INDICATIONS FOR TESTING
Chronic and unexplained gastroenterologic symptoms, poor growth, weight loss, iron deficiency anemia, and delayed puberty, among other symptoms

ORDER
TTG IgA and Total IgA

Detectable IgA concentrations
Negative TTG IgA result

CD unlikely

Low pretest suspicion for CD

CD ruled out

Undetectable IgA concentrations
Negative TTG IgA result

Suggests selective IgA deficiency

ORDER
TTG IgG and/or DGP IgG

Detectable IgA concentrations
Weak- to moderate-positive TTG IgA result

ORDER
TTG IgG and/or DGP IgG

Negative

Positive

PERFORM
Duodenal biopsy

CONSIDER

• Early-phase disease; continue gluten-containing diet and retest after 1-3 mos
• False-positive serology
• False-negative biopsy due to sampling error
• HLA genotyping

Detectable IgA concentrations
High-positive TTG IgA result (>10 x ULN)

Standard diagnostic approach

Nonbiopsy approach

ORDER
EMA IgA using a separate specimen

Negative

Positive

Marsh 0-1

Adult patient

CD confirmed

CD likely

Pediatric patient

CD confirmed

Marsh ≥2

Abbreviations
ACG  American College of Gastroenterology
CD  Celiac disease
DGP  Deamidated gliadin peptide
EMA  Endomysial antibody
HLA  Human leukocyte antigen
Ig  Immunoglobulin
TTG  Tissue transglutaminase
ULN  Upper limit of normal

*Serologic and histologic testing must be performed while the patient is consuming a regular, gluten-containing diet.

**Total IgA testing is not required if selective IgA deficiency is known or has been previously ruled out. If selective IgA deficiency is present, test with TTG IgG or DGP IgG serologies.

†In individuals with weak- to moderate-positive TTG IgA results, additional DGP IgA and/or EMA IgA testing may be considered before biopsy to increase diagnostic confidence.

‡The standard diagnostic approach, which includes a confirmatory biopsy, is recommended unless biopsy is refused or is not feasible.

§ACG recommends biopsy following negative serologies if there was a high pretest suspicion for CD (eg, to rule out possible seronegative CD).

∀HLA genotyping may be useful to clarify discrepant serology and histology. A negative HLA result rules out CD. A positive HLA result is permissive of CD but cannot be used to confirm a diagnosis.

§Biopsy is required to confirm a diagnosis of CD in adults. A diagnosis of “likely CD” can be issued if biopsy is refused or is not feasible.

References