

PROTOCOL OVERVIEW

- A detailed history and physical examination often is more helpful in establishing a diagnosis for acute **abdominal pain** with less risk to the patient than a premature and costly diagnostic evaluation.
- Early, appropriate general surgery consult may prevent both unnecessary studies and undue delay in care
- Older or immunocompromised patients may have atypical, subtle, or even absent clinical manifestations of disease.
- The more common diagnoses include:
 - Appendicitis
 - Gallbladder disease
 - Gastroenteritis
 - Diverticular disease
 - Intestinal obstruction
- Of patients presenting with acute **abdominal pain**, up to 33% will not result in a specific diagnosis.
 - When no cause is found, serious illness is unlikely and the pain usually resolves.
 - Confirm timely follow-up if etiology is unclear.

INDICATIONS

Clinical Indications for Imaging

- Supine and upright films of the abdomen
 - Indicated to evaluate clinical suspicion of ANY ONE of the following:
 - Bowel obstruction
 - Viscus perforation or ischemia
 - Unexplained peritonitis
 - Renal colic
- Ultrasound of pelvis
 - Indicated to evaluate clinical suspicions of ANY ONE of the following:
 - Ectopic pregnancy
 - Equivocal cases of suspected acute appendicitis
 - Acute **abdominal pain** in young adult woman or pregnant woman
 - Ovarian enlargement or cysts
- Ultrasound of abdomen
 - Indicated to evaluate clinical suspicions of ANY ONE of the following:
 - Chronic cholecystitis, gallbladder-wall-thickening, or gallstones
 - Appendicitis as indicated by presence of ANY ONE of the following:
 - After surgical consultation
 - Atypical presentation
 - Pregnant woman or woman with risk of adnexal disease
 - Ectopic pregnancy
 - Ascites

- Liver masses or enlarged liver
 - Acute **abdominal pain** in young adult woman and pregnant woman
 - Ovarian enlargement on physical exam
 - Renal colic if patient has contrast allergy or serum creatinine >2.0
- CT scan of abdomen
 - Indicated for **abdominal pain** when ANY ONE of the following is present:
 - Equivocal cases of suspected acute appendicitis (helical)
 - Palpable mass
 - History of malignancy
 - Diverticulitis with suspected abscess
 - Suspected intestinal ischemia
 - Suspected pancreatitis
 - Suspected leaking abdominal aortic aneurysm (AAA)
 - Suspected abdominal or pelvic abscess
 - Intestinal obstruction, when plain films cannot identify obstruction
 - Blunt or penetrating abdominal trauma
- Water-soluble GI contrast studies
 - Indicated for ANY ONE of the following (using water-soluble contrast):
 - Suspected perforation
 - Suspected partial intestinal obstruction
- Oral barium contraindicated for patient with suspected colonic obstruction
- Barium enema
 - Indicated for suspected colonic obstruction when possible perforation is not a concern
- Radioisotope scan, e.g., HIDA, PIPIDA
- Angiography
 - Indicated for selected patients when ALL of the following are present:
 - Dull, cramping midabdominal **pain** occurring 15 to 30 minutes after eating
 - Gradual weight loss
 - No other explanation for symptoms
- Magnetic resonance imaging
 - Not routinely used as a primary diagnostic tool

Clinical Indications for Referral

- Referral threshold depends on the specific condition diagnosed or suspected
- Refer for ANY ONE of the following:
 - Further evaluation of surgical abdomen
 - Suspicion of peritoneal irritation
 - Persistent **abdominal pain** without explanatory diagnosis
 - Significantly abnormal examination including ANY ONE of the following:
 - Localized tenderness
 - Abnormal rectal examination
 - Heme positive stools
 - Markedly abnormal bowel sounds

Clinical Indications for Hospitalization

- Emergent evaluation or management of **1 or more** of the following:
 - Abdominal aortic aneurysm, abscess or dissection
 - Acute abdominal pain, and clinical suspicion of **1 or more** of the following:

- Acute cholecystitis, Hepatitis, Pancreatitis, Pelvic inflammatory disease, Pyelonephritis, Appendicitis, Bowel obstruction, Cholangitis, Diverticulitis, Ileus, Incarcerated hernia, Mesenteric ischemia, Ovarian torsion, Perforation, Testicular torsion, Volvulus
 - Diabetic ketoacidosis
 - Ectopic pregnancy
 - Intussusception
 - Ischemic bowel disease
 - Malignancy
 - Meckel diverticulum
 - Myocardial infarction
 - Nephrolithiasis
 - Pneumonia
 - Porphyria
 - Pulmonary embolism
 - Sickle cell crisis
 - Trauma
 - Uremia
- Findings on imaging tests, including **1 or more** of the following:
 - Abdominal free air
 - Bowel obstruction
 - Dilated biliary tree
 - Dilated small bowel loops
- Findings on physical examination, including **1 or more** of the following:
 - Abdominal pain out of proportion to examination
 - Altered mental status
 - Bloody, maroon, or melanic stool
 - Peritoneal signs
 - Vital sign abnormality
- Severe “red flag” or “alarm” features including **1 or more** of the following:
 - Fever
 - Light-headedness or syncope
 - Obstipation
 - Overt gastrointestinal blood loss
 - Recent surgery or endoscopic procedure
 - Vomiting or inability to maintain adequate oral intake
- Gastroenterology referral for reevaluation or management of chronic abdominal pain and **1 or more** of the following:
 - Clinical suspicion of 1 or more of the following:
 - Chronic pancreatitis
 - Diverticulosis
 - Functional abdominal pain
 - Gastroparesis
 - Inflammatory bowel disease
 - Irritable bowel syndrome
 - Peptic ulcer disease
- Gynecology referral for evaluation or management of **1 or more** of the following:
 - Endometriosis
 - Gynecologic cancer
 - Pelvic inflammatory disease
- Hematology referral for evaluation or management of porphyria
- Interventional radiology referral for fine needle aspiration of suspected infected pancreatic necrosis

- Nephrology referral for evaluation or management of uremia
- Oncology referral for evaluation or management of malignancy
- Urology referral for evaluation or management of nephrolithiasis
- Vascular surgery referral for evaluation or management of abdominal aortic aneurysm

CITATION

Milliman Care Guidelines, “Ambulatory Care”, “Abdominal Pain – Referral Management”, 23rd Edition, 2/26/2019