Clinical Policy Bulletin:
Upper Gastrointestinal Endoscopy
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Policy

I. Aetna considers esophagogastroduodenoscopy (EGD)/upper endoscopy medically necessary for high-risk screening in any of the following:

A. Persons with chronic (5 years or more) gastro-esophageal reflux disease (GERD) at risk for Barrett's esophagus (BE). (Note: After a negative screening EGD, further screening EGD is not indicated).
B. Persons with symptomatic pernicious anemia (e.g., anemia, fatigue, pallor, red tongue, shortness of breath, as well as tingling and numbness in the hands and feet) to identify prevalent lesions (e.g., carcinoid tumors, gastric cancer).
C. Persons with cirrhosis and portal hypertension but no prior variceal hemorrhage, especially those with platelet counts less than 140,000/mm³, or Child's class B or C disease.

II. Aetna considers diagnostic EGD medically necessary in any of the following:

A. Evaluation of upper abdominal symptoms that persist despite an appropriate trial of therapy.
B. Evaluation of upper abdominal symptoms associated with other symptoms or signs suggesting serious organic disease (e.g., anorexia and weight loss) or in persons over 45 years of age.
C. Evaluation of dysphagia or odynophagia.
D. Evaluation of esophageal reflux symptoms that are persistent or recurrent despite appropriate therapy.
E. Evaluation of esophageal masses and for directing biopsies for diagnosing esophageal cancer.
F. Evaluation of persons with signs or symptoms of loco-regional recurrence after resection of esophageal cancer.
G. Evaluation of persistent vomiting of unknown cause.
H. Evaluation of other diseases in which the presence of upper gastrointestinal (GI) pathological conditions might modify other planned
management (e.g., persons who have a history of ulcer or GI bleeding who are scheduled for organ transplantation, long-term anti-coagulation, or long-term non-steroidal anti-inflammatory drug therapy for arthritis, and those with cancer of the head and neck).

I. Evaluation of familial adenomatous polyposis syndromes.

J. Confirmation and specific histological diagnosis of radiologically demonstrated lesions:

1. Gastric or esophageal ulcer
2. Suspected neoplastic lesion
3. Upper GI tract stricture or obstruction

K. Evaluation of GI bleeding:

1. For persons with active or recent bleeding
2. For presumed chronic blood loss and for iron deficiency anemia when the clinical situation suggests an upper GI source or when colonoscopy results are negative

L. Sampling of upper GI tissue or fluid.

M. Evaluation of persons with suspected portal hypertension to document or treat esophageal varices.

N. Evaluation of acute injury after caustic ingestion.

O. Evaluation of dyspepsia when any of the following is present:

1. Chronic GI bleeding
2. Epigastric mass
3. Iron deficiency anemia
4. Persistent vomiting
5. Progressive difficulty swallowing
6. Progressive unintentional weight loss
7. Suspicious barium meal (upper GI series)

P. Diagnosis of irritable bowel syndrome when other studies (e.g., colonoscopy, enteroscopy, ileoscopy, capsule endoscopy, and flexible sigmoidoscopy) have negative results.

Q. Differentiation of Crohn's disease from ulcerative colitis in indeterminate colitis.

III. Aetna considers therapeutic EGD medically necessary in any of the following:

A. Banding or sclerotherapy of varices.
B. Dilation of stenotic lesions (e.g., with trans-endoscopic balloon dilators or dilation systems using guide wires).
C. Management of achalasia by means of botulinum toxin, balloon dilation.
D. Palliative treatment of stenosing neoplasms by means of laser, multipolar electrocoagulation, stent placement.
E. Placement of feeding or drainage tubes (peroral, trans-nasal, percutaneous endoscopic gastrostomy, percutaneous endoscopic jejunostomy).
F. Removal of foreign bodies or selected polypoid lesions.
G. Treatment of bleeding lesions such as ulcers, tumors, and vascular abnormalities by means of electrocoagulation, heater probe, laser photocoagulation, or injection therapy.

IV. Aetna considers sequential or periodic EGD medically necessary in any of the following:

A. Surveillance of persons with BE without dysplasia. For persons with established BE of any length and with no dysplasia, after 2 consecutive examinations within 1 year, an acceptable interval for additional surveillance is every 3 years.
B. Surveillance of persons with BE and low-grade dysplasia (LGD) at 6 months. If LGD is confirmed, then surveillance at 12 months and yearly thereafter as long as dysplasia persists.
C. Surveillance of persons with BE and high-grade dysplasia every 3 months for at least 1 year. After 1 year of no cancer detection, the interval of surveillance may be lengthened if there are no dysplastic changes on 2 subsequent endoscopies performed at 3-month intervals.
D. Surveillance of persons with a severe caustic esophageal injury every 1 to 3 years beginning 15 to 20 years after the injury.
E. Surveillance of persons with tylosis every 1 to 3 years beginning at 30 years of age.
F. Surveillance of recurrence of adenomatous polyps in synchronous and metachronous sites at 3- to 5-year intervals.
G. Surveillance of persons with familial adenomatous polyposis starting around the time of colectomy or after age of 30 years.
H. Surveillance of persons with hereditary non-polyposis colorectal cancer.

V. Aetna considers EGD (screening, diagnostic, therapeutic, or sequential/periodic) experimental and investigational for any of the following because its effectiveness for these indications has not been established:

A. EGD before bariatric surgery in asymptomatic individuals
B. EGD for confirming placement of gastric band
C. EGD for diagnosing laryngopharyngeal reflux
D. EGD for routine screening.
E. Evaluation of symptoms that are considered functional in origin. (There are exceptions in which an EGD may be done once to rule out organic disease, especially if symptoms are unresponsive to therapy).
F. Evaluation of metastatic adenocarcinoma of unknown primary site when the results will not alter management.
G. Repeat EGD for persons with a prior normal EGD if symptoms remain unchanged.
H. Routine evaluation of abdominal pain in children (i.e., without other signs and symptoms suggestive of serious organic disease).

I. Evaluation of radiographical findings of:

1. Asymptomatic or uncomplicated sliding hiatal hernia
2. Deformed duodenal bulb when symptoms are absent or respond adequately to ulcer therapy
3. Uncomplicated duodenal ulcer that has responded to therapy

J. Surveillance for malignancy in persons with gastric atrophy, pernicious anemia, or prior gastric operations for benign disease (e.g., partial gastrectomy for peptic ulcer disease).

K. Surveillance of healed benign disease (e.g., esophagitis or duodenal/gastric ulcer).

L. Surveillance during repeated dilations of benign strictures unless there is a change in status.

M. Surveillance of persons with achalasia.

N. Surveillance of persons with previous aerodigestive squamous cell cancer.

O. Surveillance of persons with gastric intestinal metaplasia.

P. Surveillance of persons following adequate sampling or removal of non-dysplastic gastric polyps.

See also CPB 0396 - Gastrointestinal Function: Selected Tests, CPB 0588 - Capsule Endoscopy, CPB 0616 - Antroduodenal Manometry, CPB 0625 - Dysphagia Therapy, and CPB 0667 - Esophageal and Airway pH Monitoring.

Background

Esophagogastroduodenoscopy (EGD), also known as upper gastro-intestinal (GI) endoscopy, upper endoscopy, or gastroscopy, refers to examination of the esophagus, stomach, and upper duodenum (first part of the small intestine) by means of a flexible fiber-optic endoscope. It has been employed for investigating the cause(s) of abdominal pain, dysphagia (difficulty swallowing), gastro-esophageal reflux disease (GERD), hematemesis (vomiting up blood), persistent nausea and vomiting, as well as occult and obscure GI bleeding. It has also been used in diagnosing esophagitis (inflammation of the esophagus), Schatzki's ring (also known as esophagogastric ring and lower esophageal ring), Mallory-Weiss syndrome (tear in the mucous membrane where the esophagus connects to the stomach), gastritis (inflammation of the stomach), duodenitis (inflammation of the duodenum), GI ulcer and polyps (growth of tissue), diverticula (abnormal pouches in the lining of the intestines), as well as obstruction, stricture (abnormal narrowing), and tumors of the esophagus, stomach, and upper duodenum.

According to the American Gastroenterological Association's (2000) medical position statement on evaluation and management of occult and obscure GI bleeding, occult GI bleeding refers to the initial presentation of a positive fecal occult blood test (FOBT) result and/or iron-deficiency anemia (IDA), with no evidence of passing fecal blood visible to the patient or physician; while obscure
GI bleeding is defined as bleeding of unknown origin that persists or recurs (i.e., recurrent or persistent IDA, FOBT positivity, or visible bleeding) after a negative initial or primary endoscopy (colonoscopy and/or upper endoscopy) result. Thus, obscure GI bleeding can present in 2 forms: (i) obscure-occult, as manifested by recurrent IDA and/or recurrent positive FOBT results, and (ii) obscure-overt, with recurrent passage of visible blood. Upper endoscopy is useful in the management of occult and obscure GI bleeding.

Concha and colleagues (2007) stated that patients with obscure-occult GI bleeding presenting with IDA who have previously undergone upper endoscopy and colonoscopy and who do not respond to iron replacement should undergo a repeat upper endoscopy or enteroscopy and colonoscopy. In obscure-overt GI bleeding, if the patient is not actively bleeding (intermittent melena or hematochezia requiring repeated blood transfusions), a repeat upper endoscopy and colonoscopy is recommended. If negative, push enteroscopy is the next diagnostic step. If negative and if no further bleeding, the patient should undergo wireless capsule endoscopy.

The American Society for Gastrointestinal Endoscopy (ASGE)'s guideline on the role of endoscopy in the assessment and treatment of esophageal cancer (Jacobson et al, 2003) stated that endoscopy is pivotal in the diagnosis and management of this malignancy. Standard upper endoscopy remains the primary method for visualizing esophageal masses and for directing biopsies. Patients presenting with signs or symptoms of loco-regional recurrence after resection of esophageal cancer should undergo endoscopy as part of their evaluation.

The following recommendations on EGD are provided by the ASGE (Cohen et al, 2006).

Esophagogastroduodenoscopy is generally indicated for the evaluation of:

I. Upper abdominal symptoms that persist despite an appropriate trial of therapy.
II. Upper abdominal symptoms associated with other symptoms or signs suggesting serious organic disease (e.g., anorexia and weight loss) or in patients greater than 45 years of age.
III. Dysphagia or odynophagia.
IV. Esophageal reflux symptoms that are persistent or recurrent despite appropriate therapy.
V. Persistent vomiting of unknown cause.
VI. Other diseases in which the presence of upper GI pathological conditions might modify other planned management (e.g., patients who have a history of ulcer or GI bleeding who are scheduled for organ transplantation, long-term anti-coagulation, or long-term non-steroidal anti-inflammatory drug therapy for arthritis, and those with cancer of the head and neck).
VII. Familial adenomatous polyposis syndromes.
VIII. For confirmation and specific histological diagnosis of radiologically demonstrated lesions:

A. Suspected neoplastic lesion
B. Gastric or esophageal ulcer
C. Upper tract stricture or obstruction

IX. Gastrointestinal bleeding:

   A. In patients with active or recent bleeding
   B. For presumed chronic blood loss and for IDA when the clinical situation suggests an upper GI source or when colonoscopy results are negative

   X. When sampling of tissue or fluid is indicated.
   XI. In patients with suspected portal hypertension to document or treat esophageal varices.
   XII. To assess acute injury after caustic ingestion.
   XIII. Treatment of bleeding lesions such as ulcers, tumors, vascular abnormalities (e.g., electrocoagulation, heater probe, laser photoagulation, or injection therapy).
   XIV. Banding or sclerotherapy of varices.
   XV. Removal of foreign bodies.
   XVI. Removal of selected polypoid lesions.
   XVII. Placement of feeding or drainage tubes (peroral, percutaneous endoscopic gastrostomy, percutaneous endoscopic jejunostomy).
   XVIII. Dilation of stenotic lesions (e.g., with transendoscopic balloon dilators or dilation systems using guide wires).
   XIX. Management of achalasia (e.g., botulinum toxin, balloon dilation).
   XX. Palliative treatment of stenosing neoplasms (e.g., laser, multi-polar electrocoagulation, stent placement).

Esophagogastroduodenoscopy is generally not indicated for the evaluation of:

   I. Symptoms that are considered functional in origin (there are exceptions in which an endoscopic examination may be done once to rule out organic disease, especially if symptoms are unresponsive to therapy).
   II. Metastatic adenocarcinoma of unknown primary site when the results will not alter management.
   III. Radiographical findings of:

      A. Asymptomatic or uncomplicated sliding hiatal hernia
      B. Uncomplicated duodenal ulcer that has responded to therapy
      C. Deformed duodenal bulb when symptoms are absent or respond adequately to ulcer therapy

Sequential or periodic EGD may be indicated for:

   I. Surveillance for malignancy in patients with pre-malignant conditions such as Barrett's esophagus (a condition that increases the risk for developing esophageal cancer).

Sequential or periodic EGD is generally not indicated for:

   I. Surveillance for malignancy in patients with gastric atrophy, pernicious anemia, or prior gastric operations for benign disease.
II. Surveillance of healed benign disease such as esophagitis or gastric or duodenal ulcer.

III. Surveillance during repeated dilations of benign strictures unless there is a change in status.

The ASGE guideline on the role of endoscopy in the surveillance of pre-malignant conditions of the upper GI tract (Hirota et al, 2006) provided the following recommendations:

Patients with chronic GERD at risk for Barrett's esophagus should be considered for endoscopic screening (B).

In patients with Barrett's esophagus without dysplasia, the cost effectiveness of surveillance endoscopy is controversial. If surveillance is performed, an interval of 3 years is acceptable (C). Although an increased cancer risk has not been established in patients with Barrett's esophagus and low-grade dysplasia, endoscopy at 6 months and yearly thereafter should be considered (C).

Patients with Barrett's esophagus with confirmed high-grade dysplasia should be considered for surgery or aggressive endoscopic therapy (B). Patients with high-grade dysplasia who elect endoscopic surveillance should be followed up closely (i.e., every 3 months) for at least 1 year. If no further high-grade dysplasia is confirmed, then the interval between follow-ups may be lengthened (B).

There are insufficient data to recommend routine surveillance for patients with achalasia (C).

Patients with a severe caustic esophageal injury should undergo surveillance every 1 to 3 years beginning 15 to 20 years after the injury (C).

Patients with tylosis should undergo surveillance endoscopy every 1 to 3 years beginning at age 30 years (C).

There are insufficient data to support routine endoscopic surveillance for patients with previous aerodigestive squamous cell cancer (C). Adenomatous gastric polyps should be resected because of the risk for malignant transformation (B).

Adenomatous polyps may recur in synchronous and metachronous sites, and surveillance endoscopies should be performed at 3- to 5-year intervals (C).

Endoscopic surveillance for gastric intestinal metaplasia has not been extensively studied in the U.S. and therefore cannot be routinely recommended (C). However, there may be a subgroup of high-risk patients who will benefit from endoscopic surveillance (B).

Patients with confirmed gastric high-grade dysplasia should be considered for gastrectomy or local resection because of the high incidence of prevalent carcinoma (B).

Patients with pernicious anemia may be considered for a single screening endoscopy, particularly if symptomatic, but there are insufficient data to recommend ongoing surveillance (C).

There are insufficient data to support routine endoscopic surveillance in patients with previous partial gastrectomy for peptic ulcer disease (C).

Patients with familial adenomatous polyposis should undergo regular surveillance endoscopy using both end-viewing and side-viewing
endoscopes, starting around the time of colectomy or after age 30 years (B).

Patients with hereditary non-polyposis colorectal cancer have an increased risk of gastric and small-bowel cancer (B). Surveillance should be strongly considered (C).

Definitions:
A: Prospective controlled trials
B: Observational studies
C: Expert opinion

The North of England Dyspepsia Guideline Development Group (2004) recommended that "[u]rgent specialist referral or endoscopic investigation (to be seen within 2 weeks) is indicated for patients of any age with dyspepsia when presenting with any of the following: chronic gastrointestinal bleeding, progressive unintentional weight loss, progressive difficulty swallowing, persistent vomiting, iron deficiency anaemia, epigastric mass, or suspicious barium meal....Routine endoscopic investigation of patients of any age, presenting with dyspepsia and without alarm signs, is not necessary. However, for patients over 55, when symptoms persist despite Helicobacter pylori (H. pylori) testing and acid suppression therapy, consider endoscopic referral for any of the following: previous gastric ulcer or surgery; continuing need for NSAID treatment; or raised risk of gastric cancer or anxiety about cancer".

The ASGE guidelines on the role of endoscopy in the management of variceal hemorrhage (Qureshi et al, 2005) recommended that screening EGD should be performed in patients with established cirrhosis, especially in those with platelet counts less than 140,000/mm³, or Child's class B or C disease.

The ASGE guideline on the role of endoscopy in the patient with lower GI bleeding (Davila et al, 2005) stated that nasogastric-tube placement and/or upper endoscopy to look for an upper GI source of bleeding should be considered if a source is not identified on colonoscopy, especially if there is a history of upper GI symptoms or anemia.

The ASGE guideline on endoscopy in the diagnosis and treatment of inflammatory bowel disease (IBD) (Leighton et al, 2006) stated that EGD or enteroscopy may be helpful for diagnosing IBD when other studies have negative results and for differentiating Crohn's disease from ulcerative colitis in indeterminate colitis. (Note: ASGE does not recommend routine EGD in all patients suspected of having Crohn's disease).

The American College of Gastroenterology's guidelines for the diagnosis and treatment of GERD (DeVault and Castell, 2005) stated that "[i]f the patient's history is typical for uncomplicated GERD, an initial trial of empirical therapy (including lifestyle modification) is appropriate. Endoscopy at presentation should be considered in patients who have symptoms suggesting complicated disease, those at risk for Barrett's esophagus ... Endoscopy is the technique of choice used to identify suspected Barrett's esophagus and to diagnose complications of GERD. Biopsy must be added to confirm the presence of Barrett's epithelium and to evaluate for dyspepsia".
Dughera et al (2007) noted that GERD is known to cause erosive esophagitis, Barrett's esophagus (BE), and has been linked to the development of adenocarcinoma of the esophagus. Currently, endoscopy is the main clinical tool for visualizing esophageal lesions, but the majority of GERD patients do not have endoscopic visible lesions and other methods are required. Ambulatory esophageal pH monitoring is the gold standard in diagnosing GERD, since it measures distal esophageal acid exposure and demonstrates the relationship between symptoms and acid reflux.

According to the University of Michigan Health System's guideline on GERD (2007), no gold standard exists for the diagnosis of this disease. Although pH probe is accepted as the standard with a sensitivity of 85 % and specificity of 95 %, false positives and false negatives still exist. Endoscopy lacks sensitivity in determining pathological reflux. Barium radiology has limited usefulness in the diagnosis of GERD and is not recommended. Furthermore, If symptoms remain unchanged in a patient with a prior normal endoscopy, repeating endoscopy has no benefit and is not recommended.

In a systemic review on EGD in children with abdominal pain, Thakkar et al (2007) stated that the diagnostic yield of EGD in children with unclear abdominal pain is low; however, existing studies are inadequate. The effect of EGD on change in treatment, quality of life, improvement of abdominal pain, and cost-effectiveness is unknown. The predictors of significant findings are unclear. These findings suggested that a large multi-center study examining clinical factors, biopsy reports, and addressing patient outcomes is needed to further clarify the value of EGD in children with abdominal pain.

Absolute contraindications to EGD include shock, peritonitis, fulminant colitis, perforated viscus (e.g., esophagus, stomach, intestine), severe cardiac decompensation, and acute myocardial infarction (unless active, life-threatening hemorrhage is present). Relative contraindications include an obtunded or uncooperative subject, coma (unless the patient is intubated), and cardiac arrhythmias or recent myocardial ischemia (Merck 2005; Cerulli, 2006).

Kawai et al (2010) reported that ultra-thin trans-nasal EGD (TN-EGD) reduces pharyngeal discomfort and is more tolerable for the patients. Ultra-thin transnasal endoscopy has been reported as inferior to transoral conventional EGD (TO-EGD) in terms of image quality, suction, air insufflation and lens washing, due to the smaller endoscope caliber; TN-EGD should be conducted slowly, with short distance observation, and also with image-enhanced endoscopy. With reference to image-enhanced endoscopy, chromoendoscopy method (indigocarmine) is suitable for gastric neoplasm. On the other hand, optical digital method (NBI) and digital method (i-scan, FICE) is suitable for esophageal neoplasm. TN-EGD is applied in various GI procedures such as percutaneous endoscopic gastrostomy, naso-enteric feeding tube placement, endoscopic retrograde cholangiopancreatographic with naso-biliary drainage, long intestinal tube placement in small bowel obstruction, as well as esophageal manometry.

patients underwent trans-nasal endoscopy for the placement of NET in Peking University Third Hospital. Indications for NET included esophageal stricture or gastric outlet obstruction because of corrosive esophagitis or gastritis, partial obstruction due to malignancy, stenosis in stoma or efferent loop, gastroparesis, metallic stent in upper GI tract, tracheo-esophageal fistula, severe acute pancreatitis, anorexia nervosa and intensive care patients. The tubes were endoscopically placed using the guidewire technique. The position of the tube was confirmed by the immediate second endoscopy or abdominal X-ray. If the initiate placement was incorrect, an adjustment or a 2nd placement was conducted immediately. Initial post-pyloric placement of NET was achieved in 43 of 51 patients (84.3 %), but the total success rate reached 98.0 % (50/51) after the 2nd placement. The time required for the procedure ranged from 10 to 35 mins, with a median time of 20.4 mins. Epistaxis occurred in 2 patients. There were no complications of hemorrhage, perforation or aspiration. The authors concluded that trans-nasal endoscopic placement of NET was feasible in patients with upper GI diseases, especially in those with changed anatomy.

Kwon et al (2011) stated that laryngopharyngeal reflux (LPR) is a subset of GERD and given its own identity, because the main symptomatic regions are the larynx and pharynx. Accurate diagnosis and effective treatment of LPR has been challenging. Much research has been dedicated to the elucidation of its complex pathophysiology and the development of accurate diagnostic modalities and effective treatment.

Vardar and associates (2012) noted that the techniques used in the diagnosis of GERD have insufficient specificity and sensitivity in diagnosing LPR. These investigators evaluated the role of EGD and laryngological examination in the diagnosis of LPR. A total of 684 diagnosed GERD and suspected LPR patients were prospectively scored by the reflux finding score (RFS). A total of 484 patients with GERD who had RFS greater than or equal to 7 were accepted as having LPR; 248 patients with GERD plus LPR on whom an endoscopic examination was performed were evaluated. As a control group, results from 82 patients with GERD who had RFS less than 7 were available for comparison. The GERD symptom score (RSS) was counted according to the existence of symptoms (heartburn/regurgitation) and frequency, duration, and severity. The reflux symptom index (RSI) was also evaluated. The relationship between esophageal endoscopic findings, RSS, RFS and RSI was investigated. Mean age was 46 +/- 12 (19 to 80). The mean values of RSS, RFS, and RSI were 18.9 +/- 7.7, 10 +/- 2.2, 16.6 +/- 11.9, respectively. Erosive esophagitis was detected in 75 cases (30 %). Hiatus hernia was observed in 32 patients (13 %). There was no correlation between RSS and RFS, RSI. The severity of esophagitis did not correlate with the severity of the laryngeal findings. The authors concluded that LPR should be suspected when the history and laryngoscopy findings are suggestive of the diagnosis; and EGD has no role in the diagnosis of LPR.

UpToDate reviews on “Endoscopy in patients who have undergone bariatric surgery” (Huang, 2013) and “Overview of upper gastrointestinal endoscopy (esophagastroduodenoscopy)” (Greenwald and Cohen, 2013) do not mention confirmation of gastric band placement as an indication of endoscopy/upper gastrointestinal endoscopy.
De Palma and Forestieri (2014) stated that obesity is an increasingly serious health problem in nearly all Western countries. It represents an important risk factor for several GI diseases, such as GERD, erosive esophagitis, hiatal hernia, BE, esophageal adenocarcinoma, H. pylori infection, colorectal polyps and cancer, non-alcoholic fatty liver disease, cirrhosis, and hepato-cellular carcinoma. Surgery is the most effective treatment to date, resulting in sustainable and significant weight loss, along with the resolution of metabolic comorbidities in up to 80% of cases. Many of these conditions can be clinically relevant and have a significant impact on patients undergoing bariatric surgery. There is evidence that the chosen procedure might be changed if specific pathological upper GI findings, such as large hiatal hernia or BE, are detected pre-operatively. The value of a routine endoscopy before bariatric surgery in asymptomatic patients (screening EGD) remains controversial.

Schigt and colleagues (2014) noted that Roux-Y gastric bypass (RYGB) is a frequently used technique in bariatric surgery. Post-operative anatomy is altered by exclusion of the stomach, which makes this organ inaccessible for future EGD. The value of pre-operative assessment of the stomach is unclear. Some institutions choose to investigate the future remnant stomach by EGD, others do not. These investigators quantified the yield of pre-operative EGD in their institution. Patients, planned for primary laparoscopic RYGB (LRYGB) or laparoscopic sleeve gastrectomy from December 2007 until August 2012, were screened by EGD in advance. Results of EGD and patient characteristics were retrospectively analyzed and categorized according to a classification system based on intervention needed. A total of 523 patients (122 males, 401 females, mean age of 44.3 years, average body mass index [BMI] of 46.6) underwent pre-operative EGD. In 257 patients (48.9%) no abnormality was found (group A), 117 patients (17.2%) had abnormalities without treatment consequences (B1), 84 patients (of the 326 tested [comment #1, reviewer #1, 26.8%] were H. pylori positive (B2), in 75 (14.3%) treatment with proton pump inhibitors was required (B3), 6 (1.1%) required follow-up EGD before surgery (C). For 1 patient (0.2%) the operation was canceled because pre-operative EGD presented with Barrett's esophagus with carcinoma (D). When all abnormalities were taken into account, baselines did show a significant difference for age, gender and reflux symptoms. The authors concluded that standard pre-operative assessment by EGD in patients who are planned for bariatric surgery is not indicated. The number needed to screen to find clinically significant abnormalities is high.

CPT Codes / HCPCS Codes / ICD-9 Codes

Diagnostic EGD:

CPT codes covered if selection criteria are met:

43200
43202
43235
43237
43238
43239
43242
43259

CPT Codes related to the CPB:

43770

High-risk screening:

ICD-9 codes covered if selection criteria are met:

148.0 - 148.9 Malignant neoplasm of hypopharynx [to identify prevalent lesions]
150.0 - 152.9 Malignant neoplasm of esophagus, stomach, or small intestine including duodenum [to identify prevalent lesions]
161.0 - 162.0 Malignant neoplasm of larynx or trachea [to identify prevalent lesions]
281.0 Pernicious anemia [symptomatic (e.g., anemia, fatigue, pallor, red tongue, shortness of breath, as well as tingling and numbness of feet)]
530.81 Esophageal reflux [chronic 5 years or more]
530.85 Barrett's esophagus
571.2 Alcoholic cirrhosis of liver [with no prior variceal hemorrhage especially with platelet counts less than 140,000/mm³, or child's Class B or C disease]
571.5 Cirrhosis of liver without mention of alcohol [with no prior variceal hemorrhage especially with platelet counts less than 140,000/mm³, or child's Class B or C disease]
571.6 Biliary cirrhosis [with no prior variceal hemorrhage especially with platelet counts less than 140,000/mm³, or child's Class B or C disease]
572.3 Portal hypertension [with no prior variceal hemorrhage especially with platelet counts less than 140,000/mm³, or child's Class B or C disease]

Diagnostic EGD:

ICD-9 codes covered if selection criteria are met:
148.0 - 148.9 Malignant neoplasm of hypopharynx [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

150.0 - 152.9 Malignant neoplasm of esophagus, stomach, or small intestine including duodenum [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

161.0 - 162.0 Malignant neoplasm of larynx or trachea [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

197.1 Secondary malignant neoplasm of mediastinum [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

197.3 Secondary malignant neoplasm of other respiratory organs (trachea) [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

197.4 Secondary malignant neoplasm of or small intestine including duodenum [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

200.01 - 200.03 Reticulosarcoma involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

200.11 - 200.13 Lymphosarcoma involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

200.21 - 200.23 Burkitt's tumor or lymphoma involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

200.31 - 200.33 Marginal zone lymphoma involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

200.41 - 200.43 Mantle cell lymphoma involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

200.51 - 200.53 Primary central nervous system lymphoma involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]
<table>
<thead>
<tr>
<th>Code Range</th>
<th>Description</th>
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<tbody>
<tr>
<td>200.61 - 200.63</td>
<td>Anaplastic large cell lymphoma involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]</td>
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<tr>
<td>200.71 - 200.73</td>
<td>Large cell lymphoma involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]</td>
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<td>200.81 - 200.83</td>
<td>Other named variants of lymphoma involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]</td>
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<td>201.01 - 201.03</td>
<td>Hodgkin's paragranuloma involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]</td>
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<tr>
<td>201.11 - 201.13</td>
<td>Hodgkin's granuloma involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]</td>
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<tr>
<td>201.21 - 201.23</td>
<td>Hodgkin's sarcoma involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]</td>
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<td>201.41 - 201.43</td>
<td>Lymphocytic-histiocytic predominance involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]</td>
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<tr>
<td>201.51 - 201.53</td>
<td>Nodular sclerosis involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]</td>
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<tr>
<td>201.61 - 201.63</td>
<td>Mixed cellularity involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]</td>
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<tr>
<td>201.71 - 201.73</td>
<td>Lymphocytic depletion involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]</td>
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| 201.91 - 201.93 | Hodgkin's disease, unspecified involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation
and specific histological diagnosis of radiologically demonstrated lesions]

202.01 - 202.03
Nodular lymphoma involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

202.11 - 202.13
Mycosis fungoides involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

202.21 - 202.23
Sezary's disease involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

202.31 - 202.33
Malignant histiocytosis involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

202.41 - 202.43
Leukemic reticuloendotheliosis involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

202.51 - 202.53
Letterer-Siwe disease involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

202.61 - 202.63
Malignant mast cell tumors involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

202.71 - 202.73
Peripheral T-cell lymphoma involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

202.81 - 202.83
Other lymphomas involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

202.91 - 202.93
Other and unspecified malignant neoplasms of lymphoid and histiocytic tissue involving lymph nodes of head, face, and neck, intrathoracic, and intra-abdominal [confirmation and specific histological diagnosis of radiologically demonstrated lesions]
211.0 - 211.2 Benign neoplasm of esophagus, stomach, duodenum, jejunum, or ileum [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

211.3 Benign neoplasm of colon [familial adenomatous polyposis syndromes]

235.5 Neoplasm of uncertain behavior of other and unspecified digestive organs [esophageal masses] [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

280.0 - 280.9 Iron deficiency anemias [when the clinical situation suggests an upper GI source or when colonoscopy results are negative]

285.1 Acute posthemorrhagic anemia

438.82 Dysphagia, late effect of cerebrovascular disease

456.0 - 456.21 Esophageal varices

530.10 - 530.19 Esophagitis [persistent or recurrent despite therapy]

530.20 - 530.21 Ulcer of esophagus, without bleeding, or with bleeding [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

530.3 Stricture and stenosis of esophagus [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

530.4 Perforation of esophagus [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

530.5 Dyskinesia of esophagus [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

530.6 Diverticulum of esophagus [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

530.7 Gastroesophageal laceration-hemorrhage syndrome [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

530.81 Esophageal reflux [persistent or recurrent despite therapy]

530.82 Esophageal hemorrhage [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

530.83 Esophageal leukoplakia [confirmation and specific histological diagnosis of radiologically demonstrated lesions]
530.84  Tracheoesophageal fistula [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

530.85  Barrett's esophagus

531.00 - 531.91  Gastric ulcer [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

532.00 - 532.91  Duodenal ulcer [confirmation and specific histological diagnosis of radiologically demonstrated lesions] [complicated that has not responded to therapy]

533.00 - 533.91  Peptic ulcer, site unspecified [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

534.00 - 534.91  Gastrojejunal ulcer [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

536.2  Persistent vomiting [of unknown cause]

536.8  Dyspepsia and other specified disorders of function of stomach [with chronic GI bleeding, progressive unintentional weight loss, progressive difficulty swallowing, persistent vomiting, iron deficiency anemia, epigastric mass, or suspicious barium meal (upper GI series)]

555.0 -555.9  Regional enteritis [differentiation of Crohn's disease from ulcerative colitis in indeterminate colitis]

556.0 - 556.9  Ulcerative colitis [differentiation of Crohn's disease from ulcerative colitis in indeterminate colitis]

564.1  Irritable bowel syndrome [when other studies (e.g., colonoscopy, enteroscopy, ileoscopy, capsule endoscopy, and flexible sigmoidoscopy) have negative results]

572.3  Portal hypertension [with no prior variceal hemorrhage]

578.0 - 578.9  Gastrointestinal hemorrhage [active or recent]

747.61  Gastrointestinal vessel anomaly [bleeding]

750.3  Tracheoesophageal fistula esophageal atresia and stenosis

750.4  Other specified anomalies of esophagus

750.7  Other specified anomalies of stomach

787.20 - 787.29  Dysphagia

789.01 - 789.02  Abdominal pain, right or left upper quadrant [associated with other symptoms or signs suggesting serious organic disease
(e.g., anorexia and weight loss) or in persons over 45 years of age

789.05 - 789.06 Abdominal pain, periumbilic or epigastric [associated with other symptoms or signs suggesting serious organic disease (e.g., anorexia and weight loss) or in persons over 45 years of age]

793.4 Nonspecific abnormal findings on radiological and other examination of gastrointestinal tract [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

793.6 Nonspecific abnormal findings on radiological and other examination, abdominal area including retroperitoneum [confirmation and specific histological diagnosis of radiologically demonstrated lesions]

935.1 - 935.2 Foreign body in esophagus, stomach

938 Foreign body in digestive system unspecified

947.2 Burn of esophagus [from chemical agents]

983.0 - 983.9 Toxic effect of corrosive aromatics, acids, and caustic alcalis [acute injury after caustic ingestion]

**ICD-9 codes not covered for indications listed in the CPB:**

V45.86 Bariatric surgery status

**Other ICD-9 codes related to the CPB:**

170.0 - 170.1 Malignant neoplasm of bones of skull and face, mandible [history of ulcer or GI bleeding and cancer of the head and neck]

171.0 Malignant neoplasm of connective and other soft tissue, head, face, and neck [history of ulcer or GI bleeding and cancer of the head and neck]

195.0 Malignant neoplasm of head, face, and neck [history of ulcer or GI bleeding and cancer of the head and neck]

196.0, 196.8 Secondary malignant neoplasm of lymph nodes of head, face, and neck, or multiple sites [history of ulcer or GI bleeding and cancer of the head and neck]

558.1 - 558.9 Other and unspecified noninfectious gastroenteritis and colitis

711.00 - 716.99 Arthopathies [upper gastrointestinal GI pathological conditions that might modify other planned management - long-term non-steroidal anti-inflammatory drug therapy]

783.0 Anorexia [associated with upper abdominal symptoms]

783.21 Loss of weight [associated with upper abdominal symptoms]
783.3 Feeding difficulties and mismanagement [associated with upper abdominal symptoms]

786.50 Unspecified chest pain

787.01 - 787.03 Nausea and vomiting

787.1 Heartburn

V49.83 Awaiting organ transplant status [history of ulcer or GI bleeding and scheduled for organ transplantation]

V58.61 Long-term (current) use of anticoagulants [history of ulcer or GI bleeding and long-term anticoagulation]

V58.64 Long-term (current) use of non-steroidal anti-inflammatories (NSAID) [history of ulcer or GI bleeding and long-term steroidal anti-inflammatory drug therapy for arthritis]

**Therapeutic EGD:**

**CPT codes covered if selection criteria are met:**

43191 - 43196

43197 - 43198

43200 - 43232

43233 - 43270

**ICD-9 codes covered if selection criteria are met:**

150.0 - 152.9 Malignant neoplasm of esophagus, stomach, and small intestine including duodenum [palliative treatment of stenosing neoplasms by means of laser, multipolar electrocoagulation, stent placement]

154.0 Malignant neoplasm of rectosigmoid junction [hereditary non-polyposis colorectal cancer]

211.0 Benign neoplasm of esophagus

211.3 Benign neoplasm of colon [familial adenomatous polyposis syndromes]

230.1 Esophageal cancer in situ [palliative treatment of stenosing neoplasms by means of laser, multipolar electrocoagulation, stent placement]
530.0  Achalasia and cardiospasm [management-not surveillance]
530.21 Ulcer of esophagus with bleeding
530.3  Stricture and stenosis of esophagus
530.4  Perforation of esophagus
530.6  Diverticulum of esophagus
530.7  Gastroesophageal laceration-hemorrhage syndrome
530.81 Esophageal reflux [persistent or recurrent despite therapy]
530.82 Esophageal hemorrhage
530.83 Esophageal leukoplakia
530.84 Tracheoesophageal fistula
530.85 Barrett's esophagus
530.87 Mechanical complication of esphagostomy
531.00 - 534.91 Gastric, duodenal, peptic, or gastrojejunal ulcer
535.00 - 535.61 Gastritis and duodenitis
535.61 Diaphragmatic hernia with obstruction
747.61 Gastrointestinal vessel anomaly [bleeding]
750.3  Tracheoesophageal fistula, esophageal atresia and stenosis
750.4  Other specified anomalies of esophagus
750.7  Other specified anomalies of stomach
862.22 Injury to esophagus without open wound into cavity
862.32 Injury to esophagus with open wound into cavity
935.1 - 935.2 Foreign body in esophagus, stomach
947.2  Burn of esophagus
983.0 - 983.9 Toxic effect of corrosive aromatics, acids, and caustic alkalis

**Sequential or periodic EGD:**

**ICD-9 codes covered if selection criteria are met:**

154.0  Malignant neoplasm of rectosigmoid junction [hereditary non-polyposis colorectal cancer]
211.0  Benign neoplasm of esophagus
211.3  Benign neoplasm of colon [familial adenomatous polyposis syndromes]
530.83  Esophageal leukoplakia [? tylosis]
530.85  Barrett's esophagus
906.8  Late effect of burns of other specified sites [severe caustic esophageal injury every 1-3 years beginning 15 to 20 years after injury]
908.2  Late effect of internal injury to chest [severe caustic esophageal injury every 1-3 years beginning 15 to 20 years after injury]
909.1  Late effect of toxic effect of nonmedical substances [severe caustic esophageal injury every 1-3 years beginning 15 to 20 years after injury]
V10.03 - V10.04  Personal history of malignant neoplasm of esophagus or stomach
V12.70 - V12.79  Personal history of diseases of digestive system

**ICD-9 codes not covered for indications listed in the CPB:**

197.8  Secondary malignant neoplasm of digestive system [evaluation of adenocarcinoma of unknown primary site when the results will not alter management]
281.0  Pernicious anemia [surveillance for malignancy]
530.0  Achalasia and cardiospasm [surveillance]
530.5  Dyskinesia of esophagus [functional in origin]
532.00 - 532.91  Duodenal ulcer [uncomplicated that has responded to therapy]
537.89  Other specified disorders of stomach and duodenum [gastric atrophy] [gastric intestinal metaplasia]
553.3  Diaphragmatic hernia without obstruction or gangrene [asymptomatic or uncomplicated]
750.6  Congenital hiatus hernia [asymptomatic or uncomplicated]
751.5  Other anomalies of intestine [deformed duodenal bulb]
789.00 - 789.09  Abdominal pain [routine evaluation in children without other signs and symptoms suggestive of serious organic disease]
V10.03  Personal history of malignant neoplasm of esophagus  
[surveillance of persons with previous aerodigestive squamous cell cancer]

V12.70 - V12.79 Personal history of diseases of digestive system [healed benign disease]

V15.53  Personal history of retained foreign body fully removed

V47.3  Other digestive problems

V70.0 - V70.9  General medical examination [diagnosis]

V76.49  Special screening for malignant neoplasms of other sites [without diagnosis]

V76.50 - V76.52  Special screening for malignant neoplasms, intestine [without diagnosis]

V76.89  Special screening for other malignant neoplasms [without diagnosis]

V82.89  Special screening for other specified conditions [without diagnosis]

V82.9  Special screening for unspecified conditions [without diagnosis]

V84.09  Genetic susceptibility to other malignant neoplasm [without diagnosis]

Other ICD-9 codes related to the CPB:

V15.5  History of injury [severe caustic esophageal injury every 1-3 years beginning 15 to 20 years after injury]

V44.1  Gastrostomy status

The above policy is based on the following references:


27. Huang CS. Endoscopy in patients who have undergone bariatric surgery. Last reviewed July 2013. UpToDate Inc., Waltham, MA.


