



**Date:** June 15, 2020  
**To:** Central Zone Physicians, Laboratory Directors, Managers, Supervisors  
**From:** Clinical Biochemistry, South Sector, Alberta Precision Laboratories (APL)  
**Re:** Changes to Reference Intervals of Alanine Aminotransferase, Vitamin B12, Ferritin, Gamma Glutamyl Transferase, Magnesium, Urea

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**Key Message:**

- Effective **June 17, 2019**, reference intervals for the following analytes will be updated to reflect the new provincial reference intervals (table attached):
  - Alanine Aminotransferase
  - Vitamin B12
  - Ferritin
  - Gamma Glutamyl Transferase
  - Magnesium
  - Urea

**Why this is Important:**

- New provincial reference intervals are evidence-based and have been developed based on the statistics obtained from the provincial population.

**Action Required:**

- Please be aware of the changes in reference intervals.

**Inquiries and feedback may be directed to:**

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**This bulletin has been reviewed and approved by:**

- Heidi Paulin, MD, Regional Lab Medical Site Chief, Red Deer Regional Hospital
- Hossein Sadrzadeh, PhD, Section Chief, Clinical Biochemistry, South Sector
- Leland Baskin, MD, Associate Medical Director, South Sector



Analyte	Age	Reference Interval	Units	Gender	Critical Value
Alanine Aminotransferase (ALT)	0 - < 18 years	< 35	U/L	M, F & U	None
	≥ 18 years	< 60	U/L	M	None
	≥ 18 years	< 40	U/L	F	None
B12	0 - < 10 years	≥ 250	pmol/L	M, F, U	None
	10 – 150 years	≥ 160	pmol/L	M, F, U	None
Ferritin	0 - < 6 months	50 - 500	ug/L	M, F, U	None
	6 months - 15 years	15 - 100	ug/L	M, F, U	None
	> 15 years	20 - 300	ug/L	F	None
	> 15 years	30 - 500	ug/L	M, U	None
Gamma Glutamyl Transferase (GGT)	0 - < 15 days	20 - 200	U/L	M, F, U	None
	15 d - < 1 years	< 100	U/L	M, F, U	None
	1 yr - < 18 years	< 27	U/L	M, F, U	None
	18 - 150 years	< 50	U/L	F	None
	18 - 150 years	< 80	U/L	M	None
Magnesium (Mg)	0 - 150 years	0.70 - 1.00	mmol/L	M, F & U	<0.40 & >1.90
Urea	< 2 years	1.0 - 7.5	mmol/L	M, F, U	None
	2 - 17 years	2.0 - 7.0	mmol/L	M, F, U	None
	18 - 55 years	2.0 - 7.0	mmol/L	F	None
	18 - 55 years	3.0 - 8.0	mmol/L	M, U	None
	> 55 years	3.0 - 8.0	mmol/L	F	None
	> 55 years	3.0 - 9.0	mmol/L	M, U	None