Quest Diagnostics

Report Status: Final

ROETH, EVERETT

Patient Information	Specimen Information	Client Information
ROETH, EVERETT **DOB: 06/24/1997 AGE: 28** Gender: M Fasting: Y Phone: 925.212.1073 Patient ID: F22E5B56 Health ID: 8573031648184914	Specimen: OZ998163E Requisition: 0008230 Lab Ref #: 882A2AAF6664420C Collected: 08/21/2025 / 10:26 PDT Received: 08/22/2025 / 03:19 PDT Reported: 09/04/2025 / 23:41 PDT	Client #: 73929412 MAIL992 DAMASCO, LEO JUNCTION 440 N BARRANCA AVE # 3811 COVINA, CA 91723-1722

COMMENTS: FASTING:YES

Test Name	In Range	Out Of Range	Reference Range	Lab
HS CRP	0.2		mg/L	EN

Reference Range
Optimal <1.0
Jellinger PS et al. Endocr Pract.2017;23(Suppl 2):1-87.
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 in the baseline CRP value secondary to infection or inflammation.
>10.0	Persistent elevation, upon retesting, may be associated with infection and inflammation.

Pearson TA, Mensah GA, Alexander RW, et al. Markers of inflammation and cardiovascular disease: application to clinical and public health practice: A statement for healthcare professionals from the Centers for Disease Control and Prevention and the American Heart Association. Circulation 2003; 107(3): 499-511.

HOMOCYSTEINE	7.1		< or = 12.9 umol/L	NW

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.
Selhub J, et al., Ann Intern Med. 1999;131(5):331-9.

COMPREHENSIVE METABOLIC PANEL				NW
GLUCOSE	78		65-99 mg/dL Fasting reference interval	
UREA NITROGEN (BUN)	17		7-25 mg/dL	
CREATININE	0.99		0.60-1.24 mg/dL	
EGFR	106		> OR = 60 mL/min/1.73m2	
BUN/CREATININE RATIO	SEE NOTE: Not Reported: BUN and Creatinine are within reference range.		6-22 (calc)	
SODIUM	139		135-146 mmol/L	
POTASSIUM	3.9		3.5-5.3 mmol/L	
CHLORIDE	103		98-110 mmol/L	
CARBON DIOXIDE	26		20-32 mmol/L	
CALCIUM	9.0		8.6-10.3 mg/dL	
PROTEIN, TOTAL	6.4		6.1-8.1 g/dL	
ALBUMIN	4.4		3.6-5.1 g/dL	

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Test Name	In Range	Out Of Range	Reference Range	Lab
GLOBULIN	2.0		1.9-3.7 g/dL (calc)	
ALBUMIN/GLOBULIN RATIO	2.2		1.0-2.5 (calc)	
BILIRUBIN, TOTAL	0.8		0.2-1.2 mg/dL	
ALKALINE PHOSPHATASE	45		36-130 U/L	
AST	21		10-40 U/L	
ALT	17		9-46 U/L	
HEMOGLOBIN A1c	5.1		<5.7 %	NW

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. Standards of Medical Care in Diabetes(ADA).

MAGNESIUM	2.1		1.5-2.5 mg/dL	NW
URIC ACID	5.0		4.0-8.0 mg/dL	NW

Therapeutic target for gout patients: <6.0 mg/dL

GGT	7		3-70 U/L	NW
AMYLASE	42		21-101 U/L	NW
LIPASE	9		7-60 U/L	NW
TSH	1.06		0.40-4.50 mIU/L	NW
T4, FREE	1.3		0.8-1.8 ng/dL	NW
T3, FREE	3.6		2.3-4.2 pg/mL	NW
THYROID PEROXIDASE AND THYROGLOBULIN ANTIBODIES				
THYROGLOBULIN ANTIBODIES	<1		< or = 1 IU/mL	EN
THYROID PEROXIDASE ANTIBODIES	2		<9 IU/mL	EN
LEPTIN	0.5		ng/mL	EZ

Reference Ranges for Leptin:

Adult Lean Subjects (18-71 years) with BMI range of 18-25:

Males: 0.3-13.4 ng/mL
Females: 4.7-23.7 ng/mL

Adult Subjects (19-60 years) with BMI range of 25-30:

Males: 1.8-19.9 ng/mL
Females: 8.0-38.9 ng/mL

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Test Name	In Range	Out Of Range	Reference Range	Lab
Pediatric Reference Ranges for Leptin: 5-9.9 years: 0.6-16.8 ng/mL 10-13.9 years: 1.4-16.5 ng/mL 14-17.9 years: 0.6-24.9 ng/mL This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics. It has not been cleared or approved by the FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.				
METHYLMALONIC ACID	200		55-335 nmol/L	EZ
Serum methylmalonic acid (MMA) levels are used to diagnose and monitor several rare inborn errors of metabolism, including methylmalonic aciduria. The enzymatic conversion of MMA to succinic acid requires vitamin B12 (adenosyl-cobalamin) as a cofactor. Serum MMA levels are also used for assessing functional vitamin B12 deficiency. Vitamin B12 is essential for fetal neurodevelopment, particularly early in pregnancy. Undiagnosed maternal vitamin B12 deficiency may be associated with adverse fetal/neonatal outcomes, such as neural tube defects and intrauterine growth restriction. Quest Diagnostics utilized Multi-Modal Decomposition (MMD) analysis to establish first and second trimester-specific MMA reference intervals in pregnancy, as given below: MMA, First trimester (<13 wks gestation): 58-167 nmol/L MMA, Second trimester (13-23 wks gestation): 63-241 nmol/L This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics. It has not been cleared or approved by the FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.				
CBC (INCLUDES DIFF/PLT)				NW
WHITE BLOOD CELL COUNT	7.9		3.8-10.8 Thousand/uL	
RED BLOOD CELL COUNT	5.05		4.20-5.80 Million/uL	
HEMOGLOBIN	15.1		13.2-17.1 g/dL	
HEMATOCRIT	45.1		38.5-50.0 %	
MCV	89.3		80.0-100.0 fL	
MCH	29.9		27.0-33.0 pg	
MCHC	33.5		32.0-36.0 g/dL	
For adults, a slight decrease in the calculated MCHC value (in the range of 30 to 32 g/dL) is most likely not clinically significant; however, it should be interpreted with caution in correlation with other red cell parameters and the patient's clinical condition.				
RDW	12.3		11.0-15.0 %	
PLATELET COUNT	205		140-400 Thousand/uL	
MPV	11.1		7.5-12.5 fL	
ABSOLUTE NEUTROPHILS	5554		1500-7800 cells/uL	

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Test Name	In Range	Out Of Range	Reference Range	Lab
ABSOLUTE LYMPHOCYTES	1604		850-3900 cells/uL	
ABSOLUTE MONOCYTES	529		200-950 cells/uL	
ABSOLUTE EOSINOPHILS	182		15-500 cells/uL	
ABSOLUTE BASOPHILS	32		0-200 cells/uL	
NEUTROPHILS	70.3		%	
LYMPHOCYTES	20.3		%	
MONOCYTES	6.7		%	
EOSINOPHILS	2.3		%	
BASOPHILS	0.4		%	
URINALYSIS, COMPLETE W/REFLEX TO CULTURE				NW
COLOR	YELLOW		YELLOW	
APPEARANCE	CLEAR		CLEAR	
SPECIFIC GRAVITY	1.034		1.001-1.035	
PH	6.0		5.0-8.0	
GLUCOSE	NEGATIVE		NEGATIVE	
BILIRUBIN	NEGATIVE		NEGATIVE	
KETONES		**TRACE**	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	
This urine was analyzed for the presence of WBC, RBC, bacteria, casts, and other formed elements. Only those elements seen were reported.				
REFLEXIVE URINE CULTURE	NO CULTURE INDICATED			NW
IRON AND TOTAL IRON BINDING CAPACITY				NW
IRON, TOTAL	178		50-195 mcg/dL	
IRON BINDING CAPACITY	296		250-425 mcg/dL (calc)	
% SATURATION		**60 H**	20-48 % (calc)	
FERRITIN		**34 L**	38-380 ng/mL	NW
RHEUMATOID FACTOR	<10		<14 IU/mL	NW
CORTISOL, TOTAL	7.7		mcg/dL	NW
Reference Range: For 8 a.m.(7-9 a.m.) Specimen: 4.0-22.0 Reference Range: For 4 p.m.(3-5 p.m.) Specimen: 3.0-17.0 * Please interpret above results accordingly *				
FSH	4.9		1.4-12.8 mIU/mL	NW
INSULIN	3.3		uIU/mL	NW
Reference Range < or = 18.4 Risk: Optimal < or = 18.4 Moderate NA High >18.4 Adult cardiovascular event risk category				

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Test Name	In Range	Out Of Range	Reference Range	Lab
	cut points (optimal, moderate, high) are based on Insulin studies performed at Quest Diagnostics in 2022.		Reference Interval	
LH	5.5		1.5-9.3 mIU/mL	NW
PROLACTIN	7.3		2.0-18.0 ng/mL	NW
ESTRADIOL	30		< OR = 39 pg/mL	NW
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.				
SEX HORMONE BINDING GLOBULIN	25		10-50 nmol/L	NW
DHEA SULFATE	159		74-617 mcg/dL	EN
PSA, TOTAL WITH REFLEX TO PSA, FREE				NW
PSA, TOTAL	0.4		< OR = 4.0 ng/mL	
The Total PSA value from this assay system is standardized against the equimolar PSA standard. The test result will be approximately 20% higher when compared to the WHO-standardized Total PSA (Siemens assay). Comparison of serial PSA results should be interpreted with this fact in mind. PSA was performed using the Beckman Coulter Immunoassay method. Values obtained from different assay methods cannot be used interchangeably. PSA levels, regardless of value, should not be interpreted as absolute evidence of the presence or absence of disease.				
MERCURY, BLOOD	<4		<OR=10 mcg/L	EN
See Endnote 1				
ZINC	98		60-130 mcg/dL	EN
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Test Name	In Range	Out Of Range	Reference Range	Lab
LEAD (VENOUS)	<1.0		<3.5 mcg/dL	EN
See Endnote 1				
ABO GROUP AND RH TYPE				NW
ABO GROUP	A			
RH TYPE	RH(D) POSITIVE			
For additional information, please refer to http://education.QuestDiagnostics.com/faq/FAQ111 (This link is being provided for informational/ educational purposes only.)				
TESTOSTERONE, FREE (DIALYSIS) AND TOTAL,MS				Z3E
TESTOSTERONE, TOTAL, MS	648		250-1100 ng/dL	

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

This test was developed and its analytical performance characteristics have been determined by medfusion. It has not been cleared or approved by the FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

TESTOSTERONE, FREE	129.2		35.0-155.0 pg/mL

(Note)
This test was developed and its analytical performance characteristics have been determined by medfusion. It has not been cleared or approved by the FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

MDF
med fusion
2501 South State Highway 121,Suite 1100
Lewisville TX 75067
972-966-7300
Ithiel James L. Frame, MD, PhD

Endnote 1

This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics. It has not been cleared or approved by the FDA. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes.

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Endocrinology

Test Name	Result	Reference Range	Lab
VITAMIN D,25-OH,TOTAL,IA	51	30-100 ng/mL	NW

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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
```

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 additional information, please refer to http://education.QuestDiagnostics.com/faq/FAQ199 (This link is being provided for informational/ educational purposes only.)

Physician Comments:

Immunology

Test Name	Result	Reference Range	Lab
ANA SCREEN, IFA, W/REFL TITER AND PATTERN			EN
ANA SCREEN, IFA	**POSITIVE**	NEGATIVE	

ANA IFA is a first line screen for detecting the presence of up to approximately 150 autoantibodies in various autoimmune diseases. A positive ANA IFA result is suggestive of autoimmune disease and reflexes to titer and pattern. Further laboratory testing may be considered if clinically indicated.

For additional information, please refer to http://education.QuestDiagnostics.com/faq/FAQ177 (This link is being provided for informational/ educational purposes only.)

ANTINUCLEAR ANTIBODIES TITER AND PATTERN			EN
ANA TITER	**1:40 H**	titer	

A low level ANA titer may be present in pre-clinical autoimmune diseases and normal individuals.

```
Reference Range
<1:40        Negative
1:40-1:80    Low Antibody Level
>1:80        Elevated Antibody Level
```

ANA PATTERN	**Nuclear, Speckled**	

Speckled pattern is associated with mixed connective tissue disease (MCTD), systemic lupus erythematosus (SLE), Sjogren's syndrome, dermatomyositis, and systemic sclerosis/polymyositis overlap.

AC-2,4,5,29: Speckled

International Consensus on ANA Patterns (https://doi.org/10.1515/cclm-2018-0052)

ANA TITER	**1:160 H**	titer

```
Reference Range
<1:40        Negative
1:40-1:80    Low Antibody Level
>1:80        Elevated Antibody Level
```

ANA PATTERN	**Nuclear, Centromere**	

Centromere pattern is associated with limited cutaneous systemic sclerosis, CREST (Calcinosis, Raynaud's, Esophageal dysmotility, Sclerodactyly, Telangiectasia), primary biliary cholangitis (PBC), and other autoimmune diseases.

AC-3: Centromere

International Consensus on ANA Patterns (https://doi.org/10.1515/cclm-2018-0052)

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Immunology

Test Name	Result	Reference Range	Lab
ANA TITER	1:40 H	titer	

A low level ANA titer may be present in pre-clinical autoimmune diseases and normal individuals.

```
Reference Range
<1:40        Negative
1:40-1:80    Low Antibody Level
>1:80        Elevated Antibody Level
```

ANA PATTERN	Cytoplasmic	

The presence of cytoplasmic fluorescence was noted on the HEp-2 slide. Other reactivities (e.g., anti- mitochondrial antibodies or anti-smooth muscle antibodies) may be responsible for this fluorescence. The clinical significance of this finding is uncertain. Clinical correlation is recommended.

AC-15 to AC-23: Cytoplasmic

International Consensus on ANA Patterns (https://doi.org/10.1515/cclm-2018-0052)

Physician Comments:

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Cardio IQ®

Test Name	Current Result & Risk: Optimal	Current Result & Risk: Non-Optimal	Risk/Reference Interval: Optimal	Moderate	High	Units	Historical Result & Risk
LIPID PANEL							
CHOLESTEROL, TOTAL	158		<200	N/A	>=200	mg/dL	
HDL CHOLESTEROL	46		>=40	N/A	<40	mg/dL	
TRIGLYCERIDES	68		<150	150-199	>=200	mg/dL	
LDL-CHOLESTEROL	97		<100	100-129	>129	mg/dL (calc)	
CHOL/HDLC RATIO	3.4		<=3.5	3.6-5.0	>5.0	calc	
NON-HDL CHOLESTEROL	112		<130	130-189	>=190	mg/dL (calc)	
LIPOPROTEIN FRACTIONATION, ION MOBILI							
LDL PARTICLE NUMBER		1217	<1138	1138-1409	>1409	nmol/L	
LDL SMALL		270	<142	142-219	>219	nmol/L	
LDL MEDIUM		304	<215	215-301	>301	nmol/L	
HDL LARGE		4050	>6729	6729-5353	<5353	nmol/L	
LDL PATTERN		B	A	N/A	B	Pattern	
LDL PEAK SIZE		216.7	>222.9	222.9-217.4	<217.4	Angstrom	
APOLIPOPROTEINS							
APOLIPOPROTEIN B	85		<90	90-129	>=130	mg/dL	
LIPOPROTEIN (a)	<10		<75	75-125	>125	nmol/L	
FATTY ACIDS							
OmegaCheck® Whole Blood: (EPA+DPA+DHA)		3.8	>=5.5	3.8-5.4	<=3.7	% by wt	
ARACHIDONIC ACID/EPA RATIO	**24.0**			3.7-40.7			

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Test Name	Current Result & Risk		Risk/Reference Interval		Historical Result & Risk
	Optimal	Non-Optimal	Optimal / Moderate / High	Units	
OMEGA-6/OMEGA-3 RATIO	**10.4**		3.7-14.4		
OMEGA-3 TOTAL	**3.8**			% by wt	
EPA	**0.5**		0.2-2.3	% by wt	
DPA	**1.2**		0.8-1.8	% by wt	
DHA	**2.2**		1.4-5.1	% by wt	
OMEGA-6 TOTAL	**39.9**			% by wt	
ARACHIDONIC ACID	**11.9**		8.6-15.6	% by wt	
LINOLEIC ACID	**24.7**		18.6-29.5	% by wt	

For details on reference ranges please refer to the reference range/comment section of the report.

Medical Information For Healthcare Providers: If you have questions about any of the tests in our Cardio IQ offering, please call Client Services at our Quest Diagnostics-Cleveland HeartLab Cardiometabolic Center of Excellence. They can be reached at 866.358.9828, option 1 to arrange a consult with our clinical education team.

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Reference Range/Comments

Analyte Name	In Range	Out Range	Reference Range	Lab
EPA+DPA+DHA		**3.8**	>5.4 % by wt	Z4M
This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics Cardiometabolic Center of Excellence at Cleveland HeartLab. It has not been cleared or approved by the U.S. Food and Drug Administration. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes. Increasing blood levels of long-chain n-3 fatty acids are associated with a lower risk of sudden cardiac death (1). Based on the top (75th percentile) and bottom (25th percentile) quartiles of the CHL reference population, the following relative risk categories were established for OmegaCheck: A cut-off of >=5.5% by wt defines a population at optimal relative risk, 3.8-5.4% by wt defines a population at moderate relative risk, and <=3.7% by wt defines a population at high relative risk of sudden cardiac death. The totality of the scientific evidence demonstrates that when consumption of fish oils is limited to 3 g/day or less of EPA and DHA, there is no significant risk for increased bleeding time beyond the normal range. A daily dosage of 1 gram of EPA and DHA lowers the circulating triglycerides by about 7-10% within 2 to 3 weeks. (Reference: 1-Albert et al. NEJM. 2002; 346: 1113-1118).				
HDL LARGE		**4050**	>6729 nmol/L	Z4M
Relative Risk: Optimal >6729; Moderate 6729-5353; High <5353. Male Reference Range: 4334 to 10815 nmol/L; Female Reference Range: 5038 to 17886 nmol/L.				
LDL MEDIUM		**304**	<215 nmol/L	Z4M
Relative Risk: Optimal <215; Moderate 215-301; High >301. Male Reference Range: 167 to 485 nmol/L; Female Reference Range: 121 to 397 nmol/L.				
LDL PARTICLE NUMBER		**1217**	<1138 nmol/L	Z4M
Relative Risk: Optimal <1138; Moderate 1138-1409; High >1409. Male and Female Reference Range: 1016 to 2185 nmol/L.				
LDL PATTERN		**B**	A Pattern	Z4M
Relative Risk: Optimal Pattern A; High Pattern B. Reference Range: Pattern A.				
LDL PEAK SIZE		**216.7**	>222.9 Angstrom	Z4M
This test was developed and its analytical performance characteristics have been determined by Quest Diagnostics Cardiometabolic Center of Excellence at Cleveland HeartLab. It has not been cleared or approved by the U.S. Food and Drug Administration. This assay has been validated pursuant to the CLIA regulations and is used for clinical purposes. Relative Risk: Optimal >222.9; Moderate 222.9-217.4; High <217.4. Male and Female Reference Range: 216 to 234.3 Angstrom. Adult cardiovascular event risk category cut points (optimal, moderate, high) are based on an adult U.S. reference population plus two large cohort study populations. Association between lipoprotein subfractions and cardiovascular events is based on Musunuru et al. ATVB.2009;29:1975. For additional information, please refer to http://education.QuestDiagnostics.com/faq/FAQ134 (This link is being provided for informational/educational purposes only.)				
LDL SMALL		**270**	<142 nmol/L	Z4M
Relative Risk: Optimal <142; Moderate 142-219; High >219. Male Reference Range: 123 to 441 nmol/L; Female Reference Range: 115 to 386 nmol/L.				
APOLIPOPROTEIN B	**85**		<90 mg/dL	Z4M

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Reference Range    <90

Risk Category:
Optimal         <90
Moderate        90-129
High            > or = 130

A desirable treatment target may be <80 mg/dL or lower
depending on the risk category of the patient including
patients on lipid lowering therapies, patients with ASCVD,
diabetes with >1 risk factors, Stage 3 or greater CKD with
albuminuria, or  heterozygous familial
hypercholesterolemia. ApoB relative risk category cut
points are based on AACE/ACE and ACC/AHA recommendations
(Grundy SM, et al. 2019. doi:10.1016/j.jacc.2018.11.002;
Handelsman Y, et al. 2020. doi:10.4158/CS-2020-0490).
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Patient Information	Specimen Information	Client Information
ROETH, EVERETT **DOB: 06/24/1997** **AGE: 28** Gender: M Fasting: Y Patient ID: F22E5B56 Health ID: 8573031648184914	Specimen: OZ998163E Collected: 08/21/2025 / 10:26 PDT Received: 08/22/2025 / 03:19 PDT Reported: 09/04/2025 / 23:41 PDT	Client #: 73929412 DAMASCO, LEO

Reference Range/Comments

Analyte Name	In Range	Out Range	Reference Range	Lab
ARACHIDONIC ACID	**11.9**		8.6-15.6 % by wt	Z4M
ARACHIDONIC ACID/EPA RATIO	**24.0**		3.7-40.7	Z4M
CHOL/HDLC RATIO	**3.4**		<5.0 calc	Z4M
CHOLESTEROL, TOTAL	**158**		<200 mg/dL	Z4M
DHA	**2.2**		1.4-5.1 % by wt	Z4M
DPA	**1.2**		0.8-1.8 % by wt	Z4M
EPA	**0.5**		0.2-2.3 % by wt	Z4M
HDL CHOLESTEROL	**46**		>39 mg/dL	Z4M
LDL-CHOLESTEROL	**97**		<100 mg/dL (calc)	Z4M
Desirable range <100 mg/dL for primary prevention; <70 mg/dL for patients with CHD or diabetic patients with >= 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)				
LINOLEIC ACID	**24.7**		18.6-29.5 % by wt	Z4M
LIPOPROTEIN (a)	**<10**		<75 nmol/L	Z4M
Risk: Optimal <75 nmol/L; Moderate 75-125 nmol/L; High >125 nmol/L. Cardiovascular event risk category cut points (optimal, moderate, high) are based on Tsimika S. JACC 2017;69:692-711.				
NON HDL CHOLESTEROL	**112**		<130 mg/dL (calc)	Z4M
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.				
OMEGA-3 TOTAL	**3.8**		% by wt	Z4M
OMEGA-6 TOTAL	**39.9**		% by wt	Z4M
Cleveland HeartLab measures a number of omega-6 fatty acids with AA and LA being the two most abundant forms reported.				
OMEGA-6/OMEGA-3 RATIO	**10.4**		3.7-14.4	Z4M
TRIGLYCERIDES	**68**		<150 mg/dL	Z4M

PERFORMING SITE:

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Z4M CLEVELAND HEARTLAB INC, 6701 CARNEGIE AVENUE SUITE 500, CLEVELAND, OH 44103-4623 Laboratory Director: M. QASIM ANSARI, MD , CLIA: 36D1032987