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TO: **REFERRING CLIENTS**

FROM: Barb Baltzer, Coordinator
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 Hamilton Regional Laboratory Medicine Program (HRLMP)

DATE: July 5, 2012

SUBJECT: **New Celiac Disease Screening and Monitoring Services -
 Effective August 7, 2012**

Celiac Disease screening has changed since LRC/HRLMP first introduced the testing panel. Current guidelines (1,2,3) recommend the use of tTG IgA ab in conjunction with a total IgA test if the IgA status of the patient is unknown. The most recent guideline (3) recommends the use of an IgG test, either tTG or DGP if there is IgA deficiency documented. The gliadin antibody tests are no longer recommended for use in screening for celiac disease.

The LRC offers a number of Celiac Serology Tests:

Test	Negative	Weak positive	Positive
Tissue Transglutaminase IgA Ab (tTG) **New Method**	<4.0 U/mL	4-10 U/mL	>10 U/mL
Endomysial Antibody (EMA)	Negative		1:20 to >1:320
Anti Gliadin IgA and IgG Abs	<20 EU/L		>20 EU/L
Deamidated Gliadin Peptide IgG Ab (DGP) **New Test**	<20 units	20-30 units	>30 units

CELIAC SCREENING

The recommended test for screening for celiac disease is **tTG IgA ab**. The physician may or may not order **total IgA** to help with interpretation. We will provide interpretative comments with the **tTG IgA ab** order.

CELIAC PANEL: We have chosen to recommend a combination of 2 individual tests that have shown good individual performance and in combination appear to increase the area under the ROC. The 2 tests are DGP IgG ab (4) and tTG IgA ab (5). It has been

suggested that the combination of tTG IgA with DGP IgG will be a very sensitive and specific combination of tests with excellent likelihood ratios. For this reason, the LRC/HRLMP **Celiac Panel** will now be a combination of tTG IgA ab and DGP-IgG ab measurements. We will provide interpretative comments with the celiac panel order.

GLIADIN PANEL: The gliadin antibodies (IgA and IgG ab) are not as specific for celiac disease and may have utility in a wider range of gastroenterological conditions(7). We will continue to offer these tests as the **Gliadin Panel**. We will provide interpretative comments with the gliadin panel order.

Pricing:

Order	Price
Tissue Transglutaminase IgA Antibody (tTG)	\$30.00
Endomysial Antibody (EMA)	\$35.00
Celiac Panel (tTG-IgA and DGP IgG)	\$55.00
Gliadin Panel (Gliadin IgA and IgG)	\$66.00
Deamidated Gliadin Peptide IgG Ab (DGP)	\$30.00

1. AGA Institute Medical Position Statement on the Diagnosis and Management of Celiac Disease. *Gastroenterology*. 2006 Dec 1;131(6):1977-80.
2. Hill ID, Dirks MH, Liptak GS, Colletti RB, Fasano A, Guandalini S, et al. Guideline for the diagnosis and treatment of celiac disease in children: recommendations of the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition. *J Pediatr Gastroenterol Nutr*. 2005 Jan 1;40(1):1-19.
3. Husby S., Koletzko YS, Korponay-Szabo IR, Mearin ML, Phillips A, Shamir R et al. European Society for Pediatric Gastroenterology, Hepatology, and Nutrition Guidelines for the Diagnosis of Coeliac Disease. *J Pediatr Gastroenterol Nutr*. 2012;54: 136–160
4. Niveloni S, Sugai E, Cabanne A, Vazquez H, Argonz J, Smecuol E, et al. Antibodies against synthetic deamidated gliadin peptides as predictors of celiac disease: prospective assessment in an adult population with a high pretest probability of disease. *Clin Chem*. 2007 Dec 1;53(12):2186-92.
5. Van Meensel B, Hiele M, Hoffman I, Vermeire S, Rutgeerts P, Geboes K, et al. Diagnostic accuracy of ten second-generation (human) tissue transglutaminase antibody assays in celiac disease. *Clin Chem*. 2004 Nov 1;50(11):2125-35.
6. Lewis NR, Scott BB. Meta-analysis: deamidated gliadin peptide antibody and tissue transglutaminase antibody compared as screening tests for coeliac disease. *Aliment Pharmacol Ther*. 2010 Jan 1;31(1):73-81.
7. Armstrong D, Don-Wauchope AC, Verdu EF. Testing for gluten-related disorders in clinical practice: the role of serology in managing the spectrum of gluten sensitivity. *Can J Gastroenterol*. 2011 Apr 1;25(4):193-7.

For further information about Celiac Disease Testing, please contact:

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