGATIVE		
OPIATES	B	YEAR	199	NEGATIVE		
PCP	B	YEAR	199	NEGATIVE		
PROPOXYPHENE	B	YEAR	199	NEGATIVE		
ALCOHOL	B	YEAR	199	<20 NOT DETECTABLE		
				20-500 INGESTION		
				>500 CRITICAL VALUE		

**MISCELLANEOUS**

ANA	B	YEAR	199	Negative		
ANTI-SM	B	YEAR	199	<1.0 = Negative		
DNA, ds				NEGATIVE: < 25.0		
				EQUIVOCAL: 25.0-34.9		
				WEAKLY POSITIVE: 35.0-99.9		
				MODERATELY POSITIVE: 100.0-199.9		
				TRONGLY POSITIVE: >=200.0		
SERUM COTININE				BY REPORT		
IGF-BP3				BY REPORT		
IGF-1	B	YEAR	5	17-248		ng/mL
	B	YEAR	8	8-474		

# UNIVERSITY HOSPITALS

## LABORATORY SERVICES

REFERENCE RANGES AS OF

08/17/09

UNIVERSITY HOSPITALS  
 UHLSF LABORATORIES  
 11100 EUCLID AVENUE  
 CLEVELAND, OHIO 44106-5199  
 PHONE (216) 844 - 5227

SEX: M (MALE) F (FEMALE) B (BOTH)

NAME	SEX	AGE	LIMIT	LOW	HIGH	UNITS
	F	YEAR	11	117-771		
	M	YEAR	11	110-565		
	F	YEAR	15	261-1096		
	M	YEAR	15	202-957		
	B	YEAR	24	182-780		
	B	YEAR	39	114-492		
	B	YEAR	54	90-360		
	B	YEAR	199	71-290		
TANNER STAGES						
	Tanner stage		Male	Female		
	I		109-485 ng/mL	128-470 ng/mL		
	II		174-512 ng/mL	186-695 ng/mL		
	III		230-818 ng/mL	292-883 ng/mL		
	IV		396-776 ng/mL	394-920 ng/mL		
	V		402-839 ng/mL	308-1138 ng/mL		

Above are the reference ranges included in the Differential reported by UHC  
 Absolute Neutrophil counts are not reported as a separate result with the CBC/Differential

I am the director of the hematology lab. The lab does not provide ref ranges for WBC diffs that are reported as %. This method of reporting is obsolete and inappropriate. Instead, we report ref ranges for absolute WBC counts. Here's why. If a person has an absolute WBC count of 10,000 with 80% PMNs and 20% lymphocytes, those results would all be normal. Now, let's say the person has an absolute WBC count of 2,000 (low) with 80% lymphocytes and 20% PMNs. This person does not have an abnormally high lymphocyte count, as the high % would suggest, because the absolute number of lymphocytes is normal or even low. This is why it is incorrect to report reference ranges for WBC%s. If your protocol is asking for this reference range, just tell them your lab doesn't report it. Or, you can forward them this message.