



CLINICAL GUIDELINES

Esophagogastroduodenoscopy (EGD)

Version 1.0

Effective June 1, 2021



eviCore healthcare Clinical Decision Support Tool Diagnostic Strategies: This tool addresses common symptoms and symptom complexes. Imaging requests for individuals with atypical symptoms or clinical presentations that are not specifically addressed will require physician review. Consultation with the referring physician, specialist and/or individual's Primary Care Physician (PCP) may provide additional insight.

CPT® (Current Procedural Terminology) is a registered trademark of the American Medical Association (AMA). CPT® five digit codes, nomenclature and other data are copyright 2019 American Medical Association. All Rights Reserved. No fee schedules, basic units, relative values or related listings are included in the CPT® book. AMA does not directly or indirectly practice medicine or dispense medical services. AMA assumes no liability for the data contained herein or not contained herein.

EGD-1: Indications for EGD

EGD-1: Indications for EGD	4
EGD-2: Non-indications for EGD	16

EGD-1: Indications for EGD

EGD-1.1: Dyspepsia/Upper Abdominal Symptoms	4
EGD-1.2: GERD (Gastro-esophageal reflux disease)	5
EGD-1.3: Barrett's Esophagus	6
EGD-1.4: Gastric Ulcer	7
EGD-1.5: Duodenal Ulcer	8
EGD-1.6: Gastric Intestinal Metaplasia (GIM)	8
EGD-1.7: General Indications	9
EGD-1.8: Gastric Polyp Treatment and Follow-up	11
EGD-1.9: Atrophic Gastritis	11
EGD-1.10: Pernicious anemia	11
EGD-1.11: GIST (Gastrointestinal Stromal Tumors)	11
EGD-1.12: Gastric Neuroendocrine Neoplasms	11
EGD-1.13: Gastric Marginal Zone Lymphoma (MALT-type)	11
EGD-1.14: Bariatric Surgery	12
EGD-1.15: Known Malignancies	12
EGD-1.16: Genetic Syndromes	13

EGD-1: Indications for EGD

EGD-1.1: Dyspepsia/Upper Abdominal Symptoms

- New-onset symptoms in individuals ≥ 60 years of age.
- Individuals < 60 years of age without red flag symptoms
 - ◆ EGD if failure of an initial “test and treat” approach for *H. pylori* or a trial of empiric therapy for 4 weeks with a proton pump inhibitor (PPI)*
 - See Background and Supporting Information: Dyspepsia
- Any age with presence of ANY of the following red flag symptoms associated with dyspeptic or upper abdominal symptoms:
 - ◆ Family history of any of the following UGI malignancies in a first-degree relative:
 - Esophageal
 - Gastric
 - Duodenal
 - ◆ Documentation of unintended weight loss $> 5\%$ within the past 6-12 months
 - ◆ Documentation of anorexia
 - ◆ GI bleeding presumed to be UGI in origin by one of the following:
 - History and/or physical examination (e.g. black stool, hematemesis)
 - Laboratory data (e.g. elevated BUN associated with GI blood loss, positive fecal occult blood)
 - ◆ Iron-deficiency anemia presumed to be UGI in origin, as manifested by low hematocrit or hemoglobin AND one of the following:
 - Low serum iron
 - Low serum ferritin
 - Elevated serum iron binding capacity
 - ◆ Documentation of dysphagia
 - ◆ Odynophagia characterized by chest pain on swallowing
 - ◆ Persistent vomiting ≥ 7 days
 - ◆ Abnormal imaging study suggesting organic disease in one of the following:
 - Esophagus
 - Stomach
 - Duodenum
 - See also **EDG-2: Non-indications**
 - ◆ Clinical suspicion of malignancy as evidenced by:
 - Abdominal pain with associated weight loss
 - GI bleeding
 - Anorexia
 - Cachexia
 - ◆ A palpable intra-abdominal mass or lymphadenopathy noted on physical examination
- Epigastric pain suggesting pancreatic or biliary source should generally undergo cross-sectional imaging prior to EGD.
 - ◆ E.g. pain radiating to the back, elevated liver enzymes, jaundice, etc.).

EGD-1.2: GERD (Gastro-esophageal reflux disease)

- ANY of the following symptoms suggestive of complicated reflux disease:
 - ◆ Documentation of dysphagia
 - ◆ Odynophagia characterized by chest pain on swallowing
 - ◆ Documentation of unintentional weight loss > 5% within the past 6-12 months
 - ◆ Hematemesis
 - ◆ GI bleeding or presumed to be UGI in origin by one of the following:
 - History and/or physical examination (e.g. black stool, hematemesis)
 - Laboratory data (e.g. elevated BUN associated with GI blood loss, positive fecal occult blood)
 - ◆ Iron-deficiency anemia presumed to be UGI in origin, as manifested by low hematocrit or hemoglobin AND one of the following:
 - Low serum iron
 - Low serum ferritin
 - Elevated serum iron binding capacity
 - ◆ Multiple risk factors for Barrett's esophagus (see section **EGD-1.3: Barrett's esophagus**)
 - ◆ Failure to respond to appropriate anti-secretory medical therapy
 - Physician-directed AND
 - At least one PPI* daily for a period of 8 weeks OR
 - Twice daily PPI* for a period of 4 weeks
 - ◆ Finding of an UGI mass, stricture, or ulcer on imaging studies (CT, MRI, US)
 - See also **EGD-2: Non-Indications for EGD, duodenal ulcer**
 - ◆ Persistent vomiting (≥ 7 days)
 - ◆ Evaluation of individuals who are PPI-dependent* and being considered for endoscopic or surgical anti-reflux procedures (e.g. Nissen fundoplication)
 - ◆ Evaluation of individuals with recurrent symptoms after endoscopic or surgical anti-reflux procedures
 - ◆ Placement of wireless pH monitoring
 - ◆ Repeat EGD in individuals found to have erosive esophagitis (Los Angeles Classification B, C, or D) after an 8 - 12 week course of PPI* therapy to exclude Barrett's esophagus or dysplasia
 - ◆ Non-cardiac chest pain (cardiac etiology has been ruled out – see: **Background and Supporting Information: GERD**), after a 4 week trial of twice daily PPI* therapy
 - An appropriate cardiac workup should include:
 - Recent (within 60 days) ECG, Chest x-ray or ECHO/US, and appropriate laboratory studies after symptoms started or worsened OR
 - Referral from cardiologist for GI workup.

- ◆ Evaluation of extra-esophageal symptoms of GERD (including cough, asthma, or laryngitis):
 - If accompanied by typical GERD symptoms (heartburn or regurgitation), then follow **EGD-1.2: GERD** OR
 - If not accompanied by typical GERD symptoms, EGD after failure of appropriate therapy of non-GERD symptoms (as defined above) AND appropriate ENT, pulmonary, or allergy evaluation fails to find cause of symptoms.

EGD-1.3: Barrett's Esophagus

- Screening for Barrett's Esophagus
 - ◆ Individuals with a first-degree relative with Barrett's esophagus or esophageal adenocarcinoma
 - ◆ Individual with chronic GERD symptoms (>5 years, and/or frequent (weekly or more) symptoms, AND at least 3 of the following risk factors:
 - Age ≥ 50 years
 - Caucasian race
 - Male sex
 - Central adiposity:
 - Males – waist > 102 cm. or 40 in., or waist-hip ratio of > 0.9
 - Females – waist > 88 cm or 34.5 in., or waist-hip ratio of > 0.8
 - History of smoking
 - ◆ If initial endoscopy suggests Barrett's Esophagus (defined as an extension of salmon-colored mucosa into the tubular esophagus ≥ 1cm) and biopsy is negative for intestinal metaplasia:
 - Endoscopy can be repeated in 1-2 years to rule out Barrett's Esophagus
 - See **Background and Supporting Information: Barrett's Esophagus**
 - ◆ If initial endoscopy is negative for Barrett's Esophagus, repeating endoscopy to evaluate for the presence of Barrett's Esophagus is NOT indicated.
- Surveillance for Barrett's Esophagus
 - ◆ Initial pathology findings suggestive of, or indefinite for, dysplasia of any grade should be confirmed by a second pathologist. Preferably, at least one of the pathologists should have specialized expertise in gastrointestinal pathology. Subsequent treatment and follow-up requests do not require review by two pathologists.
 - ◆ If no dysplasia on initial screening EGD:
 - Repeat examinations in 3-5 year intervals
 - See **Background and Supporting Information: Barrett's Esophagus**
 - ◆ If pathology is indefinite for dysplasia:
 - Repeat EGD in 3-6 months
 - ◆ If indefinite dysplasia persists:
 - Repeat EGD every 12 months

- ◆ If pathology shows low-grade dysplasia:
 - Repeat endoscopy in 8-12 weeks under maximum acid suppression (PPI twice daily*)
 - If LGD persists, and endoscopic surveillance is chosen rather than eradication therapy, surveillance EGD can be performed every 6 months times two, then annually, unless there is reversion to nondysplastic Barrett's
- ◆ If pathology shows high-grade dysplasia:
 - Endoscopic therapy
 - NOTE: Active therapy with the intention of endoscopic ablation is at the discretion of the endoscopist
- Post-Ablative Therapy for Barrett's Esophagus (following complete eradication of Barrett's epithelium, defined as 2 consecutive negative EGD's)
 - ◆ If treated for high-grade dysplasia or intramucosal adenocarcinoma:
 - EGD every 3 months for 1 year, then every 6 months for 1 year, then annually
 - ◆ If treated for low-grade dysplasia:
 - If complete eradication is achieved, an initial post-eradication EGD can be performed at 3-6 months. Surveillance by EGD is then continued every year for 2 years, and then every 3 years thereafter
 - If complete eradication is not achieved, then surveillance EGD is every 6 months for 1 year after the last endoscopy, then annually for 2 years, then every 3 years thereafter
 - ◆ If recurrence of metaplasia or dysplasia is discovered:
 - Refer to pre-treatment guidelines

EGD-1.4: Gastric Ulcer

- Surveillance EGD is indicated for ANY of the following:
 - ◆ In individuals whose gastric ulcer appears endoscopically suspicious for malignancy even if biopsies are benign, after 8-12 weeks of treatment (PPI* and/or H. pylori treatment)
 - ◆ In individuals who remain symptomatic despite an appropriate course of therapy (PPI* and/or H. pylori treatment) to rule out refractory peptic ulceration, non-peptic benign etiologies, and occult malignancy
 - ◆ In individuals with gastric ulcer who did not undergo biopsy at the index endoscopy for any reason (e.g., active bleeding, coagulopathy, etc.)
 - ◆ In individuals diagnosed with gastric ulcer via radiologic imaging
 - ◆ In individuals with giant ulcers (> 3cm) to document healing
 - ◆ In individuals with refractory ulcers (fail to heal despite 8-12 weeks in therapy). Surveillance EGD can be continued until healing is documented.
 - See **Background and Supporting Information: Gastric Ulcer**

EGD-1.5: Duodenal Ulcer

- Surveillance EGD can be considered for ANY of the following:
 - ◆ In individuals with duodenal ulceration who experience persistent symptoms despite an appropriate course of therapy, specifically to rule out refractory peptic ulcers and ulcers with non-peptic etiologies
 - Symptoms include: dyspepsia, epigastric pain (sometimes with radiation to the back or to the right or left upper quadrants, nausea and/or vomiting, early satiety, belching, fullness)
 - ◆ Giant duodenal ulceration (> 2 cm) to document healing
 - ◆ Refractory ulcers: Surveillance EGD until healing is documented
 - See **Background and Supporting Information: Duodenal Ulcer**

EGD-1.6: Gastric Intestinal Metaplasia (GIM)

- Dysplasia is detected
 - ◆ GIM with high-grade dysplasia
 - EGD can be repeated immediately, and then every 6 months
 - ◆ GIM with low-grade dysplasia
 - EGD every 12 months
- Absence of dysplasia
 - ◆ EGD at one year for risk stratification
 - For high-risk individuals (Hispanic, Asian, African, or North American Indigenous heritage/descent/ancestry; first-degree relative with gastric cancer) OR
 - Documented presence of high-risk stigmata (visually detected abnormalities such as nodularity) OR
 - Documented concern regarding the completeness of the baseline endoscopy (e.g. biopsies from only one region of the stomach)
 - ◆ EGD every 3-5 years from the baseline or after the above risk-stratification for:
 - Incomplete metaplasia (at least partial colonic metaplasia as opposed to complete small intestinal metaplasia)
 - High-risk individuals as indicated above
 - Extensive vs. limited metaplasia (involving the gastric body plus either antrum and/or incisura)
 - ◆ No further EGD for the surveillance of metaplasia:
 - If not identified by any one of the above-noted criteria (e.g. not a high-risk individual, complete small intestinal metaplasia, limited extent, no dysplasia)

EGD-1.7: General Indications

- Evaluation of documented dysphagia
- Evaluation of odynophagia characterized by chest pain on swallowing
- Persistent or cyclic vomiting of unknown cause ≥7 days
- GI bleeding presumed to be UGI in origin by one of the following:
 - ◆ History and/or physical examination (e.g. black stool, hematemesis)
 - ◆ Laboratory data (e.g. elevated BUN associated with GI blood loss, positive fecal occult blood)
- Iron-deficiency anemia presumed to be UGI in origin, as manifested by low hematocrit or hemoglobin AND one of the following:
 - ◆ Low serum iron
 - ◆ Low serum ferritin
 - ◆ Elevated serum iron binding capacity
- If colonoscopy is planned for the evaluation of iron-deficiency anemia, an EGD can be performed, if requested, at the same time.
- To assess acute injury after caustic ingestion
 - ◆ Examples include: strong acids (sulfuric, hydrochloric, nitric), alkalines (lye, sodium hydroxide, oven cleaner, drain cleaner, disc batteries, ammonia, bleach).
- Screening for esophageal cancer after distant caustic ingestion:
 - ◆ EGD every 2 years beginning 10 years after caustic ingestion insult
- Other diseases in which the presence of UGI pathology would modify other planned management, such as persons with a history of ulcer disease scheduled for organ transplantation, anticipation of long-term anticoagulation, or NSAID therapy. These cases should be forwarded for Medical Director review.
- Persons with cirrhosis/portal hypertension to assess or treat esophageal varices
- To assess diarrhea in individuals suspected of having small bowel disease (e.g., celiac)
 - ◆ EGD with small bowel biopsy indicated in individuals with chronic diarrhea or suspected malabsorption after inconclusive evaluation including colonoscopy with biopsy, or in individuals with positive celiac serology
 - EXCEPTION: HIV and Graft-vs.-Host Disease: in the absence of a diagnosis on flexible sigmoidoscopy, an EGD can be performed
 - ◆ EGD with small bowel biopsy can be repeated in 2 years to assess for mucosal healing in celiac disease, or with recurrent symptoms despite 6 months of a gluten-free diet
- Removal of foreign bodies

- Removal or endoscopic treatment of known lesions
 - ◆ Known polyp(s) which have not yet been removed
 - ◆ Bleeding lesions (such as known AVM, ulcers, or tumors requiring ablation, cautery, or other treatment)
 - ◆ For conditions in which specific guidelines exist, such as Barrett's esophagus, follow the appropriate guideline for that condition.
- Placement of a feeding or drainage tube
 - ◆ Examples include: Peroral, percutaneous endoscopic gastrostomy, percutaneous endoscopic jejunostomy
- Dilation and stenting of stenotic lesions
 - ◆ Examples include: use of transendoscopic balloon dilators, dilation systems using guidewires
- Management of achalasia
 - ◆ Examples include: endoscopic dilation, Botox® injection
- Diagnosis and management of eosinophilic esophagitis
 - ◆ See **EGD-1.1 Dyspepsia** and **EGD-1.2 GERD** for initial EGD indications
- Intra-operative evaluation of anatomic reconstructions
 - ◆ Examples include: Evaluation of anastomotic leak and patency, fundoplication formation, pouch configuration during bariatric surgery
- For confirmation and specific histologic diagnosis of radiologically demonstrated lesions involving the UGI tract
 - ◆ Examples include: suspected neoplastic lesions of the esophagus, stomach, or duodenum, gastric or esophageal ulceration, upper tract stricture, or obstruction
 - See **EGD-2: Non-indications** for exceptions
- For sampling of tissue or fluid when clinically appropriate
 - ◆ Examples include: biopsy of small bowel for suspected celiac disease when appropriate, collection of gastric or duodenal fluid for analysis. These cases should be forwarded for Medical Director review.
 - ◆ For specific indications (Like Barrett's esophagus, diarrhea, etc.) for which guidelines exist, follow the specific guideline for that condition.
- Evaluation and treatment of gastric outlet obstruction
 - ◆ Generally characterized by epigastric pain and vomiting after meals.
 - ◆ Signs and symptoms may include nausea, vomiting, epigastric pain, weight loss, abdominal distention, and early satiety.
- Management of operative complications
 - ◆ Examples include: dilation of anastomotic strictures, stenting of anastomotic disruption, fistula, or leak

EGD-1.8: Gastric Polyp Treatment and Follow-up

- Adenomatous gastric polyps
 - ◆ Endoscopy 1 year after resection, followed by surveillance EGD every 3-5 years
- Hyperplastic gastric polyps resected, without dysplasia
 - ◆ Repeat EGD in 1 year
 - If polyp persists or dysplasia is present, and it is resected, repeat EGD in 1 year
 - ◆ Hyperplastic polyps without dysplasia generally do not require additional surveillance. However, in the course of endoscopy for hyperplastic gastric polyps, the standard of care should include mucosal sampling.
 - Additional follow-up for hyperplastic polyps without dysplasia
 - Mucosal sampling detects intestinal metaplasia
 - Follow-up per **EGD-1.6: Gastric Intestinal Metaplasia**
 - Mucosal sampling detects gastric atrophy
 - Follow-up per OLGA score. See **EGD-1.9: Atrophic Gastritis**
- Hyperplastic polyps with dysplasia
 - ◆ Annual EGD if requested

EGD-1.9: Atrophic Gastritis

- OLGA (Operative Link on Gastritis Assessment) score 3 or 4
 - ◆ Endoscopic surveillance can be performed every 3 years
- OLGA score 3 or 4 AND first-degree relative with gastric cancer
 - ◆ Endoscopic surveillance can be performed yearly
- Autoimmune atrophic gastritis
 - ◆ EGD every 3 years

EGD-1.10: Pernicious anemia

- EGD should be performed within 6 months of the diagnosis of pernicious anemia with follow-up examinations only for the development of new symptoms

EGD-1.11: GIST (Gastrointestinal Stromal Tumors)

- Annual EUS/EGD surveillance of GISTs smaller than 2 cm if surgical resection is not performed, to determine progression of size or changes in echo features

EGD-1.12: Gastric Neuroendocrine Neoplasms

- After resection, can be re-evaluated every 6-12 months for the first 3 years, then annually

EGD-1.13: Gastric Marginal Zone Lymphoma (MALT-type)

- Follow-up after successful H. pylori treatment
 - ◆ Endoscopy up to every 3 months for the first 2 years and then up to every 6 months thereafter (optimal surveillance interval has not been defined)

EGD-1.14: Bariatric Surgery

- Pre-operative endoscopic evaluation of the bariatric surgery individual
- Post-operative endoscopic evaluation for the following symptoms:
 - ◆ Nausea or vomiting
 - ◆ Abdominal pain
 - ◆ Post-op GERD
 - ◆ Dumping Syndrome
 - ◆ Diarrhea and nutritional deficiencies
 - ◆ Endoscopic intervention for treatment of stenosis, removal of foreign body material, bezoars, management of fistulae and leaks
 - ◆ Bleeding or anemia
 - ◆ Failure to lose weight or to regain weight after an initial post-operative weight loss

EGD-1.15: Known Malignancies

- Known Esophageal Malignancy
 - ◆ Endoscopy as felt clinically indicated by the ordering provider for the management of complications, treatment, evaluation of ongoing or new symptoms, and surveillance for recurrence
- Known Gastric Malignancy
 - ◆ EGD as felt clinically indicated by the ordering provider for the endoscopic management of complications, ongoing or new symptoms, treatment, and surveillance for recurrence
- Known Duodenal or Small Bowel Malignancy
 - ◆ EGD as felt clinically indicated by the ordering provider for the management of complications, treatment, ongoing or new symptoms, and surveillance for recurrence

EGD-1.16: Genetic Syndromes

- Lynch Syndrome
 - ◆ For all mutations (MLH1/MSH2, MSH6/PMS2)
 - EGD beginning at age 30 years, every 2-3 years
- Juvenile Polyposis Syndrome
 - ◆ EGD at age 12 years. If polyps are present, repeat yearly. If no polyps, repeat every 2 years.
- Peutz-Jeghers Syndrome
 - ◆ EGD at age 8 years. If polyps present, can be repeated every 3 years. If no polyps, repeat at age 18 years, then every 3 years, or earlier if any symptoms occur.
- Hereditary Gastric Cancer (Hereditary Diffuse Gastric Cancer-HDGC Syndrome)
 - ◆ EGD beginning 10 years before the earliest cancer in the family, up to every 6 months.
- BMMRD (Biallelic Mismatch Repair Deficiency)
 - ◆ EGD annually, beginning at age 8 years
- Tylosis (Rare autosomal dominant disorder characterized by hyperkeratosis of the palms and feet, with lifetime risk of esophageal cancer of 40% in Americans)
 - ◆ Annual EGD beginning at age 30 years or at the onset of recognition of the disease
- Cowden Syndrome (PTEN Hamartoma Tumor Syndrome)
 - ◆ EGD beginning at age 15 years
 - ◆ Repeat surveillance every 2 years
 - ◆ If polyps present, follow-up EGD at the discretion of the endoscopist, depending on the number of polyps, as felt indicated.

- Classical Familial Polyposis (FAP)/Attenuated FAP
 - EGD Beginning at age 25 years (before 20 years of age if patient has undergone a colectomy prior to the age of 20 years)
 - See **Spigelman Stage** for follow-up imaging intervals
- ◆ MAP (MUTYH-Associated Polyposis)
 - EGD beginning at age 30 years
 - See **Spigelman Stage** for follow-up imaging intervals
- ◆ Spigelman Stage
 - Follow-up imaging depending on Spigelman Stage of duodenal polyposis as follows (using point system):

Polyps	1 Point	2 Points	3 Points
Number	≤4	5-20	>20
Size	0-≤4	5-10	>10
Histology	Tubular	Tubulovillous	Villous
Dysplasia	Mild	Moderate	Severe

Spigelman Stage	Total Points	Surveillance Interval
0	0	Every 4 years
I	≤ 4	Every 2-3 years
II	5-6	Every 1-3 years
III	7-8	Every 6-12 months
IV	9-12	Every 3-6 months (if surgery not chosen)

** Unless there is a documented history of allergy or intolerance to PPI use*

EGD-2: Non-Indications for EGD

EGD-2: Non-indications for EGD

16

EGD-2: Non-indications for EGD

- Symptoms that are considered functional in origin:
 - ◆ EGD may be done ONCE to rule out organic disease especially if symptoms are unresponsive to therapy, or recur that are different from the original symptoms
 - Follow guidelines for **EGD-1.1 Dyspepsia** or **EGD-1.2 GERD**, depending on the predominant symptom
- Metastatic adenocarcinoma of unknown primary site when the results will not alter management
- To evaluate radiologic findings for:
 - ◆ Asymptomatic or uncomplicated sliding hiatal hernia
 - ◆ Uncomplicated duodenal ulcer that has responded to therapy
 - ◆ Deformed duodenal bulb when symptoms are absent or respond to therapy
- Sequential or periodic EGD for surveillance of malignancy in individuals with:
 - ◆ Pernicious anemia (See above indication for **pernicious anemia**)
 - ◆ Fundic gland polyps
 - ◆ Previous gastric operations for benign disease
 - ◆ Surveillance of healed benign disease such as esophagitis and gastric or duodenal ulcer
- Endomicroscopy
 - ◆ At the current time, endomicroscopy is considered investigational and experimental

Background and Supporting Information

- Dyspepsia/Upper abdominal symptoms
 - ◆ Studies comparing “test and treat” approach with endoscopy have reported no difference in symptom control, with most studies also showing increased cost with an “initial endoscopy” approach (ASGE). A potential advantage of negative endoscopy in the evaluation of dyspeptic individuals is a reduction in anxiety and an increase in individual satisfaction, yet there is little evidence to suggest significant improvement with outcomes by this approach (ASGE)
 - ◆ There is a significant difference in guidelines proffered by the ACG and ASGE. ACG guidelines (2017) establish the age for endoscopy with new symptoms at ≥ 60 years, rather than 50 years for the ASGE, and in fact, do not recommend endoscopy even in the presence of red flag symptoms for most individuals < 60 years of age because of a low positive predictive value for detecting UGI malignancy in this age group
- Barrett’s Esophagus
 - ◆ If initial endoscopy is negative for Barrett’s Esophagus, repeating endoscopy to evaluate for the presence of Barrett’s Esophagus is NOT indicated
 - ◆ If initial examination shows BE but no dysplasia, follow-up endoscopy in one year is NOT indicated. Follow prescribed guidelines
- GERD
 - ◆ If the individual’s history is consistent with typical or uncomplicated GERD, an initial trial of empiric medical therapy is appropriate before consideration of endoscopy in most individuals
 - ◆ Endoscopy is not indicated for the evaluation of individuals with suspected extra-esophageal manifestations of GERD who present with symptoms such as choking, coughing, asthma, hoarseness, laryngitis, chronic sore throat, or dental erosions
 - ◆ (ASGE) Given that the majority of these individuals will not have endoscopic evidence of erosive esophagitis, especially when taking empiric medical therapy for GERD, the routine use of EGD to evaluate extra-esophageal symptoms of GERD is NOT recommended
 - ◆ There is a paucity of outcomes research to suggest that early or even once-in-a-lifetime EGD has a favorable effect on the management, course, or health-related quality of life of individuals with typical symptoms of GERD without red flag symptoms (ASGE)
- Gastric Ulcer
 - ◆ The rationale for surveillance has been that some individuals with endoscopically benign-appearing gastric ulcerations may eventually be shown to have gastric cancer. However, the efficacy of surveillance is unclear. An analysis of the Clinical Outcomes Research Initiative database found that approximately 25% of individuals diagnosed with gastric ulceration undergo repeat endoscopy despite the fact that multiple studies have found limited yield in identifying malignancy with surveillance endoscopy (ASGE)
- Duodenal Ulcer
 - ◆ More than 90% of duodenal ulcers heal with 4 weeks of PPI therapy.

References

1. Moayyedi PM, Lacy BE, Andrews CN, Enns RA, Howden CW, Vakil N. ACG and CAG clinical guideline: Management of dyspepsia. *Am J Gastroenterol.* 2017;112(7):988-1013. doi:10.1038/ajg.2017.154
2. Shaheen NJ, Falk GW, Iyer PG, Gerson LB. ACG clinical guideline: Diagnosis and management of barrett's esophagus. *Am J Gastroenterol.* 2015;111(1):30-50. doi:10.1038/ajg.2015.322
3. Evans JA, Chandrasekhara V, Chathadi KV, et al. The role of endoscopy in the management of premalignant and malignant conditions of the stomach. *Gastrointestinal Endoscopy.* 2015;82(1):1-8. doi:10.1016/j.gie.2015.03.1967
4. Dinis-Ribeiro M, Areia M, de Vries AC, et al. Management of precancerous conditions and lesions in the stomach (MAPS): Guideline from the European Society of Gastrointestinal Endoscopy (ESGE), European Helicobacter Study Group (EHSg), European Society of Pathology (ESP), and the Sociedade Portuguesa de Endoscopia Digestiva (SPED). *Endoscopy.* 2012 Jan;44(1):74-94. doi: 10.1055/s-0031-1291491.
5. Banerjee S, Cash BD, Dominitz JA, et al. The role of endoscopy in the management of patients with peptic ulcer disease. *Gastrointest Endosc* 2010; 71(4): 663-668. doi:10.1016/j.gie.2009.11.026
6. Shaukat A, Wang A, Acosta RD, et al. The role of endoscopy in dyspepsia. *Gastrointest Endosc.* 2015; 82(2):227-232 doi:10.1016/j.gie/2015.04.003
7. Wani S, Qumseya B, Sultan S, et al. Endoscopic eradication therapy for patients with Barrett's esophagus-associated dysplasia and intramucosal cancer. *Gastrointestinal Endoscopy.* 2018;87(4). doi:10.1016/j.gie.2017.10.011
8. Delaney B, Moayyedi P, Deeks J, et al. The management of dyspepsia: a systematic review. *Health Technology Assessment.* 2000;4(39). doi:10.3310/hta4390
9. Muthusamy VR, Lightdale JR, Acosta RD, et al. The role of endoscopy in the management of GERD. *Gastrointestinal Endoscopy.* 2015;81(6):1305-1310. doi:10.1016/j.gie.2015.02.021
10. Evans JA, Muthusamy VR, Acosta RD, et al. The role of endoscopy in the bariatric surgery patient. *Gastrointestinal Endoscopy.* 2015;81(5):1063-1072. doi:10.1016/j.gie.2014.09.044
11. Pasha SF, Acosta RD, Chandrasekhara V, et al. The role of endoscopy in the evaluation and management of dysphagia. *Gastrointestinal Endoscopy.* 2014;79(2):191-201. doi:10.1016/j.gie.2013.07.042
12. Evans JA, Early DS, Chandrasekhara V, et al. The role of endoscopy in the assessment and treatment of esophageal cancer. *Gastrointestinal Endoscopy.* 2013;77(3) doi:10.1016/j.gie.2012.10.001
13. Shen B, Khan K, Ikenberry SO, et al. The role of endoscopy in the management of patients with diarrhea. *Gastrointestinal Endoscopy.* 2010;71(6):887-892. doi: <https://doi.org/10.1016/j.gie.2009.11.025>
14. American Gastroenterological Association Medical Position Statement on the Management of Barrett's Esophagus. *Gastroenterology.* 2011;140(3):1084-1091. doi:10.1053/j.gastro.2011.01.030
15. Kahrilas PJ, Shaheen NJ, Vaezi MF. American Gastroenterological Association Medical Position Statement on the Management of Gastroesophageal Reflux Disease. *Gastroenterology.* 2008;135(4). doi:10.1053/j.gastro.2008.08.045
16. Wani S, Rubenstein JH, Vieth M, Bergman J. Diagnosis and management of low-grade dysplasia in Barrett's esophagus: Expert review from the clinical practice updates committee of the American Gastroenterological Association. *Gastroenterology.* 2016;151(5):822-835. doi:10.1053/j.gastro.2016.09.040
17. Rubio-Tapia A, Hill ID, Kelly CP, Calderwood AH, Murray JA. ACG Clinical Guidelines: Diagnosis and Management of Celiac Disease. *The American Journal of Gastroenterology.* 2013;108(5):656-676. doi:10.1038/ajg.2013.79
18. Dellon ES, Gonsalves N, Hirano I, Furuta GT, Liacouras CA, Katzka DA. ACG Clinical Guideline: evidenced based approach to the diagnosis and management of esophageal eosinophilia and eosinophilic esophagitis (EoE). *The American Journal of Gastroenterology.* 2013;108(5):679-692. doi:10.1038/ajg.2013.71
19. Katz PO, Gerson LB, Vela MF. Guidelines for the diagnosis and management of gastroesophageal reflux disease. *The American Journal of Gastroenterology.* 2013;108(3):308-328. doi:10.1038/ajg.2012.444

20. Wani S, Rubenstein JH, Vieth M, Bergman J. Diagnosis and management of low-grade dysplasia in Barrett's esophagus: Expert review from the clinical practice updates committee of the American Gastroenterological Association. *Gastroenterology*. 2016;151(5):822-835. doi:10.1053/j.gastro.2016.09.040
21. Gisbert JP, Calvet X. Helicobacter Pylori "Test-and-Treat" Strategy for Management of Dyspepsia: A Comprehensive Review. *Clinical and Translational Gastroenterology*. 2013;4(3). doi:10.1038/ctg.2013.3
22. ASGE Standards of Practice Committee, Evans JA, Early DS, Fukami N, Ben-Menachem T et al. The role of endoscopy in Barrett's Esophagus and other premalignant conditions of the esophagus. *Gastrointest Endosc*. 2012;76:1087-1094.
23. Early DS, Ben-Menachem T, Decker GA, et al. Appropriate use of GI endoscopy. *Gastrointestinal Endoscopy*. 2012;75(6):1127-1131. doi:10.1016/j.gie.2012.01.011.
24. Syngal S, Brand RE, Church JM, Giardiello FM, Hampel HL, Burt RW. ACG Clinical Guideline: Genetic Testing and Management of Hereditary Gastrointestinal Cancer Syndromes. *The American Journal of Gastroenterology*. 2015;110(2):223-262. doi:10.1038/ajg.2014.435.
25. Giardiello FM, Allen JI, Axilbund JE, et al. Guidelines on Genetic Evaluation and Management of Lynch Syndrome: A Consensus Statement by the US Multi-Society Task Force on Colorectal Cancer. *The American Journal of Gastroenterology*. 2014;109(8):1159-1179. doi:10.1038/ajg.2014.186.
26. Rubenstein JH, Enns R, Heidelbaugh J, et al. American Gastroenterological Association Institute Guideline on the Diagnosis and Management of Lynch Syndrome. *Gastroenterology*. 2015;149(3):777-782. doi:10.1053/j.gastro.2015.07.036.
27. Durno C, Boland CR, Cohen S, et al. Recommendations on surveillance and management of Biallelic Mismatch Repair Deficiency (BMMRD) syndrome: A consensus statement by the US multi-society task force on colorectal cancer. *Gastroenterology*. 2017;152(6):1605-1614. doi:10.1053/j.gastro.2017.02.011.
28. Evans JA, Early DS, Fukami N, et al. The role of endoscopy in Barretts esophagus and other premalignant conditions of the esophagus. *Gastrointestinal Endoscopy*. 2012;76(6):1087-1094. doi:10.1016/j.gie.2012.08.004.
29. Rex DK, Boland R, Dominitz JA, Giardiello FM, Johnson DA, et al. Colorectal cancer screening: recommendations for physicians and patients from the U.S. multi-society task force on colorectal cancer. *Am J Gastroenterology*. 2017. doi: 10.1038/ajg.2017.174
30. Islam RS, Patel NC, Lam-Limlin D, Nguyen CC. Gastric polyps: A review of clinical, endoscopic, and histopathologic features and management decisions. *Gastroenterol Hepatol (NY)*. 2013;9(10):640-651.
31. Chauhan SS, Abu Dayyeh BK, Bhat YM, et al. Confocal laser endomicroscopy. *Gastrointestinal Endoscopy*. 2014;80(6):928-938. doi:10.1016/j.gie.2014.06.021.
32. ASGE Standards of Practice Committee, Pasha SF, Shergill A, Acosta RD, et al. The role of endoscopy in the patient with lower GI bleeding. *Gastrointest Endosc*. 2014;79(6):875-885. doi:10.1016/j.gie.2013.10.039.
33. ASGE Standards of Practice Committee, Qumseya B, Sultan S, Bain P, et. al. Guideline on screening and surveillance of Barrett's esophagus. *Gastrointest Endosc*. 2019;90(3):335-359. doi:10.1016/j.gie.2019.05.012.
34. Fitzgerald RC, di Pietro M, Ragunath K, et. al. British Society of Gastroenterology guidelines on the diagnosis and management of Barrett's oesophagus. *Gut*. 2013;63(1):7-42. doi: 10.1136/gutjnl-2013-305372.
35. Shaheen N, Weinberg D, Denberg T, Chou R, Amir Q, Shekelle P. Upper endoscopy for gastroesophageal reflux disease: best practice advice from the Clinical Guidelines Committee of the American College of Physicians. *Annals of internal medicine*. 2012;157:808-816. doi:10.7326/0003-4819-157-11-201212040-00008.
36. Fock KM, Talley N, Goh KL, et. al. Asia-Pacific consensus on the management of gastro-esophageal reflux disease: an update focusing in refractory reflux disease and Barrett's esophagus. *Gut*. 2016;65(9):1402-1415. doi:10.1136/gutjnl-2016-311715.
37. Harnik I. Gastroesophageal Reflux Disease. *Ann Intern Med*. 2015;163(1):ITC1. doi:10.7326/AITC201507070.
38. Steele D, Kondal KKB, Peter S. Evolving screening and surveillance techniques for Barrett's esophagus. *World J. Gastroenterol*. 2019;25(17):2045-2057. doi:10.3748/wjg.v25.i17.2045.

39. Gupta S, Li D, El Serag HB, et. al. AGA clinical practice guidelines on management of gastric intestinal metaplasia. *Gastroenterology*. 2019;158(3):693-702. doi:10.1053/j.gastro.2019.12.003.
40. Pimentel-Nunes P, Libânio D, Marcos-Pinto R, et al. Management of epithelial precancerous conditions and lesions in the stomach (MAPS II): European Society of Gastrointestinal Endoscopy (ESGE), European Helicobacter and Microbiota Study Group (EHMSG), European Society of Pathology (ESP), and Sociedade Portuguesa de Endoscopia Digestiva (SPED) guideline update 2019. *Endoscopy*. 2019;51:365-388. doi:10.1055/a-0859-1883.