**Goal**

Gastroenterology encompasses the evaluation and treatment of patients with disorders of the gastrointestinal tract, pancreas, biliary tract, and liver. It includes disorders of organs within the abdominal cavity and requires knowledge of the manifestations of gastrointestinal disorders in other organ systems, such as the skin. Additional areas include knowledge of nutrition and nutritional deficiencies, and screening and prevention, particularly for colorectal cancer.

The general internist should have a wide range of competency in gastroenterology and should be able to provide primary and in some cases secondary preventive care, evaluate a broad array of gastrointestinal symptoms, and manage many gastrointestinal disorders. The general internist is not expected to perform most technical procedures with the important exception of flexible sigmoidoscopy. However, he or she must be familiar with the indications, contraindications, interpretation, and complications of these procedures.

**Lead Faculty**

Grace Elta, MD

**Objectives**

**Patient Care and Medical Knowledge**

**Dysphagia**

Differentiate oropharyngeal from esophageal
Know the general approach to diagnosis
Oropharyngeal dysphagia
  Use of barium esophagogram/swallowing study
  Use of endoscopy
  Use of ENT/speech pathology
Know the general approach esophageal dysphagia
  Use of endoscopy
  Use of barium esophagogram
Know causes of esophageal dysphagia
  Rings
  GERD
  Stricture
  Pill esophagitis
  Cancer

Know when to include radiology, gastroenterology

**Gastroesophageal reflux**

Know common symptoms
Know common complications (Barrett’s esophagus, stricture, esophageal dysplasia, esophagitis)
Know use of endoscopy/x-ray
Know step up/step down treatment of GERD
Know how to differentiate GERD/NERD
Know when to involve gastroenterology/surgery

**Chest pain**
- Know common symptoms of esophageal chest pain
- Know the roles of x-ray/endoscopy/esophageal manometry/24 hr pH monitoring
- Know how to use PPI, antimotility agents, antidepressants
- Know the role of psychology/psychiatry in management

**Esophageal cancer**
- Know risk factors/alarm symptoms
- Know use of endoscopy/x-rays
- Know the roles of surgery/endoscopic treatment/chemoradiation
- Know the role for hospice/family support

**Esophageal dysmotility**
- Know criteria for/common presentations of:
  - Esophageal spasm
  - Nutcracker esophagus
  - Hypertensive LES
  - Non specific esophageal motility
- Know presentation/pathophysiology/management-Achalasia
  - X-ray/manometric criteria
  - Know treatment algorithms in usual patients/patients with comorbidity

**Dyspepsia**
- Know general approach
- Know empiric treatment strategy
- Know when diagnostic testing is indicated
- Know roles of gastric emptying studies/endoscopy/H. pylori/visceral sensitivity
- Know natural history and follow up

**Peptic ulcer disease**
- Know role of H. pylori, NSAIDs, acid hypersecretion
- Know initial treatment of H. pylori/follow-up strategies
- Know risk factors for NSAID induced ulcers
- Know options for preventing/treating NSAID ulcers
- Know risk factors/diagnosis/treatment of acid hypersecretion (gastrinoma)

**Diarrhea**
- Know causes of acute diarrhea
- Know initial treatment of acute diarrhea
- Know the approach to chronic diarrhea
  - Fecal weight
  - Osmotic/secretory diarrhea
  - Role of endoscopy/biopsy
  - Know risk factors for secretory diarrhea
    - Endocrine tumors
    - Diabetes
    - Bacterial overgrowth
    - Laxative use
- Know how to evaluate fat malabsorption
  - Fecal fat collection
Small intestinal biopsy
Pancreatic function tests
Risk factors/tests for bacterial overgrowth
Know causes/tests for vit. B12/folate deficiency
Know how to use Schilling test
Evaluation for celiac sprue/pancreatitis/post surgical causes
Know about small bowel tumors
- Lymphoma
- Adenocarcinoma
- Carcinoid tumor

Colon cancer
Know prevention/screening strategies
Know use/limitations of colon cancer strategies
- Fecal blood screening
- Flexible sigmoidoscopy
- Colonoscopy
- Barium x-rays
- Virtual endoscopy
- Genetic stool studies
Know diagnosis/treatment strategies for colon polyps
Know roles of surgery/adjuvant therapy/radiation/chemoprevention

Inflammatory bowel disease (acute)
Know acute versus chronic inflammatory bowel disease
Know ischemic/radiation/pill induced colitis
Know acute infectious causes including c. difficile/EHEC
Initial diagnosis/treatment options

Irritable bowel syndrome
Know differentiation from Inflammatory Bowel Disease
Know pathophysiology/causative factors
Know criteria (Rome Criteria) for diagnosis
Know treatment strategies/limitations
Know novel treatments

Chronic colonic bleeding
- AVMs, Diverticulitis, ischemia, radiation-diagnosis/treatment

Chronic GI bleeding
Know approach to diagnosis
- Role of colonoscopy/EGD/enteroscopy/wireless capsule endoscopy
Know treatment options for blood loss anemia
  - Iron supplementation
  - Use of erythropoietin
  - Know role of transfusion of blood

Anal dysfunction
Know approach to fecal incontinence
Treatment of hemorrhoid
Diagnosis/treatment anal fissure
Defecation disorders
**Diverticular disease**
- Know criteria for diverticulitis
- Know initial treatment options
- Recognize complications of diverticular disease/cause/treatment
  - Abscess
  - Obstruction
  - Fistula
  - Bleeding
- Know radiology/surgery role

**Constipation**
- Differentiate from IBS
- Know causes (particularly drug induced)
- Know definition/management colonic inertia
- Know tests for constipation
  - Colonic marker tests
  - Nuclear medicine testing
  - Anorectal manometry
  - Defacography/balloon expulsion tests

**Chronic pancreatitis**
- Know common causes chronic pancreatitis
- Know usual presentations/treatment of chronic pancreatitis
  - Pancreatic pseudocyst
  - Biliary obstruction
  - Pancreatic insufficiency
  - Chronic pain
- Role of radiology/endoscopic/surgical treatment

**Practice-based Learning and Improvement**
Discuss the evidence base for various common GI conditions

**Interpersonal and Communication Skills**
Adapt history-taking skills to the mental status and psychosocial presentation of the patient and family.
Communicate with patients and other professionals (other house officers, the attending physician, other services, and other non-University of Michigan facilities).
Obtain informed consent for procedures, weighing the patient's autonomy and participation in health care decisions.

**Professionalism**
Anticipate and address the complexities of family care at home, potential abusive relationships, possible medical compliance problems and financial limitations of health care.
Describe the issues surrounding substance abuse and chronic liver disease, especially in the context of liver transplantation. The issues include substance abuse and alcoholism in a patient to be considered for liver transplantation or in a patient already listed for a liver transplant.
Discuss issues of palliation for patients with gastrointestinal malignancies including the use of laser therapy, luminal stents, blood transfusions, enteral and parenteral alimentation, radiation and chemotherapy, hospice care, effects on employment and family. Discuss when the DNR status is appropriate and when this issue should be brought up to patients and families, in the patient with end-stage liver disease, gastrointestinal malignancy, and other life-threatening diseases. Negotiate appropriate management for the hostile or narcotic-seeking patient.

**Systems-based Practice**
- Discuss cost issues, directed work-up, indications for endoscopy, potential complications of therapies.
- Discuss cost-effectiveness of various treatment modalities.
- Interface with non-health care professionals to assist in initial and long-term (post discharge) patient management (interns).

**Teaching Methods**
- Daily rounds
- Patient evaluations
- Daily teaching conference
- Independent readings

**Evaluation**
Learning goals are established with each resident by the attending at the beginning of the month. Formative face-to-face feedback to residents by attendings occurs at mid-month. Each month, the attendings complete written evaluations of residents and these learners evaluate the attendings.

**Resources**
- Endoscopic simulation
- Direct procedure visualization OPTIONAL performance
- Up-to-Date™
- Common websites (AGA, ACG, ASGE, AASLD)

**Schedule**

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