



**Date:** December 28, 2020  
**To:** North Sector Area 1, 2, 3 and QEII Physicians, Laboratory Directors, Managers and Supervisors  
**From:** North Sector, Alberta Precision Laboratories (APL)  
**Re:** Changes to Reference Intervals of Alanine Aminotransferase, Gamma Glutamyl Transferase, Magnesium and Urea

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**Key Message:**

- Effective **11 January 2021**, reference intervals for the following analytes will be updated to reflect the new provincial reference intervals (table attached):
  - Alanine Aminotransferase
  - 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:**

- Dr. Mireille Kattar, Consulting Pathologist, Alberta Precision Laboratories (APL), [Mireille.Kattar@albertaprecisionlabs.ca](mailto:Mireille.Kattar@albertaprecisionlabs.ca)
- Dr. Brent Mendez, Regional Lab Medicine Site Chief QEII Hospital at 780-538-7417 or by email at: [Brent.mendez@albertaprecisionlabs.ca](mailto:Brent.mendez@albertaprecisionlabs.ca)

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

- Dr. Michael Mengel, North Sector Medical Director, APL Chair Department of Laboratory Medicine and Pathology, University of Alberta



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, U	None
	≥ 18 years	< 40	U/L	F	None
Gamma Glutamyl Transferase (GGT)	0 - < 15 days	20 - 200	U/L	M, F, U	None
	15d-<1years	< 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, U	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