Quest Diagnostics

Report Status: Final

Patient Information	Specimen Information	Client Information
DOB: **AGE:** Gender: Fasting: Phone: Patient ID:	Specimen: Requisition: Lab Ref #: Collected: Received: Reported:	

COMMENTS:

Test Name	In Range	Out Of Range	Reference Range	Lab
THYROID PANEL WITH TSH				
THYROID PANEL				
T3 UPTAKE	27		22-35 %	
T4 (THYROXINE), TOTAL	7.5		5.1-11.9 mcg/dL	
FREE T4 INDEX (T7)	2.0		1.4-3.8	
TSH	1.83		mIU/L	
			Reference Range	
			> or = 20 Years 0.40-4.50	
			Pregnancy Ranges	
			First trimester 0.26-2.66	
			Second trimester 0.55-2.73	
			Third trimester 0.43-2.91	
LIPID PANEL, STANDARD				
CHOLESTEROL, TOTAL	166		<200 mg/dL	
HDL CHOLESTEROL	54		>50 mg/dL	
TRIGLYCERIDES	83		<150 mg/dL	
LDL-CHOLESTEROL	95		mg/dL (calc)	
Reference range: <100				
Desirable range <100 mg/dL for primary prevention; <70 mg/dL for patients with CHD or diabetic patients with > or = 2 CHD risk factors.				
LDL-C is now calculated using the Martin-Hopkins calculation, which is a validated novel method providing better accuracy than the Friedewald equation in the estimation of LDL-C. Martin SS et al. JAMA. 2013;310(19): 2061-2068 (http://education.QuestDiagnostics.com/faq/FAQ164)				
CHOL/HDLC RATIO	3.1		<5.0 (calc)	
NON HDL CHOLESTEROL	112		<130 mg/dL (calc)	
For patients with diabetes plus 1 major ASCVD risk factor, treating to a non-HDL-C goal of <100 mg/dL (LDL-C of <70 mg/dL) is considered a therapeutic option.				
HS CRP		**4.1 H**	mg/L	
Higher relative cardiovascular risk according to AHA/CDC guidelines. Consider retesting in 1 to 2 weeks to exclude a benign transient elevation in the baseline CRP value secondary to infection or inflammation.				
For ages >17 Years:				
hs-CRP mg/L Risk According to AHA/CDC Guidelines				
<1.0 Lower relative cardiovascular risk.				
1.0-3.0 Average relative cardiovascular risk.				
3.1-10.0 Higher relative cardiovascular risk. Consider retesting in 1 to 2 weeks to exclude a benign transient elevation				

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	in the baseline CRP value secondary to infection or inflammation.			
>10.0	Persistent elevation, upon retesting, may be associated with infection and inflammation.			
HOMOCYSTEINE	7.7		<10.4 umol/L	
Homocysteine is increased by functional deficiency of folate or vitamin B12. Testing for methylmalonic acid differentiates between these deficiencies. Other causes of increased homocysteine include renal failure, folate antagonists such as methotrexate and phenytoin, and exposure to nitrous oxide.				
COMPREHENSIVE METABOLIC PANEL				
GLUCOSE	84		65-99 mg/dL Fasting reference interval	
UREA NITROGEN (BUN)	13		7-25 mg/dL	
CREATININE	0.94		0.50-1.10 mg/dL	
eGFR NON-AFR. AMERICAN	73		> OR = 60 mL/min/1.73m2	
eGFR AFRICAN AMERICAN	84		> OR = 60 mL/min/1.73m2	
BUN/CREATININE RATIO	NOT APPLICABLE		6-22 (calc)	
SODIUM	136		135-146 mmol/L	
POTASSIUM	4.5		3.5-5.3 mmol/L	
CHLORIDE	102		98-110 mmol/L	
CARBON DIOXIDE	25		20-32 mmol/L	
CALCIUM	9.4		8.6-10.2 mg/dL	
PROTEIN, TOTAL	7.1		6.1-8.1 g/dL	
ALBUMIN	4.3		3.6-5.1 g/dL	
GLOBULIN	2.8		1.9-3.7 g/dL (calc)	
ALBUMIN/GLOBULIN RATIO	1.5		1.0-2.5 (calc)	
BILIRUBIN, TOTAL	0.5		0.2-1.2 mg/dL	
ALKALINE PHOSPHATASE	88		33-115 U/L	
AST	18		10-35 U/L	
ALT	21		6-29 U/L	
HEMOGLOBIN A1c	5.4		<5.7 % of total Hgb	
For the purpose of screening for the presence of diabetes: <5.7% Consistent with the absence of diabetes 5.7-6.4% Consistent with increased risk for diabetes (prediabetes) > or =6.5% Consistent with diabetes This assay result is consistent with a decreased risk of diabetes. Currently, no consensus exists regarding use of hemoglobin A1c for diagnosis of diabetes in children. According to American Diabetes Association (ADA) guidelines, hemoglobin A1c <7.0% represents optimal control in non-pregnant diabetic patients. Different metrics may apply to specific patient populations.				

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Standards of Medical Care in Diabetes(ADA).				
PHOSPHATE (AS PHOSPHORUS)	2.9		2.5-4.5 mg/dL	
URIC ACID		**10.1 H**	2.5-7.0 mg/dL	
Therapeutic target for gout patients: <6.0 mg/dL				
LD	163		100-200 U/L	
GGT	21		3-55 U/L	
T4, FREE	1.1		0.8-1.8 ng/dL	
T3, FREE	2.3		2.3-4.2 pg/mL	
ESTROGEN, TOTAL, SERUM	203.4		pg/mL	
Reference Ranges for Total Estrogen:				
Follicular Phase (1-12 days):	90-590 pg/mL			
Luteal Phase:	130-460 pg/mL			
Postmenopausal:	50-170 pg/mL			
The total estrogen assay is not recommended for use in pre-pubertal children.				
IGF 1, LC/MS	152		52-328 ng/mL	
Z SCORE (FEMALE)	0.1		-2.0 - +2.0 SD	
This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics Nichols Institute San Juan Capistrano. It has not been cleared or approved by FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.				
CBC (INCLUDES DIFF/PLT)				
WHITE BLOOD CELL COUNT	7.7		3.8-10.8 Thousand/uL	
RED BLOOD CELL COUNT	4.99		3.80-5.10 Million/uL	
HEMOGLOBIN	14.2		11.7-15.5 g/dL	
HEMATOCRIT	42.6		35.0-45.0 %	
MCV	85.4		80.0-100.0 fL	
MCH	28.5		27.0-33.0 pg	
MCHC	33.3		32.0-36.0 g/dL	
RDW	13.2		11.0-15.0 %	
PLATELET COUNT	391		140-400 Thousand/uL	
MPV	10.1		7.5-12.5 fL	
ABSOLUTE NEUTROPHILS	4836		1500-7800 cells/uL	
ABSOLUTE LYMPHOCYTES	2272		850-3900 cells/uL	
ABSOLUTE MONOCYTES	508		200-950 cells/uL	
ABSOLUTE EOSINOPHILS	62		15-500 cells/uL	
ABSOLUTE BASOPHILS	23		0-200 cells/uL	
ABSOLUTE NUCLEATED RBC	0		0 cells/uL	
NEUTROPHILS	62.8		%	
LYMPHOCYTES	29.5		%	
MONOCYTES	6.6		%	
EOSINOPHILS	0.8		%	
BASOPHILS	0.3		%	
URINALYSIS, COMPLETE				
COLOR	YELLOW		YELLOW	
APPEARANCE	CLEAR		CLEAR	

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SPECIFIC GRAVITY	1.008		1.001-1.035	
PH	5.5		5.0-8.0	
GLUCOSE	NEGATIVE		NEGATIVE	
BILIRUBIN	NEGATIVE		NEGATIVE	
KETONES	NEGATIVE		NEGATIVE	
OCCULT BLOOD	NEGATIVE		NEGATIVE	
PROTEIN	NEGATIVE		NEGATIVE	
NITRITE	NEGATIVE		NEGATIVE	
LEUKOCYTE ESTERASE	NEGATIVE		NEGATIVE	
WBC	NONE SEEN		< OR = 5 /HPF	
RBC	NONE SEEN		< OR = 2 /HPF	
SQUAMOUS EPITHELIAL CELLS	NONE SEEN		< OR = 5 /HPF	
BACTERIA	NONE SEEN		NONE SEEN /HPF	
HYALINE CAST	NONE SEEN		NONE SEEN /LPF	
IRON AND TOTAL IRON BINDING CAPACITY				
IRON, TOTAL	52		40-190 mcg/dL	
IRON BINDING CAPACITY	406		250-450 mcg/dL (calc)	
% SATURATION	13		11-50 % (calc)	
DHEA SULFATE		**260 H**	19-231 mcg/dL	

DHEA-S values fall with advancing age.
For reference, the reference intervals for 31-40 year old patients are:

Male: 106-464 mcg/dL
Female: 23-266 mcg/dL

GROWTH HORMONE (GH)	<0.1		< OR = 7.1 ng/mL	

Because of a pulsatile secretion pattern, random (unstimulated) growth hormone (GH) levels are frequently undetectable in normal children and adults and are not reliable for diagnosing GH deficiency. Regarding suppression tests, failure to suppress GH is diagnostic of acromegaly.

Typical GH response in healthy subjects:
Using the glucose tolerance (GH suppression) test, acromegaly is ruled out if the patient's GH level is <1.0 ng/mL at any point in the timed sequence. [Katznelson L, Laws Jr ER, Melmed S, et al. Acromegaly: an Endocrine Society Clinical Practice Guideline. J Clin Endocrinol Metab 2014; 99: 3933-3951].
Using GH stimulation testing, the following result at any point in the timed sequence makes GH deficiency unlikely:
Adults (> or = 20 years):
Insulin Hypoglycemia > or = 5.1 ng/mL
Arginine/GHRH > or = 4.1 ng/mL
Glucagon > or = 3.0 ng/mL
Children (< 20 years):
All Stimulation Tests > or = 10.0 ng/mL

PROGESTERONE	<0.5		ng/mL Reference Ranges	

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ESTRADIOL	66		Female Follicular Phase < 1.0 Luteal Phase 2.6-21.5 Post menopausal < 0.5 Pregnancy 1st Trimester 4.1-34.0 2nd Trimester 24.0-76.0 3rd Trimester 52.0-302.0 pg/mL Reference Range Follicular Phase: 19-144 Mid-Cycle: 64-357 Luteal Phase: 56-214 Postmenopausal: < or = 31	

Reference range established on post-pubertal patient population. No pre-pubertal reference range established using this assay. For any patients for whom low Estradiol levels are anticipated (e.g. males, pre-pubertal children and hypogonadal/post-menopausal females), the Quest Diagnostics Nichols Institute Estradiol, Ultrasensitive, LCMSMS assay is recommended (order code 30289).

Please note: patients being treated with the drug fulvestrant (Faslodex(R)) have demonstrated significant interference in immunoassay methods for estradiol measurement. The cross reactivity could lead to falsely elevated estradiol test results leading to an inappropriate clinical assessment of estrogen status. Quest Diagnostics order code 30289-Estradiol, Ultrasensitive LC/MS/MS demonstrates negligible cross reactivity with fulvestrant.

TESTOSTERONE, FREE (DIALYSIS) AND TOTAL,MS			
TESTOSTERONE, TOTAL, MS	29		2-45 ng/dL
TESTOSTERONE, FREE	3.6		0.1-6.4 pg/mL

**Data from J Clin Invest 1974:53:819-828 and J Clin Endocrinol Metab 1973;36:1132-1142. Men with clinically significant hypogonadal symptoms and testosterone values repeatedly in the range of the 200-300 ng/dL or less, may benefit from testosterone treatment after adequate risk and benefits counseling.

For additional information, please refer to http://education.questdiagnostics.com/faq/FAQ165 (This link is being provided for informational/ educational purposes only.)

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Endocrinology

Test Name	Result	Reference Range	Lab
VITAMIN D,25-OH,TOTAL,IA	26 L	30-100 ng/mL	

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Vitamin D Status          25-OH Vitamin D:

Deficiency:                     <20 ng/mL
Insufficiency:            20 - 29 ng/mL
Optimal:                  > or = 30 ng/mL
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For 25-OH Vitamin D testing on patients on D2-supplementation and patients for whom quantitation of D2 and D3 fractions is required, the QuestAssureD(TM) 25-OH VIT D, (D2,D3), LC/MS/MS is recommended: order code 92888 (patients >2yrs).

For more information on this test, go to: http://education.questdiagnostics.com/faq/FAQ163 (This link is being provided for informational/ educational purposes only.)

Physician Comments:

PERFORMING SITE: