



Learning Objectives for Undergraduate Rotations in General Surgery Year 3 Clerkship

GI Bleeding

- Identify the clinical presentation and features of upper and lower gastrointestinal (GI) tract bleeding and perform a history and physical examination demonstrating this knowledge.
- Describe the principles and technique of assessing intravascular volume status and adequacy of fluid resuscitation.
- Outline the appropriate clinical, laboratory, endoscopic and imaging (CT, angiography, red blood cell scan) investigations in a case of GI bleeding to help delineate its cause and site.
- Describe the pathologic conditions which may be associated with upper G.I. bleeding and the standard surgical management of these conditions.
- Describe the pathologic conditions which may be associated with lower G.I. bleeding and the standard surgical management options of these conditions.

Hernia

- Describe the pathologic hernia-related anatomy of the anterior abdominal wall and inguinal/femoral regions.
- Demonstrate physical examination skills that can help detect and differentiate abdominal wall hernias- specifically indirect and direct inguinal hernias, femoral hernias, incisional hernias and umbilical hernias.
- Define the terms 'reducible', 'incarceration' and 'strangulation' and their clinical significance.
- Denote the usual risk factors, age and gender prevalence of indirect and direct inguinal hernias, femoral hernias, incisional hernias and umbilical hernias.
- Describe the basic techniques of direct and indirect inguinal hernia repairs and demonstrate a knowledge of the attendant risks.

Acute Abdomen

- Propose a differential diagnosis for a patient presenting with bilious vomiting and abdominal distension, including the most common causes of large and small bowel obstruction.
- Demonstrate a systemic approach to abdominal radiograph (AXR) interpretation and recognize the following findings: portal venous gas, small bowel obstruction, large bowel obstruction, toxic megacolon, free air and colonic thickening ("thumbprinting").
- Describe a plan for investigation and management of a patient with a bowel obstruction, including non-operative management, and indications for emergent surgery.
- Define peritonitis and list the usual physical findings.
- Develop a differential diagnosis and outline a plan of appropriate investigation and management for a 40-year-old female who presents with acute generalized peritonitis.

Hepato-pancreatico-biliary (HPB)

- Identify the common causes of obstructive jaundice.
- Develop a differential diagnosis and outline a plan of appropriate investigation and management for a 60-year-old male who presents with jaundice.
- Describe the standard laboratory, imaging (ultrasound, CT, MRI) and endoscopic investigations used to help determine the underlying diagnosis in cases of suspected obstructive jaundice

and/or biliary calculus disease.

- Describe medical, endoscopic and surgical management of obstructive jaundice and biliary calculus disease.
- Discuss important surgical risks for consideration in patients presenting with biliary calculi and/or obstructive jaundice.
- Describe the typical clinical presentation and subsequent workup of a patient with suspected pancreatic malignancy.
- Describe pain management options for patients diagnosed with pancreatic cancer, including celiac plexus block.

Breast

- Describe the basic anatomy of the breast lymphatic drainage.
- Propose a differential diagnosis for a breast mass, including benign and malignant conditions.
- Describe the workup and management plan of common benign breast conditions including mastitis, nipple discharge, gynecomastia and breast abscess.
- Summarize current breast screening guidelines (available on BCCA website) for average risk and high-risk women.
- Summarize the role of radiologists in screening, investigation, and diagnosis of breast disease, including the BI-RADS classification (do not memorize BI-RADS).
- Describe the risk factors for breast cancer.
- Describe the “triple assessment” of a breast mass, including clinical exam, imaging, and biopsy.
- Describe how the TNM Staging of breast cancer impacts treatment options.
- Discuss different surgical options for managing a breast lesion, including breast-conserving (lumpectomy), mastectomy, sentinel node biopsy, and axillary node dissection.
- Discuss the relevance of Estrogen Receptor/Progesterone Receptor/ Her 2 Neu Status in the setting of breast cancer.
- Describe, using breast disease as an example, the importance of interprofessional teams in cancer care and describe how the surgeon contributes to this team.

Colo-recto-anal

- Describe the adenoma - carcinoma sequence in colon cancer
- Differentiate between different types of polyps and the associated cancer risk
- Describe risk factors and the clinical presentation of colon cancer
- Review screening guidelines for average risk patients - refer to BCCA website
- Review TNM Staging (do not memorize) and discuss implications on management of colorectal cancer
- Describe the surgical management of colon cancer based on blood supply and denote 3 different types of stomas using standard surgical nomenclature (i.e. right hemicolectomy, loop ileostomy,etc)
- Describe palliative surgical options for colon cancer
- Differentiate the features of hereditary colon cancer syndromes (FAP, HNPCC) and implications on cancer screening and management
- Differentiate in at least 2 ways Crohn’s colitis and ulcerative colitis
- Differentiate internal hemorrhoids, external hemorrhoids, anal fissure, peri-anal abscess and fistula-in- ano.