

AMSER Case of the Month

November 2025

57 year-old female with abdominal pain

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Patient Presentation

HPI: 57F no PMH w/ strong family history of malignancy presenting with 3 weeks of progressive abdominal pain and emesis. Endorsing abdominal fullness. Denies B symptoms.

Vitals: BP 139/66 Pulse 88 Temp 98.2 BMI 24

Physical exam: +epigastric tenderness

Pertinent Labs

- Lipase wnl
- Troponins wnl
- ECG: no e/o STEMI

What Imaging Should We Order?

Select the applicable ACR Appropriateness Criteria

This imaging modality was ordered by the ER physician



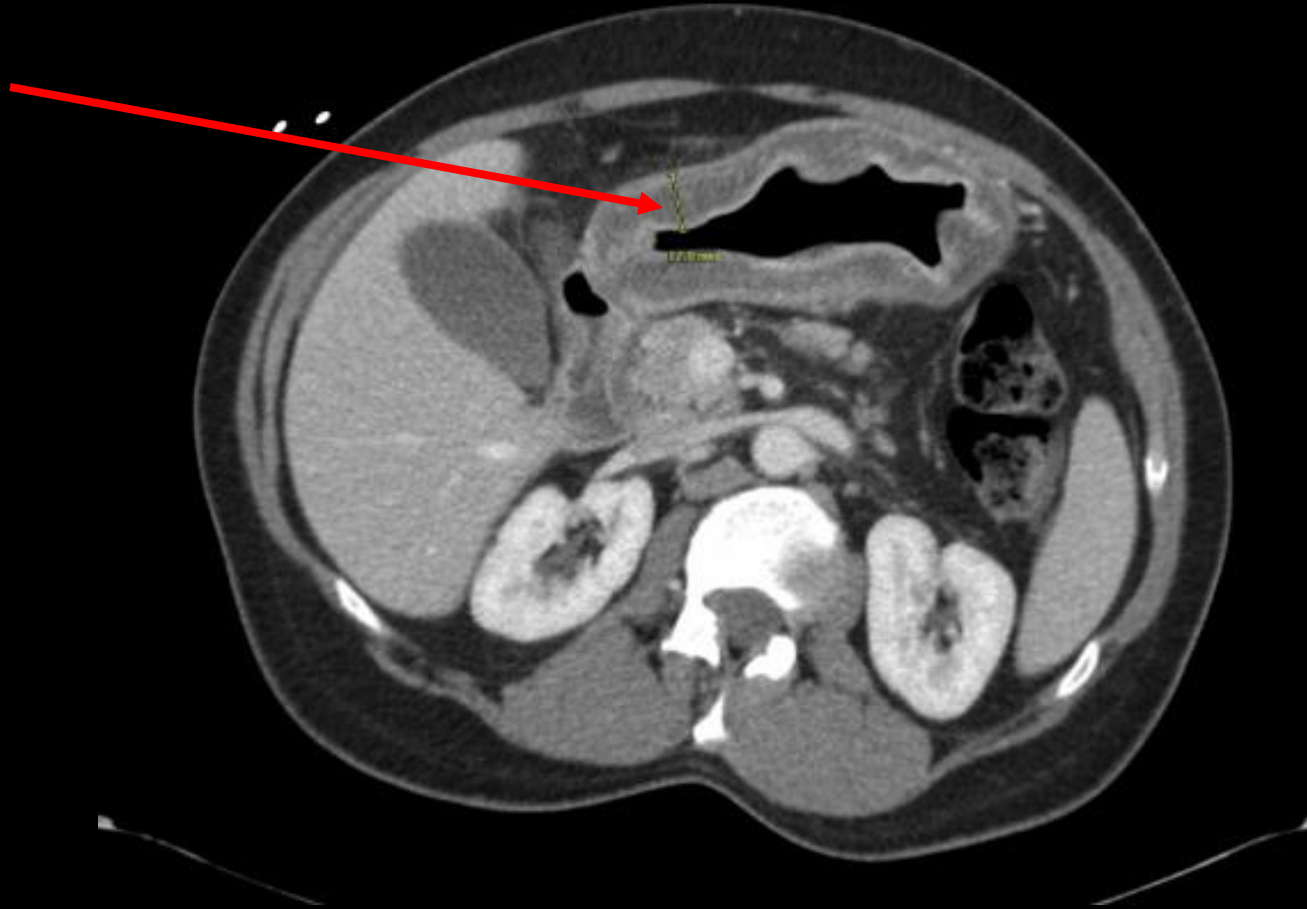
Scenario	Scenario ID	Procedure	Adult RRL	Peds RRL	Appropriateness Category
Epigastric pain, gastric cancer suspected, initial imaging	3194203	● Fluoroscopy upper GI series	1-10 mSv ☼☼☼	0.3-3 mSv [ped] ☼☼☼	Usually appropriate
		● CT abdomen and pelvis with IV contrast	1-10 mSv ☼☼☼	3-10 mSv [ped] ☼☼☼☼	Usually appropriate
		● CT abdomen and pelvis without IV contrast	1-10 mSv ☼☼☼	3-10 mSv [ped] ☼☼☼☼	May be appropriate
		● CT abdomen with IV contrast	1-10 mSv ☼☼☼	3-10 mSv [ped] ☼☼☼☼	May be appropriate (Disagreement)
		● CT abdomen without IV contrast	1-10 mSv ☼☼☼	3-10 mSv [ped] ☼☼☼☼	May be appropriate
		● CT abdomen with IV contrast multiphase	10-30 mSv ☼☼☼☼		May be appropriate
		● Fluoroscopy biphasic esophagram	1-10 mSv ☼☼☼		Usually not appropriate
		● Fluoroscopy single contrast esophagram	1-10 mSv ☼☼☼		Usually not appropriate
		● MRI abdomen without and with IV contrast	0 mSv O	0 mSv [ped] O	Usually not appropriate
		● MRI abdomen without and with IV contrast with MRCP	0 mSv O	0 mSv [ped] O	Usually not appropriate
		● MRI abdomen without IV contrast	0 mSv O	0 mSv [ped] O	Usually not appropriate
		● MRI abdomen without IV contrast with MRCP	0 mSv O	0 mSv [ped] O	Usually not appropriate
		● CT abdomen and pelvis without and with IV contrast	10-30 mSv ☼☼☼☼	10-30 mSv [ped] ☼☼☼☼☼	Usually not appropriate
		● CT abdomen without and with IV contrast	10-30 mSv ☼☼☼☼	10-30 mSv [ped] ☼☼☼☼☼	Usually not appropriate
● FDG-PET/CT skull base to mid-thigh	10-30 mSv ☼☼☼☼	3-10 mSv [ped] ☼☼☼☼	Usually not appropriate		

Findings (unlabeled)



Findings: (labeled)

Diffusely thickened (up to 1.7 cm) stomach w/ submucosal hypoattenuation



Findings (unlabeled)



Findings (labeled)

Ill-defined 1.3cm
hypodense lesion in
segment 8 of liver



Findings (unlabeled)

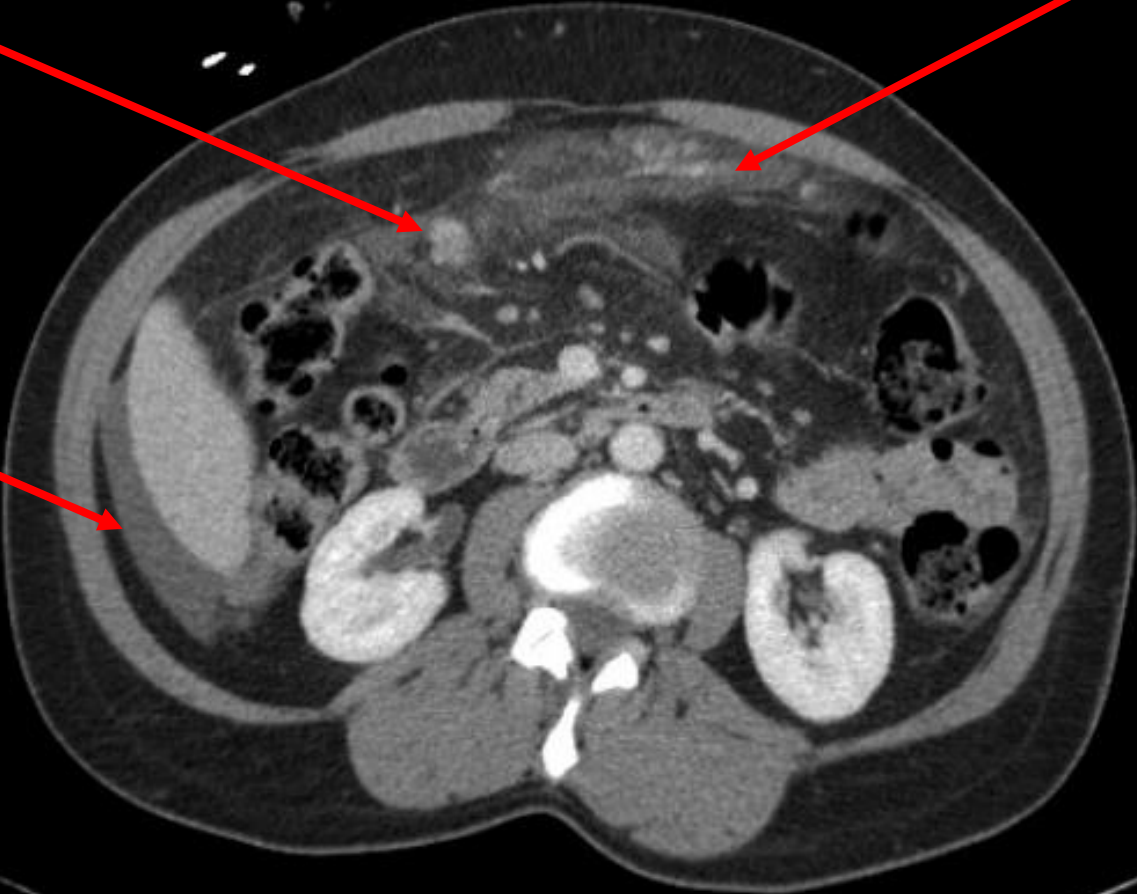


Findings (labeled)

Irregularly shaped omental nodule

Mesenteric inflammatory stranding

Small amount of perihepatic fluid



Findings (unlabeled)



Findings (labeled)



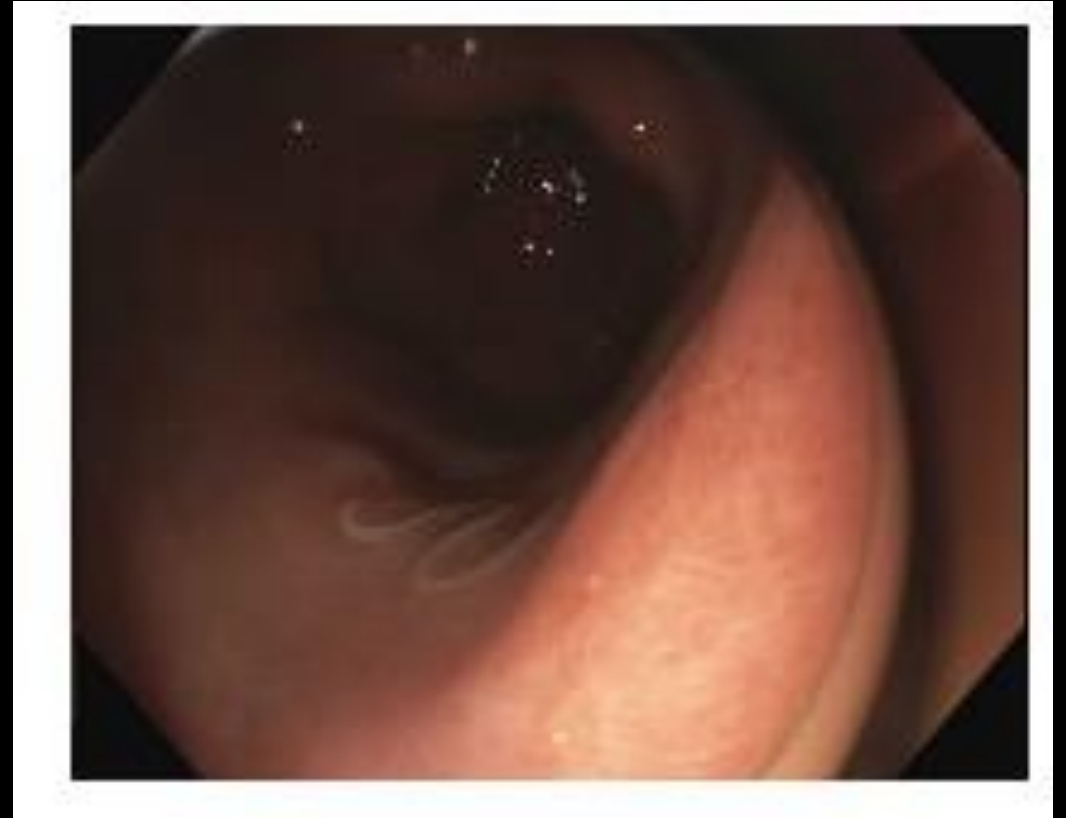
Irregularly shaped
gastrohepatic lymph
node

Patient Progress:

- Imaging was concerning for gastric malignancy w/ hepatic metastases and early peritoneal carcinomatosis
- Tumor markers were sent for other malignancies (pancreatic, ovarian)
- EGD was performed to collect a stomach biopsy, which was negative for malignancy

Patient Progress:

- EGD found multiple moving worms, later identified as parasite anisakis
- Worms were mechanically removed and patient was started on anti-fungal medication
- Repeat CT in 2 weeks showed a grossly normal stomach



Final Dx:

Anisakiasis/Ascariasis

Case Discussion

- Clinical malignancy mimicry: Anisakiasis can form mass-like lesions and even show PET/CT uptake, leading to misdiagnoses of gastric or gynecologic cancer
- Extra-gastrointestinal disease can present as diffuse peritoneal disease that mimics peritoneal malignancy
- Although rare, can cause hepatic nodules that closely resemble metastatic liver tumors on imaging

Case Discussion

- Demographics: people who eat raw/undercooked fish
- Pathophysiology and spread: larvae attach to and penetrate the gastric or intestinal wall, provoking intense eosinophilic inflammation and granuloma formation
- Natural history: the worm eventually dies and the process is self-limited but the granulomatous mass can persist long enough to look neoplastic

Case Discussion

- Diagnosis: Usually made by visualization of worm from emesis or endoscopy. Barium studies might show a threadlike filling defect indicating a worm (figure 1)
- Treatment: Physical removal of parasite is the primary cure. Successful treatment also described with albendazole

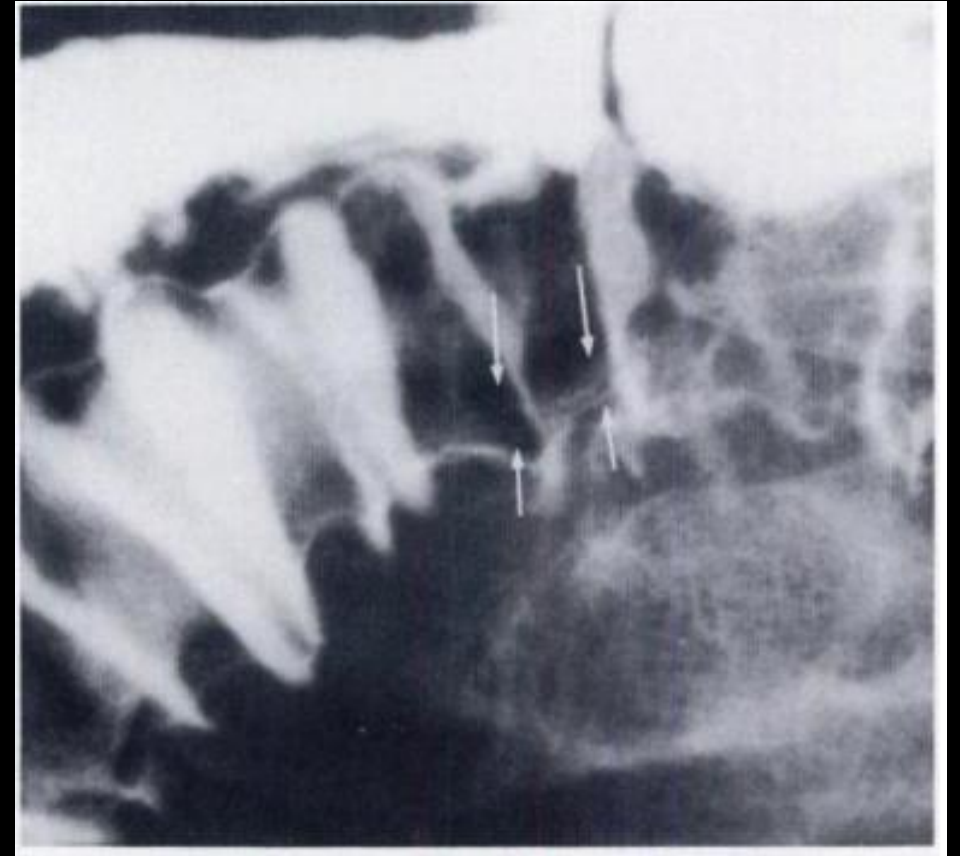


Figure 1. Double-contrast radiograph of ileum. From Matsui T, Iida M, Murakami M, et al. *Intestinal anisakiasis: clinical and radiologic features. Radiology.* 1985;157(2):299-302.
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