Specimen ID: 279-847-2292-0
Control ID: 63010222342
Rte: 00

Specimen Details
Date collected: 10/05/2020 0949 Local
Date received: 10/05/2020
Date entered: 10/05/2020
Date reported: 10/15/2020 1707 ET

General Comments & Additional Information

Total Volume: Not Provided **Fasting:** Yes

Ordered Items

NMR LipoProfile+Lipids+Graph; CBC With Differential/Platelet; Comp. Metabolic Panel (14); Lipid Panel; Thyroid Panel; Vitamin B12 and Folate; Insulin and C-Peptide, Serum; Hemoglobin A1c; Cortisol; Testosterone, Serum; IGF-1; Reverse T3, Serum; Vitamin D, 25-Hydroxy; Fructosamine; Lipoprotein (a); C-Reactive Protein, Cardiac; Oxidized LDL; Lp-PLA2 Activity; GlycA; Leptin, Serum; Homocyst(e)ine; Uric Acid; GGT; Ferritin, Serum; Glucagon, Plasma; Apolipoprotein A-1; Fatty Acids, Free (Nonester); Apolipoprotein B; Venipuncture

TESTS	RESULT	FLAG	UNITS	REFERENCE INTERVAL	LAB
NMR LipoProfile+Lipids+Graph					
LDL Particle Number					01
LDL-P [A]	**1280**	**High**	nmol/L	<1000	01
			Low	**< 1000**	
			Moderate	**1000 - 1299**	
			Borderline-High	**1300 - 1599**	
			High	**1600 - 2000**	
			Very High	**> 2000**	
Lipids					01
LDL-C (NIH Calc)	**112**	**High**	mg/dL	0-99	01
			Optimal	**< 100**	
			Above optimal	**100 - 129**	
			Borderline	**130 - 159**	
			High	**160 - 189**	
			Very high	**> 189**	
HDL-C [A]	48		mg/dL	>39	01
Triglycerides [A]	93		mg/dL	0-149	01
Cholesterol, Total [A]	177		mg/dL	100-199	01
LDL and HDL Particles					01
HDL-P (Total) [A]	32.3		umol/L	>=30.5	01
Small LDL-P [A]	321		nmol/L	<=527	01
LDL Size [A]	20.9		nm	>20.5	01

** INTERPRETATIVE INFORMATION**
PARTICLE CONCENTRATION AND SIZE
<--Lower CVD Risk Higher CVD Risk-->

LDL AND HDL PARTICLES	Percentile in Reference Population				
HDL-P (total)	High	75th	50th	25th	Low
	>34.9	34.9	30.5	26.7	<26.7
Small LDL-P	Low	25th	50th	75th	High
	<117	117	527	839	>839
LDL Size	<-Large (Pattern A)->		<-Small (Pattern B)->		

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TESTS	RESULT	FLAG	UNITS	REFERENCE INTERVAL	LAB
	23.0 20.6		20.5	19.0	
Comment:					01
Small LDL-P and LDL Size are associated with CVD risk, but not after LDL-P is taken into account.					
Insulin Resistance Score					01
LP-IR Score [A]	**71**	**High**		<=45	01
INSULIN RESISTANCE MARKER					
<--Insulin Sensitive Insulin Resistant-->					
Percentile in Reference Population					
Insulin Resistance Score					
LP-IR Score Low 25th 50th 75th High					
<27 27 45 63 >63					
Comment:					01
LP-IR Score is inaccurate if patient is non-fasting. The LP-IR score is a laboratory developed index that has been associated with insulin resistance and diabetes risk and should be used as one component of a physician's clinical assessment.					
PDF	.				01
CBC With Differential/Platelet					
WBC	5.2		x10E3/uL	3.4-10.8	02
RBC	5.60		x10E6/uL	4.14-5.80	02
Hemoglobin	15.9		g/dL	13.0-17.7	02
Hematocrit	47.9		%	37.5-51.0	02
MCV	86		fL	79-97	02
MCH	28.4		pg	26.6-33.0	02
MCHC	33.2		g/dL	31.5-35.7	02
RDW	13.6		%	11.6-15.4	02
Platelets	285		x10E3/uL	150-450	02
Neutrophils	47		%	Not Estab.	02
Lymphs	41		%	Not Estab.	02
Monocytes	9		%	Not Estab.	02
Eos	2		%	Not Estab.	02
Basos	1		%	Not Estab.	02
Neutrophils (Absolute)	2.4		x10E3/uL	1.4-7.0	02
Lymphs (Absolute)	2.1		x10E3/uL	0.7-3.1	02
Monocytes(Absolute)	0.5		x10E3/uL	0.1-0.9	02
Eos (Absolute)	0.1		x10E3/uL	0.0-0.4	02
Baso (Absolute)	0.1		x10E3/uL	0.0-0.2	02
Immature Granulocytes	0		%	Not Estab.	02
Immature Grans (Abs)	0.0		x10E3/uL	0.0-0.1	02
Comp. Metabolic Panel (14)					
Glucose	92		mg/dL	65-99	02
BUN	19		mg/dL	6-24	02

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TESTS	RESULT	FLAG	UNITS	REFERENCE INTERVAL	LAB
Creatinine	1.08		mg/dL	0.76-1.27	02
eGFR If NonAfricn Am	84		mL/min/1.73	>59	
eGFR If Africn Am	97		mL/min/1.73	>59	
BUN/Creatinine Ratio	18			9-20	
Sodium	142		mmol/L	134-144	02
Potassium	4.3		mmol/L	3.5-5.2	02
Chloride	106		mmol/L	96-106	02
Carbon Dioxide, Total	23		mmol/L	20-29	02
Calcium	9.2		mg/dL	8.7-10.2	02
Protein, Total	6.7		g/dL	6.0-8.5	02
Albumin	4.3		g/dL	4.0-5.0	02
Globulin, Total	2.4		g/dL	1.5-4.5	
A/G Ratio	1.8			1.2-2.2	
Bilirubin, Total	0.4		mg/dL	0.0-1.2	02
Alkaline Phosphatase	53		IU/L	39-117	02
AST (SGOT)	23		IU/L	0-40	02
ALT (SGPT)	25		IU/L	0-44	02
Lipid Panel					
Cholesterol, Total	177		mg/dL	100-199	02
Triglycerides	82		mg/dL	0-149	02
HDL Cholesterol	48		mg/dL	>39	02
VLDL Cholesterol Cal	15		mg/dL	5-40	
LDL Chol Calc (NIH)	**114**	**High**	mg/dL	0-99	
Thyroid Panel					
Thyroxine (T4)	6.5		ug/dL	4.5-12.0	02
T3 Uptake	34		%	24-39	02
Free Thyroxine Index	2.2			1.2-4.9	
Vitamin B12 and Folate					
Vitamin B12	1153		pg/mL	232-1245	02
Folate (Folic Acid), Serum	9.6		ng/mL	>3.0	02
Note: A serum folate concentration of less than 3.1 ng/mL is considered to represent clinical deficiency.					02
Insulin and C-Peptide, Serum					
Insulin	11.0		uIU/mL	2.6-24.9	02
C-Peptide, Serum	2.6		ng/mL	1.1-4.4	02
C-Peptide reference interval is for fasting patients.					
Hemoglobin A1c					
Hemoglobin A1c	5.2		%	4.8-5.6	02
Please Note:					02

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TESTS	RESULT	FLAG	UNITS	REFERENCE INTERVAL	LAB
Prediabetes: 5.7 - 6.4 Diabetes: >6.4 Glycemic control for adults with diabetes: <7.0					
Cortisol	7.0		ug/dL		02
			Cortisol AM	6.2 - 19.4	
			Cortisol PM	2.3 - 11.9	
Testosterone, Serum	353		ng/dL	264-916	02
Adult male reference interval is based on a population of healthy nonobese males (BMI <30) between 19 and 39 years old. Travison, et.al. JCEM 2017,102;1161-1173. PMID: 28324103.					
IGF-1					
Insulin-Like Growth Factor I	133		ng/mL	84-270	01
Reverse T3, Serum [B]	24.1		ng/dL	9.2-24.1	01
Vitamin D, 25-Hydroxy	38.2		ng/mL	30.0-100.0	02
Vitamin D deficiency has been defined by the Institute of Medicine and an Endocrine Society practice guideline as a level of serum 25-OH vitamin D less than 20 ng/mL (1,2). The Endocrine Society went on to further define vitamin D insufficiency as a level between 21 and 29 ng/mL (2). 1. IOM (Institute of Medicine). 2010. Dietary reference intakes for calcium and D. Washington DC: The National Academies Press. 2. Holick MF, Binkley NC, Bischoff-Ferrari HA, et al. Evaluation, treatment, and prevention of vitamin D deficiency: an Endocrine Society clinical practice guideline. JCEM. 2011 Jul; 96(7):1911-30.					
Fructosamine	211		umol/L	0-285	02
Published reference interval for apparently healthy subjects between age 20 and 60 is 205 - 285 umol/L and in a poorly controlled diabetic population is 228 - 563 umol/L with a mean of 396 umol/L.					
Lipoprotein (a)	25.4		nmol/L	<75.0	01
Note: Values greater than or equal to 75.0 nmol/L may indicate an independent risk factor for CHD, but must be evaluated with caution when applied to non-Caucasian populations due to the influence of genetic factors on Lp(a) across ethnicities.					
C-Reactive Protein, Cardiac	**4.68**	**High**	mg/L	0.00-3.00	02
			Relative Risk for Future Cardiovascular Event		
			Low	**<1.00**	
			Average	**1.00 - 3.00**	
			High	**>3.00**	

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TESTS	RESULT	FLAG	UNITS	REFERENCE INTERVAL	LAB
Oxidized LDL	49		ng/mL	10-170	01
Lp-PLA2 Activity	180		nmol/min/mL	0-224	01
			Reduced Risk	<225	
			Increased Risk	>224	
GlycA [A]	366		umol/L	<400	01
			GlycA Medical Decision Limit:		
			Low Risk	<400	
			High Risk	>or=400	

Leptin, Serum

Leptin, Serum 19.7 ng/mL 01

Male Ranges by Body Mass Index (BMI)

BMI	Range	BMI	Range
11	0.1 - 0.4	25	1.1 - 9.6
12	0.1 - 0.6	26	1.3 - 12.0
13	0.1 - 0.7	27	1.6 - 14.9
14	0.1 - 0.9	28	2.0 - 18.6
15	0.1 - 1.1	29	2.5 - 23.2
16	0.2 - 1.3	30	3.2 - 28.9
17	0.2 - 1.7	31	3.9 - 36.0
18	0.2 - 2.1	32	4.9 - 44.9
19	0.3 - 2.6	33	6.1 - 55.8
20	0.4 - 3.2	34	7.6 - 69.6
21	0.4 - 4.0	35	9.5 - 86.7
22	0.5 - 5.0	36	11.8 - 108.0
23	0.8 - 6.2	37	14.8 - 135.0
24	0.9 - 7.7		

Blum WF, Juul A, "Reference Ranges of Leptin Levels According to Body Mass Index, Gender and Development Stage" in Leptin: The Voice of Adipose Tissue, Blumm WF, Kiess WF, and Rascher W, eds, 1997, 319-326.

Comment: 01

Results of this test are labeled for research purposes only by the assay's manufacturer. The performance characteristics of this assay have not been established by the manufacturer. The result should not be used for treatment or for diagnostic purposes without confirmation of the diagnosis by another medically established diagnostic product or procedure. The performance characteristics were determined by LabCorp.

Homocyst(e)ine	10.2		umol/L	0.0-14.5	02
	Please note reference interval change				
Uric Acid					
Uric Acid	5.0		mg/dL	3.7-8.6	02
Please Note:					02
	Therapeutic target for gout patients: <6.0				

Patient ID:

Control ID: 63010222342

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TESTS	RESULT	FLAG	UNITS	REFERENCE INTERVAL	LAB
GGT	18		IU/L	0-65	02
Ferritin, Serum	113		ng/mL	30-400	02
Glucagon, Plasma					
Glucagon, Plasma	69		pg/mL	50-150	01
Comment:					01

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Apolipoprotein A-1	145		mg/dL	101-178	02
Fatty Acids, Free (Nonester)	0.7		mEq/L	0.1-0.9	01
Apolipoprotein B	**94**	**High**	mg/dL	<90	02

Desirable	**< 90**
Borderline High	**90 - 99**
High	**100 - 130**
Very High	**>130**

ASCVD RISK CATEGORY	THERAPEUTIC TARGET APO B (mg/dL)
Very High Risk	<80 (if extreme risk <70)
High Risk	<90
Moderate Risk	<90

Comments:

[A] This test was developed and its performance characteristics determined by LabCorp. It has not been cleared or approved by the Food and Drug Administration.

[B] This test was developed and its performance characteristics determined by LabCorp. It has not been cleared or approved by the Food and Drug Administration.

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For inquiries, the physician may contact **Branch: 888-522-2677 Lab: 800-762-4344**

LabCorp
Laboratory Corporation of America

1447 York Court
Burlington, NC 27215
800-788-9223
Medical Director: Sanjai Nagendra, MD

Specimen Number	Patient ID	Account Number	Account Phone	Account Fax
279-847-2292-0				

Patient Last Name	Patient First Name

Age	Date of Birth	Sex	Fasting
43		M	YES

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63010222342	

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❖ NMR LipoProfile ® test

		Reference Interval[1]				
		Percentile[1]	20th	50th	80th	95th
	nmol/L	Low	Moderate	Borderline High	High	Very High
LDL-P (LDL Particle Number)	**1280**	**< 1000**	**1000 - 1299**	**1300 - 1599**	**1600 - 2000**	**> 2000**

1. Reference population (5,362 men and women) not on lipid medication enrolled in the Multi-Ethnic Study of Atherosclerosis (MESA). Mora, et al. Atherosclerosis 2007.

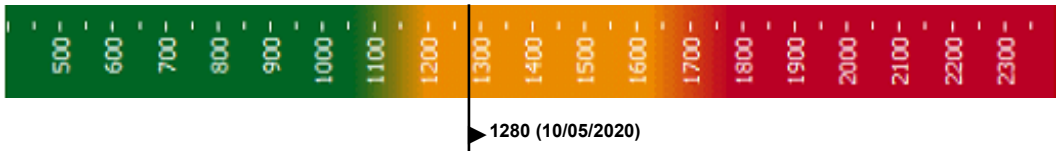
❖ Lipids

	mg/dL	Optimal	Near or Above Optimal	Borderline High	High	Very High
LDL-C (calculated)	**112**	**< 100**	**100 - 129**	**130 - 159**	**160 - 189**	**≥ 190**

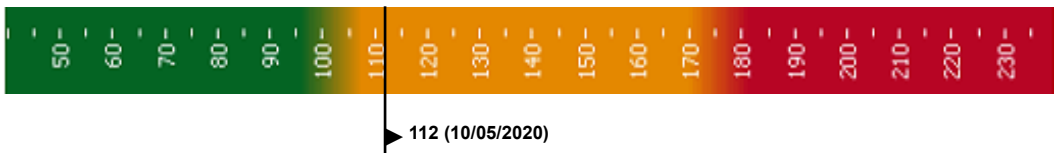
	mg/dL		mg/dL		mg/dL
HDL-C	**48**	**Triglycerides**	**93**	**Total Cholesterol**	**177**
	Desirable ≥ 40		Desirable < 150		Desirable < 200

Historical Reporting

LDL-P



LDL-C



❖ This test was developed and its performance characteristics determined by LabCorp. It has not been cleared or approved by the US Food and Drug Administration.

Issued or Pending PATENTS	The NMR LipoProfile ® test may be covered by one or more issued or pending patents, including U.S. Patent Nos. 6,518,069; 6,576,471; 6,653,140; and 7,243,030	CLIA Number	34D0655059

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279-847-2292-0				

Patient Last Name	Patient First Name

Age	Date of Birth	Sex	Fasting
43		M	YES

Control Number	NPI
63010222342	

Date Collected	Date Entered	Date and Time Reported	Physician ID & Name	Page Number
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PARTICLE CONCENTRATION AND SIZE

❖ LDL and HDL Particles

Lower CVD Risk ◄ ——— Higher CVD Risk

Percentile in Reference Population①

		high	75th	50th	25th	low
HDL-P (total)	µmol/L **32.3**		**34.9**	**30.5**	**26.7**	

		low	25th	50th	75th	high
SMALL LDL-P	nmol/L **321**		**117**	**527**	**839**	

LDL SIZE	nm **20.9**	23.0	Large (Pattern A)	20.6	20.5 Small (Pattern B)	19.0

Small LDL-P and LDL Size are associated with CVD risk, but not after LDL-P is taken into account.

Insulin Resistance Score②③

Insulin Sensitive ◄ ——— Insulin Resistant

Percentile in Reference Population①

		insulin sensitive	25th	50th	75th	insulin resistant
LP-IR SCORE**	0-100 **71**		**27**	**45**	**63**	

** The LP-IR score is a laboratory developed index that has been associated with insulin resistance and diabetes risk and should be used as one component of a physician's clinical assessment. The LP-IR score has not been cleared by the US Food and Drug Administration.

Clinician Notes

❖ This test was developed and its performance characteristics determined by LabCorp. It has not been cleared or approved by the US Food and Drug Administration.

① LipoScience reference population comprises 4,588 men and women without known CVD or diabetes and not on lipid medication.

② Shalaurova I et al., Metab Syndr Relat Disord 2014; 12:422-9.

③ Mackey RH et al., Diab Care 2015; 38:628-36.