

**Patient Details**

DOB: 10/10/1956  
 Age(y/m/d): 061/05/04  
 Gender: M SSN:  
 Patient ID:

**Specimen Details**

Date collected: 03/14/2018 1126 Local  
 Date received: 03/14/2018  
 Date entered: 03/14/2018  
 Date reported: 03/19/2018 1210 ET

**Physician Details**

Ordering: R THOMAS  
 Referring:  
 ID:  
 NPI: 1831299809

**General Comments & Additional Information**

Total Volume: Not Provided

Fasting: Yes

**Ordered Items**

NMR LipoProf+Graph; TSH+T4F+T3Free; Comp. Metabolic Panel (14); CBC, Platelet, No Differential; Iron and TIBC; Testosterone, Free+Total LC/MS; Dihydrotestosterone; Hemoglobin A1c; Cortisol; DHEA, Serum; Luteinizing Hormone(LH), S; Prolactin; Prostate-Specific Ag, Serum; Reverse T3, Serum; Vitamin D, 25-Hydroxy; C-Reactive Protein, Cardiac; Estradiol, Sensitive; Homocyst(e)ine, Plasma; Uric Acid, Serum; Phosphorus, Serum; GGT; Vitamin B12; Magnesium, Serum; Progesterone; Ferritin, Serum; Venipuncture

TESTS	RESULT	FLAG	UNITS	REFERENCE INTERVAL	LAB
<b>NMR LipoProf+Graph</b>					
LDL Particle Number					01
LDL-P	1942	High	nmol/L	<1000	01
		Low		< 1000	
		Moderate		1000 - 1299	
		Borderline-High		1300 - 1599	
		High		1600 - 2000	
		Very High		> 2000	
Lipids					01
LDL-C	180	High	mg/dL	0 - 99	
		Optimal		< 100	
		Above optimal		100 - 129	
		Borderline		130 - 159	
		High		160 - 189	
		Very high		> 189	
Comment:					01
LDL-C is inaccurate if patient is non-fasting.					
HDL-C	43		mg/dL	>39	01
Triglycerides	94		mg/dL	0 - 149	01
Cholesterol, Total	242	High	mg/dL	100 - 199	01
LDL and HDL Particles					01
HDL-P (Total)	29.4	Low	umol/L	>=30.5	01
Small LDL-P	895	High	nmol/L	<=527	01
LDL Size	21.4		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



## Patient Report

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TESTS	RESULT	FLAG	UNITS	REFERENCE	INTERVAL	LAB
Small LDL-P	Low	25th	50th	75th	High	
	<117	117	527	839	>839	
LDL Size	<-Large (Pattern A)->		<-Small (Pattern B)->			
	23.0	20.6	20.5	19.0		

## Comment:

Small LDL-P and LDL Size are associated with CVD risk, but not after LDL-P is taken into account. These assays were developed and their performance characteristics determined by LipoScience. These assays have not been cleared by the US Food and Drug Administration. The clinical utility of these laboratory values have not been fully established.

01

## Insulin Resistance Score

## LP-IR Score

30

&lt;=45

01

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:

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. The LP-IR score listed above has not been cleared by the US Food and Drug Administration.

01

## NMR PDF Image

01

## TSH+T4F+T3Free

TSH	4.010	uIU/mL	0.450 - 4.500	02
Triiodothyronine, Free, Serum	3.6	pg/mL	2.0 - 4.4	02
T4, Free (Direct)	1.30	ng/dL	0.82 - 1.77	02

## Comp. Metabolic Panel (14)

Glucose, Serum	85	mg/dL	65 - 99	02
BUN	21	mg/dL	8 - 27	02
Creatinine, Serum	1.08	mg/dL	0.76 - 1.27	02
eGFR If NonAfrican Am	74	mL/min/1.73	>59	
eGFR If African Am	85	mL/min/1.73	>59	
BUN/Creatinine Ratio	19		10 - 24	
Sodium, Serum	139	mmol/L	134 - 144	02
Potassium, Serum	4.2	mmol/L	3.5 - 5.2	02
Chloride, Serum	101	mmol/L	96 - 106	02
Carbon Dioxide, Total	22	mmol/L	18 - 29	02
Calcium, Serum	9.1	mg/dL	8.6 - 10.2	02
Protein, Total, Serum	6.5	g/dL	6.0 - 8.5	02





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TESTS	RESULT	FLAG	UNITS	REFERENCE	INTERVAL	LAB
Albumin, Serum	4.3		g/dL	3.6 - 4.8		02
Globulin, Total	2.2		g/dL	1.5 - 4.5		
A/G Ratio	2.0			1.2 - 2.2		
Bilirubin, Total	0.7		mg/dL	0.0 - 1.2		02
Alkaline Phosphatase, S	74		IU/L	39 - 117		02
AST (SGOT)	15		IU/L	0 - 40		02
ALT (SGPT)	19		IU/L	0 - 44		02

CBC, Platelet, No Differential

WBC	4.5		x10E3/uL	3.4 - 10.8		02
RBC	5.48		x10E6/uL	4.14 - 5.80		02
Hemoglobin	16.3		g/dL	13.0 - 17.7		02
Hematocrit	47.7		%	37.5 - 51.0		02
MCV	87		fL	79 - 97		02
MCH	29.7		pg	26.6 - 33.0		02
MCHC	34.2		g/dL	31.5 - 35.7		02
RDW	13.7		%	12.3 - 15.4		02
Platelets	223		x10E3/uL	150 - 379		02

Iron and TIBC

Iron Bind.Cap. (TIBC)	315		ug/dL	250 - 450		
UIBC	244		ug/dL	111 - 343		02
Iron, Serum	71		ug/dL	38 - 169		02
Iron Saturation	23		%	15 - 55		

Testosterone, Free+Total LC/MS

Testosterone, Total, LC/MS	895.5		ng/dL	264.0 - 916.0		01
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This LabCorp LC/MS-MS method is currently certified by the CDC Hormone Standardization Program (HoSt). 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.

Disclaimer: 01

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

Free Testosterone(Direct)	13.7		pg/mL	6.6 - 18.1		01
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Dihydrotestosterone	80		ng/dL			03
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Reference Range:  
 Adult Male: 30 - 85

Hemoglobin A1c

Hemoglobin A1c	5.3		%	4.8 - 5.6		02
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Please Note: 02

Pre-diabetes: 5.7 - 6.4



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TESTS	RESULT	FLAG	UNITS	REFERENCE	INTERVAL	LAB
Diabetes: >6.4						
Glycemic control for adults with diabetes: <7.0						
Cortisol	12.0		ug/dL			02
			Cortisol AM	6.2 - 19.4		
			Cortisol PM	2.3 - 11.9		
DHEA, Serum						
Dehydroepiandrosterone (DHEA)						
	84		ng/dL	31 - 701		01
			Age			
			1 - 5 years	0 - 67		
			6 - 7 years	0 - 110		
			8 - 10 years	0 - 185		
			11 - 12 years	0 - 201		
			13 - 14 years	0 - 318		
			15 - 16 years	39 - 481		
			17 - 19 years	40 - 491		
			>19 years	31 - 701		
Luteinizing Hormone(LH), S						
LH	<0.2	Low	mIU/mL	1.7 - 8.6		02
Prolactin	10.7		ng/mL	4.0 - 15.2		02
Prostate-Specific Ag, Serum						
Prostate Specific Ag, Serum	1.0		ng/mL	0.0 - 4.0		02
Roche ECLIA methodology.						
According to the American Urological Association, Serum PSA should decrease and remain at undetectable levels after radical prostatectomy. The AUA defines biochemical recurrence as an initial PSA value 0.2 ng/mL or greater followed by a subsequent confirmatory PSA value 0.2 ng/mL or greater.						
Values obtained with different assay methods or kits cannot be used interchangeably. Results cannot be interpreted as absolute evidence of the presence or absence of malignant disease.						
Reverse T3, Serum	14.6		ng/dL	9.2 - 24.1		01
Vitamin D, 25-Hydroxy	41.6		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						





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guideline. JCEM. 2011 Jul; 96(7):1911-30.					
C-Reactive Protein, Cardiac	0.82		mg/L	0.00 - 3.00	02
Relative Risk for Future Cardiovascular Event					
			Low	<1.00	
			Average	1.00 - 3.00	
			High	>3.00	
Estradiol, Sensitive	44.9!! <del>Will Follow</del>	High		8.0 - 35.0	01
Homocyst(e)ine, Plasma	11.0		umol/L	0.0 - 15.0	02
Uric Acid, Serum					
Uric Acid, Serum	5.4		mg/dL	3.7 - 8.6	02
Please Note:					02
Therapeutic target for gout patients: <6.0					
Phosphorus, Serum	2.4	Low	mg/dL	2.5 - 4.5	02
GGT	19		IU/L	0 - 65	02
Vitamin B12	1101		pg/mL	232 - 1245	02
Magnesium, Serum	2.2		mg/dL	1.6 - 2.3	02
Progesterone	0.1		ng/mL	0.0 - 0.5	02
Ferritin, Serum	75		ng/mL	30 - 400	02

01	BN	LabCorp Burlington 1447 York Court, Burlington, NC 27215-3361	Dir: William F Hancock, MD
02	SE	LabCorp Seattle 550 17th Avenue Ste 300, Seattle, WA 98122-5789	Dir: Daniel Toweill, MD
03	ES	Esoterix Endocrinology 4301 Lost Hills Road, Calabasas Hills, CA 91301-5358	Dir: Samuel Pepkowitz, MD

For inquiries, the physician may contact Branch: 800-598-3345 Lab: 206-861-7000



1447 York Court  
 Burlington, NC 27215  
 800-788-9223

Medical Director: William F Hancock, MD

Specimen Number 073-535-1708-0		Patient ID		Account Number 50000460	Account Phone (907) 868-2961	Account Fax (907) 868-2961
Patient Last Name BROWN		Patient First Name JACK		Account Address  ATP Medicine Bldg B B4 2000 W Int'l Airport Rd Anchorage, AK 99502		
Age 61	Date of Birth 10/10/1956	Sex M	Fasting YES			
Control Number 62005012177		RFI 1831299809				
Date Collected 03/14/2018	Date Entered 03/14/2018	Date and Time Reported 03/17/2018 05:58 AM ET		Physician ID & Name THOMAS, R		Page Number 1 of 2

## NMR LipoProfile® test

## Reference Range<sup>1</sup>

	Percentile <sup>1</sup>	20th	50th	80th	95th	
	nmol/L	Low	Moderate	Borderline High	High	Very High
<b>LDL-P</b> (LDL Particle Number)	<b>1942</b>	< 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

**LDL-C**  
(calculated)

mg/dL

**180**

Optimal

Near or Above  
Optimal

Borderline  
High

High

Very High

< 100

100 - 129

130 - 159

160 - 189

≥ 190

180

**HDL-C**

mg/dL

**43**

Desirable ≥ 40

**Triglycerides**

mg/dL

**94**

Desirable < 150

**Total Cholesterol**

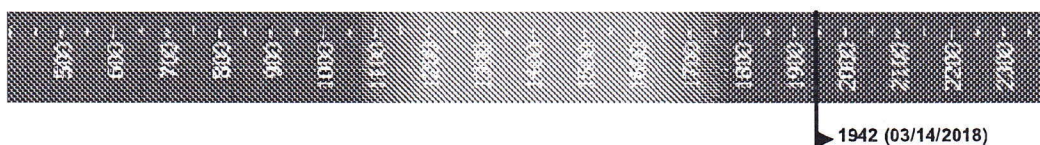
mg/dL

**242**

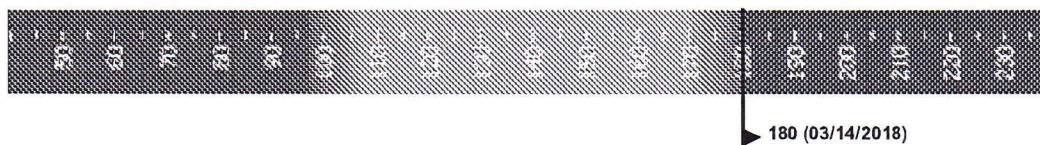
Desirable < 200

## Historical Reporting

**LDL-P**



**LDL-C**



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



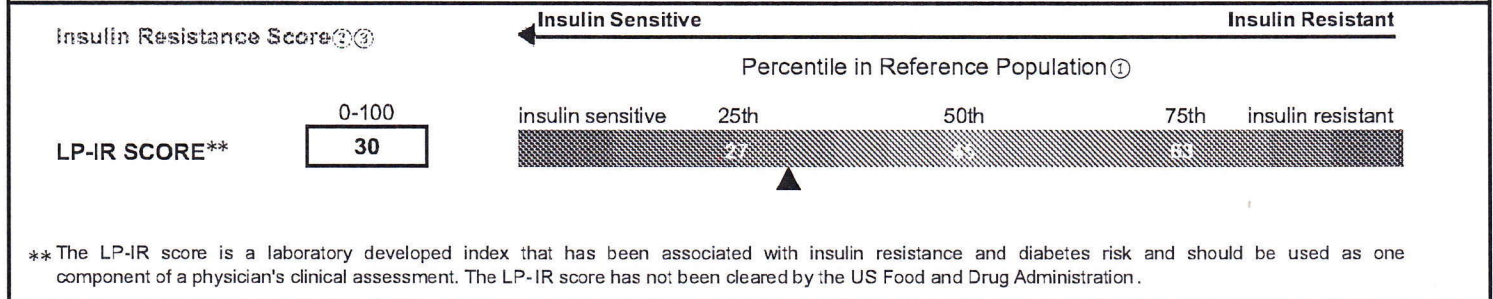
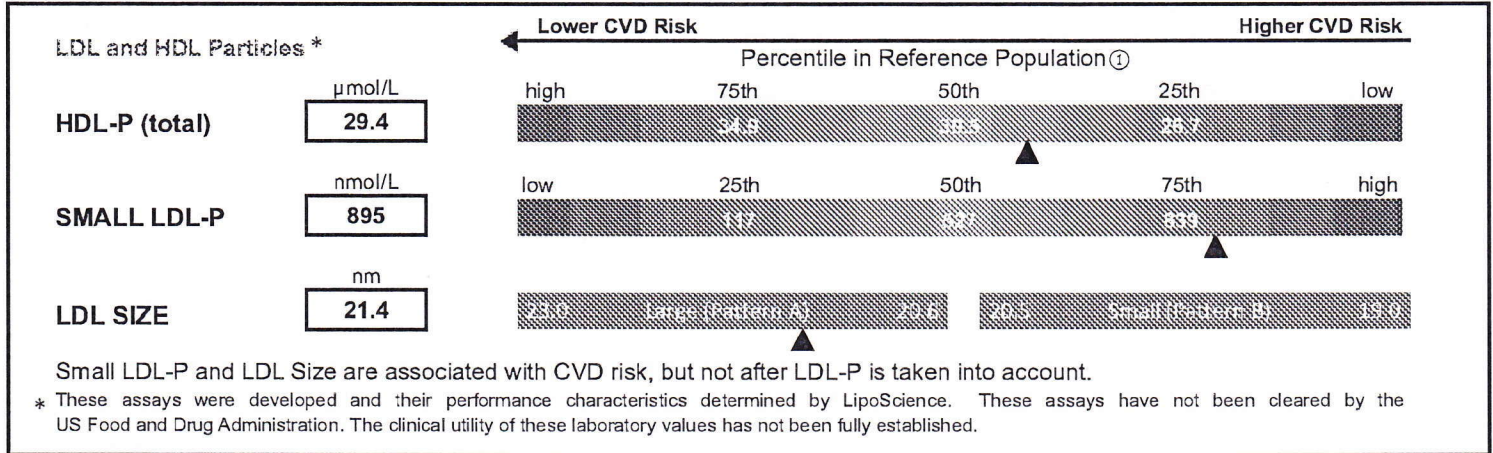


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## PARTICLE CONCENTRATION AND SIZE



## Clinician Notes

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.