

GASTROINTESTINAL RADIOLOGY

**Developed by the
Society of Gastrointestinal Radiology**

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Curriculum in Gastrointestinal Radiology

- I. Physics
 - A. Composition of standard contrast agents
 - B. KVp setting for standard studies
- II. Pharynx
 - A. Technique of examination
 - B. Normal anatomy
 - C. Benign diseases
 - 1. Congenital disorders
 - a. Branchial cleft cysts
 - b. Thyroglossal duct cysts
 - 2. Webs
 - 3. Diverticula
 - 4. Foreign bodies
 - 5. Trauma
 - D. Malignant tumors
 - 1. Primary squamous cancer
 - 2. Salivary gland tumors
 - 3. Lymphoma
 - 4. Metastases
 - E. Motility disorders
 - 1. Normal pharyngeal motion
 - 2. The modified barium swallow
 - F. The postoperative pharynx
 - 1. Total laryngectomy
 - 2. Partial laryngectomies
- III. Esophagus
 - A. Technique of examination
 - B. Normal anatomy
 - C. Benign diseases
 - 1. Congenital abnormalities
 - 2. Diverticula
 - 3. Trauma
 - 4. Esophagitis
 - a. Reflux
 - b. Infectious

- c. Caustic
 - d. Drug-induced
 - 5. Barrett's esophagus
 - 6. Rings, webs, strictures
 - 7. Varices
 - 8. Benign tumors and tumor-like conditions
 - 9. Extrinsic processes affecting the esophagus
 - a. Vascular structures
 - b. Mediastinal structures
 - c. Pulmonary abnormalities
 - d. Vertebral and paravertebral structures
 - D. Malignant tumors
 - 1. Squamous
 - 2. Adenocarcinomas
 - 3. Other malignant tumors
 - E. Motility disorders
 - 1. Normal esophageal motility
 - 2. Primary motility disorders
 - 3. Secondary motility disorders
 - F. The postoperative esophagus
- IV. Stomach
- A. Normal anatomy and variations
 - B. Technique of examination
 - C. Benign diseases
 - 1. Congenital
 - 2. Diverticula
 - 3. Gastritis
 - a. Erosive
 - b. Hemorrhagic
 - c. Atrophic
 - d. Granulomatous and gummatous
 - i. Sarcoidosis
 - ii. Crohn's
 - iii. Syphilis
 - e. Infectious
 - f. Miscellaneous
 - i. Eosinophilic
 - ii. Amyloidosis
 - 4. Peptic ulcer disease
 - a. Epidemiology
 - b. Etiology
 - c. Healing of peptic ulcers
 - d. Complications
 - 5. Hypertrophic gastropathy
 - 6. Varices
 - 7. Motility disturbances

- C. Malignant diseases
 - 1. Primary
 - a. Adenocarcinoma
 - b. Lymphoma
 - c. GI stromal tumors
 - d. Carcinoid
 - 2. Metastatic
 - a. Hematogenous
 - b. Lymphatic
 - c. Peritoneal
- D. The postoperative stomach
 - 1. Technique of examination
 - 2. Expected surgical appearance
 - 3. Complications
- V. Duodenum
 - A. Benign diseases
 - 1. Congenital abnormalities
 - 2. Diverticula
 - 3. Hernia
 - 4. Trauma
 - 5. Inflammation
 - a. Duodenitis
 - b. Duodenal ulcers
 - c. Crohn's
 - 6. Varices
 - 7. Aortoduodenal fistula
 - 8. Systemic diseases
 - a. Sprue
 - b. Whipple's
 - c. Scleroderma
 - 9. Benign tumors
 - B. Malignant diseases
 - 1. Adenocarcinoma
 - 2. Lymphoma
 - 3. Metastatic disease
- VI. Small Intestine
 - A. Technique of examination
 - B. Normal anatomy and variants
 - C. Benign diseases
 - 1. Congenital disorders
 - 2. Diverticula
 - 3. Trauma
 - 4. Vascular diseases
 - a. Intestinal ischemia and infarction
 - b. Radiation enteritis
 - c. Scleroderma

- d. Vasculitides
 - i. Henoch-Schonlein purpura
 - ii. Polyarteritis nodosa
 - iii. Systemic lupus erythematosus
 - iv. NSAIDS enteritis
 - e. Varices
 - 5. Malabsorption
 - a. Sprue
 - b. Lymphangiectasia
 - 6. Inflammatory diseases
 - a. Crohn's
 - b. Infectious and parasitic diseases
 - 7. Benign tumors
 - a. Sporadic
 - b. Associated with polyposis syndromes
 - D. Malignant tumors
 - 1. Adenocarcinoma
 - 2. Lymphoma
 - 3. Carcinoid
 - 4. GI stromal tumors
 - 5. Metastases
 - a. Hematogenous
 - b. Peritoneal
- VII. Colon and Appendix
 - A. Technique of examination
 - B. Normal anatomy
 - C. Benign diseases
 - 1. Congenital abnormalities
 - 2. Diverticular disease
 - a. Demographics
 - b. Pathogenesis
 - c. Diverticulitis
 - 3. Inflammatory diseases
 - a. Crohn's
 - b. Ulcerative colitis
 - c. Infectious colitis
 - i. Pseudomembranous
 - ii. Viral
 - iii. Bacterial
 - iv. Colitis in AIDS
 - d. Appendicitis
 - 4. Ischemic colitis
 - 5. Benign neoplasms
 - a. Adenoma
 - b. Mesenchymal tumors
 - c. Polyposis syndromes

- 6. Motility disorders
 - a. Demographics
 - b. Etiology
 - c. Dynamic proctography
 - i. Technique
 - ii. Findings
 - iii. Surgical decision-making
- D. Malignant diseases
 - 1. Adenocarcinoma
 - a. Demography
 - b. Etiology and risk factors
 - c. Biologic behavior
 - d. Staging
 - e. Surgical decision-making
 - 2. Other malignant tumors
 - a. Lymphoma
 - b. Metastases

VIII. Pancreas

- A. Normal anatomy
- B. Congenital abnormalities and variants
- C. Imaging methods
- D. Pancreatitis
 - 1. Etiology
 - 2. Clinical staging
- E. Pancreatic neoplasms
 - 1. Duct cell adenocarcinoma
 - 2. Cystic pancreatic neoplasms
 - 3. Islet cell tumors

IX. Liver

- A. Normal anatomy
 - 1. Classical gross anatomy
 - 2. Couinaud segmentation
- B. Congenital abnormalities
- C. Imaging methods
- D. Diffuse diseases of the liver
 - 1. Cirrhosis
 - 2. Diseases associated with infiltration
 - a. Fatty infiltration
 - b. Hemochromatosis
 - c. Storage diseases
 - 3. Vascular diseases
 - a. Portal hypertension
 - b. Portal vein occlusion
 - c. Hepatic venous hypertension
- E. Focal diseases of the liver
 - 1. Benign

- a. Focal fatty infiltration
 - b. Cavernous hemangioma
 - c. Liver cell adenoma
 - d. Focal nodular hyperplasia
 - e. Regenerating nodules in cirrhosis
 - 2. Malignant
 - a. Hepatocellular carcinoma
 - i. Epidemiology
 - ii. Etiology and risk factors
 - iii. Surgical decision-making
 - b. Metastases
 - i. Variation in appearance
 - ii. Pitfalls in diagnosis
 - iii. Surgical metastasectomy
 - c. Other malignant liver lesions
 - F. Liver transplantation
 - 1. Surgical candidates
 - 2. Exected postoperative appearance
 - 3. Complications
- X. Spleen
 - A. Normal anatomy and variants
 - B. Congenital abnormalities
 - C. Splenomegaly
 - D. Focal lesions
 - 1. Cysts
 - 2. Hemangioma
 - 3. Infarction
 - 4. Abscess
 - 5. Granulomatous disease
- XI. Bile Ducts and Gallbladder
 - A. Normal anatomy and variants
 - B. Techniques of examination
 - C. Congenital abnormalities
 - 1. Choledochal cysts
 - 2. Caroli's disease
 - D. Inflammatory diseases
 - 1. Gallbladder
 - a. Acute cholecystitis
 - i. Calculous
 - ii. Acalculous
 - b. Chronic cholecystitis
 - 2. Biliary ducts
 - a. Primary sclerosing cholangitis
 - b. Ascending cholangitis
 - c. Recurrent pyogenic cholangitis
 - d. AIDS cholangiopathy

- e. Ischemic injury
- f. Surgical injury
 - i. Mechanisms
 - ii. Bismuth classification
 - iii. Surgical decision-making

XII. Peritoneal Spaces

- A. Normal anatomy and embryology
- B. Distribution of fluid collections
- C. Diseases of the peritoneum
 - 1. Inflammatory diseases
 - a. Bacterial peritonitis
 - b. Sclerosing peritonitis
 - 2. Primary tumors
 - 3. Metastatic tumors

XIII. Retroperitoneum

- A. Normal anatomy and embryology
- B. Retroperitoneal spaces
- C. Retroperitoneal planes
- D. Benign diseases
 - 1. Fibrosis
 - 2. Inflammatory diseases
- E. Malignant tumors

XIV. Mesenteries

- A. Normal anatomy and embryology
- B. Relationship to retroperitoneum
- C. Pathologic conditions
 - 1. Primary
 - 2. Arising in the bowel
 - 3. Arising in the retroperitoneum
 - 4. Arising in the peritoneum
 - 5. Systemic diseases

XV. Percutaneous Biopsy and Fluid Aspiration

XVI. Multisystem Disorders

- A. Acute abdomen
- B. Trauma to the abdomen
- C. Collagen vascular diseases
- D. Syndromes involving the Gastrointestinal Tract