Billings Clinic

Laboratory Communiqué

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The Laboratory Communiqué is a quarterly publication released by Billings Clinic Laboratory Services as an informational tool for medical staff and laboratorians.

In This Issue

New Testing

CELIAC TESTING

Effective Thursday, 8-08-18, we implemented 4 new assays for celiac testing on the INOVA BioFlash Chemiluminescent analyzer. They are:

- Tissue Transglutaminase IgA (t-TG, IgA)
- Tissue Transglutaminase IgG (t-TG, IgG)
- Deaminated Gliadin Peptide IgA (DGP, IgA)
- Deaminated Gliadin Peptide IgG (DGP, IgG)

Clinical:

Celiac disease (CD) is a gluten sensitive enteropathy that is characterized by inflammation and characteristic histological flattening of intestinal mucosa, resulting in a malabsorption syndrome. The exact etiology of the disease remains unknown, but gliadin, the alcohol soluble fraction of wheat gluten, is clearly the toxic agent.

Dermatitis herpetiformis (DH) is a blistering skin condition. The majority of patients with DH have gluten sensitivity and jejunal villous atrophy identical to that found in celiac disease and strict gluten-free diet improves both gut and skin lesions. Current serological methods such as anti-t-TG, anti-DGP and endomysial assays exhibit lower performance when testing for DH, with sensitivities ranging from only 45-75% compared with the 95% and higher sensitivities reported for celiac disease. One study, however, found that anti-DGP antibodies are more common in DH patients than anti-t-TG antibodies.

Methodology:

Chemiluminescence technology. The magnetic particle separation with flash chemiluminescent detection delivers exceptional clinical performance, precise quantification and broad analytical measurement ranges as noted on the next page.

Test Specifics

t-TG, IgA

Test # 0187
CPT: 83516
LOINC: 31017-7

t-TG, IgG

Test # 0186
CPT: 83516
LOINC: 32998-7

DGP, IgA

Test # 0185
CPT: 83516
LOINC: 58709-7

DGP, IgG

Test # 0184
CPT: 83516
LOINC: 58710-5

New Panel

Gluten Sensitive Enteropathy Panel with Reflex

Test #: 0182

t-TG, IgA 1.9 CU to 4965.5 CU
t-TG, IgG 3.8 CU to 2560.0 CU
DGP, IgA 5.2 CU to 2367.3 CU
DGP, IgG 2.8 CU to 1936.7 CU

Specimen:

Red Top SST Tube. Following collection, the serum should be separated from the clot. Serum samples may be stored refrigerated at 2-8ºC for no longer than 8 hours otherwise they should be frozen at -20 ºC.

Testing Schedule:

Celiac testing will be performed once a week on Wednesday by dayshift staff.

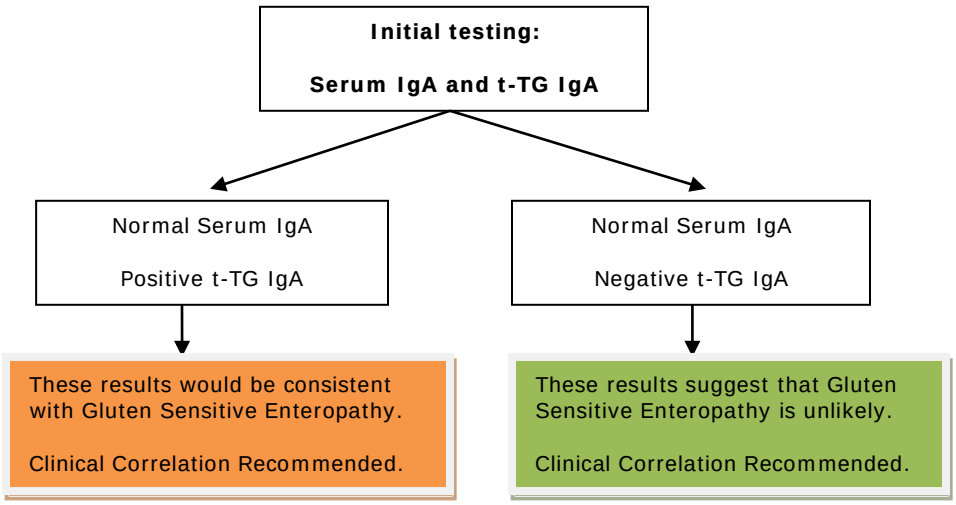
Interpretation:

Reactivity	CU
Negative	<20
Weak Positive	20-30
Positive	>30

Reactivity in CU is directly related to the titer of the autoantibody in the patient sample. Increases and decreases in patient autoantibody concentrations will be reflected in a corresponding rise or fall in CU, which is proportional to the amount of antibody.

Gluten Sensitive Enteropathy Panel (GSE Panel)

Using DGP and t-TG combinations, a panel can help stratify patients for biopsy or gluten-free diets. Our initial testing will include a serum IgA and t-TG IgA. The Serum IgA result is performed to determine the patient's IgA sufficiency or deficiency status. t-TG IgA is the preferred single test for the detection of a gluten sensitive enteropathy or celiac disease in individuals over the age of 2 years.



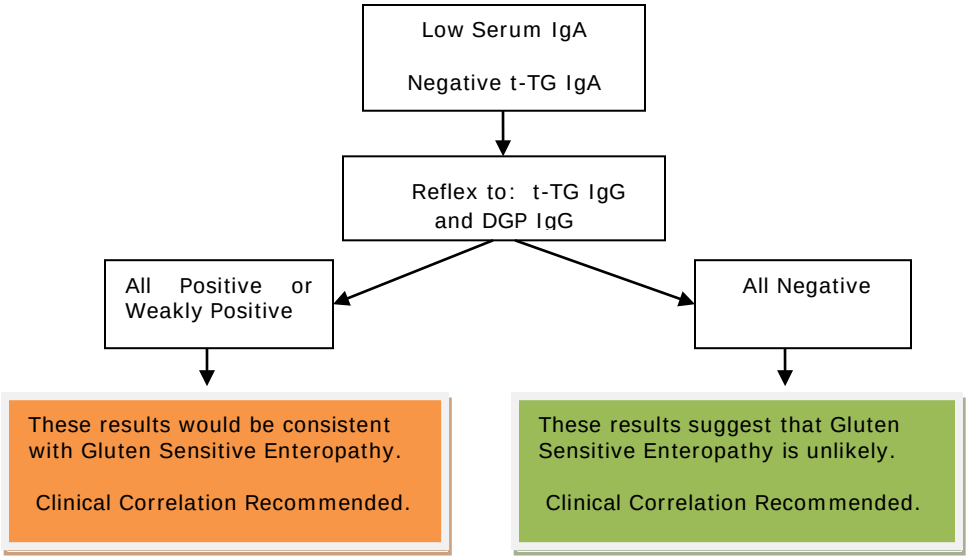
Reference Change

Testosterone

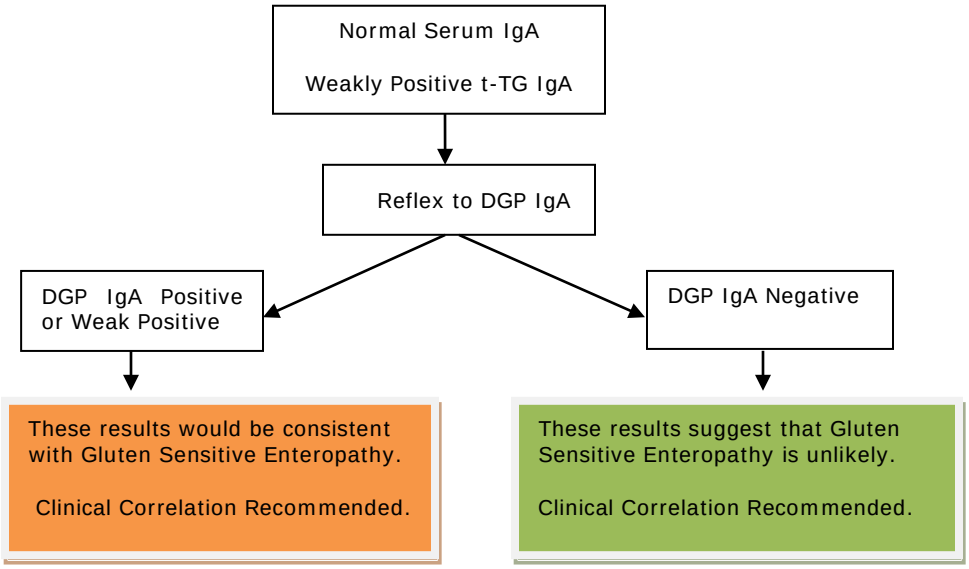
DRVVT Assays

We developed our GSE Panel to reflex to additional tests when the results of the serum IgA and the t-TG IgA indicate additional testing is needed to provide further diagnostic value. Depending on the result of the Serum IgA level and the t-TG IgA we have additional reflex algorithms:

In patients in whom low serum IgA or selective IgA deficiency is identified, IgG based testing (DGP IgG and t-TG IgG) will be performed.



A normal Serum IgA with a weakly positive tTG IgA (20-30 CU) is inconclusive so this scenario will reflex to a DGP IgA. This will add additional sensitivity and specificity.



We strongly recommend ordering the GSE Panel with Reflex, in lieu of the individual assays, for initial diagnostic use.

Billings Clinic

Laboratory Services
Contact Us

(406) 657-4060
(866) 232-2522

Director / Pathologist:
Jeffrey Smith, MD

Lab Director:
Mark Lubbers, MT ASCP

Lab Manager:
Sheilah Frazier MT ASCP

Technical Consultant:
Joni Gilstrap, MT ASCP
Extension 4046

Supervisor
Meet Patel MT ASCP
Extension 4644

Supervisor
Rebecca Schulz
Extension 4861

Supervisor
Heather Verbeck
Extension 6409

Laboratory Marketing Coordinator
Jena DeVries
Extension 4888

Normal Range Update

TESTOSTERONE

A reagent change for Testosterones was recently made within the Laboratory and this necessitated a change in the reference ranges. These changes took effect on May 3rd.

Males	Old Range	New Range
0 – 10 years	10 – 20 ng/dL	7 – 29 ng/dL
10 – 50 years	240 – 871 ng/dL	123 – 814 ng/dL
50 - >150 years	241 – 827 ng/dL	87 – 780 ng/dL

Females		
0 – 10 years	10 – 20 ng/dL	7 – 29 ng/dL
10 – 50 years	14 – 53 ng/dL	9 – 48 ng/dL
50 - >150 years	14 – 76 ng/dL	<7 – 46

DRVVT

Due to a new lot of LA1 and LA2 reagents, the following tests have had a change in their reference ranges effective August 10.

DRVVT Screen and Mix	27.4 – 45.4 seconds
DRVVT Confirm and Mix	27.0 – 38.7 seconds
DRVVT Ratio	1.33

For more information about Billings Clinic Laboratory please call (406) 657-4060.
www.billingsclinic.com

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Billings Clinic
2800 Tenth Avenue North
P.O. Box 37000
Billings, Montana 59107-7000

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