Helicobacter pylori Diagnostic Algorithm

**Alarm Features:** overt gastrointestinal bleeding (melena, hematemesis), unintentional weight loss, family history of gastric or esophageal cancer, palpable abdominal or epigastric mass, abnormal adenopathy, iron deficiency anemia, persistent vomiting, dysphagia, odynophagia

**Patients <3 years**
- Stool antigen: HPSA / Helicobacter pylori Antigen, Feces

**Patients 3 to 54 years**
- Urea breath test: UBT / Helicobacter pylori Breath Test
- Stool antigen: HPSA / Helicobacter pylori Antigen, Feces

**Adults ≥55 years**
- Endoscopy with biopsy

**POSITIVE**
- Treat for Helicobacter pylori infection
- Evaluate for other causes of dyspepsia

**NEGATIVE**
- Evaluate for other causes of dyspepsia

Optional: Repeat endoscopy. Order HELIS / Helicobacter pylori Culture with Antimicrobial Susceptibilities for culture from GI biopsy and antimicrobial susceptibility testing of isolated organism, or submit isolated organism for ZMMLS / Antimicrobial Susceptibility, Aerobic Bacteria, MIC.

---

1. Mayo Clinic Laboratories utilizes the POCone Infrared Spectrophotometer; performance characteristics for this instrument have not been established for persons under age 3. For patients 3 to 17 years, age, weight and height must be included in test request for appropriate result interpretation.

2. Breath test, stool antigen, histology with special staining for H pylori organisms, and/or culture are the gold standard tests for diagnosis of H pylori infection.

3. According to the 2007 American College of Gastroenterologists guidelines and Talley* et al, serology should be avoided or positive results should be confirmed with a test that identifies an active infection such as the urea breath test or stool antigen test. Serology is no longer performed at Mayo Clinic laboratories as of February 2016.

4. Confirmation of eradication testing should not be ordered until 2 to 4 weeks after cessation of treatment. Proton pump inhibitors and antisecretory drugs should be discontinued for at least 1 week prior to assessment of H pylori eradication.

5. Culture is not routinely used for initial diagnosis of H pylori infection in the Mayo Clinic practice, but is required for antibiotic susceptibility testing if physicians suspect antibiotic resistance in patients who have previously failed therapy.