


Learning Objectives

- At the completion of this educational activity, the learner will be able to:
 - Recognize common GI diagnoses and their coding requirements
 - Identify query opportunities that are supported by clinical indicators
 - Recall newly created ICD-10 codes and AHA *Coding Clinics* related to GI diagnoses


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Diseases of Digestive System

- K20–K31 Diseases of the esophagus, stomach, and duodenum
- K40–K46 Hernias
- K50–K52 Non-infectious enteritis and colitis
- K55–K64 Other disease of the intestine
- K65–K68 Diseases of the peritoneum and retroperitoneum
- K70–K77 Diseases of the liver
- K80–K87 Diseases of the gallbladder, biliary tree, and pancreas
- K90–K95 Other diseases of the digestive system
- I85 Esophageal varices


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Gastroesophageal Reflux Disease (GERD)


- Gastroesophageal reflux disease
 - With esophagitis (K21.0)
 - Without esophagitis (K21.9)
- Erosive esophagitis, ulcerative esophagitis
 - Without bleeding (K22.10)
 - With bleeding (K22.11)

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Other Diseases of the Esophagus

- Barrett's esophagus (K22.7XX)
- Eosinophilic esophagitis (K20.0)
- Candida esophagitis (B37.81)
- Esophageal ulcer due to medication (K22.1X and T509.05A) or poisoning/suicide attempts
- Strictures/stenosis (K22.2)




Eosinophilic Esophagitis



Erosive esophagitis with stricture

Eosinophilic esophagitis https://commons.wikimedia.org/wiki/File:Multi_ring_esophagus.jpg
Esophagitis with stricture https://commons.wikimedia.org/wiki/File:Peptic_stricture.png

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Ulcers of the Esophagus

- Query opportunities
 - Bleeding
 - Establish causal relationship with endoscopic finding
 - Acute blood loss anemia
 - Nutritional diagnosis

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Mallory-Weiss Tear (K22.6)

- Gastroesophageal laceration—hemorrhagic syndrome




https://en.wikipedia.org/wiki/Mallory%E2%80%93Weiss_syndrome#/media/File:Mallory_Weiss_Tear.tif

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Esophageal Perforation (non-traumatic) (K22.3)

- Boerhaave's syndrome
 - “The patient ate a meal that included veal soup, cabbage boiled with mutton, calf sweetbreads, spinach, duck, two larks, apple compote, bread, and beer”
 - Several hours later patient vomited forcefully, ruptured his esophagus, and died in agony days later



By J. Chapman, <https://commons.wikimedia.org/w/index.php?curid=6707603>


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Esophageal Varices (I85.XX)

- Types:
 - Primary/idiopathic
 - Uncommon
 - Not bleeding (I85.00)
 - With bleeding (I85.01)
 - Secondary
 - Most common type
 - Cirrhosis of the liver
 - Alcoholic liver disease
 - Schistosomiasis (rare in U.S.)
 - Code the underlying cause first (principal diagnosis)

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Secondary Esophageal Varices

- Without bleeding (I85.10)

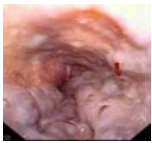


Fig. 1
- With bleeding (I85.11)

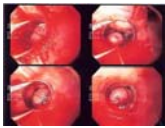



Fig. 2

Fig. 1: https://commons.wikimedia.org/wiki/File:Esophageal_varices_-_wale.jpg
 Fig. 2: https://en.wikipedia.org/wiki/File:Esophageal_varices_being_banded_showing_white_ball_sign_and_wale_sign.jpg


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Esophageal Varices

- Query opportunities
 - Underlying cause (code first)
 - Link the diagnosis with the bleeding
 - Hypovolemic shock
 - ABLA


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Gastric and Duodenal Ulcers

- Gastric ulcers (K25.X)
 - Includes gastric erosions, stomach and pyloric ulcers
- Duodenal ulcers (K26.X)
 - Includes duodenal erosions, postpyloric ulcer
- Gastrojejunal ulcers (K28.X)
 - Marginal, anastomotic

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Gastric and Duodenal Ulcers

- Acute, chronic (default)
- Hemorrhage
- Perforation
- Both hemorrhage and perforation

Examples:

- Gastric ulcer with hemorrhage (K25.4)
- Acute duodenal ulcer with perforation (K26.1)

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Bleeding Gastric Ulcer



https://commons.wikimedia.org/wiki/File:Bleeding_gastric_ulcer.png

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Gastrointestinal Hemorrhage

Patient is admitted with hematemesis.

Upper endoscopy report:


- Duodenal ulcer, no active bleeding present. A clip was placed on a visible vessel.

https://en.wikipedia.org/wiki/Upper_gastrointestinal_bleeding#/media/File:DU_2.jpg

https://en.wikipedia.org/wiki/Upper_gastrointestinal_bleeding#/media/File:GU_with_clip.jpg


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GI Bleed

- GI bleeding with multiple possible sources (AHA Coding Clinic, Third Quarter 2005, pp. 17–18)
- GI bleeding with a single finding (AHA Coding Clinic, Second Quarter 2007, p. 13)
 - The coder should not assume a causal relationship between gastrointestinal bleeding and single finding. **The physician must identify the source of bleeding and link the clinical findings**, as these findings may be unrelated to the bleeding.
- If cause of bleeding is not specified—QUERY!
- A finding not actively bleeding may have bled—QUERY!


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Query Opportunities

- Bleeding
 - Link must be specifically documented
 - Even clean-based ulcers may have bled
- Acute blood loss anemia
- Hypovolemic shock
- Perforation complications
 - Sepsis/septic shock
 - Intra-abdominal/peritoneal abscess

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Arteriovenous Malformations (AVM)



<https://commons.wikimedia.org/wiki/File:Angiodysplasia.jpg>

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Angiodysplasia = Arteriovenous Malformations



"Assign code 537.82, *Angiodysplasia* of stomach and duodenum (without mention of hemorrhage), for the gastric AV *malformation* not stated as congenital" (AHA *Coding Clinic*, Third Quarter 1996, p. 10).

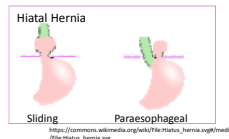
- Angiodysplasia (colon) (cecum):
 - Bleeding (K55.21)
 - Other/unspecified (K55.20)
 - Gastric/duodenal (K31.819), with bleeding (K31.811)
 - Small intestinal—no specific code; suggest use of K55.20 or K55.21
- Most AVMs are acquired—CKD/ESRD. Congenital arteriovenous malformation of digestive system vessel (Q27.33) is rare.

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Hernias



- Femoral (K41.xx)
- Hiatal (esophageal, diaphragmatic, paraesophageal) (K44.x)
- Incisional (K43.x)
- Inguinal (K40.xx)
- Umbilical (K42.x)
- Ventral (K43.x)




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Hernias



- Obstruction
 - Incarcerated, irreducible, strangulated
- Gangrene
 - Acute infarction of intestine includes the terms "gangrene" and "necrosis"
- Both obstruction and gangrene (codes to gangrene)
- Inguinal and femoral—unilateral or bilateral and recurrent or not specified as recurrent

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Non-Infectious Enteritis and Colitis


- Crohn's disease
 - Ulcerative colitis
- Indeterminate colitis (K52.3)
 - Collagenous colitis (K52.831)
 - Lymphocytic colitis (K52.832)
 - Microscopic colitis
 - Other (K52.838)
 - Unspecified (K52.839)
- Toxic (drug-induced) colitis (K52.1)
- Gastroenteritis and colitis due to radiation (K52.0)

Irritable bowel syndrome (IBS) is NOT IBD

Inflammatory bowel disease (IBD)


New codes

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Crohn's Disease	Ulcerative Colitis
Mouth to anus—especially small intestine	Limited to large intestine
Skip lesions (patchy)	Continuous pattern
Extends through entire thickness of bowel wall	Tends to be limited to bowel mucosa
Strictures and fistula are common	Strictures and fistula are uncommon
Bleeding can occur	Bleeding very common
Recurr following surgery	Surgery (colectomy) curative

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Large Intestine (normal)




Normal mucosa (with Endoclips)

https://upload.wikimedia.org/wikipedia/en/1/1a/Postpolypectomy_ulcer.jpg

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Inflammatory Bowel Disease (IBD)



Crohn's disease


https://commons.wikimedia.org/wiki/File:CD_serpiginous_ulcer.jpg



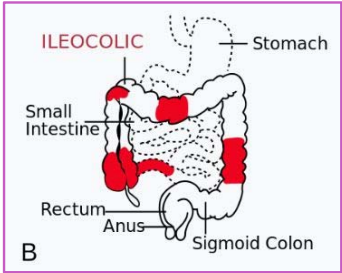
Ulcerative colitis

https://commons.wikimedia.org/wiki/File:CD_colitis_2.jpg

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Crohn's Disease



ILEOCOLIC

Stomach

Small Intestine

Rectum


Anus

Sigmoid Colon

B


https://en.wikipedia.org/wiki/Crohn%27s_disease#/media/File:Patterns_of_Crohn%27s_Disease.svg

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Crohn's Disease (Terminal Ileitis, Regional Enteritis)

- Location
 - Small intestine (duodenum, jejunum, ileum) (K50.0x)
 - Large intestine (K50.1x)
 - Both (K50.8x)
- Complications
 - Abscess
 - Fistula
 - Obstruction
 - Rectal bleeding
 - Other specified



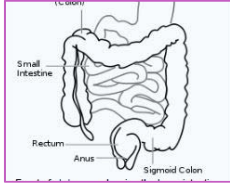
https://en.wikipedia.org/wiki/Crohn%27s_disease#/media/File:Resectedileum.jpg

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Ulcerative Colitis

- Location
 - Proctitis (K51.2x)
 - Rectosigmoiditis (K51.3x)
 - Left-sided (left hemicolitis) (K51.5x)
 - Pancolitis (K51.9x)
 - Other specified (K51.8x)
 - Unspecified (K51.9x)
- Complications
 - Abscess
 - Fistula
 - Obstruction
 - Rectal bleeding
 - Other specified



https://en.wikipedia.org/wiki/Large_intestine#/media/File:Large_intestine_diagram.svg


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IBD Query Opportunities

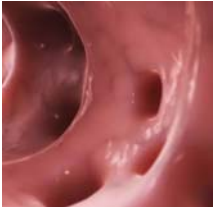
- Malnutrition
- Acute blood loss anemia
- Sepsis (from abscess)
- Hypovolemic shock

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Diverticulosis

- Pockets forming in weak spot of the bowel wall
 - Not infected
- Complications
 - None (K57.30)
 - Bleeding (K57.31)




<https://vimeo.com/184196867>

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Diverticulitis

- Break in diverticulum wall
 - Results in infection
 - Often walled off by mesentery or pericolic fat (microperforation)
- Complications
 - With perforation, peritonitis or abscess (K57.20)
 - With perforation, peritonitis or abscess and bleeding (K57.21)
 - With bleeding only (K57.33)


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Diverticular Disease of the Intestine

- Query opportunities
 - ABLA
 - Hypovolemic shock
 - Sepsis, septic shock
 - “Fluid collection” on CT scan
 - Abscess


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Vascular Disorders of the Intestine

- Ischemia
 - Tissue *injury* due to insufficient blood supply
 - Reversible
 - Intestinal angina
 - Acute, chronic
- Infarction
 - Tissue *death* due to lack of blood supply
 - Necrosis or gangrene
 - Not reversible


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Intestinal Ischemia

- Acute
 - Intestine
 - Focal (K55.051)
 - Diffuse (K55.052)
 - Extent unspecified (K55.09)
 - Small intestine
 - Focal (K55.011)
 - Diffuse (55.012)
 - Extent unspecified (K55.019)
 - Large intestine
 - Focal (K55.031)
 - Diffuse (K55.032)
 - Extent unspecified (K55.039)
- Chronic (K55.1)
 - Chronic ischemic colitis, ischemic intestinal stricture, mesenteric vascular insufficiency
- Vascular disorder of intestine, unspecified (K55.9)
 - Ischemic colitis


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Intestinal Ischemia

- Common conditions
 - Ischemic colitis
 - Acute (K55.039)
 - Chronic (K55.1)
 - Unspecified acuity (K55.9)
 - Mesenteric insufficiency (K55.1)
 - Mesenteric vein thrombosis (I81)
 - Ischemic stricture (K55.1)


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Intestinal Infarction

- Acute
 - Unspecified site
 - Focal (K55.061)
 - Diffuse (K55.062)
 - Extent unspecified (K55.069)
 - Small intestine
 - Focal (K55.021)
 - Diffuse (55.022)
 - Extent unspecified (K55.029)
 - Large intestine
 - Focal (K55.041)
 - Diffuse (K55.042)
 - Extent unspecified (K55.049)
- Mesenteric (artery) thrombosis (K55.069)


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Intestinal Infarction

- Common conditions
 - Acute intestinal infarction (emboli, thrombus)
 - Volvulus, adhesions
 - Incarcerated or strangulated hernia can infarct (gangrene)

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Fluid Collections

- Where is it located?
 - Abdominal wall (L02.211)
 - Intra-abdominal or peritoneal cavity (K65.1)
 - Retroperitoneal (K68.19)
- Cause?
 - Diverticulitis
 - Post-procedural (T81.4XXA + infection code)
 - Ascites—liver disease/neoplasm
 - Pancreatitis—pseudocyst, phlegmon, necrosis
- Infected or sterile?





Photo by Gregor Scheer - Transferred from en.wikipedia to Commons by Common Good using CommonsHelper, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=20030691>


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Fluid Collections

- Abscess (phlegmon)
 - Clues:
 - "Infected" fluid collection
 - Pus
 - Antibiotics
 - Drainage procedures
 - Evidence of infection or sepsis
- Query if diagnosis is not clear


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Diseases of the Liver

- “Transaminitis”
 - Transaminases (ALT/AST) do not get “inflamed”
 - Query for cause of transaminase elevation—shock liver, toxins/drugs, infections


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Shock Liver

- Clinician: Ischemic hepatitis means shock liver
- Coder: Ischemic hepatitis does *not* mean shock liver

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Shock Liver

- Shock liver (*AHA Coding Clinic*, Second Quarter 2014)
 - Acute and subacute hepatic (liver) failure
 - Without coma (K72.00)
 - With coma (K72.01)
- Ischemic hepatitis
 - Other specified inflammatory liver diseases (K75.89), or
 - Hepatic failure (K72.XX)—query for acuity

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Hepatic Encephalopathy



Patient with alcoholic cirrhosis is admitted with confusion. He states his last drink was the evening prior to admission. Oriented in person only, jaundiced, asterixis.

Diagnosis: Hepatic encephalopathy caused by alcoholic cirrhosis

(ICD-10: Alcoholic hepatic failure without coma, K70.40)

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Is Hepatic Encephalopathy (HE) the Same as Hepatic Coma?



- HE stages from mild symptoms to coma
- Coma—a state of deep, unarousable unconsciousness
- AHA Coding Clinic, Second Quarter 2016, p. 35
 - “Hepatic encephalopathy is not synonymous with hepatic coma”
 - “It is the physician’s responsibility to state if patient has hepatic encephalopathy with or without coma”
 - “Assign code for hepatic failure, unspecified, without coma (K72.90) if only documentation is ‘hepatic encephalopathy’”

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Hepatic Encephalopathy



- Query opportunity:
 - Is hepatic coma present?
 - Intubated
 - Unresponsive/minimal or no response to painful stimuli
 - Unable to protect airway
 - Grade (or stage) 4
 - In ICU

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Disorders of the Gallbladder, Biliary Tree, and Pancreas



- Jaundice
 - Cholestatic (intrahepatic)—hepatocellular disease
 - Hepatitis (viral, toxins, drugs)
 - Obstructive (extrahepatic)—mechanical blockage of bile ducts
 - Choledocholithiasis
 - Tumors
 - Sequence the complication (obstruction) first if this is focus of treatment and not the malignancy (*AHA Coding Clinic*, First Quarter 2016, pp. 18–19)
 - Strictures (benign)

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Bile Duct Obstruction



Normal biliary tree and pancreas



https://en.wikipedia.org/wiki/Bile_duct#/media/File:ERCP_Roentgen.jpg

Dilated bile duct (obstruction)



<https://en.wikipedia.org/wiki/Jaundice#/media/File:Obstructivebiliarydilation.png>


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Jaundice



- Query opportunity:
 - Suggests obstructive jaundice:
 - Imaging shows dilated biliary tree
 - Serum transaminases (ALT/AST) slightly or moderately elevated in relation to alkaline phosphatase level
 - Vitamin K corrects prolonged prothrombin time/INR
 - Jaundice with RUQ pain
 - Cholangitis


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Pancreatitis

- Acuity
- Cause
 - Alcohol
 - Biliary (gallstone)
 - Medications
 - Idiopathic
- Severity—new 5th digit level
 - Without necrosis or infection (0)
 - With uninfected necrosis (1)
 - With infected necrosis (pancreatic abscess, phlegmon) (2)

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Accidental Perforation/Laceration During a Procedure

- “If the physician does not explicitly document whether the condition is a complication of the procedure, then the physician should be queried for clarification” (AHA Coding Clinic, Third Quarter 2009, p. 5)
- Physician is responsible to distinguish a condition as a complication—“only a physician can diagnose a condition, and the physician must explicitly document whether the condition is a complication” (AHA Coding Clinic, First Quarter 2011, pp. 13–14)

If documentation is not clear—QUERY!

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Thank you. Questions?

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