Johnson, Bryan R
Patient ID:
Specimen ID [redacted]

DOB: [redacted]
Age: **47**
Sex: **Male**

Patient Report
Account Number: [redacted]
Ordering Physician [redacted]

labcorp

Date Collected: **04/01/2025** Date Received: **04/01/2025** Date Reported: **04/09/2025** Fasting: **Yes**

Ordered Items: **Lipid Panel With LDL/HDL Ratio; Testosterone,Free and Total; Total Glutathione; IGF-1; Lipoprotein (a); Cystatin C; Oxidized LDL; Lp-PLA2 Activity; S-100B Protein, Serum; Tumor Necrosis Factor-Alpha; NT-proBNP; GGT; Apolipoprotein A-1; Sex Horm Binding Glob, Serum; Venipuncture**

Date Collected: **04/01/2025**

Lipid Panel With LDL/HDL Ratio

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Cholesterol, Total [01]	109		mg/dL	100-199
Triglycerides [01]	44		mg/dL	0-149
HDL Cholesterol [01]	53		mg/dL	>39
VLDL Cholesterol Cal	11		mg/dL	5-40
LDL Chol Calc (NIH)	45		mg/dL	0-99
LDL/HDL Ratio	0.8		ratio	0.0-3.6

Please Note: [01]

LDL/HDL Ratio

	Men	Women
1/2 Avg.Risk	1.0	1.5
Avg.Risk	3.6	3.2
2X Avg.Risk	6.2	5.0
3X Avg.Risk	8.0	6.1

Testosterone,Free and Total

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Testosterone [01]	764		ng/dL	264-916

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.

Free Testosterone(Direct) [02]	10.9		pg/mL	6.8-21.5

Total Glutathione

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
▼ **Total Glutathione** [02]	**105 Low**		ug/mL	176-323

Results of this test are for Investigational Purposes Only. The performance characteristics of this assay have been determined by LabCorp. The result should not be used as a diagnostic procedure without confirmation of the diagnosis by another medically established diagnostic product or procedure.

IGF-1

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Insulin-Like Growth Factor I [03]	107		ng/mL	81-263

Lipoprotein (a)

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Lipoprotein (a) [02]	19.0		nmol/L	<75.0

Note: Values greater than or equal to 75.0 nmol/L may

Date Collected: **04/01/2025**

Lipoprotein (a) (Cont.)

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.

Cystatin C

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Cystatin C [01]	0.82		mg/L	0.60-1.00

Oxidized LDL

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Oxidized LDL [02]	92		ng/mL	10-170

Lp-PLA2 Activity

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Lp-PLA2 Activity [02]	105		nmol/min/mL	0-224
		Reduced Risk	<225	
		Increased Risk	>224	

S-100B Protein, Serum

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
S-100B Protein, Serum [A, 02]	60.8		ng/L	20.6-103.7

Testing performed by Fujirebio Diagnostics CanAg Enzyme Linked Immunoassay (ELISA) method. Values obtained with different assay methods or kits cannot be used interchangeably.
S100B can be found in abnormal levels in many pathological conditions, including liver, brain and renal injury, inflammatory and infectious processes. The use of S100B is limited by its lack of specificity as extracerebral sources produce increases in levels of S100B in the setting of hemorrhagic shock, circulatory arrest or during cardiopulmonary bypass.
Anti-reagent antibodies (human anti-mouse antibody (HAMA) or heterophilic antibodies) in the sample may occasionally interfere with the assay, even though specific blocking agents are included in the buffer.
This test may exhibit interference when sample is collected from a person who is consuming a supplement with a high dose of biotin (also termed as vitamin B7 or B8, vitamin H, or coenzyme R). It is recommended to ask all patients who may be indicated for this test about biotin supplementation.
Please note reference interval change

Tumor Necrosis Factor-Alpha

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Tumor Necrosis Factor-Alpha [A, 02]	0.7		pg/mL	0.0-2.2

Date Collected: **04/01/2025**

NT-proBNP

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
NT-proBNP[01]	<36		pg/mL	0-121

Please Note:[01]

The following cut-points have been suggested for the use of proBNP for the diagnostic evaluation of heart failure (HF) in patients with acute dyspnea:

Modality	Age (years)	Optimal Cut Point
Diagnosis (rule in HF)	<50	450 pg/mL
	50 - 75	900 pg/mL
	>75	1800 pg/mL
Exclusion (rule out HF)	Age independent	300 pg/mL

GGT

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
GGT[01]	8		IU/L	0-65

Apolipoprotein A-1

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Apolipoprotein A-1[01]	141		mg/dL	101-178

Sex Horm Binding Glob, Serum

Test	Current Result and Flag		Previous Result and Date	Units	Reference Interval
▲ **Sex Horm Binding Glob, Serum**[11]	**68.9**	**High**		nmol/L	16.5-55.9

Disclaimer
The Previous Result is listed for the most recent test performed by Labcorp in the past 5 years where there is sufficient patient demographic data to match the result to the patient. Results from certain tests are excluded from the Previous Result display.

Icon Legend
▲ Out of Reference Range ■ Critical or Alert

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.

Performing Labs
01: SO - Labcorp San Diego, 13112 Evening Creek Dr So Ste 200, San Diego, CA 92128-4108 Dir: Earle Collum, Jr, MD
02: BN - Labcorp Burlington, 1447 York Court, Burlington, NC 27215-3361 Dir: Sanjai Nagendra, MD
03: CETWE - Labcorp Phoenix, 5005 S 40th Street Ste 1200, Phoenix, AZ 85040-2969 Dir: Earle Collum, MD
For inquiries, the physician may contact Branch: 859-277-5341 Lab: 858-668-3700

Patient Details
Johnson, Bryan R
[redacted]

[redacted]

Physician Details
[redacted]

[redacted]

Specimen Details
[redacted]

Johnson, Bryan
Patient ID: [redacted]
Specimen ID: [redacted]

DOB: [redacted]
Age: **47**
Sex: **Male**

Patient Report
Account Number [redacted]
Ordering Physician [redacted]

labcorp

Date Collected: **04/01/2025** Date Received: **04/02/2025** Date Reported: **04/07/2025** Fasting: **Yes**

Ordered Items: **NMR LipoProfile+Lipids+IR; CBC With Differential/Platelet; Comp. Metabolic Panel (14); Urinalysis, Complete; OmegaCheck(TM) (EPA+DPA+DHA); Iron and TIBC; Testosterone Free, Profile I; Albumin/Creatinine Ratio,Urine; ABO Grouping and Rho(D) Typing; PSA Total (Reflex To Free); Hemoglobin A1c; Thyroxine (T4) Free, Direct; Folate (Folic Acid), Serum; DHEA-Sulfate; Cortisol; TSH; Luteinizing Hormone(LH); FSH; Prolactin; Estradiol; Rheumatoid Factor (RF); Lead, Blood (Adult); IGF-1; Vitamin D, 25-Hydroxy; Lipoprotein (a); C-Reactive Protein, Cardiac; Leptin, Serum; Homocyst(e)ine; Uric Acid; GGT; Amylase; Lipase; Vitamin B12; Magnesium; Zinc, Plasma or Serum; Insulin; Ferritin; Triiodothyronine (T3), Free; ANA by IFA Rfx Titer/Pattern; Apolipoprotein B**

Date Collected: **04/01/2025**

NMR LipoProfile+Lipids+IR

Test	Current Result and Flag		Previous Result and Date	Units	Reference Interval
LDL Particle Number[01]					
LDL-P[A,01]	<300			nmol/L	<1000
			Low < 1000 Moderate 1000 - 1299 Borderline-High 1300 - 1599 High 1600 - 2000 Very High > 2000		
Lipids[01]					
LDL-C (NIH Calc)[01]	24			mg/dL	0-99
			Optimal < 100 Above optimal 100 - 129 Borderline 130 - 159 High 160 - 189 Very high > 189		
HDL-C[A,01]	57			mg/dL	>39
Triglycerides[A,01]	40			mg/dL	0-149
▼ **Cholesterol, Total**[A,01]	**92**	**Low**		mg/dL	100-199
LDL and HDL Particles[01]					
▼ **HDL-P (Total)**[A,01]	**30.2**	**Low**		umol/L	>=30.5
Small LDL-P[A,01]	<90			nmol/L	<=527
LDL Size[A,01]					

Test not performed. LDL levels not sufficient for LDL size determination.

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-------------------------------------------------------------
                ** 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)->
                   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.

Date Collected: **04/01/2025**

NMR LipoProfile+Lipids+IR (Cont.)

Insulin Resistance/Diab. Risk [01]				
Large VLDL-P [A, 01]	<0.8		nmol/L	<=2.7
Small LDL-P [A, 01]	<90		nmol/L	<=527
Large HDL-P [A, 01]	9.4		umol/L	>=4.8
VLDL Size [A, 01]	40.7		nm	<=46.6
LDL Size [A, 01]	Test not performed. LDL levels not sufficient for LDL size determination.			
HDL Size [A, 01]	10.1		nm	>=9.2
Insulin Resistance Score [01]				
LP-IR Score [A, 01]	<25			<=45

```
------------------------------------------------------------
            INSULIN RESISTANCE / DIABETES RISK MARKERS
          <--Insulin Sensitive      Insulin Resistant-->
                      Percentile in Reference Population
 Large VLDL-P      Low     25th     50th     75th     High
                   <0.9    0.9      2.7      6.9      >6.9
 Small LDL-P       Low     25th     50th     75th     High
                   <117    117      527      839      >839
 Large HDL-P       High    75th     50th     25th     Low
                   >7.3    7.3      4.8      3.1      <3.1
 VLDL Size         Small   25th     50th     75th     Large
                   <42.4   42.4     46.6     52.5     >52.5
 LDL Size          Large   75th     50th     25th     Small
                   >21.2   21.2     20.8     20.4     <20.4
 HDL Size          Large   75th     50th     25th     Small
                   >9.6    9.6      9.2      8.9      <8.9
 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.			

CBC With Differential/Platelet

	Test	Current Result and Flag		Previous Result and Date	Units	Reference Interval
	WBC [02]	3.6			x10E3/uL	3.4-10.8
	RBC [02]	4.51			x10E6/uL	4.14-5.80
	Hemoglobin [02]	15.4			g/dL	13.0-17.7
	Hematocrit [02]	45.4			%	37.5-51.0
▲	**MCV** [02]	**101**	**High**		fL	79-97
▲	**MCH** [02]	**34.1**	**High**		pg	26.6-33.0
	MCHC [02]	33.9			g/dL	31.5-35.7
▼	**RDW** [02]	**11.1**	**Low**		%	11.6-15.4
	Platelets [02]	165			x10E3/uL	150-450
	Neutrophils [02]	57			%	Not Estab.

Date Collected: **04/01/2025**

CBC With Differential/Platelet (Cont.)

Lymphs [02]	32	%	Not Estab.
Monocytes [02]	7	%	Not Estab.
Eos [02]	3	%	Not Estab.
Basos [82]	1	%	Not Estab.
Neutrophils (Absolute) [02]	2.0	x10E3/uL	1.4-7.0
Lymphs (Absolute) [82]	1.2	x10E3/uL	0.7-3.1
Monocytes(Absolute) [82]	0.3	x10E3/uL	0.1-0.9
Eos (Absolute) [02]	0.1	x10E3/uL	0.0-0.4
Baso (Absolute) [82]	0.0	x10E3/uL	0.0-0.2
Immature Granulocytes [82]	0	%	Not Estab.
Immature Grans (Abs) [02]	0.0	x10E3/uL	0.0-0.1

Comp. Metabolic Panel (14)

	Test	Current Result and Flag		Previous Result and Date	Units	Reference Interval
▲	**Glucose** [02]	**103**	**High**		mg/dL	70-99
	BUN [02]	20			mg/dL	6-24
	Creatinine [02]	1.13			mg/dL	0.76-1.27
	eGFR	81			mL/min/1.73	>59
	BUN/Creatinine Ratio	18				9-20
	Sodium [03]	142			mmol/L	134-144
	Potassium [02]	4.5			mmol/L	3.5-5.2
	Chloride [02]	102			mmol/L	96-106
	Carbon Dioxide, Total [82]	23			mmol/L	20-29
	Calcium [02]	9.4			mg/dL	8.7-10.2
	Protein, Total [82]	6.5			g/dL	6.0-8.5
	Albumin [82]	4.8			g/dL	4.1-5.1
	Globulin, Total	1.7			g/dL	1.5-4.5
	Bilirubin, Total [02]	0.4			mg/dL	0.0-1.2
	Alkaline Phosphatase [02]	73			IU/L	44-121
	AST (SGOT) [82]	29			IU/L	0-40
	ALT (SGPT) [02]	19			IU/L	0-44

Urinalysis, Complete

	Test	Current Result and Flag		Previous Result and Date	Units	Reference Interval
	Urinalysis Gross Exam [82]					
▼	**Specific Gravity** [02]	**<1.005**	**Low**			1.005-1.030
	pH [02]	7.5				5.0-7.5
	Urine-Color [02]	Yellow				Yellow
	Appearance [02]	Clear				Clear
	WBC Esterase [02]	Negative				Negative
	Protein [02]	Negative				Negative/Trace
►	**Glucose** [02]	**1+**	**Abnormal**			Negative
	Ketones [82]	Negative				Negative
	Occult Blood [82]	Negative				Negative

Date Collected: **04/01/2025**

Urinalysis, Complete (Cont.)

Bilirubin [02]	Negative		Negative
Urobilinogen,Semi-Qn [02]	0.2	mg/dL	0.2-1.0
Nitrite, Urine [02]	Negative		Negative
Microscopic Examination [02]	Microscopic follows if indicated.		
Microscopic Examination [02]	See below:		
WBC [02]	None seen	/hpf	0-5
RBC [02]	None seen	/hpf	0-2
Epithelial Cells (non renal) [02]	None seen	/hpf	0-10
Casts [02]	None seen	/lpf	None seen
Bacteria [02]	None seen		None seen/Few

OmegaCheck(TM) (EPA+DPA+DHA)

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
OmegaCheck(TM) [03]	We have received your specimen and it has been forwarded to another laboratory for testing. Results will be forwarded to you as soon as possible. **Effective April 25, 2025, 823430 OmegaCheck(TM) (EPA+DPA+DHA) will be** made non-orderable. No replacement number is available. For further information, please contact your local Labcorp Representative.		% by wt	
Arachidonic Acid/EPA Ratio [03]	Will Follow			
Omega-6/Omega-3 Ratio [03]	Will Follow			
Omega-3 total [03]	Will Follow			
EPA [03]	Will Follow			
DPA [03]	Will Follow			
DHA [03]	Will Follow			
Omega-6 total [03]	Will Follow			
Arachidonic Acid [03]	Will Follow			
Linoleic Acid [03]	Will Follow			
PDF [03]	Will Follow			

Iron and TIBC

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Iron Bind.Cap.(TIBC)	397		ug/dL	250-450
UIBC [02]	322		ug/dL	111-343
Iron [02]	75		ug/dL	38-169
Iron Saturation	19		%	15-55

Testosterone Free, Profile I

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Testosterone [02]	731 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.		ng/dL	264-916

Date Collected: **04/01/2025**

Testosterone Free, Profile I (Cont.)

▲ **Sex Horm Binding Glob, Serum** 02	**67.1**	**High**	nmol/L	16.5-55.9
Testost., Free, Calc	95.6		pg/mL	30.3-183.2

Albumin/Creatinine Ratio,Urine

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Creatinine, Urine 02	12.7		mg/dL	Not Estab.
Albumin, Urine 02	<3.0		ug/mL	Not Estab.
Alb/Creat Ratio	<24		mg/g creat	0-29

Normal: 0 - 29
Moderately increased: 30 - 300
Severely increased: >300

ABO Grouping and Rho(D) Typing

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
ABO Grouping 02	A			
Rh Factor 02	Positive			

Please note: Prior records for this patient's ABO / Rh type are not available for additional verification.

PSA Total (Reflex To Free)

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Prostate Specific Ag 02	0.3		ng/mL	0.0-4.0

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.

Reflex Criteria 02

The percent free PSA is performed on a reflex basis only when the total PSA is between 4.0 and 10.0 ng/mL.

Hemoglobin A1c

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Hemoglobin A1c 02	5.0		%	4.8-5.6

Please Note: 02

Prediabetes: 5.7 - 6.4
Diabetes: >6.4
Glycemic control for adults with diabetes: <7.0

Thyroxine (T4) Free, Direct

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
T4,Free(Direct) 02	1.70		ng/dL	0.82-1.77

Date Collected: **04/01/2025**

Folate (Folic Acid), Serum

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Folate (Folic Acid), Serum [02]	19.6		ng/mL	>3.0
Note: [02]	A serum folate concentration of less than 3.1 ng/mL is considered to represent clinical deficiency.			

DHEA-Sulfate

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
DHEA-Sulfate [02]	209.0		ug/dL	71.6-375.4

Cortisol

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Cortisol [02]	11.9		ug/dL	6.2-19.4
	Please Note: The reference interval and flagging for this test is for an AM collection. If this is a PM collection please use: Cortisol PM: 2.3-11.9			

TSH

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
TSH [02]	0.760		uIU/mL	0.450-4.500

Luteinizing Hormone(LH)

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
▲ **LH** [02]	**9.1** **High**		mIU/mL	1.7-8.6

FSH

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
FSH [02]	7.6		mIU/mL	1.5-12.4

Prolactin

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Prolactin [02]	4.6		ng/mL	3.9-22.7

Estradiol

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Estradiol [02]	24.5 Roche ECLIA methodology		pg/mL	7.6-42.6

Rheumatoid Factor (RF)

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Rheumatoid Factor (RF) [02]	<10.0		IU/mL	<14.0

Date Collected: **04/01/2025**

Lead, Blood (Adult)

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Lead, Blood (Adult) [A,04]	1.1		ug/dL	0.0-3.4

Blood Lead Collection Method: Venous
Testing performed by Inductively coupled plasma/Mass Spectrometry.
Analysis by inductively coupled plasma/mass spectrometry (ICP/MS)

Environmental Exposure:	
WHO Recommendation	<5.0
Occupational Exposure:	
OSHA Lead Std	40.0
BEI	30.0
Detection Limit =	1.0

IGF-1

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Insulin-Like Growth Factor I [05]	104		ng/mL	81-263

Vitamin D, 25-Hydroxy

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
▲ **Vitamin D, 25-Hydroxy** [02]	**134.0 High**		ng/mL	30.0-100.0

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.

Lipoprotein (a)

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Lipoprotein (a) [01]	18.6		nmol/L	<75.0

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

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
C-Reactive Protein, Cardiac [02]	<0.15		mg/L	0.00-3.00

Relative Risk for Future Cardiovascular Event	
Low	<1.00
Average	1.00 - 3.00
High	>3.00

Date Collected: **04/01/2025**

Leptin, Serum

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Leptin, Serum [01]	<0.5		ng/mL	

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.

Homocyst(e)ine

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Homocyst(e)ine [02]	10.4		umol/L	0.0-14.5

Uric Acid

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
▼ **Uric Acid** [02]	**3.1** **Low**		mg/dL	3.8-8.4

Therapeutic target for gout patients: <6.0

GGT

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
GGT [02]	7		IU/L	0-65

Amylase

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Amylase [02]	42		U/L	31-110

Lipase

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
Lipase [02]	37		U/L	13-78

Vitamin B12

Test	Current Result and Flag	Previous Result and Date	Units	Reference Interval
▲ **Vitamin B12** [02]	**1815** **High**		pg/mL	232-1245

Date Collected: **04/01/2025**

Magnesium

	Test	Current Result and Flag		Previous Result and Date	Units	Reference Interval
▲	**Magnesium** [02]	**2.4**	**High**		mg/dL	1.6-2.3

Zinc, Plasma or Serum

Test	Current Result and Flag		Previous Result and Date	Units	Reference Interval
Zinc, Plasma or Serum [A, 04]	74			ug/dL	44-115

Detection Limit = 5

Insulin

Test	Current Result and Flag		Previous Result and Date	Units	Reference Interval
Insulin [02]	2.8			uIU/mL	2.6-24.9

Ferritin

	Test	Current Result and Flag		Previous Result and Date	Units	Reference Interval
▼	**Ferritin** [02]	**20**	**Low**		ng/mL	30-400

Triiodothyronine (T3), Free

Test	Current Result and Flag		Previous Result and Date	Units	Reference Interval
Triiodothyronine (T3), Free [02]	2.9			pg/mL	2.0-4.4

ANA by IFA Rfx Titer/Pattern

Test	Current Result and Flag		Previous Result and Date	Units	Reference Interval
ANA by IFA Rfx Titer/Pattern [06]	Negative				

```
Negative    <1:80
Borderline   1:80
Positive    >1:80
```

```
ICAP nomenclature: AC-0
For more information about Hep-2 cell patterns use
ANApatterns.org, the official website for the International
Consensus on Antinuclear Antibody (ANA) Patterns (ICAP).
```

Apolipoprotein B

Test	Current Result and Flag		Previous Result and Date	Units	Reference Interval
Apolipoprotein B [02]	52			mg/dL	<90

```
Desirable             < 90
Borderline High      90 -  99
High                100 - 130
Very High             >130
---------------------------------------------------
   ASCVD RISK            THERAPEUTIC TARGET
    CATEGORY               APO B (mg/dL)
Very High Risk       <80 (if extreme risk <70)
High Risk            <90
Moderate Risk        <90
```

Disclaimer
The Previous Result is listed for the most recent test performed by Labcorp in the past 5 years where there is sufficient patient demographic data to match the result to the patient. Results from certain tests are excluded from the Previous Result display.

Icon Legend
▲ Out of Reference Range ■ Critical or Alert

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.

Performing Labs
01: BN - Labcorp Burlington, 1447 York Court, Burlington, NC 27215-3361 Dir: Sanjai Nagendra, MD
02: SO - Labcorp San Diego, 13112 Evening Creek Dr So Ste 200, San Diego, CA 92128-4108 Dir: Earle Collum, Jr, MD
03: CLHRT - Cleveland Heartlab Inc, 6701 Carnegie Avenue Ste 500, Cleveland, OH 44103-4623 Dir: Bill Richendollar, MD
04: SPOWA - Labcorp Spokane, 110 W Cliff Dr. Ste 100-200, Spokane, WA 99204-3614 Dir: Shefali Goyal, MD
05: CETWE - Labcorp Phoenix, 5005 S 40th Street Ste 1200, Phoenix, AZ 85040-2969 Dir: Earle Collum, MD
06: PDLCA - Labcorp Phoenix, 5005 S 40th Street Ste 1200, Phoenix, AZ 85040-2969 Dir: Earle Collum, MD
For inquiries, the physician may contact Branch: 800-597-8026 Lab: 858-668-3700

Patient Details
Johnson, Bryan
[redacted]

Physician Details
[redacted]

Specimen Details
[redacted]

Longevity Biomarkers:
Bryan Johnson's Most Recent & Average

These 60+ biomarkers are among the most predictive for longevity.

Biological Aging

Biomarker	Most Recent Result		12 Month Average		Clinical Notes	Importance of Marker
	Result	Date	Result	# of Tests		
Speed of aging	0.54	2/25	0.67	22	World's slowest measured aging rate (dataset of 5,877 people).	DNA methylation measures biological age by capturing cumulative molecular changes.
Telomere length	11.4 kb	2/25	12.07 kb	2	Comparable to a 10-15 year old based upon SpectraCell dataset of 15,000 samples.	Telomeres shorten with age, and their length reflects cellular aging and risk for chronic disease.
Relative Telomerase Activity (RTA)	7.70%	1/25	7.70%	1	Comparable to a 12 year old.	RTA measures the activity of telomerase, the enzyme that helps maintain telomere length and genome stability.
Glutathione	105 ug/mL	4/25	210.3 ug/mL	4	Slightly low due to NAC cycling experiment. 12 month average result is ideal.	Glutathione is a cellular antioxidant that supports detoxification, immune defense, and oxidative stress balance.
Basal Temperature	94.9°F/34.9°C	4/25	95.6°F/35.3°C	84	To achieve this body temperature, one would need to swim a mile in ice. This is the equivalent of metabolically cold plunging 24/7.	Lower resting body temperature is associated with a slower metabolic rate and, in multiple mammalian studies, has been linked to extended lifespan and delayed aging processes.
RDW-CV	11.1 %	4/25	11.4 %	4	Ideal. Top 95% percentile of the population for RBC uniformity.	RDW measures variation in red blood cell size; lower values are linked to reduced inflammation and improved metabolic health.
Homocysteine	10.4 umol/L	4/25	8.5 umol/L	3	Ideal	Homocysteine is linked to cardiovascular risk and a marker of B-vitamin and methylation status.
Omega 3 Index	9.98% (RBC)	1/25	7.4% (RBC)	2	Excellent	Measures EPA and DHA in red blood cells; higher levels support heart, brain, and anti-inflammatory health.

Body Composition and Bone Health

Biomarker	Most Recent Result		12 Month Average		Clinical Notes	Importance of Marker
	Result	Date	Result	# of Tests		
Muscle Volume (via MRI)	17.89 Liter	1/25	17.96	2	Top 99th percentile.	Muscle volume is a leading indicator of metabolic health and resilience, and strongly linked to improved longevity.
Fat	0.28 L visceral 1.13% Liver	1/25	0.56 L visceral 1.67% Liver	3	Lowest 1st percentile.	Visceral and liver fat are key indicators of metabolic health, with lower levels strongly associated with reduced inflammation, decreased risk of chronic diseases, and improved longevity.
Bone Mineral Density	2.7 T & Z score	3/25	2.8 T & Z score	2	Top 99th percentile.	Bone Mineral Density (BMD) is a critical marker of skeletal health and frailty, with higher values strongly linked to reduced fracture risk, improved mobility, and enhanced longevity.

Metabolic & Inflammation

Biomarker	Most Recent Result		12 Month Average		Clinical Notes	Importance of Marker
	Result	Date	Result	# of Tests		
Hba1c	5 %	4/25	5 %	4	Ideal	HbA1c measures long-term blood sugar control, a key predictor of metabolic health, aging, and chronic disease risk.
Blood Glucose 3 day ave with CGM	94 mg/dL	7/25	94 mg/dL	2	Ideal	Continuous glucose monitors show real-time sugar trends and variability.
Insulin	2.8 uIU/mL	4/25	3.9 uIU/mL	3	Ideal	Fasting insulin reflects metabolic efficiency and risk for insulin resistance.
LP-IR Score	<25	4/25	16.6	4	Excellent, insulin sensitive	Determines insulin resistance based on NMR lipid profiles.
Uric Acid	3.1 mg/dL	4/25	2.9 mg/dL	6	Ideal	Uric acid reflects both antioxidant activity and risk for inflammation, metabolic dysfunction, and cardiovascular disease.
hsCRP	undetectable	4/25	.3 mg/L	5	Most recent measurement showed undetectable levels of systemic inflammation. There were two high reading in mid 2024 from an ankle injury which raised the average otherwise the average would be 0.15 mg/L.	hsCRP is the gold-standard clinical marker of chronic systemic inflammation (a major driver of aging), and a long-term disease risk indicator with lower levels correlating to longevity.
TNF	0.7 pg/mL	4/25	0.6 pg/mL	4	Ideal	Tumor Necrosis Factor (TNF) is a key inflammatory cytokine involved in immune signaling and chronic inflammation (inflammaging).

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Strength and Physical Performance

Biomarker	Most Recent Result		Average		Clinical Notes	Importance of Marker
	Result	Date	Result	# of Tests		
Bench press	240 lbs	3/24	240 lbs	1	Ideal	This metric is a strong indicator of upper body muscular power and overall physical fitness. Both critical aspects of longevity.
Leg press	850 lbs	1/25	850 lbs	1	Ideal	Lower body muscular power is a critical marker of physical resilience, mobility, and overall longevity.
Grip Strength	134 lbs	1/25	132 lbs	12	Top 95% (age/height) 95th percentile (age/sex).	Grip strength is a simple and powerful predictor of overall health and longevity, strongly associated with reduced risk of chronic disease, disability, and mortality.
VO2 max	51.3 mL/(kg·min)	3/25	55.03 mL/(kg·min)	3	These results are from lab grade systems. Recent result of 51.3 mL/(kg·min is lower than suspected as test was aborted early due to a recent ankle sprain & fracture. The averaged results are from three measurements across two years. Most recent result (64.29 mL/(kg·min)) not included in average as device reliability is still being evaluated by team.	VO_2 max is a power law marker of aerobic fitness and cardiovascular health, with higher levels strongly associated with increased longevity and a reduced risk of chronic diseases.
SmO2 % time<10%	44.80%	10/24	44.80%	1	Muscle oxygenation of an athlete.	SmO2 is a marker of muscular efficiency, measuring oxygen delivery and utilization, crucial for optimizing performance and recovery.
Lung Strength	750 L/m	6/24	772 L/m	2	Lung strength of an athlete.	Peak expiratory flow reflects respiratory efficiency and overall health and increased longevity.

Renal and Liver

Biomarker	Most Recent Result		12 Month Average		Clinical Notes	Importance of Marker
	Result	Date	Result	# of Tests		
Creatinine (Serum)	1.13 mg/dL	4/25	1.13 mg/dL	6	Ideal	Serum creatinine is a waste product from muscle metabolism that is filtered by the kidneys, and its levels in the blood are used as a indicator of kidney function. Creatine supplementation can increase Creatinine.
Cystatin-C	0.82 mg/L	4/25	.82 mg/L	4	Ideal	Cystatin-C is a protein produced by all nucleated cells and filtered by the kidneys, making it a reliable marker of kidney function that is less affected by muscle mass than creatinine.
GFR	81 mL/min/1.73	4/25	82 mL/min/1.73	6	Ideal	Glomerular Filtration Rate (GFR) measures kidney function, with low levels indicating impaired filtration and potential kidney disease.
Albumin/Creatinine Ratio (urine)	12 mg/g	4/25	14 mg/g	3	Ideal	The Albumin/Creatinine Ratio (ACR) in urine is a key marker for kidney function and a powerful predictor of cardiovascular risk, even in early disease stages.
GGT	7.5 U/L	4/25	7.8 U/L	4	Ideal	Gamma-glutamyl transferase (GGT) is a key enzyme indicative of liver health, elevated levels associated with chronic or acute liver damage.
AST	29 U/L	4/25	28.5 U/L	6	Ideal	Aspartate aminotransferase (AST) is a liver enzyme that serves as a marker of liver and muscle health, with elevated levels indicating damage.
ALT	19 U/L	4/25	17.5 U/L	6	Ideal	Alanine aminotransferase (ALT) is a liver enzyme that serves as a marker of liver and muscle health, with elevated levels indicating damage.

Cognitive and Neurological Health

Biomarker	Most Recent Result		12 Month Average		Clinical Notes	Importance of Marker
	Result	Date	Result	# of Tests		
Sleep - Time in bed - Performance - Restorative sleep - Recovery - HRV	See 12 month average	-	8 hr 35 min 94% 3 hr 56 min 69% 48	365	Sleep is in top quartile for 18-29 year olds. HRV is average for age.	Sleep quality and HRV reflect recovery, autonomic balance, and brain health resilience.
S-100B	60.8 ng/L	4/25	63.6 ng/L	4	Ideal.	S-100B is a marker of brain cell stress or injury, often elevated in neuroinflammation and cognitive dysfunction.

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Cardiovascular

Biomarker	Most Recent Result		12 Month Average		Clinical Notes	Importance of Marker
	Result	Date	Result	# of Tests		
CAC Score	0	8/24	0	1	CAC of 0 is ideal and suggests near zero cardiovascular risk.	CAC measures calcified plaque in coronary arteries and is a strong predictor of heart disease risk.
Blood pressure	109/74	1/25	107/71	15	Ideal	Blood pressure measures arterial pressure; elevated levels increase risk for stroke, heart and kidney disease.
Resting Heart Rate	46 bpm	3/25	51	365	At level of athlete.	Resting heart rate is a proxy for cardiovascular fitness and autonomic function.
Heart Rate Recovery	37 bpm	10/24	35 bpm	3	At level of athlete.	Measures how quickly your heart rate drops after exercise; faster recovery reflects better cardiovascular fitness and autonomic nervous system health.
Cholesterol (total)	100 mg/dL	4/25	118.8 mg/dL	6	Ideal	Sum of all cholesterol types in the blood, a general measure of lipid status.
HDL-C	55 mg/dL	4/25	55.8 mg/dL	5	Ideal	HDL-C measures "good" cholesterol which aids in removing excess cholesterol from the bloodstream.
Apo-A1	141 mg/dL	4/25	146.7 mg/dL	3	Ideal	Apo-A1 is the main protein in HDL particles "good cholesterol"; a more accurate marker of protective HDL function.
LDL-C	35 mg/dL	4/25	43.6 mg/dL	5	Exceptional.	LDL-C measures “bad cholesterol,” with elevated levels strongly linked to increased cardiovascular risk and arterial plaque buildup.
ApoB	52 mg/dL	4/25	75.8 mg/dL	4	Ideal	ApoB is the main protein in LDL particles "bad cholesterol" and is a superior marker of LDL-driven CVD risk.
LDL-P	150 nmol/L	4/25	537.8 nmol/L	4	Ideal	LDL-P measures LDL particle number, offering precision insight into cholesterol-related risk.
Triglycerides	42 mg/dL	4/25	48.3 mg/dL	6	Ideal	Triglycerides are blood fats linked to insulin sensitivity and liver function.
oxLDL	92 ng/mL	4/25	114.8 ng/mL	4	Ideal	Oxidized LDL is a marker of lipid peroxidation and endothelial damage.
Lp(a)	19 nmol/L	4/25	21.9 nmol/L	5	Ideal	Lp(a) is a genetically influenced cholesterol particle linked to CVD and stroke.
BNP	18 pg/mL	4/25	18 pg/mL	2	Ideal	BNP is secreted by the heart in response to pressure; high levels predict heart failure.

Microbiome

Biomarker	Most Recent Result		12 Month Average		Clinical Notes	Importance of Marker
	Result	Date	Result	# of Tests		
Akkermansia muciniphila	4.2E4 CFU/g	1/25	2.1E4 CFU/g	2	Ideal	A beneficial gut bacterium that strengthens the intestinal barrier, reduces inflammation, and is associated with improved metabolic health and healthy aging.
Short-Chain Fatty Acids	55.8 umol/g	1/25	39.2 umol/g	2	Ideal	SCFAs are gut-bacteria metabolism products that fuel intestinal cells and improve gut barrier function with effects on regulating inflammation, glucose metabolism, and immune function.
n-Butyrate	11.1 umol/g	1/25	7.45 umol/g	2	Ideal	A major SCFA that fuels colon cells, strengthens the gut lining, and reduces inflammation; linked to lower risk of metabolic disease and improved gut-brain communication.

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Reproductive and Hormone Health

Biomarker	Most Recent Result		12 Month Average		Clinical Notes	Importance of Marker
	Result	Date	Result	# of Tests		
Testosterone	748 ng/dL	4/25	702.7 ng/dL	7	Ideal (natural, no TRT).	Testosterone is crucial for both men and women, supporting muscle strength, bone density, energy levels, and mood.
Free Testosterone (Direct) **Free Testosterone (Calc)**	10.9 pg/mL 95.6 pg/mL	4/25	10.9 pg/mL 94.2 pg/mL	1 4	Ideal (natural, no TRT).	Free Testosterone (direct) measures the testosterone that is unbound and biologically active in the body, direct uses a specific immunoassay for measurement, while Free Testosterone (calc) refers to an estimated value of free testosterone based on total testosterone, SHBG, and albumin levels.
DHEA	209 mcg/dL	4/25	240.8 mcg/dL	4	Ideal	DHEA is a precursor to sex hormones and supports stress resilience, immune balance, and cellular repair—functions often tied to recovery and vitality.
LH	9.1 IU/L	4/25	8.7 IU/L	3	Ideal	LH stimulates the production of sex hormones (testosterone and estrogen), which support muscle, bone, and reproductive health.
FSH	7.6 mIU/ml	4/25	7.4 mIU/ml	3	Ideal	FSH regulates sperm production in men and egg maturation in women and plays a broader role in reproductive and hormonal balance.
TSH	0.76 uIU/mL	4/25	0.9 ulU/mL	4	Ideal	TSH (Thyroid-Stimulating Hormone) is a critical biomarker for thyroid health, regulating metabolism, energy levels, and overall hormonal balance essential for longevity.
Vit D	134 ng/mL	4/25	88 ng/mL	4	A bit high due to improved microbiome absorption from HBOT.	Vitamin D plays a central role in bone health, immune modulation, metabolic regulation, hormonal balance, and gene expression regulation—all of which are critical determinants of healthy longevity.
IGF-1	106 ng/mL	4/25	100.8 ng/mL	6	Ideal, on the lower end due to caloric restriction.	IGF-1 regulates growth, repair, and metabolism, acting as a key mediator of growth hormone. While essential, IGF-1 is a u-shaped marker, chronically elevated levels are linked to accelerated aging and increased cancer risk.
Nighttime erections	2 hr 32 min	12/25	2 hr 57 min	4	Exceptional	Involuntary erections during sleep help maintain penile tissue health; their presence reflects normal vascular, heart, hormonal, and neurological function.
Sperm - Sperm (total) - Concentration - Motility - Volume - Morphology - Motile (total)	 253 m 71 m 33% 3.58 mL 7% 83 m	4/25	 304 m 142 m 42% 2.9 mL 8% 154 m	4	Sperm health of a 20 year old.	Sperm parameters are sensitive indicators of reproductive, hormonal, and metabolic health, and are associated with increased life expectancy in large cohorts.
PSA	.3 mg/mL	4/25	0.4 ng/mL	2	Ideal	PSA (Prostate Specific Antigen) is a protein produced by the prostate that helps liquefy semen; elevated levels can indicate prostate enlargement, inflammation, or cancer risk.