

DATE:	2021 April 5
TO:	Central Zone: Physicians, Nurses, Directors, and Managers
FROM:	Clinical Biochemistry, South Sector, Alberta Precision Laboratories (APL) and DynaLIFE Medical Labs
RE:	Provincial Standardization of Reference Intervals and Comments for Total Testosterone

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Key Message:

- Effective **April 9th, 2021**, Testosterone, Random, AM and Testosterone, Random, PM will be discontinued, and the Testosterone, Total orderable will remain.
- Testosterone, Random AM/PM test codes (**TESTA/TESTP**) are no longer orderable in Central Zone Meditech Order Entry and a single test code Testosterone, Total (**TESTT**) should be used instead.

Test (abbreviation, units)	Current Reference Intervals (RIs)			New Provincially Standardized RIs			New Result Comment
	Age	Gender	RI	Age	Gender	RI	
Testosterone, Total (nmol/L)	0 to <18y	M	None	0 to <6m	M	<19.0	*Clinical correlation with puberty status suggested. **Testosterone exhibits diurnal variation with values that are highest closest to waking. Collection time should be considered when making clinical decisions. A low value should be confirmed with a repeat test. ***Note: a comment will be applied to all gender U/X patient results outlining the M/F RIs and relevant comments as above.
		F	0.5-2.0	0 to <6m	F	<2.0	
	≥18y	M	AM: 10.3-29.5	6m to <11y	All	<0.2*	
			PM: 8.0-26.7	11 to <15y	M	<20.0*	
		F	Random: 8.0-29.5	15 to <18y	M	4.0-27.0*	
			0.5-2.0	11 to <18y	F	<1.8*	
	≥18y	M	8.0-35.0**	≥18y	M	8.0-35.0**	
	≥18y	F	<2.0	≥18y	F	<2.0	
	All	U, X	None***	All	U, X	None***	

Why this is Important:

- The RI and comment changes will provide a more robust and accurate guidance for result interpretation that is reflective of the Alberta population, and will support ongoing provincial laboratory standardization efforts.
- Consolidating total testosterone testing to a single orderable is supported by provincial data and endorsed by the Division of Endocrinology in Edmonton and Calgary.

Action Required:

- Be aware that Testosterone, Random, AM (**TESTA**) and Testosterone, Random, PM (**TESTP**) will be discontinued in Central Zone Meditech Order entry, and the single Testosterone, Total (**TESTT**) orderable will remain.

Inquiries and feedback may be directed to:

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- DynaLIFE Clinical Chemists, 780-451-3702 ext. 3572 or clinical.chemists@dynamlife.ca

This bulletin has been reviewed and approved by:

- Mathew Estey, PhD, Director of Chemistry, DynaLIFE Medical Labs
- Heidi Paulin, MD, Regional Laboratory Medicine Site Chief for Red Deer Regional Hospital
- Hossein Sadrzadeh, PhD, Section Chief, Clinical Biochemistry, South Sector
- Ethan Flynn, MD *on behalf of:* Leland Baskin, MD, Associate Medical Director, South Sector