Hematology				
WBC		8.6	4.0-10.0	10*9/L
RBC		5.00	4.20-5.40	10*12/L
Hemoglobin		152	135-170	g/L
Hematocrit		0.45	0.40-0.50	L/L
MCV		90	82-98	fl
MCH		30.4	27.5-33.5	pg
MCHC		339	300-370	g/L
RDW		11.7	11.5-14.5	%
Platelet Count		222	150-400	10*9/L
Differential				
Neutrophils		6.8	2.0-7.5	10*9/L
Lymphocytes		1.1	1.0-4.0	10*9/L
Monocytes		0.5	0.1-0.8	10*9/L
Eosinophils		0.1	0.0-0.7	10*9/L
Basophils		0.0	0.0-0.2	10*9/L
Granulocytes Immature		0.0	0.0-0.1	10*9/L
		For Hematology Reporting Changes and RBC Morphology Grading, please visit LifeLabs BC Website at http://www.lifelabs.com/sites/content_authoring/healthcare-providers/Physician%20Newsletters/HCP%20Newsletter%20June%202018%20FINAL.pdf		
Biochemical Investigation of Anemias and Iron Overload				
Ferritin		97	24-444	ug/L
		Adults: <15: diagnostic of Iron Deficiency 15-50: Probable Iron Deficiency 51-100: Possible Iron Deficiency >100: Iron Deficiency unlikely persistently >600: Test for Iron overload Children: <12: diagnosis of Iron Deficiency http://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/iron-overload		

General Chemistry				
Glucose Fasting		5.4	3.3-5.5	mmol/L
Hemoglobin A1C				
Hemoglobin A1C		5.2	4.5-6.0	%
		Therapeutic target for most adults with type 1 or type 2 diabetes is <=7.0%. In the frail elderly and patients who are prone to hypoglycemia, target is <=8.5%. A1c >=6.5% meets the criterion for type 2 diabetes mellitus in adults. See 2018 Diabetes Canada guidelines.		
Sodium		144	135-145	mmol/L
Potassium		4.5	3.5-5.0	mmol/L
Urea		5.8	2.0-9.0	mmol/L
Creatinine		110	45-110	umol/L
Estimated GFR		66	>=60	
		Units for eGFR are mL/min/1.73sq.m Kidney function estimate based on assumption of a stable serum creatinine concentration: diet, drugs, pregnancy, clinical state and muscle mass can affect accuracy of the estimate. Urinary ACR may assist interpretation. See www.bcguidelines.ca/pdf/ckd.pdf		
Calcium		2.36	2.10-2.60	mmol/L
Uric Acid		359	150-430	umol/L
Total Bilirubin	**A**	**21**	<17	umol/L
Alkaline Phosphatase		51	40-145	U/L
Gamma GT		13	<49	U/L
ALT		22	<50	U/L
AST		24	<36	U/L
Muscle Enzymes				
CK	**A**	**178**	<165	U/L
Lipids				
Cholesterol		4.83	2.00-5.19	mmol/L
LDL Cholesterol		2.75	1.50-3.40	mmol/L

		The optimal LDL cholesterol level for intermediate and high risk individuals is <= 2.00 mmol/L. If triglycerides are => 1.50 mmol/L, consider monitoring of alternate lipid targets non HDL-cholesterol or apoB. For low risk individuals with LDL cholesterol => 5.00 mmol/L, target reduction of LDL cholesterol => 50 percent. See Can J Cardiol 2013 vol 29 pgs 151 to 167.		
HDL Cholesterol		1.61	>0.99	mmol/L
		New method effective September 17,2018, with improved specificity and reduced interferences in patients with liver disease. For further information please contact the Bio-Chemist on call at 1-800-431-7206.		
Chol/HDL (Risk Ratio)		3.00	<4.9	
Non HDL Cholesterol		3.22		mmol/L
		Non HDL-cholesterol is calculated from total cholesterol and HDL-C and is not affected by the fasting status of the patient. The optimal non HDL-cholesterol level for intermediate and high risk individuals is <= 2.60 mmol/L. See Can J Cardiol 2013 vol 29 pgs 151 to 167.		
Triglycerides		1.04	<2.21	mmol/L
Random Urine Chemistry				
Urine Creatinine				
Urine Creatinine		2.19		mmol/L
		No reference range has been established for this test.		
Urine (Micro)albumin				
ACR (Microalbumin/ Creatinine Ratio)		<1.0	<2.0	mg/mmol
		Note: Reference interval for albumin/ creatinine ratio as per BCMA/MSC guidelines.		

Thyroid Function				
TSH		1.03	0.32-5.04	mU/L
Adrenal Function				
Cortisol				
AM Cortisol		223	125-536	nmol/L
		If dexamethasone has been given <130 nmol/L.		
Tumour Markers				
Prostate Specific Ag		0.49	<3.5	ug/L
		Changes in serial PSA levels may be misleading unless all PSA tests are performed by the same laboratory.		
Reproductive and Gonadal				
DHEA Sulphate		2.1	<9.8	umol/L
Serum Proteins				
C Reactive Protein (High Sensitivity)		0.4	<4.8	mg/L

Reproductive and Gonadal				
Estradiol		92	<157	pmol/L
		NOTE: Estrogen receptor antagonists and aromatase inhibitors have been shown to interfere with estradiol testing by some immunoassay technologies resulting in falsely elevated estradiol concentrations. For patients taking these medications, please interpret results with caution.		
Testosterone		27.0	8.4-28.8	nmol/L
Testosterone Free Calculated		546	115-577	pmol/L
		Method of Vermeulen		
Testosterone Bioavailable Calculated		12.8	2.7-13.5	nmol/L

		Method of Vermeulen Interpret BAT and cFT results with caution in presence of significant hypoalbuminemia.		
Sex Hormone Binding Globulin		40.2	19.0-76.0	nmol/L
		When assessing testosterone status, testosterone and SHBG should be tested on the same specimen.		