Cigna Medical Coverage Policies – Gastrointestinal Endoscopic Procedure Esophagogastroduodenoscopy (EGD)

Effective April 1, 2024

Instructions for use

The following coverage policy applies to health benefit plans administered by Cigna. Coverage policies are intended to provide guidance in interpreting certain standard Cigna benefit plans and are used by medical directors and other health care professionals in making medical necessity and other coverage determinations. Please note the terms of a customer's particular benefit plan document may differ significantly from the standard benefit plans upon which these coverage policies are based. For example, a customer's benefit plan document may contain a specific exclusion related to a topic addressed in a coverage policy.

In the event of a conflict, a customer's benefit plan document always supersedes the information in the coverage policy. In the absence of federal or state coverage mandates, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of:

1. The terms of the applicable benefit plan document in effect on the date of service
2. Any applicable laws and regulations
3. Any relevant collateral source materials including coverage policies
4. The specific facts of the particular situation

Coverage policies relate exclusively to the administration of health benefit plans. Coverage policies are not recommendations for treatment and should never be used as treatment guidelines.

This evidence-based medical coverage policy has been developed by eviCore, Inc. Some information in this coverage policy may not apply to all benefit plans administered by Cigna. These guidelines include procedures eviCore does not review for Cigna. Please refer to the Cigna CPT code list for the current list of gastrointestinal procedures that eviCore reviews for Cigna.

Esophagogastroduodenoscopy (EGD)

General Guidelines (EGD-0)

- The cobranded Cigna-eviCore Gastrointestinal (GI) Endoscopy Program applies an evidence-based approach to evaluate the most appropriate care for each individual. This evaluation requires submission of medical records pertinent to the treatment and/or services being requested by the provider.
- If the medical records provided do not provide sufficiently detailed information to understand the individual's current clinical status, then the medical necessity for the request cannot be established and the request cannot be approved.
- Specific elements of an individual's medical records commonly required to establish medical necessity should include, but are not limited to:
  - recent virtual or in-person clinical evaluation which includes a detailed history and physical examination pertinent to the current request
  - laboratory studies
  - imaging studies
  - pathology reports
  - procedure reports
  - reports from other providers participating in treatment of the relevant condition
- Adequate clinical information must be submitted to eviCore in order to establish medical necessity for gastrointestinal endoscopy services. Pertinent clinical evaluation (within 60 days) including a recent detailed history and physical examination, and/or laboratory and prior imaging studies should be performed prior to considering endoscopy. Other meaningful contact (telehealth visit, telephone or video call, electronic mail or messaging) by an established individual can substitute for an in-person clinical evaluation.
- Cigna and eviCore reserve the right to change and update the Gastrointestinal Endoscopy guideline. The guidelines undergo a formal review at least annually. Cigna-eviCore guidelines are based upon major national and international association and society guidelines and criteria, peer reviewed literature, major treatises, as well as input from health plans, practicing academic and community-based physicians.
- This guideline is not intended to supersede or replace sound medical judgment, but instead, should facilitate the identification of the most appropriate treatment given the individual's clinical condition. This guideline is written to cover most gastrointestinal endoscopic indications. However, the guideline may not be applicable in certain clinical circumstances. Physician judgment may override the guideline. Clinical decisions, including treatment decisions, are the responsibility of the individual and his/her provider. Clinicians are expected to use independent medical judgment, which takes into account the clinical circumstances to determine individual management decisions.
- All time intervals in this guideline refer to upper endoscopy, unless otherwise stated.
- Requests for Open-Access Endoscopy must meet criteria according to these Guidelines.

- Endomicroscopy
  - At the current time, endomicroscopy is considered investigational and experimental
- EGD-included Procedures
  - All requests for an additional EGD are evaluated based on whether the request meets guideline criteria for a therapeutic EGD.
  - Endoscopic Ultrasound
    - An endoscopic ultrasound (EUS) is a specialized procedure using a scope with ultrasound to create images of the digestive tract lining or other organs, such as the liver or pancreas.
    - The coding for an EUS includes a diagnostic EGD[46]. The unbundling of EUS into separate codes for EUS and diagnostic EGD is not supported.
    - eviCore does not adjudicate EUS at this time.
  - Endoscopic retrograde cholangiopancreatography
    - Endoscopic retrograde cholangiopancreatography (ERCP) is a procedure to diagnose and treat problems in the liver, gallbladder, bile ducts, and pancreas combining x-ray and the use of an endoscope.
    - Performing ERCP does not automatically require a separate EGD service. Automatically billing separate codes for ERCP and diagnostic EGD is not supported. Requests for EGD to be performed at the same time as ERCP will be adjudicated based on whether the request meets guideline criteria for a separate EGD.
    - eviCore does not adjudicate ERCP at this time.
- New and Emerging Technologies
  - Requests related to new and emerging technologies will be considered to determine whether they meet eviCore's evidence-based guidelines.
    - If a specific CPT code does not exist for a new technology, the CPT code used in the request will be considered based on its typical procedure application.
  - Procedures which are inconsistent with established clinical standards or are requested for data collection and not used in direct clinical management are not supported.
- State and federal legislations may need to be considered in the review of gastrointestinal endoscopy requests.
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Dyspepsia/Upper Abdominal Symptoms (EGD-1.1)

The following are indications for EGD in individuals with dyspepsia or upper abdominal symptoms. Dyspepsia is defined by the American College of Gastroenterology (ACG) and Canadian Association of Gastroenterology (CAG) as predominant epigastric pain lasting at least one month and can be associated with any upper gastrointestinal symptoms such as epigastric fullness, nausea, vomiting, or heartburn.

- 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) taken daily*
- 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 upper gastrointestinal (UGI) malignancies in a first-degree relative:
    - Esophageal
    - Gastric
    - Duodenal
  - Documentation of unintended weight loss > 5% within the past 6-12 months
  - GI bleeding presumed to be UGI in origin by one of the following:
    - History and/or physical examination (e.g., black stool, hematemesis; not hemorrhoidal bleeding)
    - Laboratory data (e.g., elevated BUN associated with GI blood loss, positive fecal occult blood, FIT testing including Cologuard®)
  - 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 (≤ 45 ng/mL or < lab lower limit if higher than 45 ng/mL)
    - Elevated serum iron binding capacity
    - Low serum transferrin saturation
  - Documentation of dysphagia
  - Odynophagia characterized by chest pain on swallowing
  - Persistent or cyclic vomiting of unknown cause ≥ 7 days
  - Abnormal imaging study suggesting organic disease in one of the following:
    - Esophagus
    - Stomach
    - Duodenum
  - 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 (e.g. pain radiating to the back, elevated liver enzymes, jaundice, etc.) should undergo cross-sectional imaging prior to EGD.
  - EGD can be approved in this context once imaging studies rule out a pancreatic or biliary source of pain
- 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
- Belching, bloating, and/or abdominal distention alone is/are not an indication for EGD. See: **General and Therapeutic EGD (EGD-1.7)** for circumstances when EGD is indicated with these symptoms.

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

Background and Supporting Information

- Dyspepsia/Upper abdominal symptoms
  - "Test and treat" approach is a strategy for addressing dyspepsia in which H. pylori is investigated and treated if found. If dyspepsia is resolved with this approach, further diagnostics may not be necessary.
  - 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

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

This section refers to typical GERD quantified by symptoms of heartburn and/or regurgitation. Heartburn is defined by the ACG as “substernal burning sensation rising from the epigastrium up toward the neck”. Regurgitation is the “effortless return of gastric contents upward toward the mouth, often accompanied by an acid or bitter taste”.

Typical GERD

- EGD is indicated for typical GERD with the following:
  - Failure to respond to appropriate anti-secretory medical therapy with an 8-week trial of empiric PPIs once daily (or 4-week trial twice daily),
    OR
  - Return of symptoms after discontinuation of provider-directed, appropriate anti-secretory medical therapy with an 8 week trial of empiric PPIs once daily (or 4-week trial twice daily)
- EGD is indicated if any of the following accompany GERD symptoms
  - 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 presumed to be UGI in origin by one of the following:
    - History and/or physical examination (e.g., black stool, hematemesis; not hemorrhoidal bleeding)
    - Laboratory data (e.g., elevated BUN associated with GI blood loss, positive fecal occult blood, FIT testing including Cologuard®)
  - 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 (≤ 45 ng/mL or < lab lower limit if higher than 45 ng/mL)
    - Elevated serum iron binding capacity
    - Low serum transferrin saturation
  - Multiple risk factors for Barrett’s esophagus (see: **Barrett’s Esophagus (EGD-1.3)**)
  - Finding of an UGI mass, stricture, or ulcer on imaging studies (CT, MRI, US)
  - Persistent vomiting (≥ 7 days)

Chest Pain Attributed to Reflux (Non-cardiac Chest Pain)

- If accompanied by typical GERD symptoms, refer to typical GERD indications above
- If not accompanied by typical GERD symptoms, EGD is indicated when:
  - Cardiac disease has been ruled out by recent (within 60 days) ECG, chest x-ray, Coronary CTA, or ECHO/US, and appropriate laboratory studies performed after symptoms started or worsened OR
  - Referral from cardiologist for GI workup

Extra-Esophageal Reflux

- Extra-esophageal symptoms of GERD include symptoms of chronic cough, throat-clearing, hoarseness, globus sensation, asthma, and/or laryngitis
- For extra-esophageal reflux accompanied by typical GERD symptoms (heartburn, regurgitation), EGD is appropriate when:
  - There is failure to respond to an 8-12 week trial of PPI therapy twice daily
- For extra-esophageal reflux not accompanied by typical GERD symptoms, EGD is appropriate when:
  - Evaluation for other causes have been considered for individuals with laryngeal symptoms, chronic cough, and asthma with appropriate ENT, pulmonary, or allergy evaluation as indicated OR
  - There is failure to respond to an 8-12 week trial of PPI therapy twice daily

Additional Indications

- 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
- One-time 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
- 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

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

Background and Supporting Information

- GERD
  - Individual choice to defer a trial of physician-directed acid suppression therapy, in the absence of known drug intolerance or contraindication, is not of itself an indication to perform upper endoscopy
  - 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
    - See: **EGD-1.2** for specific instances in which evaluation of extra-esophageal symptoms with EGD is indicated
  - 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)

Barrett's Esophagus (EGD-1.3)

- Screening for Barrett's Esophagus
  - Individual with chronic GERD symptoms (defined as weekly symptoms for 5 or more years) AND at least 3 of the following risk factors:
    - Age ≥ 50 years
    - Caucasian race
    - Male sex
    - Obesity
    - History of tobacco smoking
    - Family history of a first-degree relative with Barrett's esophagus or esophageal adenocarcinoma
- For removal or serial endoscopic treatment of known lesions, including ablation, see: **General and Therapeutic EGD (EGD-1.7)**
- Surveillance for Barrett's Esophagus
  - 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
  - If initial endoscopy is negative for Barrett's Esophagus, repeating endoscopy to evaluate for the presence of Barrett's Esophagus is NOT indicated.
  - 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.
  - In diagnosed Barrett's esophagus with no dysplasia on screening EGD (Non-dysplastic Barrett's esophagus or NDBE):
    - Repeat EGD in 3 to 5 years[55]
  - If findings are indefinite for dysplasia on screening EGD:
    - Repeat EGD within 6 months
      - If repeat EGD yields a diagnosis of non-dysplastic Barrett's epithelium (NDBE), follow surveillance intervals for NDBE
      - If repeat EGD yields a diagnosis of low-grade dysplasia, follow surveillance intervals for low-grade dysplasia
      - If repeat EGD continues to demonstrate Barrett's esophagus indefinite for dysplasia, continue surveillance annually
  - If findings reveal low-grade dysplasia on screening EGD, and it is elected to pursue endoscopic surveillance instead of treatment:
    - Repeat EGD at 6 and 12 months from diagnosis, then annually
- Post-endoscopic complete eradication (defined as 2 consecutive negative EGDs) achieved with any technique including post-ablative therapy, submucosal resection, or submucosal dissection of malignancy or dysplasia[54]:
  - If treated for low-grade dysplasia:

        - EGD at 1 and 3 years following complete eradication, then every 2 years thereafter
    - If treated for high-grade dysplasia, intramucosal carcinoma, or submucosal carcinoma:
        - EGD at 3, 6, 12, 18, and 24 months following complete eradication, then annually thereafter
    - If recurrence of metaplasia or dysplasia is discovered:
        - Refer to the surveillance for Barrett's esophagus guidelines above

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
    - If initial examination shows BE but no dysplasia, follow-up endoscopy in one year is NOT indicated. Follow prescribed guidelines
- Sleeve gastrectomy may be an independent risk factor for Barrett's esophagus and esophageal adenocarcinoma that may warrant Barrett's screening post-gastrectomy in the absence of GERD symptoms.

Gastric Ulcer (EGD-1.4)

- 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 without a clear etiology (e.g. no NSAID use, no H. pylori, etc.)
  - In individuals with gastric ulcer who did not undergo biopsy at the index endoscopy due to enhanced risk or inability to perform biopsy for medical reasons (e.g., active bleeding, coagulopathy, etc.)
  - In individuals diagnosed with gastric ulcer via radiologic imaging
  - Giant ulcers (> 3cm), or refractory ulcers (fail to heal despite 8-12 weeks in therapy):
    - Surveillance EGD every 8-12 weeks until healing is documented

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

Background and Supporting Information

- 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 (EGD-1.5)

- 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), or refractory ulcers (fail to heal despite 8-12 weeks in therapy):
    - Surveillance EGD every 8-12 weeks until healing is documented

Background and Supporting Information

- Duodenal Ulcer
  - More than 90% of duodenal ulcers heal with 4 weeks of PPI therapy.

Gastric Intestinal Metaplasia (GIM) (EGD-1.6)

- 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 within 1 year for risk stratification
    - For high-risk individuals (Hispanic/Latin American, 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)
- One-time endoscopic screening for gastric cancer in an asymptomatic individual age ≥ 50 years with ANY of the following risk factors:[80-82]
  - Family history of a first-degree relative with gastric cancer
  - Hispanic/Latin American, Asian, African, or North American Indigenous heritage/descent/ancestry
    - If gastric intestinal metaplasia is found, follow current surveillance guidelines. If screening EGD is negative, no further screening EGD is needed.
    - See: **EGD-1.16** for individuals with known genetic syndromes

General and Therapeutic EGD (EGD-1.7)

- 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; not hemorrhoidal bleeding)
  - Laboratory data (e.g., elevated BUN associated with GI blood loss, positive fecal occult blood, FIT testing including Cologuard®)

- 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 (≤ 45 ng/mL or < lab lower limit if higher than 45 ng/mL)
  - Elevated serum iron binding capacity
  - Low serum transferrin saturation
- 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 hydroxine, 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.
- To assess diarrhea in individuals suspected of having small bowel disease
  - EGD with small bowel biopsy is indicated in individuals with chronic diarrhea
    - EGD with small bowel biopsy is indicated in individuals with suspected malabsorption after inconclusive evaluation including colonoscopy with biopsy
    - EXCEPTION: HIV and Graft-vs.-Host Disease: in the absence of a diagnosis on flexible sigmoidoscopy, an EGD can be performed
- Removal of foreign bodies
- Removal or serial endoscopic treatments of known lesions, including ablation
  - Known polyp(s) which have not yet been removed
  - Bleeding lesions (such as known AVM, ulcers, or tumors requiring ablation, cautery, or other treatment)
- Placement of a feeding or drainage tube
  - Examples include: Peroral, percutaneous endoscopic gastrostomy, percutaneous endoscopic jejunostomy
- Dilation, stenting, and other therapeutic interventions for initial and serial treatment of benign or malignant stenotic lesions
  - Examples include: use of transendoscopic balloon dilators, dilation systems using guidewires, electrocoagulation, stents
- Management of achalasia
  - Examples include: endoscopic dilation, Botox® injection
- Diagnosis and management of eosinophilic esophagitis
  - See: **Eosinophilic Esophagitis (EOE) (EGD-1.17)**
- 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
    - EGD is NOT indicated 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

- For sampling of tissue or fluid when clinically appropriate
  - Examples include: biopsy of small bowel for suspected celiac disease when appropriate (see: **Celiac Disease (EGD-1.18)** for indications), collection of gastric or duodenal fluid for analysis, suspected upper GI Crohn's.
  - For specific indications (Like Barrett's esophagus, diarrhea, etc.) for which guidelines exist, follow the specific guideline for that condition.
  - Carbohydrate enzyme deficiencies (e.g., disaccharidase deficiency) should be ruled out with dietary restriction and/or breath testing. In the small subset of at-risk individuals who do not respond to dietary restriction, small bowel aspiration or biopsy may be warranted.

- 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, early satiety)

- Belching, bloating, and/or abdominal distention
  - EGD is indicated when belching, bloating, or abdominal distention is accompanied by ANY of the following:
    - History of malignancy with a likelihood or propensity to metastasize to abdomen
    - Fever (≥101 degrees Fahrenheit)
    - Elevated WBC >10,000, or above the upper limit of normal for the particular lab reporting the result
    - Palpable mass of clinical concern and/or without benign features
    - GI bleeding, overt or occult, not obviously hemorrhoidal
    - Abdominal tenderness documented as moderate or severe
    - Suspected complication of bariatric surgery
    - New onset of symptoms at age >60 years
    - Unintentional weight loss of ≥10 lbs. or ≥5% of body weight over 6 months or less, without an identifiable reason

- Management of operative complications
  - Examples include: dilation of anastomotic strictures, stenting of anastomotic disruption, fistula, or leak

- Gastroesophageal varices in the setting of portal hypertension or cirrhosis[89]
  - One-time initial screening for gastroesophageal varices is indicated
    - If varices are absent at initial screening:
      - Repeat EGD in 2 years in the presence of ongoing liver injury or disease cofactors are present
      - Repeat EGD in 3 years in the absence of ongoing liver injury
    - If varices are found at initial screening:
      - Repeat EGD every 1 year in presence of ongoing liver injury
      - Repeat EGD every 2 years in absence of ongoing liver injury
  - After eradication of gastroesophageal varices:
    - First EGD performed 3-6 months after eradication, then every 6-12 months indefinitely
  - Decompensated cirrhosis
    - Surveillance EGD every 1 year

Background and Supporting Information

- EGD may be considered in select individuals where there is high suspicion of small bowel bacterial overgrowth (small intestine bacterial overgrowth, SIBO) but noninvasive testing is negative

Upper GI Polyp Treatment and Follow-up (EGD-1.8)

- 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 **Gastric Intestinal Metaplasia (EGD-1.6)**
    - Mucosal sampling detects gastric atrophy
      - Follow-up per OLGA stage. See: **Atrophic Gastritis (EGD-1.9)**
- Hyperplastic polyps with dysplasia
  - Annual EGD if requested
- EGD may be repeated to remove suspicious appearing gastric polyps >0.5cm in size when benign histology has not been determined at the time of initial endoscopy
- Follow up of duodenal polyp(s) (sporadic duodenal tumors not associated with genetic syndromes)[69, 70]
  - Superficial non-ampullary duodenal tumors
    - EGD is indicated 3 months after initial treatment
      - If no recurrence on EGD after initial treatment, repeat EGD is indicated in 1 year
  - Ampullary duodenal tumors
    - EGD is indicated within 3 months of initial treatment
      - Repeat EGD is indicated at 6 and 12 months after initial treatment, and yearly thereafter for 5 years
  - Note: if a duodenal adenoma is detected, a colonoscopy is also indicated.
    - See: Surveillance after Polypectomy (COLON-3) for colonoscopy indications
  - For resection of previously biopsied adenomatous or dysplastic polyp(s), see: **General and Therapeutic EGD (EGD-1.7)**
  - For screening and surveillance of individuals with genetic syndromes, see: **Genetic Syndromes (EGD-1.16)**
- Sequential or periodic EGD is NOT indicated for surveillance of malignancy in individuals with:
  - Fundic gland polyps
  - Previous gastric operations for benign disease
  - Surveillance of healed benign disease such as esophagitis and gastric or duodenal ulcer

Atrophic Gastritis (EGD-1.9)

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

Background and Supporting Information

- Atrophic Gastritis
  - OLGA score[68]:

Atrophy score		Corpus			
		No atrophy	Mild atrophy	Moderate atrophy	Severe atrophy
Antrum	No atrophy (score 0) (including incisura angularis)	Stage 0	Stage I	Stage II	Stage II
	Mild atrophy (score 1) (including incisura angularis)	Stage I	Stage I	Stage II	Stage III
	Moderate atrophy (score 2) (including incisura angularis)	Stage II	Stage II	Stage III	Stage IV
	Severe atrophy (score 3) (including incisura angularis)	Stage III	Stage 0	Stage IV	Stage IV

Pernicious Anemia (EGD-1.10)

- EGD should be performed within 6 months of the diagnosis of pernicious anemia
  - Diagnosis of pernicious anemia as demonstrated by:
    - Vitamin B12 level below normal (<300 pg/mL) or elevated MMA (methylmalonic acid) AND one of the following:
      - Positive for anti-IF antibodies (intrinsic factor) OR
      - Positive for anti-parietal cell antibodies OR
      - Other laboratory findings consistent with Vitamin B12 deficiency including elevated MCV (mean corpuscular volume) and hypersegmented neutrophils seen on CBC OR
      - Other laboratory findings consistent with gastric atrophy (i.e., elevated fasting serum gastrin or decreased serum Pepsinogen I)
- Follow-up examinations indicated only for the development of new symptoms
- If atrophic gastritis is found, refer to **Atrophic Gastritis (EGD-1.9)**.

GIST (Gastrointestinal Stromal Tumors)(EGD-1.11)

- 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

Gastric Neuroendocrine Neoplasms (EGD-1.12)

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

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

- 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)

Bariatric Surgery (EGD-1.14)

- 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

Known Malignancies (EGD-1.15)

- 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

Genetic Syndromes (EGD-1.16)

- Lynch Syndrome (NOTE: Screening begins at the stated age as indicated below, or 5 years before the youngest age of diagnosis of colorectal cancer in an affected family member, whichever occurs first)
  - For all mutations (MLH1/MSH2, MSH6/PMS2)
    - EGD beginning at age 30 years, every 2-3 years
- Juvenile Polyposis Syndrome (defined as individuals with 5 or more juvenile polyps in the colorectum or any juvenile polyps in other parts of the GI tract, or evidence of SMAD4 or BMPRI1A mutations, or positive family history of juvenile polyposis syndrome)
  - EGD at age 12 years. If polyps are present, repeat yearly. If no polyps, repeat every 2 years.
- Peutz-Jeghers Syndrome (defined as individuals with perioral or buccal pigmentation and/or 2 or more histologically characteristic hamartomatous polyps, or family history of PJS, or STK11 mutations)
  - EGD at age 8 years
    - If polyps present, can be repeated every 2-3 years.
      - Shorter intervals may be indicated based on polyp size, number, and pathology.
    - If no polyps, repeat at age 18 years old, then every 2-3 years, or earlier if any symptoms occur.
- Hereditary Gastric Cancer (Hereditary Diffuse Gastric Cancer-HDGC Syndrome/CDH-1 mutation or family history of hereditary gastric cancer)
  - EGD beginning at age 40 years[88] or 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 20 years
    - EGD before 20 years of age when either of the following are met:
      - Individual has undergone a colectomy prior to the age of 20 years OR
      - Request is prior to a planned colectomy
  - 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
- Li-Fraumeni Syndrome (defined as a syndrome inherited in an autosomal-dominant manner, associated with germline mutations in TP53, and resulting in an increased susceptibility to a variety of cancers)
  - EGD every 2-5 years beginning at age 25 years (or 5 years before the earliest known gastric cancer in the family.[60, 61]
- 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 3-5 years
I	≤ 4	Every 2-3 years
II	5-6	Every 1-2 years
III	7-8	Every 6-12 months
IV	9-12	Every 3-6 months (if surgery not chosen)

Eosinophilic Esophagitis (EoE) (EGD-1.17)

- Initial EGD is indicated for diagnosis of suspected eosinophilic esophagitis in ANY of the following:[63-66]
  - Individuals with typical GERD symptoms refractory to treatment with proton pump inhibitors (PPI)
  - Symptoms of dysphagia or food bolus obstruction
- Repeat EGD is indicated for ANY of the following:[63-66]
  - After 8 weeks of dietary or pharmacological EoE treatment:
    - To assess treatment response in individuals with an established diagnosis of EoE
      - When PPIs are prescribed, reassessment should be delayed until completion of PPI therapy twice daily for at least 8 weeks
    - For individuals where a high index of suspicion exists for a diagnosis of EoE, initial histology was not diagnostic, and there exists endoscopic features of EoE or typical symptoms suggestive of EoE
  - After 1 year of treatment for EoE:
    - For individuals where a high index of suspicion exists for a diagnosis of EoE, initial histology was not diagnostic, there exists NO endoscopic features of EoE, and symptoms typical of EoE have been present
  - Any time significant symptoms recur while on any previously effective treatment
  - Annual EGD surveillance (once per year) of established EoE
  - For endoscopic dilation of symptomatic fibrostenotic disease

Background and Supporting Information

- Eosinophilic Esophagitis (EoE)
  - Eosinophilic esophagitis (EoE) is a chronic, immune/antigen-mediated, esophageal disease of increasing recognition and prevalence predominantly in male children and adults. EoE is characterized clinically by symptoms related to esophageal dysfunction and histologically by eosinophil-predominant inflammation (at least 15 eosinophils per high power field). Three pathologic sub-types vary from mild expression to fibrostenotic disease. Clinical manifestations include solid food dysphagia, food impaction, antacid-refractory central chest pain, upper abdominal pain, and GERD-like symptoms.
  - Disease severity, defined by the Index of Severity of Eosinophilic Esophagitis (I-SEE; mild [1 to 6 points], moderate [7 to 14 points] or severe [15 points or higher]) is determined by presentation and associated complications (symptom frequency, food impaction, hospitalization), endoscopic features (edema, furrows, exudates, rings, strictures), and histologic burden of eosinophils per high power field.
  - There is a strong association of eosinophilic esophagitis with allergic conditions such as food allergies, environmental allergies, asthma, and atopic dermatitis. Only recently, however, has targeted EoE treatment been FDA-indicated. Of note, symptoms may not always correlate with histological activity.

- More than a third of those with esophageal symptoms associated with esophageal eosinophilia will respond to PPI treatment. Notable is a condition called PPI-REE where clinical and histologic findings present similar to EoE but complete remission is achieved with PPI use.

Celiac Disease (EGD-1.18)

Screening for Celiac Disease

- EGD is indicated for individuals with positive serologies as follows:
  - Individuals with elevated TTG IgA in the setting of normal total IgA level OR
  - Individuals with IgA deficiency and a positive TTG IgG or deamidated IgG
    - Elevated TTG IgG, deamidated gliadin IgG should not be considered positive screens in individuals with normal total IgA levels
    - HLA test results does not preclude the need for celiac serology
    - See: **Background and Supporting Information** for discussion of additional related screening serologies (e.g., gliadin antibodies)
  - Individuals with positive endomysial IgA antibody
- EGD is indicated for individuals with negative serologies but high index of suspicion for Celiac disease based on symptoms (see: **Background and Supporting Information** for common symptoms) AND at least one of the following risk factors:
  - Diagnosis of one of the following associated conditions:
    - autoimmune thyroid disease
    - autoimmune liver disease
    - primary biliary cirrhosis
    - type 1 DM
    - Addison's disease
    - dermatitis herpetiformis
    - idiopathic peripheral neuropathy
    - Sjögren's syndrome
    - juvenile idiopathic arthritis
    - idiopathic dilated cardiomyopathy
  - First-degree relative with celiac disease
  - Down syndrome
  - Turner syndrome
  - Williams syndrome

Individuals on a Gluten-Free Diet

- EGD is indicated in the following scenarios:
  - Seroconversion with gluten challenge OR
  - Individual develops significant symptoms after at least two weeks on gluten-containing diet and ALL of the following:
    - Serologies remain negative after at least two weeks on gluten-containing diet AND
    - Individual has a permissive HLA/haplotype

Known Celiac Disease

- EGD is indicated in known celiac disease in the following scenarios:
  - Inadequate biopsies on initial scope
    - One-time repeat EGD to obtain appropriate number of small bowel biopsies
  - EGD with small bowel biopsy can be repeated two years after starting a gluten-free diet to assess for mucosal healing regardless of symptoms
  - EGD with small bowel biopsy in individuals with persistent symptoms despite at least 6 months of compliance with gluten-free diet
- For assessment of diarrhea in conditions other than celiac disease, see: **General and Therapeutic EGD (EGD-1.7)**

Background and Supporting Information

- Celiac disease is an immune-mediated systemic disorder elicited by gluten in genetically susceptible individuals. The spectrum of symptoms is quite heterogeneous and can manifest at any age after gluten is introduced into the diet. This may include a variable combination of intestinal and extra-intestinal symptoms, and can overlap with functional GI conditions such as irritable bowel syndrome or Non-celiac gluten sensitivity (NCGS). In the latter, symptoms typically occur soon after ingestion of gluten-containing foods and disappear with a strict gluten-free diet. However, there are no antibodies nor enteropathy present as in celiac disease.
- Common symptoms can include abdominal pain, bloating, nausea, diarrhea, constipation, reflux, fatigue, headache, joint pains, and muscle aches. Surveys estimate the prevalence of NCGS to be anywhere from 0.6-6% of the US population.
- Another important distinction should be made between celiac disease and wheat allergy. Signs and symptoms of wheat allergy can include swelling of the mouth, itching, and hives. This is more common in individuals who also have other atopic conditions.
- Additional screening tests/serologies:
  - Permissive genetics/HLA alone should not be used as sole rationale for proceeding with EGD
  - Isolated elevation in deamidated gliadin IgA levels should never be used as sole criteria for positive screen
- Initial EGD should obtain at least 4 biopsies from distal duodenum and 1 from bulb
- Chronic abdominal pain or diarrhea (> 30 days) as their only symptoms, and no evidence of elevated biomarkers associated with celiac disease, is not an indication for EGD

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