

<b>Patient:</b>	<b>Trahan, Brandon W</b>			<b>Acc #:</b>	<b>2519233</b>	
Patient #:	MDT19067-314754	Birth:	5/13/1983	Fasting:	UNKNOWN	
Doctor:	Azzam, Samir	Age:	41 years	Collection Date:	12/27/2024 10:25 AM	RK
Home Phone:	(951)880-4546	Gender:	Male	Received in Lab:	12/27/2024 10:30 AM	NP

Test Name	In Range	Out of Range	Flag	Units	Reference Range
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## Chemistry

### Comprehensive Metabolic Panel

Glucose	88			mg/dL	65 - 140
Sodium	137			mmol/L	135 - 145
Potassium	5.0			mmol/L	3.4 - 5.3
Chloride	102			mmol/L	98 - 107
Carbon Dioxide (CO2)	28			mmol/L	22 - 29
Calcium	9.2			mg/dL	8.4 - 10.7
Protein, Total	6.8			g/dL	6.0 - 8.2
Albumin	4.4			g/dL	3.2 - 5.5
Globulin (calc)	2.4			g/dL	1.9 - 3.7
Albumin : Globulin Ratio	1.8				1.2 - 2.5
Bilirubin, Total	0.5			mg/dL	0.3 - 1.1
ALP (Alkaline Phosphatase)		35	(L)	IU/L	42 - 128
AST (Aspartate Aminotransferase)		46	(H)	IU/L	10 - 42
ALT (Alanine Aminotransferase)		71	(H)	U/L	7 - 50
BUN (Blood Urea Nitrogen)	11			mg/dL	7 - 18
Creatinine, Serum	1.23			mg/dL	0.60 - 1.30
BUN:Creatinine Ratio	8.9				6.0 - 22.0
Estimated GFR (calc)	68.9			*	

\* *Estimated GFR (calc)*  
The units of measurement for this assay are mL/min/1.73m2

(If patient is African American, multiply result by 1.210).

Normal: >= 90 mL/min/1.73m2  
Mild decrease: 60-89 mL/min/1.73m2  
Mild to Moderate decrease: 45-59 mL/min/1.73m2  
Moderate to Severe decrease: 30-44 mL/min/1.73m2  
Severe decrease: 15-29 mL/min/1.73m2  
Kidney Failure: <15 mL/min/1.73m2

The MDRD Formula for Calculation of the GFR was used.

## Cardiac Risk Studies

### Lipid Panel

Cholesterol, Total	160			mg/dL	0 - 199
Triglycerides	89			mg/dL	0 - 149
High triglyceride levels are associated with an increased risk of developing heart disease.					
HDL Cholesterol	48			mg/dL	>40
The test for high-density lipoprotein cholesterol (HDL-C) is used along with other lipid tests to identify unhealthy levels of lipids and to determine the risk of developing heart disease.					
Based on many epidemiologic studies, HDL-C of 40 mg/dL or higher is associated with a less than average risk of heart disease. The National Cholesterol Education Panel Adult Treatment Guidelines suggest that an HDL cholesterol value greater than 40 mg/dL is protective and should be treated as a negative risk factor. However, some recent studies suggest that high HDL-C is not universally protective.					

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## Cardiac Risk Studies

### Lipid Panel

LDL Cholesterol (calc.)	94			mg/dL	<100
Optimal:	<100 mg/dL				
Near optimal:	100-129 mg/dL				
Borderline high:	130-159 mg/dL				
High:	160-189 mg/dL				
Very high:	>189 mg/dL				
Elevated levels of LDL cholesterol can indicate risk for heart disease, so an LDL-C result is evaluated with respect to the upper limits that are desired based on individual risk factors.					
LDL-C levels may also be ordered at regular intervals to evaluate the success of lipid-lowering lifestyle changes, such as diet and exercise, or to determine the effectiveness of drug therapy such as statins.					
Calculated LDL uses the Friedewald equation. Results should be interpreted with caution essentially in diabetic patients and patients with renal disease.					
VLDL Cholesterol (calc.)	18			mg/dL	<30
Non-HDL Cholesterol (calc.)	112			mg/dL	0 - 159
Cholesterol:HDL Ratio	3.3				<5.0

## Thyroid Studies

TSH (3rd IS)	1.477			uIU/mL	0.380 - 5.330
General Population (Males and Non-Pregnant Females, aged 18-88): 0.38 - 5.33 (uIU/mL)					
Pregnant Females:					
1st Trimester:	0.05 - 3.70 uIU/mL				
2nd Trimester:	0.31 - 4.35 uIU/mL				
3rd Trimester:	0.41 - 5.18 uIU/mL				

## Hematology

### Complete Blood Count w/Diff

WBC	6.4			x10E3/uL	4.0 - 10.5
RBC	5.58			x10E6/uL	4.38 - 5.62
Hemoglobin		17.4	(H)	g/dL	13.5 - 16.9
Hematocrit	49.7			%	39.5 - 50.0
MCV	89.0			fL	80.0 - 100.0
MCH	31.1			pg.	26.0 - 34.0
MCHC	34.9			g/dL	33.0 - 37.0
RDW	14.4			%	11.6 - 14.4
Platelets	307			x10E3/uL	150 - 400
MPV	8.4			fL	7.4 - 11.9
Neutrophils %	52.9			%	39.0 - 88.0
Lymphs %	33.9			%	14.0 - 52.0
Monocytes %	6.4			%	0.0 - 9.0

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## Hematology

### Complete Blood Count w/Diff

Eos %	5.4			%	0.0 - 7.0
Basos %	1.4			%	0.0 - 2.0
Neutrophils (Absolute)	3.39			x10E3/uL	2.00 - 8.10
Lymphs (Absolute)	2.17			x10E3/uL	0.90 - 3.30
Monocytes (Absolute)	0.41			x10E3/uL	0.00 - 0.80
Eosinophils (Absolute)	0.35			x10E3/uL	0.00 - 0.50
Basophils (Absolute)	0.09			x10E3/uL	0.00 - 0.20

## Chemistry, Other

Hemoglobin A1c	5.5		(N)	%	<5.7
<i>Prediabetes: 5.7 - 6.4</i>					
<i>Diabetes: &gt;6.4</i>					
<i>Glycemic control for adults with diabetes: &lt;7.0</i>					

## Hormonal Studies

Estradiol (E2), Sensitive	44.8		(H)	pg/mL	<31.5
<i>Male Reference Ranges:</i>					
<i>&gt;=19 years old: &lt;15 - 31.5 pg/mL</i>					
*****					
<i>Female Reference Ranges:</i>					
<i>Early Follicular</i>	<i>22.4 - 115 pg/mL</i>				
<i>Mid-Follicular</i>	<i>25 - 115 pg/mL</i>				
<i>Ovulatory Peak</i>	<i>32.1 - 517 pg/mL</i>				
<i>Mid-Luteal</i>	<i>36.5 - 246 pg/mL</i>				
<i>Post-menopausal</i>	<i>&lt;25.1 pg/mL</i>				

### Testosterone, Free and Total, IA

SHBG	31.20			nmol/L	13.30 - 89.50
Testosterone, Total	557			ng/dL	175 - 781
<i>Serum</i>					
<i>(M): 175-781 ng/dL (F): &lt;10-75 ng/dL</i>					
<i>Heparinized Plasma</i>					
<i>(M): 168-758 ng/dL (F): &lt;10-90 ng/dL</i>					
Testosterone, Free (calc.) / FAI	61.95			%	24.30 - 110.20

## Tumor Markers

### PSA, Total w/rfx to PSA, Free

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## Tumor Markers

<b>PSA, Total w/rfx to PSA, Free</b>					
PSA, Total w/rfx to PSA, Free	1.22			ng/mL	0.00 - 4.00
<i>Please note: Abnormal flagging is based on the reference range indicated. Chemiluminescence methodology by Beckman Coulter was used in performing the assay. Values obtained with different PSA methodologies should not be used interchangeably.</i>					

*PSA, Free is only recommended when PSA, Total values are between 4 - 10 ng/mL*

<b>Location 1:</b>	Innovative Health Diagnostics 1565-B McGaw Ave., Ste B Irvine, CA 92614
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Innovative Health Diagnostics is an MD Tox Laboratory Service Line  
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