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Laboratory Bulletin

DATE:	17 March 2025
TO:	All Zones: Physicians, Nurses and Healthcare Providers, Laboratory Staff
FROM:	Clinical Biochemistry, Alberta Precision Laboratories
RE:	**Provincial Standardization of Serological Testing for Celiac Disease**

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Key Message

- **Effective April 1, 2025,** serological testing for Celiac Disease (CD) will be standardized across the province and consolidated at the Diagnostic and Scientific Centre (DSC) in Calgary.
- Testing methodology, location, and reference intervals will change for patients within North Sector.
- Connect Care test codes for ordering Tissue Transglutaminase (TTG) IgA [LAB723] and anti-endomysial antibodies (EMA) [LAB774] will not change.
- The automatic lab-triggered reflex to an anti-EMA for pediatric patients with a TTG IgA ≥10x the upper limit of normal (current practice in South Sector) will be discontinued.

Background

- North and South Sectors currently use different methods to measure TTG IgA, which is the universally accepted first line test for CD. These TTG IgA methods have different reference intervals and numerical results are not interchangeable.
- The lab-triggered second line test for patients with IgA deficiency also varies between Sectors, with South using automated TTG IgG testing and North using manual EMA IgA/IgG testing.
- A standardized approach to serological testing for CD will eliminate the current confusion that arises from different reference intervals and algorithms used across Alberta.

How this will impact you

North Sector

- Testing methodology, location and reference intervals will change as follows:

		Before April 1, 2025		Effective April 1, 2025	
Test	**Utility**	**Method and testing location**	**Reference interval**	**Method and testing location**	**Reference interval**
TTG IgA [LAB723]	Only lab test required to screen for CD	Phadia 250 Edmonton Base Lab	<7.0 U/L	BioRad Bioplex DSC (Calgary)	<15.0 KIU/L
2nd line testing for patients with IgA deficiency	Automatically reflexed by lab if patient has insufficient IgA	Anti-EMA IgG/IgA UAH* (Edmonton)	negative	TTG IgG DSC (Calgary)	<15.0 KIU/L
anti-EMA [LAB774]	Ordered in specific circumstances by gastroenterologists	Anti-EMA IgG/IgA UAH* (Edmonton)	negative	Anti-EMA IgA DSC (Calgary)	negative

*UAH = University of Alberta Hospital

- Numerical results from the BioRad Bioplex TTG IgA method (currently used in South Sector and will become the standardized provincial method) are expected to be higher than those from the Phadia 250 TTG IgA method (previously used in North Sector).
    - This difference is more pronounced the higher the concentration and can reach up to 12-fold in some cases.
- The BioRad Bioplex TTG IgA method (currently used in South Sector and will become the standardized provincial method) measures the total IgA concentration in every sample and is thus superior to the Phadia 250 TTG IgA method at identifying patients with IgA deficiency who require second line testing.

South Sector

- No changes to TTG IgA or TTG IgG testing methodology, location or reference intervals.
- Based on feedback from GI specialists, the automatic lab-triggered reflex to an anti-EMA for pediatric patients with a TTG IgA ≥10x the upper limit of normal will be discontinued.
    - If needed for biopsy-free diagnosis of CD in this setting, anti-EMA can be ordered in Connect Care (LAB774) or using the general community requisition.

Action Required

- Refer to the Provincial Celiac Disease Primary Care Pathway for more detailed information on the investigation of suspected CD.
- There is no need to update order sets or preference lists as test codes will not change.
- **Do not order total IgA when investigating suspected CD.**
    - **The TTG IgA test includes an assessment for IgA deficiency and lab will automatically reflex 2nd line testing when indicated.**
- In North Sector apply caution in interpreting TTG IgA levels for serological diagnosis in pediatric patients and the trend in TTG IgA levels early after transition to the new Provincial method after April 1st.

Questions/Concerns

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Approved by

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