



Hospital Name
 Department Address
 1-888-774-3268
 Nuclear Medicine

**Blood Volume
 Analysis**
 FINAL REPORT
 PHYSICIAN

Patient Demographics

Patient Name: Patient, James A	DOB: 10/31/1957	Analyzed On: 12/10/2014 4:46 PM
ID: DOO123456	Gender: Male	Age: 57
Accession: BN123-2	Height: 72.00 in	Analyst: RLD
Referring MD: Feldschuh, J.	Weight: 275.00 lb	Injectate Lot: V81482-644
CC: Fischman,G.	Deviation from Ideal Weight: +60.7%	Location: Rm 233
Comments:		

Blood Volume Analysis Results

	<u>BVA Result</u>	<u>Patient Ideal</u>	<u>Deviation From Ideal</u>	<u>Excess/Deficit %</u>	
Total Blood Volume	6431 mL	6512 mL	-81 mL	-1.2% Normal Deficit	
Red Blood Cell Volume	2101 mL	2640 mL	-539 mL	-20.4% Moderate Deficit	
Plasma Volume	4330 mL	3872 mL	+458 mL	+11.8% Mild Excess	
<i>Blood Volume Interpretation Guideline</i>					
	<u>Normal</u>	<u>Mild</u>	<u>Moderate</u>	<u>Severe</u>	<u>Extreme</u>
BV, PV Deviation (± %):	0 to 8	>8 to 16	>16 to 24	>24 to 32	>32
RCV Deviation (± %):	0 to 10	>10 to 20	>20 to 30	>30 to 40	>40

Additional Analysis

<u>Hematocrit Analysis</u>			<u>mL/kg Analysis</u>			<u>Albumin Transudation Analysis/Slope (%/min)</u>	
	<u>Patient Result</u>	<u>Normal Male</u>		<u>Patient Result</u>	<u>Patient Ideal</u>	<u>Patient Result</u>	<u>Reference Range</u>
Peripheral Venous Hct	36.3%	40-46%	Total Volume	51.6	52.2	0.32	Normal: 0 to 0.4
Normalized Hct (nHct)	35.8%	40-46%	Plasma Volume	34.7	31.0		High: 0.4 to 0.5
			RBC Volume	16.8	21.2		Unusually High: >0.5

Report Findings

Blood Volume Analysis result indicates patient's total blood volume is normal volemic, with a normal deficit of -81 mL or -1.2% from ideal; plasma volume is mildly hypervolemic, with a mild excess of +458 mL or +11.8% from ideal; red blood cell volume is moderately hypovolemic, with a moderate deficit of -539 mL or -20.4%

Additional Comments:

Physician Signature _____

Date _____

Time _____

Technical Notes: This Blood Volume Analysis was performed by the radiopharmaceutical tracer dilution technique utilizing a calibrated dose of Volumex (HSA I-131) at 25 µCi, separate timed blood samples, measured hematocrits and a regression analysis to time zero. Corrections for plasma packing (0.99) and the ratio of whole body hematocrit to venous hematocrit ($f=0.91$) are incorporated. Sample analysis consists of an evaluation of separate blood volume collection points compared to a matched standard with mathematical evaluation of consistency. Sample analysis evaluation is reported as acceptable or unacceptable with a standard deviation of less than 3.9% being acceptable. The sample analysis of this report is 1.788% and is acceptable. nHct is the theoretical hematocrit that would result if the patient's plasma volume were adjusted to achieve a normal total blood volume. Ideal Values based on Feldschuh, J and Enson, Y. Prediction of the normal blood volume: Relation of blood volume to body habitus. Circulation. 1977;56:605-612.

Key: ** = data cannot be calculated, - = data missing, * = data out of range.



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 ANALYST

Patient Demographics

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Patient Sample Counts

Sample	Time	Hct-A (%)	Hct-B (%)	Avg Hct	Count-A	Count-B	Avg Count	Unadjusted Volume (mL)
Standard					15929	15729	15829	
Baseline		36.6	36.5	36.6	20	26	23	
Sample 1	12:24	36.5	36.2	36.4	3597	3416	3507	6751
Sample 2	18:18	36.5	36.4	36.5	3482	3488	3485	6802
Sample 3	24:24	36.0	36.2	36.1	3449	3475	3462	6815
Sample 4	30:24	36.2	36.4	36.3	3232	3434	3333	7100
Sample 5	36:00	36.2	36.0	36.1	3240	3266	3253	7256

Room Background Count: 14
 Tube: Sprayed EDTA (1.00)

Sample Acquisition Time: 1 min.12 sec.
 Isotope: Iodine-131 Dose: 25 microCuries

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	Normal	Mild	Moderate	Severe	Extreme
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Blood Volume Interpretation Guideline

Sample Data Analysis

<table border="1"> <thead> <tr> <th colspan="2">Standard Deviation</th> </tr> <tr> <th>Patient Result</th> <th>Acceptance Range</th> </tr> </thead> <tbody> <tr> <td>1.788% or 115.0 mL</td> <td><3.9%</td> </tr> </tbody> </table>	Standard Deviation		Patient Result	Acceptance Range	1.788% or 115.0 mL	<3.9%	<p>Final Blood Volume: 6431 mL Slope: 0.32 %/min</p>	<table border="1"> <thead> <tr> <th colspan="2">Albumin Transudation Analysis/Slope (%/min)</th> </tr> <tr> <th>Patient Result</th> <th>Reference Range</th> </tr> </thead> <tbody> <tr> <td>0.32</td> <td>Normal: 0 to 0.4</td> </tr> <tr> <td></td> <td>High: 0.4 to 0.5</td> </tr> <tr> <td></td> <td>Unusually High: >0.5</td> </tr> </tbody> </table>	Albumin Transudation Analysis/Slope (%/min)		Patient Result	Reference Range	0.32	Normal: 0 to 0.4		High: 0.4 to 0.5		Unusually High: >0.5
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Ideal Values based on Feldschuh, J and Enson, Y. Prediction of the normal blood volume: Relation of blood volume to body habitus. Circulation. 1977;56:605-612.



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Audit Trail

<u>Date/Time</u>	<u>By</u>	<u>Field</u>	<u>Old Value</u>	<u>New Value</u>
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