Celiac Disease Diagnostic Testing Algorithm

**Testing for selective IgA deficiency**
- **IGA / Immunoglobulin A (IgA), Serum**
  - IgA ≥1 mg/dL and below age-matched reference values
  - Selective IgA deficiency

**TTGA / Tissue Transglutaminase (tTG) Antibody, IgA, Serum**
- TTGA < 4.0 U/mL: Celiac disease very unlikely
- TTGA 4.0–10.0 U/mL: Possible false-positive tTG result
- TTGA > 10.0 U/mL: Celiac disease possible but unlikely
  - If strong suspicion of celiac disease remains, perform HLA typing.
  - CELI / Celiac Associated HLA-DQ Alpha 1 and DQ Beta 1 DNA Typing, Blood
  - If positive for DQ2 or DQ8, possible celiac disease
  - If negative, not celiac disease

**DAGL / Gliadin (Deamidated) Antibody, IgA, Serum**
- DAGL 4.0–10.0 U/mL: Celiac disease possible but unlikely
  - If strong suspicion of celiac disease remains, perform HLA typing.
  - CELI / Celiac Associated HLA-DQ Alpha 1 and DQ Beta 1 DNA Typing, Blood
  - If positive for DQ2 or DQ8, possible celiac disease
  - If negative, not celiac disease

**IgA ≥1 mg/dL and below age-matched reference values**
- Proceed to biopsy
  - Biopsy results inconsistent with serology
  - CELI / Celiac Associated HLA-DQ Alpha 1 and DQ Beta 1 DNA Typing, Blood
  - Not celiac disease
  - Possible celiac disease

**TTGG / Tissue Transglutaminase (tTG) Antibody, IgG, Serum**
- TTGG < 4.0 U/mL: Celiac disease very unlikely
- TTGG 4.0–10.0 U/mL: Possible false-positive tTG result
- TTGG > 10.0 U/mL: Celiac disease possible but unlikely
  - If strong suspicion of celiac disease remains, perform HLA typing.
  - CELI / Celiac Associated HLA-DQ Alpha 1 and DQ Beta 1 DNA Typing, Blood
  - If positive for DQ2 or DQ8, possible celiac disease
  - If negative, not celiac disease

**DGGL / Gliadin (Deamidated) Antibody, IgG, Serum**
- DGGL < 2.0 U/mL: Celiac disease very unlikely
- DGGL 2.0–10.0 U/mL: Possible false-positive tTG result
- DGGL > 10.0 U/mL: Celiac disease possible but unlikely
  - If strong suspicion of celiac disease remains, perform HLA typing.
  - CELI / Celiac Associated HLA-DQ Alpha 1 and DQ Beta 1 DNA Typing, Blood
  - If positive for DQ2 or DQ8, possible celiac disease
  - If negative, not celiac disease

**Possible false-positive tTG result**
- CELI / Celiac Associated HLA-DQ Alpha 1 and DQ Beta 1 DNA Typing, Blood
- Not celiac disease
- Possible celiac disease

**Possible celiac disease**
- CELI / Celiac Associated HLA-DQ Alpha 1 and DQ Beta 1 DNA Typing, Blood
- Follow-up patient for future development of celiac disease

*For individuals with clinical symptoms suggestive of recurrent infections, suggest further evaluation for possible primary immunodeficiency:
- IGGS / IgG Subclasses, Serum
- IMMG / Immunoglobulins (IgG, IgA, and IgM), Serum

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