

Specimen ID: 286-847-2788-0
 Control ID: 63010222700

Rte: 00



Specimen Details

Date collected: 10/12/2020 1025 Local
Date received: 10/12/2020
Date entered: 10/12/2020
Date reported: 10/22/2020 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	1336	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)	107	High	mg/dL	0-99	01
		Optimal		< 100	
		Above optimal		100 - 129	
		Borderline		130 - 159	
		High		160 - 189	
		Very high		> 189	
HDL-C ^A	42		mg/dL	>39	01
Triglycerides ^A	125		mg/dL	0-149	01
Cholesterol, Total ^A	171		mg/dL	100-199	01
LDL and HDL Particles					01
HDL-P (Total) ^A	29.3	Low	umol/L	>=30.5	01
Small LDL-P ^A	444		nmol/L	<=527	01
LDL Size ^A	20.8		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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	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 75 **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	4.8	x10E3/uL	3.4-10.8	02
RBC	5.66	x10E6/uL	4.14-5.80	02
Hemoglobin	16.5	g/dL	13.0-17.7	02
Hematocrit	49.5	%	37.5-51.0	02
MCV	88	fL	79-97	02
MCH	29.2	pg	26.6-33.0	02
MCHC	33.3	g/dL	31.5-35.7	02
RDW	13.5	%	11.6-15.4	02
Platelets	246	x10E3/uL	150-450	02
Neutrophils	51	%	Not Estab.	02
Lymphs	38	%	Not Estab.	02
Monocytes	8	%	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)	1.8	x10E3/uL	0.7-3.1	02
Monocytes (Absolute)	0.4	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	77	mg/dL	65-99	02
BUN	17	mg/dL	6-24	02

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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	16			9-20	
Sodium	139		mmol/L	134-144	02
Potassium	4.3		mmol/L	3.5-5.2	02
Chloride	100		mmol/L	96-106	02
Carbon Dioxide, Total	23		mmol/L	20-29	02
Calcium	9.4		mg/dL	8.7-10.2	02
Protein, Total	6.8		g/dL	6.0-8.5	02
Albumin	4.5		g/dL	4.0-5.0	02
Globulin, Total	2.3		g/dL	1.5-4.5	
A/G Ratio	2.0			1.2-2.2	
Bilirubin, Total	0.6		mg/dL	0.0-1.2	02
Alkaline Phosphatase	52		IU/L	39-117	02
AST (SGOT)	22		IU/L	0-40	02
ALT (SGPT)	21		IU/L	0-44	02
Lipid Panel					
Cholesterol, Total	184		mg/dL	100-199	02
Triglycerides	113		mg/dL	0-149	02
HDL Cholesterol	46		mg/dL	>39	02
VLDL Cholesterol Cal	20		mg/dL	5-40	
LDL Chol Calc (NIH)	118	High	mg/dL	0-99	
Thyroid Panel					
Thyroxine (T4)	6.0		ug/dL	4.5-12.0	02
T3 Uptake	31		%	24-39	02
Free Thyroxine Index	1.9			1.2-4.9	
Vitamin B12 and Folate					
Vitamin B12	1357	High	pg/mL	232-1245	02
Folate (Folic Acid), Serum	11.2		ng/mL	>3.0	02
Note:					02
A serum folate concentration of less than 3.1 ng/mL is considered to represent clinical deficiency.					
Insulin and C-Peptide, Serum					
Insulin	6.0		uIU/mL	2.6-24.9	02
C-Peptide, Serum	1.7		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	7.2		ug/dL		02
			Cortisol AM	6.2 - 19.4	
			Cortisol PM	2.3 - 11.9	
Testosterone, Serum	505		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	169		ng/mL	84-270	01
Reverse T3, Serum^B	25.7	High	ng/dL	9.2-24.1	01
Vitamin D, 25-Hydroxy	48.1		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	222		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)	28.1		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	1.57		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	59		ng/mL	10-170	01
Lp-PLA2 Activity	181		nmol/min/mL	0-224	01
			Reduced Risk	<225	
			Increased Risk	>224	
GlycA ^A	342		umol/L	<400	01
			GlycA Medical Decision Limit:		
			Low Risk	<400	
			High Risk	>or=400	
Leptin, Serum	19.5		ng/mL		01
Leptin, Serum			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	11.2		umol/L	0.0-14.5	02
	Please note reference interval change				
Uric Acid	7.7		mg/dL	3.7-8.6	02
Please Note:					02
	Therapeutic target for gout patients: <6.0				

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TESTS	RESULT	FLAG	UNITS	REFERENCE INTERVAL	LAB
GGT	16		IU/L	0-65	02
Ferritin, Serum	130		ng/mL	30-400	02
Glucagon, Plasma					
Glucagon, Plasma	86		pg/mL	50-150	01
Comment:					01
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Apolipoprotein A-1	137		mg/dL	101-178	02
Fatty Acids, Free (Nonester)	0.7		mEq/L	0.1-0.9	01
Apolipoprotein B	103	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.

01	BN	LabCorp Burlington 1447 York Court, Burlington, NC 27215-3361	Dir: Sanjai Nagendra, MD
02	PDLCA	LabCorp Phoenix 5005 S 40th Street Ste 1200, Phoenix, AZ 85040-2969	Dir: Earle Collum, MD

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

Specimen Number 286-847-2788-0		Patient ID		Account Number	Account Phone	Account Fax	
Patient Last Name			Patient First Name				
Age 43	Date of Birth	Sex M	Fasting YES				
Control Number 63010222700		NPI					
Date Collected 10/12/2020	Date Entered 10/12/2020	Date and Time Reported 10/14/2020 11:42 AM ET			Physician ID & Name		Page Number 1 of 2

❖ **NMR LipoProfile® test**

Reference Interval¹

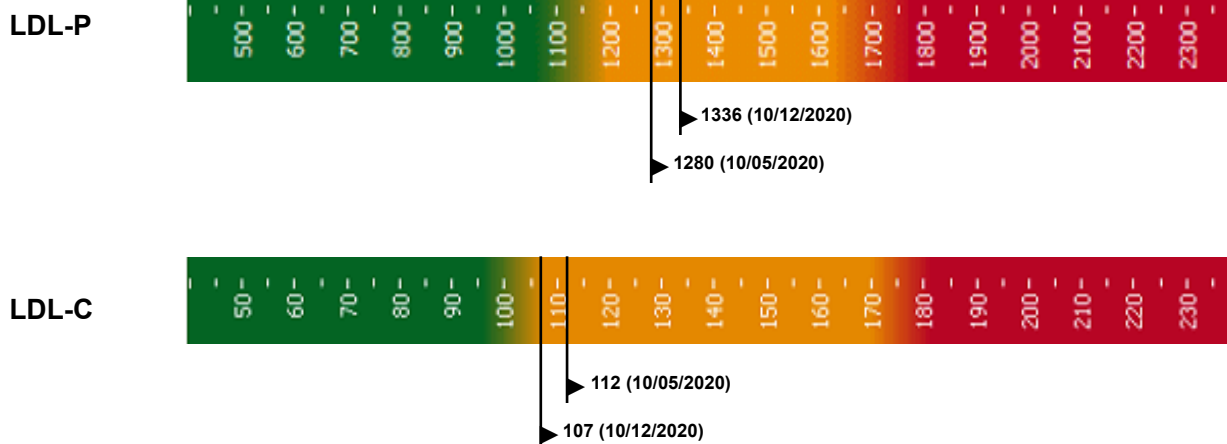
	Percentile ¹	20th	50th	80th	95th	
	Low	Moderate	Borderline High	High	Very High	
LDL-P (LDL Particle Number)	1336	< 1000	1000 - 1299	1300 - 1599	1600 - 2000	> 2000

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)	107	< 100	100 - 129	130 - 159	160 - 189	≥ 190
HDL-C	42	Triglycerides		125	Total Cholesterol	
	Desirable ≥ 40			Desirable < 150	Desirable < 200	

Historical Reporting



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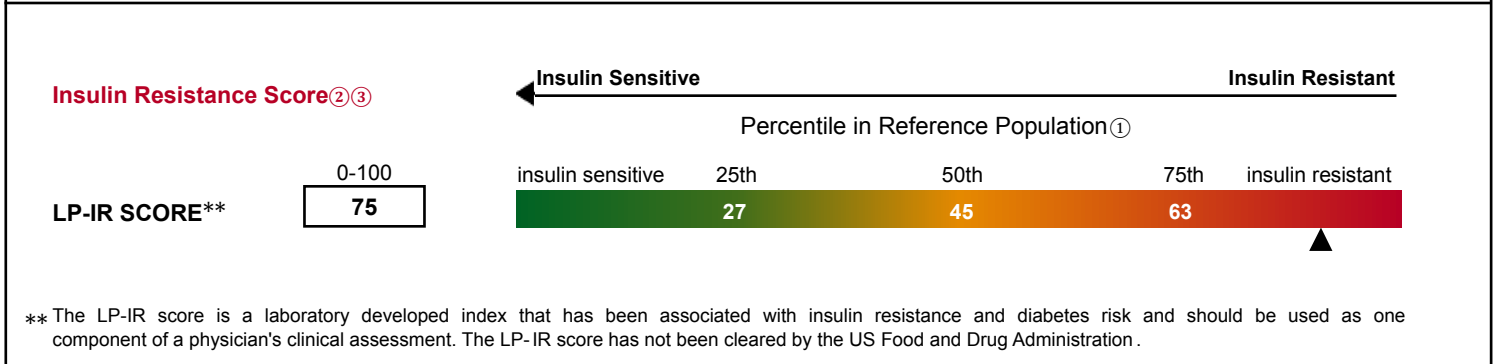
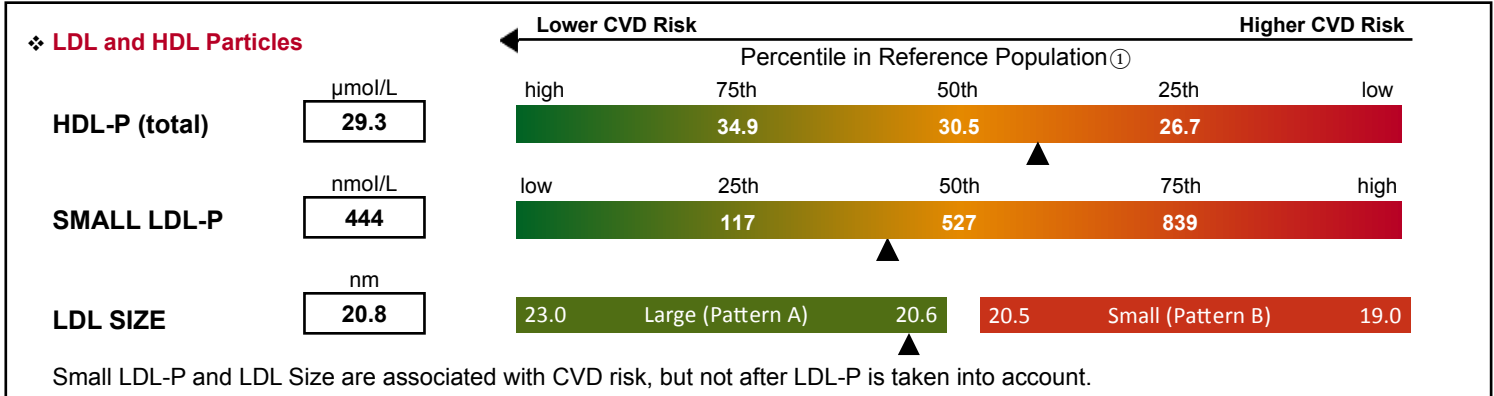
Issued or Pending PATENTS

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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Age 43	Date of Birth	Sex M	Fasting YES			
Control Number 63010222700		NPI				
Date Collected 10/12/2020	Date Entered 10/12/2020	Date and Time Reported 10/14/2020 11:42 AM ET		Physician ID & Name		Page Number 2 of 2

PARTICLE CONCENTRATION AND SIZE



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 Shalurova I et al., Metab Syndr Relat Disord 2014; 12:422-9.
 ③ Mackey RH et al., Diab Care 2015; 38:628-36.