

Non-Invasive Helicobacter Pylori Testing

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Definition

Helicobacter pylori (*H. pylori*) — gram-negative rod bacteria found in adults and children; associated with chronic active/persistent gastritis, peptic ulcer disease, gastric cancer and possibly gastric lymphoma.

Non-invasive Testing Modalities (those that do not require endoscopy)

Urea breath testing (UBT)	Identifies the presence of <i>H. pylori</i> infection by way of the organism's urease activity. In the presence of <i>H. pylori</i> , the ingestion of urea, labeled with either the nonradioactive isotope 13C or the radioactive isotope 14C, results in production of labeled CO2, which can be quantitated in expired breath
Serology (antibody)	Laboratory-based using ELISA technology to detect immunoglobulin G (IgG) antibodies. (See <u>Limitations/Exclusions</u>)
Fecal antigen	Detects the presence of <i>H. pylori</i> antigen in stool by enzyme immunoassay (Lab or office-based [rapid])

Guideline

Members are eligible for coverage of non-invasive *H. pylori* testing for both the initial work-up (to confirm suspicion of infection), as well as the post-treatment follow up (to confirm eradication of infection).

The UBT (¹³C or ¹⁴C) and fecal antigen (HpSA®) tests are considered medically necessary for members who are < 55 years of age without alarm features (bleeding, anemia, early satiety, unexplained weight loss, progressive dysphagia, odynophagia, recurrent vomiting, family history of gastrointestinal cancer, previous esophagogastric malignancy) when any of the following are applicable (list not all-inclusive):

- 1. Active gastric/duodenal ulcer disease (regardless of nonsteroidal inflammatory [NSAID] medication use)
- 2. History of complicated or uncomplicated peptic ulcer disease (not previously treated for *H. pylori*)
- 3. Presence of low grade gastric mucosa-associated lymphoid tissue (MALT)
- 4. Post endoscopic resection of early gastric cancer
- 5. Uninvestigated dyspepsia (depending upon H. pylori prevalence)¹

Post-treatment confirmation testing for H. pylori eradication is considered medically necessary

Limitations/Exclusions

- 1. Serological antibody testing (CPT 86677) does not test for active *H. pylori* infection and is therefore not considered medically necessary for diagnosis or post treatment follow up.
- 2. Concurrent UBT-HpSA® testing is redundant and therefore not considered medically necessary.
- 3. Confirmation testing to insure infection-eradication is not considered medically necessary when performed < 4 four weeks post treatment and after PPI therapy has been withheld for 1–2 weeks.
- 4. H. pylori testing is not considered medically necessary for any of the following:
 - a. Screening without intent to treat infection
 - b. Member to undergo endoscopy
- 5. Genotyping to determine cytochrome p450 (CYP2C19) genetic polymorphisms is not considered medically necessary for *H. pylori* management, as there is insufficient evidence to permit the conclusion that pharmacogenomics-based treatment improves eradication rates.

Revision History

Feb. 12, 2021	Added "list not all-inclusive" to indications deemed medically necessary to test for H pylori, and added "complicated or uncomplicated" to history of peptic ulcer disease
	Removed prerequisites for post-treatment confirmation testing for H. pylori eradication
	Amended "Confirmation testing to insure infection-eradication" in Limitations/Exclusions to communicate that the testing is not medically necessary after PPI therapy has been withheld for 1–2 weeks
	Removed "New onset, uncomplicated dyspeptic symptoms" from Limitations/Exclusions, as it already clearly communicated within the policy

Applicable Procedure Codes

78267	Urea breath test, C-14 (isotopic); acquisition for analysis
78268	Urea breath test, C-14 (isotopic); analysis
83009	Helicobacter pylori, blood test analysis for urease activity, non-radioactive isotope (eg, C-13)
83013	Helicobacter pylori; breath test analysis for urease activity, non-radioactive isotope (eg, C-13)
83014	Helicobacter pylori; drug administration
87338	Infectious agent antigen detection by immunoassay technique, (eg, enzyme immunoassay [EIA], enzyme-linked immunosorbent assay [ELISA], immunochemiluminometric assay [IMCA]) qualitative or semiquantitative, multiple-step method; Helicobacter pylori, stool

¹ The American College of Gastroenterology (ACG) endorses the test-and-treat strategy for *H. pylori* as a proven management strategy for persons with uninvestigated dyspepsia less than 55 years of age (without "alarm features"). Invasive testing through endoscopy is recommended for persons with alarm features or those 55 or over.

87339	Infectious agent antigen detection by immunoassay technique, (eg, enzyme immunoassay [EIA], enzyme-linked immunosorbent assay [ELISA], immunochemiluminometric assay [IMCA]) qualitative or
	semiquantitative, multiple-step method; Helicobacter pylori

Applicable ICD-10 Diagnosis Codes

Malignant neoplasm of cardia Malignant neoplasm of fundus of stomach Malignant neoplasm of body of stomach Malignant neoplasm of pyloric antrum Malignant neoplasm of pylorus	
Malignant neoplasm of fundus of stomach Malignant neoplasm of body of stomach Malignant neoplasm of pyloric antrum Malignant neoplasm of pylorus	
Malignant neoplasm of body of stomach Malignant neoplasm of pyloric antrum Malignant neoplasm of pylorus	
C16.4 Malignant neoplasm of pylorus	
C16.5 Malignant neoplasm of lesser curvature of stomach, unspecified	
C16.6 Malignant neoplasm of greater curvature of stomach, unspecified	
C16.8 Malignant neoplasm of overlapping sites of stomach	
C16.9 Malignant neoplasm of stomach, unspecified	
C83.83 Other non-follicular lymphoma, intra-abdominal lymph nodes	
C83.86 Other non-follicular lymphoma, intrapelvic lymph nodes	
C83.87 Other non-follicular lymphoma, spleen	
C83.88 Other non-follicular lymphoma, lymph nodes of multiple sites	
C83.89 Other non-follicular lymphoma, extranodal and solid organ sites	
D00.2 Carcinoma in situ of stomach	
D13.1 Benign neoplasm of stomach	
K25.0 Acute gastric ulcer with hemorrhage	
K25.1 Acute gastric ulcer with perforation	
Acute gastric ulcer with both hemorrhage and perforation	
Acute gastric ulcer without hemorrhage or perforation	
Chronic or unspecified gastric ulcer with hemorrhage	
Chronic or unspecified gastric ulcer with perforation	
Chronic or unspecified gastric ulcer with both hemorrhage and perforation	
Chronic gastric ulcer without hemorrhage or perforation	
Gastric ulcer, unspecified as acute or chronic, without hemorrhage or perforation	
K26.0 Acute duodenal ulcer with hemorrhage	
K26.1 Acute duodenal ulcer with perforation	
Acute duodenal ulcer with both hemorrhage and perforation	
K26.3 Acute duodenal ulcer without hemorrhage or perforation	
Chronic or unspecified duodenal ulcer with hemorrhage	
Chronic or unspecified duodenal ulcer with perforation	
Chronic or unspecified duodenal ulcer with both hemorrhage and perforation	
Chronic duodenal ulcer without hemorrhage or perforation	
Duodenal ulcer, unspecified as acute or chronic, without hemorrhage or perforation	
Acute peptic ulcer, site unspecified, with hemorrhage	
Acute peptic ulcer, site unspecified, with perforation	
Acute peptic ulcer, site unspecified, with both hemorrhage and perforation	
Acute peptic ulcer, site unspecified, without hemorrhage or perforation	
Chronic or unspecified peptic ulcer, site unspecified, with hemorrhage	
C27.5 Chronic or unspecified peptic ulcer, site unspecified, with perforation	
C27.6 Chronic or unspecified peptic ulcer, site unspecified, with both hemorrhage and perforation	

K27.7	Chronic peptic ulcer, site unspecified, without hemorrhage or perforation
K27.9	Peptic ulcer, site unspecified, unspecified as acute or chronic, without hemorrhage or perforation
K28.0	Acute gastrojejunal ulcer with hemorrhage
K28.1	Acute gastrojejunal ulcer with perforation
K28.2	Acute gastrojejunal ulcer with both hemorrhage and perforation
K28.3	Acute gastrojejunal ulcer without hemorrhage or perforation
K28.4	Chronic or unspecified gastrojejunal ulcer with hemorrhage
K28.5	Chronic or unspecified gastrojejunal ulcer with perforation
K28.6	Chronic or unspecified gastrojejunal ulcer with both hemorrhage and perforation
K28.7	Chronic gastrojejunal ulcer without hemorrhage or perforation
K28.9	Gastrojejunal ulcer, unspecified as acute or chronic, without hemorrhage or perforation
K29.21	Alcoholic gastritis with bleeding
K29.30	Chronic superficial gastritis without bleeding
K29.31	Chronic superficial gastritis with bleeding
K29.40	Chronic atrophic gastritis without bleeding
K29.41	Chronic atrophic gastritis with bleeding
K29.50	Unspecified chronic gastritis without bleeding
K29.51	Unspecified chronic gastritis with bleeding
K29.60	Other gastritis without bleeding
K29.61	Other gastritis with bleeding
K29.70	Gastritis, unspecified, without bleeding
K29.71	Gastritis, unspecified, with bleeding
K29.90	Gastroduodenitis, unspecified, without bleeding
K29.91	Gastroduodenitis, unspecified, with bleeding
K30	Functional dyspepsia

References

American College of Gastroenterology. Guideline on the Management of Helicobacter pylori Infection. Jan. 2017. https://journals.lww.com/ajg/Fulltext/2017/02000/ACG_Clinical_Guideline_Treatment_of_Helicobacter.12.aspx. Accessed November 16, 2023.

Raman G, Trikalinos TA, Zintzaras E, et al. Reviews of selected pharmacogenetic tests for non-cancer and cancer condtions. Technology Assessment Report. Prepared by the Tufts Evidence-based Practice Center for the Agency for Healthcare Research and Quality (AHRQ). Contract No. 290-02-0022. Rockville, MD: AHRQ; November 12, 2008. http://www.cms.gov/Medicare/Coverage/DeterminationProcess/downloads/id61TA.pdf. Accessed November 16, 2023.

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