

DATE:	19 December 2022
TO:	All Zones – Ordering Providers, Nurses, Laboratory Directors and Managers
FROM:	DynaLIFE Medical Labs and Alberta Precision Laboratories
RE:	Update to PTH units (Edmonton only), assay (Calgary only), reference intervals, and preferred sample type

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Key Message

- Effective **December 5th, 2022** changes were made to parathyroid hormone (PTH) testing and reporting at DynaLIFE testing locations to promote provincial standardization: Edmonton Base Lab (testing for North, Edmonton, and Central Zones) and Calgary Hub Lab (testing for Calgary and South Zones).

Background

- Prior to December 5th, there was a lack of provincial harmonization for PTH units, assays, reference intervals, and preferred sample type. To promote provincial standardization, changes were made to PTH testing at DynaLIFE Edmonton (EDM) Base Lab and DynaLIFE Calgary (CGY) Hub Lab as outlined in the table below.

Note: intra-operative PTH (ioPTH) is not impacted by these changes, and continues to be run at APL sites.

How this will impact you

Parameter	DynaLIFE EDM Base Lab		DynaLIFE CGY Hub Lab	
	Previous State	Effective Dec 5, 2022	Previous State	Effective Dec 5, 2022
Assay^a	Unchanged (Roche 2 nd Gen)		DiaSorin 3 rd Gen	Roche 3 rd Gen ^b
Units	pmol/L	ng/L <i>Note: ng/L = pmol/L x 9.43</i>	Unchanged (ng/L)	
Reference Interval^c	1.4 – 6.8 pmol/L	15 – 65 ng/L	7 – 37 ng/L	15 – 57 ng/L
Preferred sample type	Serum (Gold SST)	Lithium Heparin Plasma (Green PST) ^d	EDTA Plasma (Mauve)	Lithium Heparin Plasma (Green PST)

^aChanges reflect provincial standardization of assay manufacturer, while maintaining the assay generation previously used at each laboratory site.

^bHigher values are expected for Roche compared to DiaSorin 3rd Gen assays (average increase [IQR] for results ≤ 57 ng/L: 11 ng/L [7 – 13 ng/L]; average increase [IQR] for results > 57 ng/L: 39 % [18 – 47 %]).

^cReference interval changed due to the unit change (EDM) or assay change (CGY) and to align with manufacturer's recommendations.

^dLithium heparin plasma is the preferred sample type due to improved stability. Gold SST is still acceptable in EDM.



Action Required

- Be aware of the PTH changes for testing completed at:
 - DynaLIFE EDM: change to units, reference interval, and preferred sample type
 - If required, to convert a previously reported result in pmol/L to ng/L, use the following equation: $\text{ng/L} = \text{pmol/L} \times 9.43$
 - DynaLIFE CGY: change to assay manufacturer, reference interval, and preferred sample type
 - Higher values are expected for results generated on the Roche 3rd Gen PTH assay compared to the DiaSorin 3rd Gen PTH assay. Clinical correlation is required.
 - For patients with normal or low PTH, results are expected to be approx. 10 ng/L higher
 - For patients with elevated PTH, results are expected to be approx. 20 to 50 % higher

Questions/Concerns

- DynaLIFE EDM: Clinical Chemist Team, 780-451-3702 ext. 3572, clinical.chemists@dynalife.ca
- DynaLIFE CGY: Dr. Jessica Gifford, 403-770-3779, jessica.gifford@dynalife.ca

Approved by

- Dr. Carolyn O'Hara, Interim Chief Medical Laboratory Officer, APL
- Dr. Michelle Parker, North Interim Lead of Clinical Chemistry, DynaLIFE Medical Labs
- Dr. Jessica Gifford, South Lead and Interim Director of Clinical Chemistry, DynaLIFE Medical Labs
- Dr. Erene Farag, Provincial Medical Director, DynaLIFE Medical Labs