

# AMSER Case of the Month

## July 2023

19-year-old female presenting with melena



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# Patient Presentation

- History of present illness: unintentional weight loss and 3-day history of melena
- Past medical history: Pneumonia with empyema requiring decortication
- Physical examination: Tachycardia. Unremarkable abdominal exam
- Vitals: Afebrile, 122/75, HR 145, RR 24, SpO2 on room air 100%
- Labs: pancytopenia

What Imaging Should We Order?

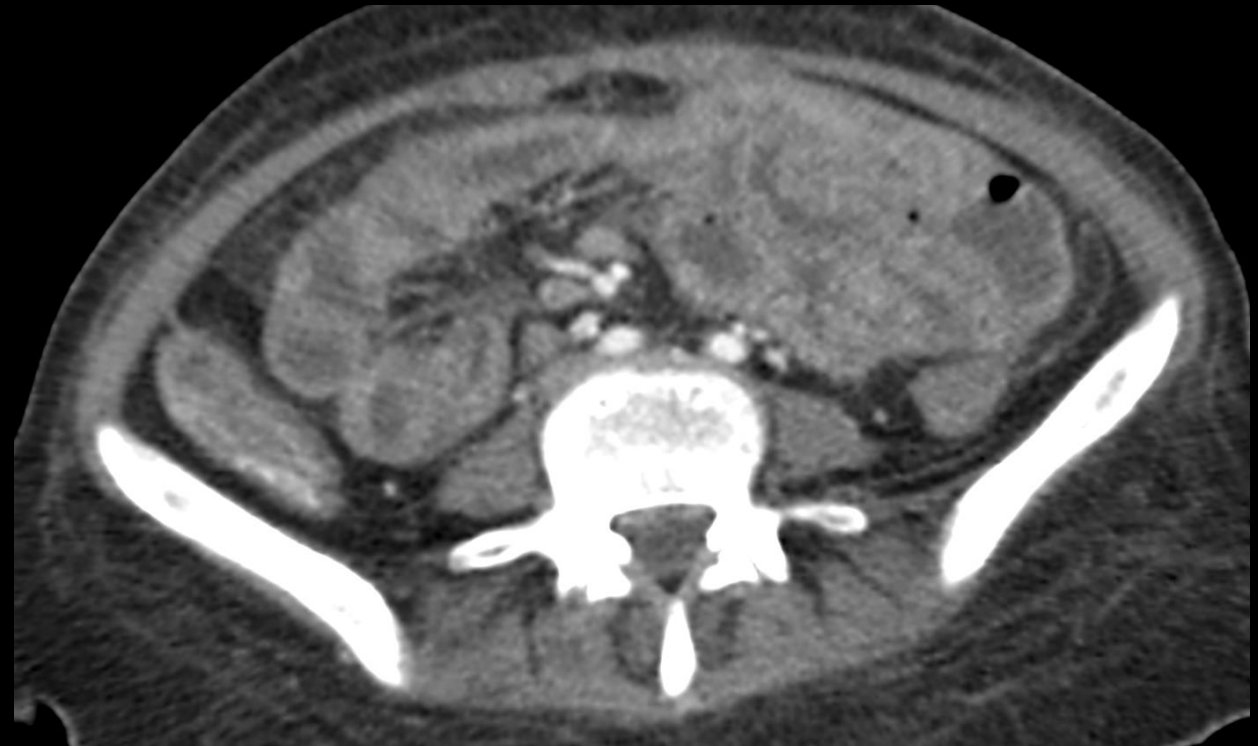
# Select the applicable ACR Appropriateness Criteria

**Variant 3:** Acute nonlocalized abdominal pain. Neutropenic patient. Initial imaging.

Procedure	Appropriateness Category	Relative Radiation Level
CT abdomen and pelvis with IV contrast	Usually Appropriate	☼☼☼
CT abdomen and pelvis without IV contrast	May Be Appropriate	☼☼☼
MRI abdomen and pelvis without and with IV contrast	May Be Appropriate	○
US abdomen	May Be Appropriate	○
MRI abdomen and pelvis without IV contrast	May Be Appropriate	○
CT abdomen and pelvis without and with IV contrast	May Be Appropriate	☼☼☼☼
FDG-PET/CT skull base to mid-thigh	Usually Not Appropriate	☼☼☼☼
WBC scan abdomen and pelvis	Usually Not Appropriate	☼☼☼☼
Radiography abdomen	Usually Not Appropriate	☼☼
Nuclear medicine scan gallbladder	Usually Not Appropriate	☼☼
Fluoroscopy contrast enema	Usually Not Appropriate	☼☼☼
Fluoroscopy upper GI series with small bowel follow-through	Usually Not Appropriate	☼☼☼

This imaging modality was ordered by the ER physician

# Findings (unlabeled)



## Findings (labeled)



Contrast-enhanced CT of the abdomen and pelvis demonstrates diffuse wall thickening of the small bowel (**orange arrows**), numerous enlarged mesenteric lymph nodes (**green arrows**), and hazy peritoneal thickening and stranding (**blue arrows**).

Final Dx:

Intestinal and peritoneal tuberculosis

# Intestinal and Peritoneal Tuberculosis

- An immunocompromised state increases the likelihood for extrapulmonary tuberculosis.
  - The abdomen is the most common site for extrapulmonary disease.
- Abdominal tuberculosis can present with a variety of imaging findings, including but not limited to:
  - Lymphadenopathy
  - Peritonitis
  - Gastrointestinal tract and solid organ involvement



# Intestinal and Peritoneal Tuberculosis

- Peritoneal tuberculosis has classically been classified as “wet” (with ascites), “dry”, and “fixed-fibrotic”.
- Gastrointestinal tuberculosis typically demonstrates ileocecal involvement.

# Intestinal and Peritoneal Tuberculosis

- Imaging features include:
  - Bowel wall thickening
  - Skip areas with luminal narrowing
  - Abdominal lymphadenopathy
  - Ascites, loculated collections, peritoneal thickening
- Differential diagnosis may include:
  - Inflammatory disease, including Crohn's disease, sarcoidosis
  - Neoplastic disease, including peritoneal carcinomatosis, lymphoma, mesothelioma
  - Other infections disease, including peritoneal paragonimus
- Diagnosis:
  - Clinical suspicion based on imaging appearance and caseating granulomas on tissue sampling are beneficial for diagnosis.

# References:

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