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**Date:** October 7, 2019  
**To:** South Zone Physicians, Laboratory Directors, Managers and Supervisors  
**From:** Clinical Biochemistry, APL South Sector  
**Re:** Changes to Reference Intervals of Chloride, Albumin, Total Protein, Calcium, Alkaline Phosphatase, Phosphate, and Total CO2

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**Key Message:**

- Effective **October 22, 2019**, reference intervals for the following analytes will be updated to reflect the new provincial reference intervals (table attached):
  - Chloride
  - Albumin
  - Total Protein
  - Calcium
  - Total Bilirubin
  - Alkaline Phosphatase
  - Phosphate
  - Total CO2
- There will be no critical value for Total CO2.

**Why this is important:**

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

**Action Required:**

- Please be aware of the changes in reference intervals.

**Background:**

- The change in reference intervals is a part of standardization of the processes within APL South and North Sector.

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

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

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Analyte	Age	Reference Interval	Units	Gender	Critical Value
Chloride	0 - 150 yrs	98 - 112	mmol/L	M, F & U	None
Albumin	0 - 364 days	22 - 45	g/L	M, F & U	None
	365 days - 150 yrs	30 - 45	g/L	M, F & U	None
Total Protein	0 - 364 days	40 - 70	g/L	M, F & U	None
	365 days - 150 yrs	62 - 82	g/L	M, F & U	None
Calcium (applicable for Chinook Regional Hospital only)	0 - 10 days	1.80 - 2.70	mmol/L	M, F & U	<1.65 & >3.25
	11 - 365 days	2.20 - 2.70	mmol/L	M, F & U	<1.65 & >3.25
	>1 year	2.05 - 2.45	mmol/L	M, F & U	<1.65 & >3.25
Total Bilirubin	0 - 8 days		µmol/L	M, F & U	<30 days, >300
	9 - 28 days		µmol/L	M, F & U	
	29 days - 150 yrs	<20	µmol/L	M, F & U	
Alkaline Phosphatase	0 - 14 days	70 - 320	U/L	M, F & U	None
	15 days - 364 days	130 - 500	U/L	M, F & U	None
	1 years - 12 years	130 - 430	U/L	M, F & U	None
	13 years - 14 years	130 - 500	U/L	M & U	None
	15 years - 17 years	60 - 250	U/L	M & U	None
	13 years - 14 years	60 - 225	U/L	F	None
	15 years - 17 years	50 - 140	U/L	F	None
	18 years - 150 years	40 - 120	U/L	M, F & U	None
Phosphate	0 - 14 days	1.40 - 2.70	mmol/L	M, F & U	<0.40
	15 days - 30 days	1.60 - 2.70	mmol/L	M, F & U	<0.40
	31 days - 4 years	1.20 - 2.20	mmol/L	M, F & U	<0.40
	5 years - 12 years	1.10 - 1.90	mmol/L	M, F & U	<0.40
	13 years - 17 years	0.90 - 1.70	mmol/L	M, F & U	<0.40
	18 years - 150 years	0.70 - 1.50	mmol/L	M, F & U	<0.40
Total CO <sub>2</sub>	0 - 150 years	20 - 32	mmol/L	M, F & U	None