ABDOMINAL PAIN DDx

EM FLAME LECTURE: 01

COLLINS 9.28.20

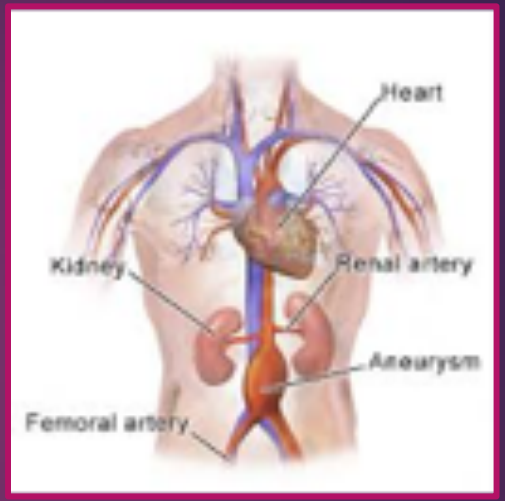
LEARNING OBJECTIVES

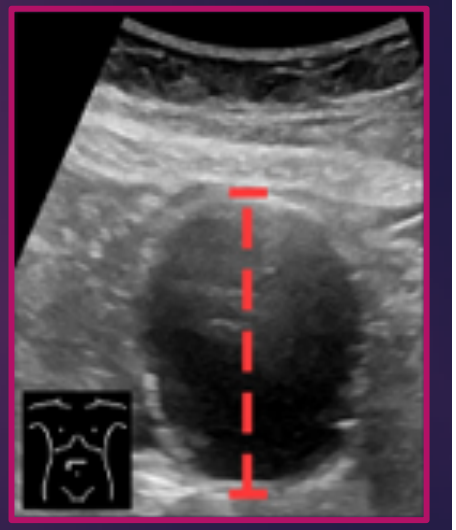
By the end of this talk learners will be able to:

- Understand differential diagnosis for the chief complaint of Abdominal Pain
- Describe the initial workup for abdominal pain
- See also – for closely related topics
  - FLAME LECTURE 16: Abdominal Trauma
  - FLAME LECTURE 19B: Pelvic Pain

THE "CAN'T MISS" DIAGNOSES

- Ruptured Aortic Aneurysm
  - Suspect with: hypotension, sudden onset severe pain, elderly, smoking history
  - Immediate action:
    - Bedside Ultrasound
    - Type and Cross
    - Vascular surgery consult





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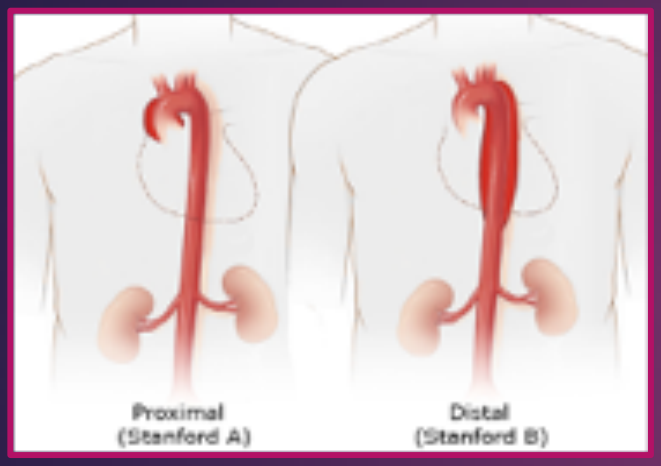
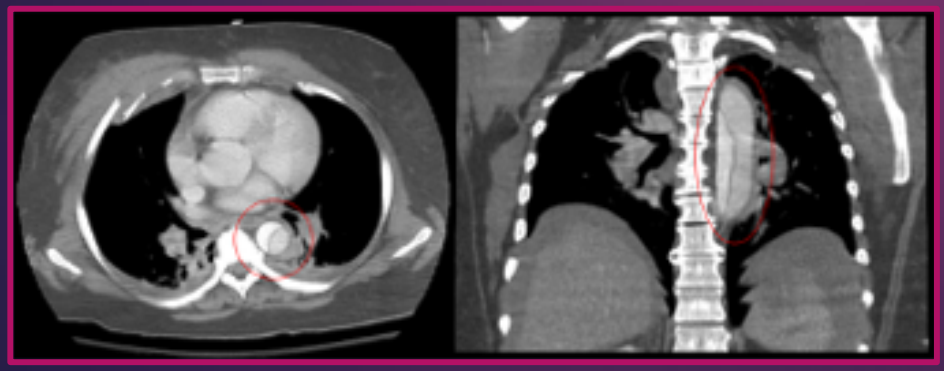
THE "CAN'T MISS" DIAGNOSES





- Aortic Dissection
  - Suspect with "tearing" pain, pain that radiates to the back, uneven extremity pulses
  - Immediate action:
    - BP control
    - Vascular surgery consult

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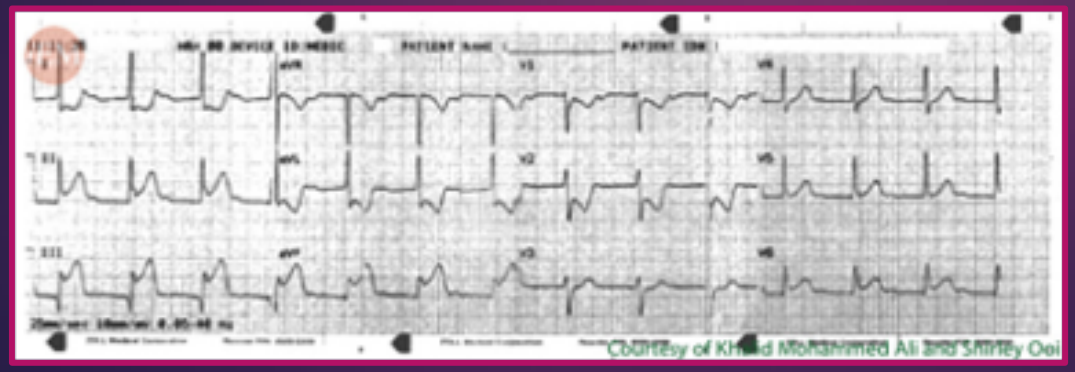
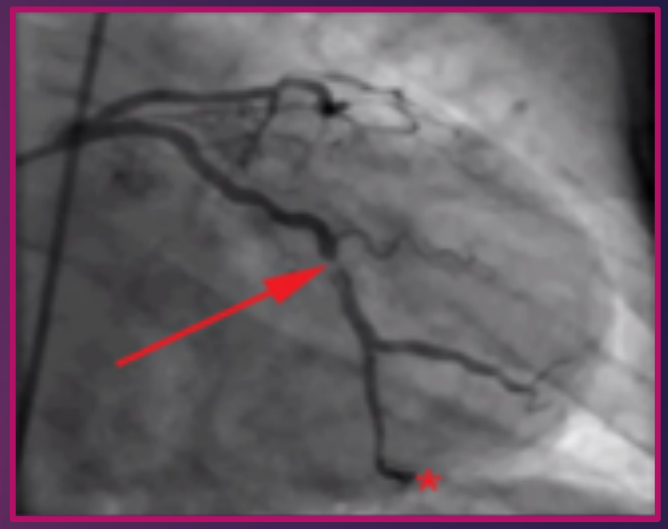
THE "CAN'T MISS" DIAGNOSES

- Myocardial Infarction
  - Suspect with: EKG changes, history of MI
  - Immediate action: Activate Cath Lab, Aspirin, Labs
  - See ACS FLAME lecture





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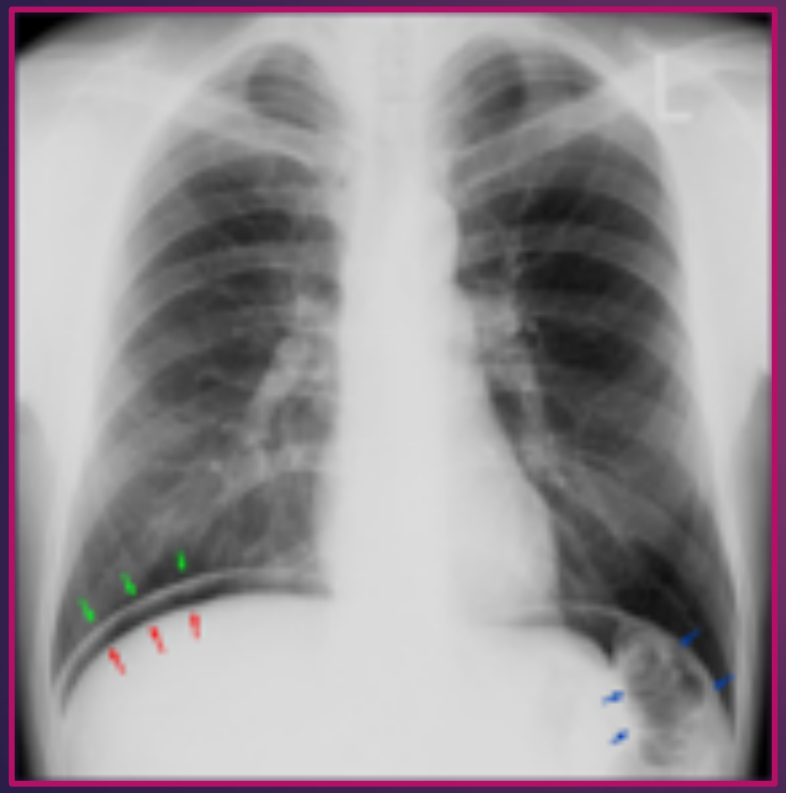
THE "CAN'T MISS" DIAGNOSES



- Perforated Hollow Viscus
  - Suspect if patient has signs of peritonitis (*rebound tenderness, guarding*) on exam
  - Immediate action:
    - Upright CXR for free air
    - Antibiotics
    - Emergent surgery

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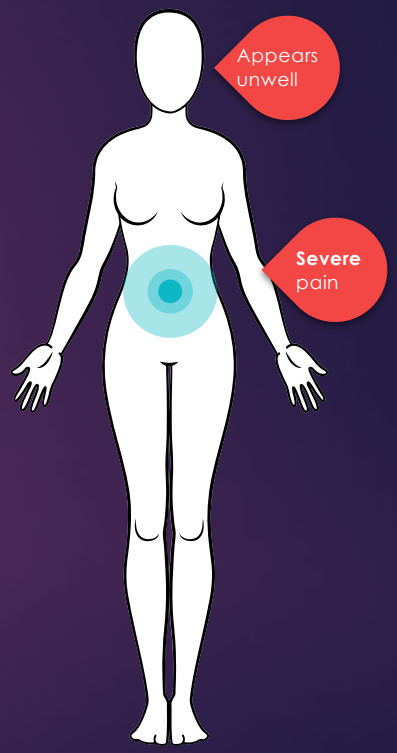
THE "CAN'T MISS" DIAGNOSES

- Mesenteric Ischemia
  - Suspect when the pain is out of proportion to the exam
  - Immediate stabilizing action
    - CT angiogram
    - IV Fluids
    - Antibiotics with anaerobic coverage
    - Emergent Surgery



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GLOBAL DIFFERENTIAL DIAGNOSIS

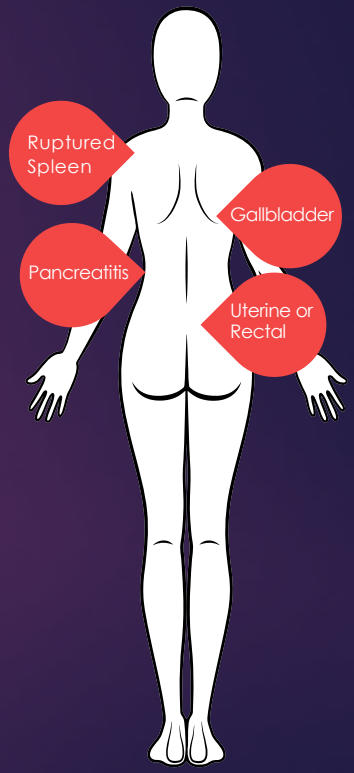
RUQ
- Biliary colic
- Cholecystitis
- Gastritis
- GERD
- Acute Hepatitis
- Pancreatitis
- Perforated Ulcer
- RLL Pneumonia

RLQ
- Appendicitis
- Meckel's diverticulum
- Diverticulitis
- Endometriosis
- Ovarian cyst/torsion
- Ectopic Pregnancy
- Psoas abscess
- UTI
- Hernia

Diffuse
- Peritonitis
- Pancreatitis
- Sickle Cell Crisis
- Appendicitis
- Gastroenteritis
- AAA
- IBD
- SBO/LBO

LUQ
- Gastritis
- Pancreatitis
- GERD
- Splenic pathology
- MI
- Pericarditis
- LLL Pneumonia
- Pleural effusion

LLQ
- Diverticulitis
- Hernia
- Endometriosis
- Ovarian cyst/torsion
- Ectopic Pregnancy
- Psoas abscess
- UTI



Referred Abdominal Pain

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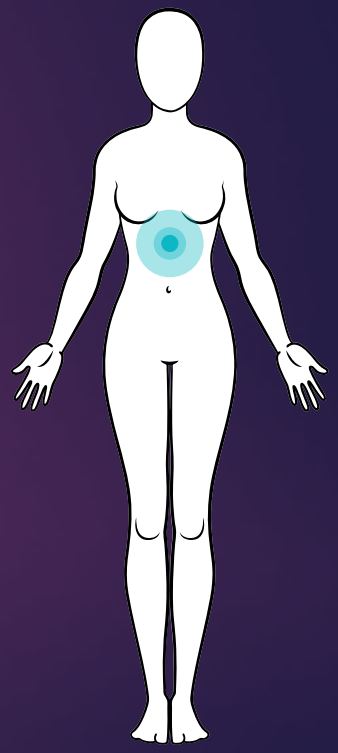
THE MOST COMMON CAUSES

- Gastritis
  - Epigastric pain
  - Burning/sharp
  - Mild to severe
  - +/- radiation
  - May be associated with certain foods, stress, or position



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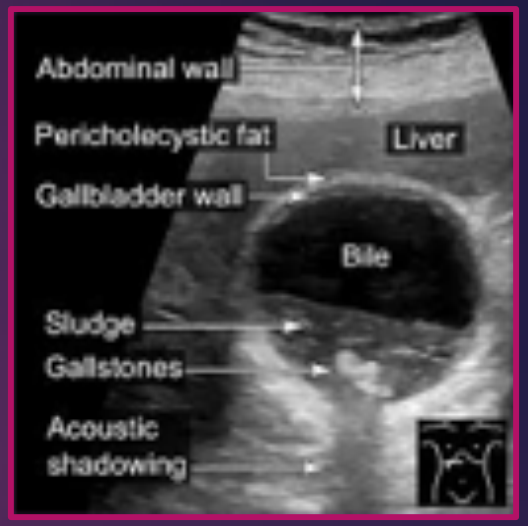
THE MOST COMMON CAUSES

- Biliary Tract Disease
  - Often chronic intermittent RUQ or Epigastric
  - Crampy
  - Mild to severe
  - +/- radiation to R subscapular
  - May be associated with eating



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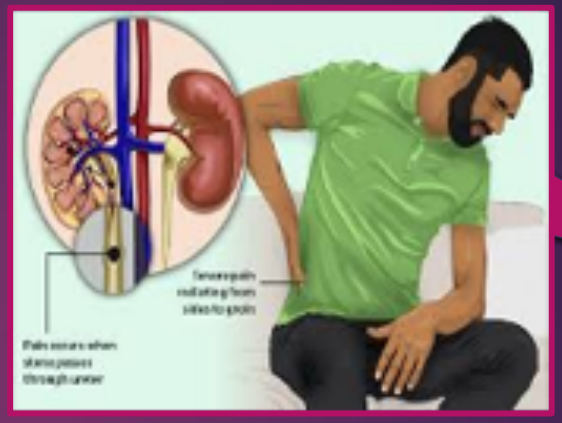
THE MOST COMMON CAUSES

- Ureteral Colic
  - Acute flank pain
  - severe
  - radiating to groin
  - + N/V
  - +CVA tenderness



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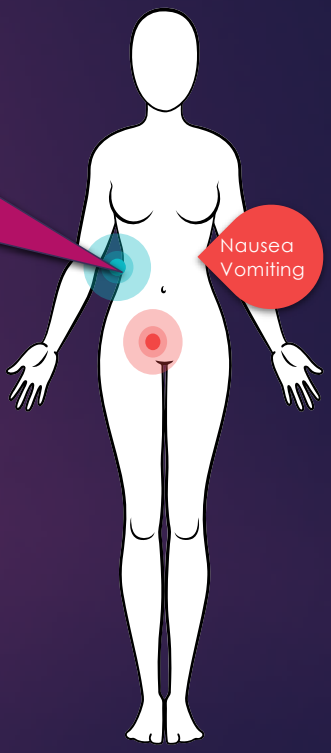

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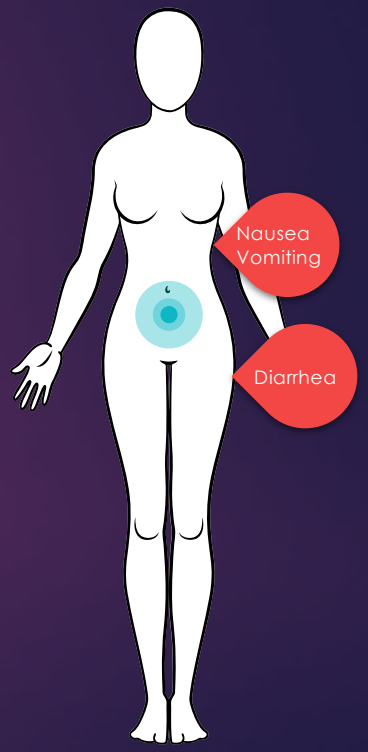
THE MOST COMMON CAUSES

- Gastroenteritis
  - Acute crampy/sharp diffuse or lower abdominal pain
  - + N/V and/or diarrhea
  - +/- History of new food or sick contacts



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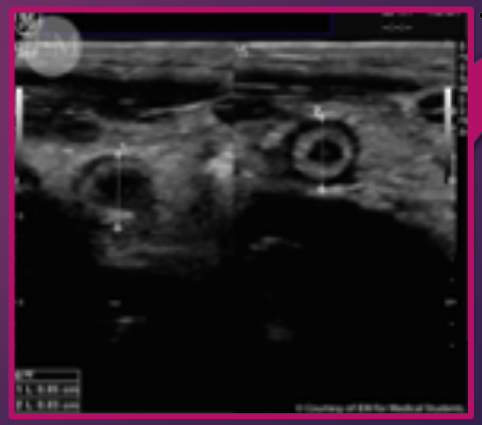
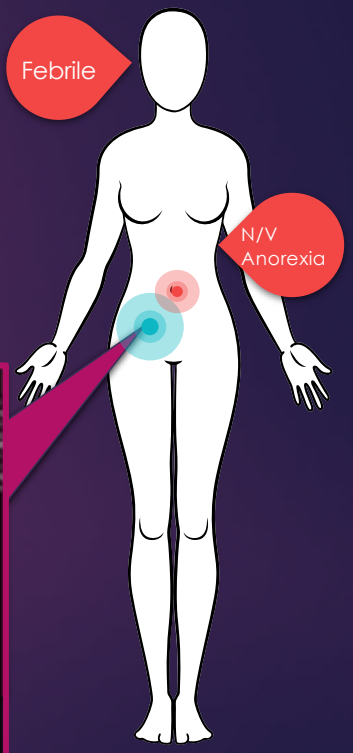
THE MOST COMMON CAUSES

- Acute Appendicitis
  - Acute gradually increasing pain
  - Starts periumbilical/epigastric then moves to RLQ
  - + Anorexia
  - +/- N/V
  - Low grade fever
  - + Psoas sign/obturator sign





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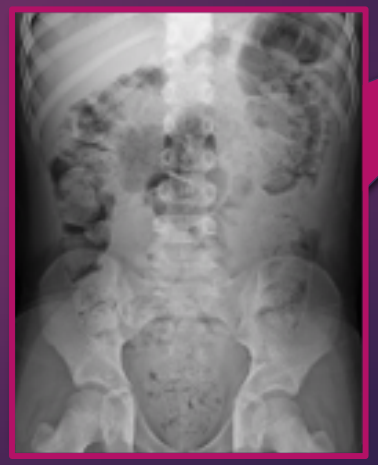
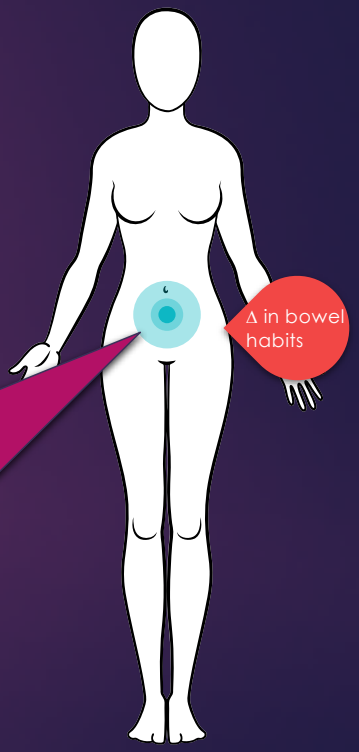
THE MOST COMMON CAUSES

- Constipation
  - Diffuse or lower abdominal pain
  - History of constipation, bloating, or change in bowel habits





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RELEVANT HISTORY

- Detailed OLDCARTS/OPQRSTAAA
- Signs of infection
  - Fever, chills, N/V, hx of sick contacts or exposure (travel)
- Changes in bowel movements
- Ob/Gyn history including sexual history, LMP, and contraception use

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RELEVANT PHYSICAL EXAM

- Detailed abdominal exam
  - Murphy's sign, obturator sign, psoas sign, Rovsing's sign, McBurney's point, fluid wave assessment
- Consider:
  - **Pelvic exam** for females with lower abdominal pain and hx suspicious for pelvic source
  - **Rectal exam** looking for presence of hard feces in rectal vault (constipation) or lack of contents (SBO/LBO), blood (ulcer, gastroenteritis)

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INITIAL WORK UP

- Vitals with immediate resuscitation if warranted
- Early consideration of need for emergent surgery
- EKG in elderly, women, diabetics to rule out cardiac etiology as abdominal pain can be a chest pain equivalent

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INITIAL WORK UP

- **CBC** – look for signs of infection, anemia
- **CMP** – look for severe electrolyte derangements that can cause (Ca) or result from (K, Mg, Cl) GI distress, LFTs can show severe hepatic and biliary causes
- **UA** – look for signs of UTI, pyelonephritis, ureteral colic
- **HCG** to rule out pregnancy
- **Lipase** for possible pancreatitis

- **CXR** – may show free air under diaphragm, may rule out pulmonary etiology
- **Abdominal series** – look for air fluid levels, sigmoid volvulus, severe constipation
- Consider **RUQ US**, **CT** w/ IV +/- Oral contrast, **Pelvic US** depending on your suspicions and likelihood of the need for surgical planning

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SUMMARY

CHIEF COMPLAINT	CAN'T MISS	MOST COMMON	OTHER DX	WORK UP
Abdominal Pain	-Ruptured AAA -Aortic Dissection -MI -Perforated Viscus -Mesenteric Ischemia	-Gastritis/ Gastroenteritis -Biliary tract dz -Ureteral colic -Constipation -Appendicitis	-See chart for Ddx by location of pain	-Labs: CBC, CMP, HCG, Lipase, UA -Imaging: CXR, Abd series, +/- CT/RUQ US/Pelvic US -EKG

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CDEM M4 Curriculum

IMPORTANT LINKS / REFERENCES

1. 2016 Model of the Clinical Practice of Emergency Medicine
2. Welsh, EMRA EM Fundamentals 2016
3. Marx JA. Rosen's Emergency Medicine 2014
4. CDEM M4 Curriculum
5. Icons provided by SlidesCarnival.com