

3703 Camino del Rio South 100-A  
 San Diego, CA, 92108  
 619-450-5870 - Phone  
 619-450-6023 - Fax

CLIA# 05D2027247 - Director: David J. Smith, MD

<b>Patient :</b>		<b>Acc #:</b>	AL-BLD-11307
Patient #:		Birth:	
Doctor:	MD David J. Smith	Age:	63 years
		Gender:	Female
		Collection Date:	04/05/2019 11:41
		Received in Lab:	04/05/2019 11:42

**BLOOD WELLNESS TESTING**

Test Name	Result	Units	Flag	Reference Range
<b>COMPLETE BLOOD COUNT (CBC)</b>				
<b>WBC</b>	<b>11.7</b>	<b>10(3)/mcL</b>	<b>High</b>	<b>4.1 - 10.9</b>
LYM	3.3	10(3)/mcL		0.6 - 4.1
MID	1.10	10(3)/mcL		0.02 - 1.80
GRA	7.3	10(3)/mcL		2.0 - 7.8
LYM%	28.0	%		10.0 - 58.5
MID%	9.8	%		0.1 - 24.0
GRA%	62.2	%		37.0 - 92.0
RBC	4.2	10(6)/mcL		4.2 - 6.3
HGB	12.7	g/dL		12.0 - 18.0
HCT	39.7	%		37.0 - 51.0
MCV	94.0	fL		80.0 - 97.0
MCH	30.1	pg		26.0 - 32.0
MCHC	32.0	g/dL		31.0 - 36.0
RDW	13.1	%		11.5 - 14.5
PLT	379	10(3)/mcL		140 - 440
MPV	8.5	fL		0.0 - 49.9

<b>WELLNESS SUBPANEL - BLOOD</b>				
Cholesterol (Total)	224.0	mg/dL		199.0 - 240.0
Triglycerides	125.0	mg/dL		1.0 - 200.0
HDL (High-Density Lipoprotein)	52.0	mg/dL		40.0 - 60.0
Direct LDL(DLDL)	149.0	mg/dL		80.0 - 190.0
<b>Estradiol</b>	<b>&lt;10.0</b>	<b>pg/mL</b>	<b>Low</b>	<b>10.0 - 649.0</b>
Folate	8.6	ng/mL		7.0 - 20.0
Insulin	11.0	uU/mL		1.0 - 300.0
Lactate Dehydrogenase (LDH)	194.0	U/L		125.0 - 243.0
Progesterone	<0.1	ng/mL		0.0 - 0.2
Free Triiodothyronine (FT3)	2.0	pg/mL		1.7 - 5.1
<b>Total Triiodothyronine (TT3)</b>	<b>0.6</b>	<b>ng/mL</b>	<b>Low</b>	<b>0.8 - 2.0</b>
Free Thyroxine (FT4)	0.8	ng/dL		0.7 - 1.5
Total Thyroxine (TT4)	7.0	mcg/dL		4.5 - 12.5
Thyroid Stimulating Hormone (TSH)	5.6441	uIU/mL		0.4000 - 64.0000
T-Uptake	26.0	%		20.0 - 37.0
Ferritin	29.97	ng/mL		20.00 - 200.00
Vitamin B12	284.0	pg/mL		200.0 - 915.0

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<b>COMPLETE METABOLIC PANEL</b>				
Albumin BCP	3.9	g/dL		3.4 - 6.0
Calculated Globulin (CG)	2.4	g/dL		1.9 - 3.7
A/G Ratio	1.6			1.0 - 2.5
Alkaline Phosphatase	74.0	U/L		55.0 - 135.0
Alanine Aminotransferase (ALT)	18.0	U/L		7.0 - 45.0
Aspartate Aminotransferase (AST)	14.0	U/L		8.0 - 43.0
Bilirubin (Total)	0.300	mg/dL		0.200 - 1.200
Calcium	9.2	mg/dL		8.4 - 10.2
Chloride	107.0	mmol/L		98.0 - 113.0
Potassium	4.2	mmol/L		3.5 - 5.1
Sodium	140.0	mmol/L		136.0 - 145.0
Creatinine	0.81	mg/dL		0.60 - 1.10
Carbon Dioxide (CO2)	21.0	mEq/L	Low	23.0 - 31.0
Blood Glucose	66	mg/dL	Low	80 - 115
Total Protein	6.3	g/dL		4.4 - 8.0
Urea (BUN) - Blood Urea Nitrogen	14.0	mg/dL		9.8 - 20.1
BUN/Creatinine Ratio (BCR)	17			6 - 22
eGFR calculated (Female)	78	mL/min/1.73m2		60 - 120
AA eGFR calculated (Female)	91	mL/min/1.73m2		60 - 120

**Comments:**

This test was performed at Alcala Testing and Analysis Services (CLIA# 05D2027247).

**PLEASE NOTE:**

**BLOOD WELLNESS TESTING (Venipuncture WHOLE BLOOD and SERUM):** ATAS provides clients with a Serum Separator Tube (SST) for serum collections and a 4 mL EDTA/Lavender tube for whole blood collections.

**Order of draw** is Serum (SST tube) then collect whole blood with the EDTA/Lavender tube. While all EDTA/Lavender tubes are optimized to contain 1.5 mg EDTA/ ml of whole blood, the **minimum whole blood volume** to draw suggested by the vendor (BD) is at least a 90% draw volume - that is a **minimum of 3.6 mL whole blood per 4 mL EDTA/Lavender tube**. Whole blood specimens drawn with less volume may clot and be rejected if clots are observed in the tube.

Anti-coagulated samples are required for many of the laboratory tests that are performed on a daily basis to assess and monitor patients. When these samples clot, they must be rejected and have to be recollected. Results are delayed, in turn delaying timely treatment of patients.

**What causes clotted specimens? The top three causes of clotted samples are:**

1. Leaving blood in a syringe too long before placing in tubes - syringes have no anticoagulant in them. When blood is drawn from a vein or a line, coagulation begins almost immediately.

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2. Delay of placing blood in tubes such as with a slow draw using a syringe. Hemostasis begins during the draw and will continue after the blood is transferred to a tube. **Removing the clot is prohibited**; it will not stop hemostasis and will affect results.
3. Improper mixing of anti-coagulated tubes (primarily lavender and blue top tubes). The anticoagulant in the lavender tube is sprayed onto the inside of the tube while the blue top tube has a liquid anticoagulant. The **tubes need to be inverted at least 10 times to make sure that the anticoagulant is properly mixed** with the blood components to stop the entire clotting mechanism. A slow draw into a vacutainer tube should be mixed intermittently until filled to prevent hemostasis.

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**Notes:**

Reviewed By: \_\_\_\_\_

Date: **04/08/2019 19:49** \_\_\_\_\_