

AMSER Case of the Month

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63 y.o. with one week abdominal pain and new onset constipation



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Patient Presentation

Seen by GI: 4/20/2026 for chief complaint of abdominal pain

- PMH: Essential HTN, GERD, dyslipidemia, benign thyroid nodules
- Meds: omeprazole 20mg qD, Claritin, Singulair
- negative colonoscopy 2025
- 1 week hx intermittent “bellyache” with some relief using Miralax/fiber supplement
- Early 4/2026 c/o epigastric abd pain relieved with eating but recurred several hours later, pain was progressively more constant and attempted Miralax w/o relief
- Denies: weight loss, early satiety, N/V

Pertinent Labs

- No labs prior to diagnosis

What Imaging Should We Order?

ACR Appropriateness Criteria

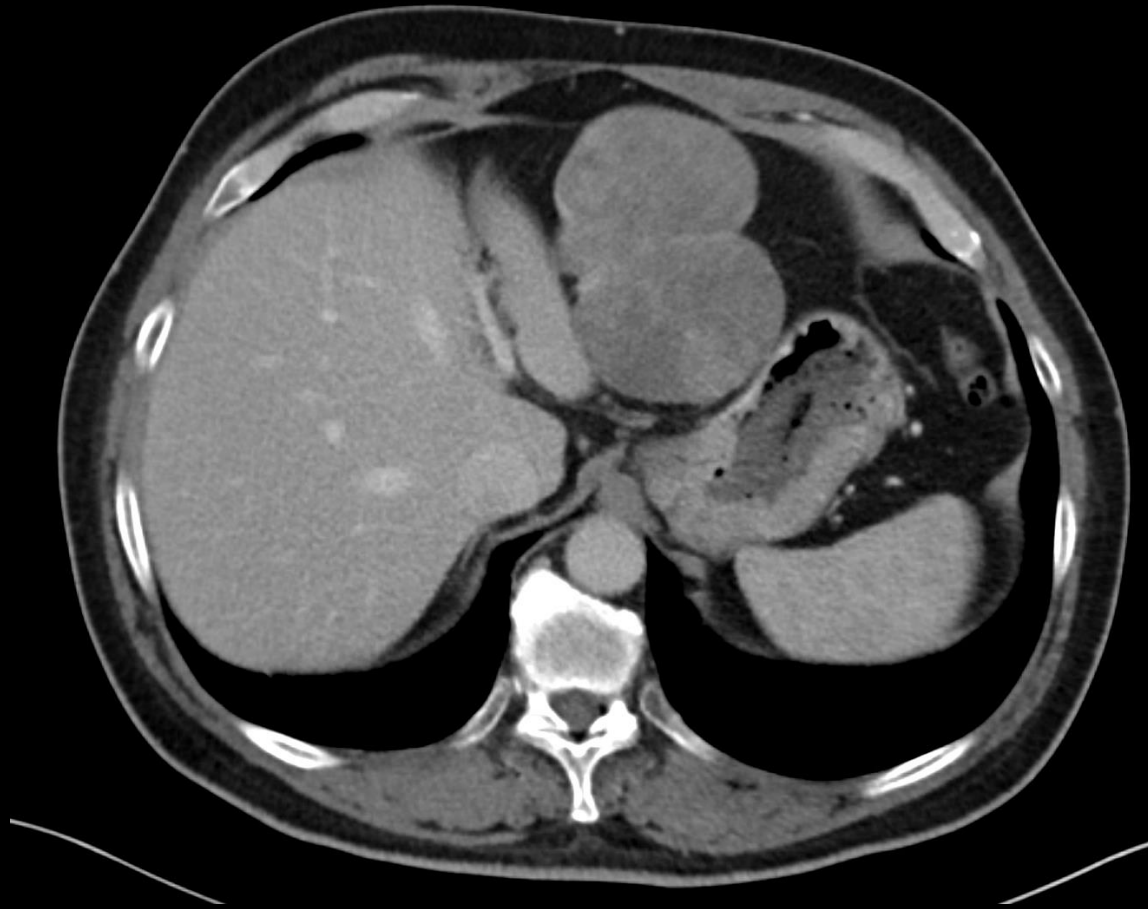
This imaging modality was ordered by the GI physician



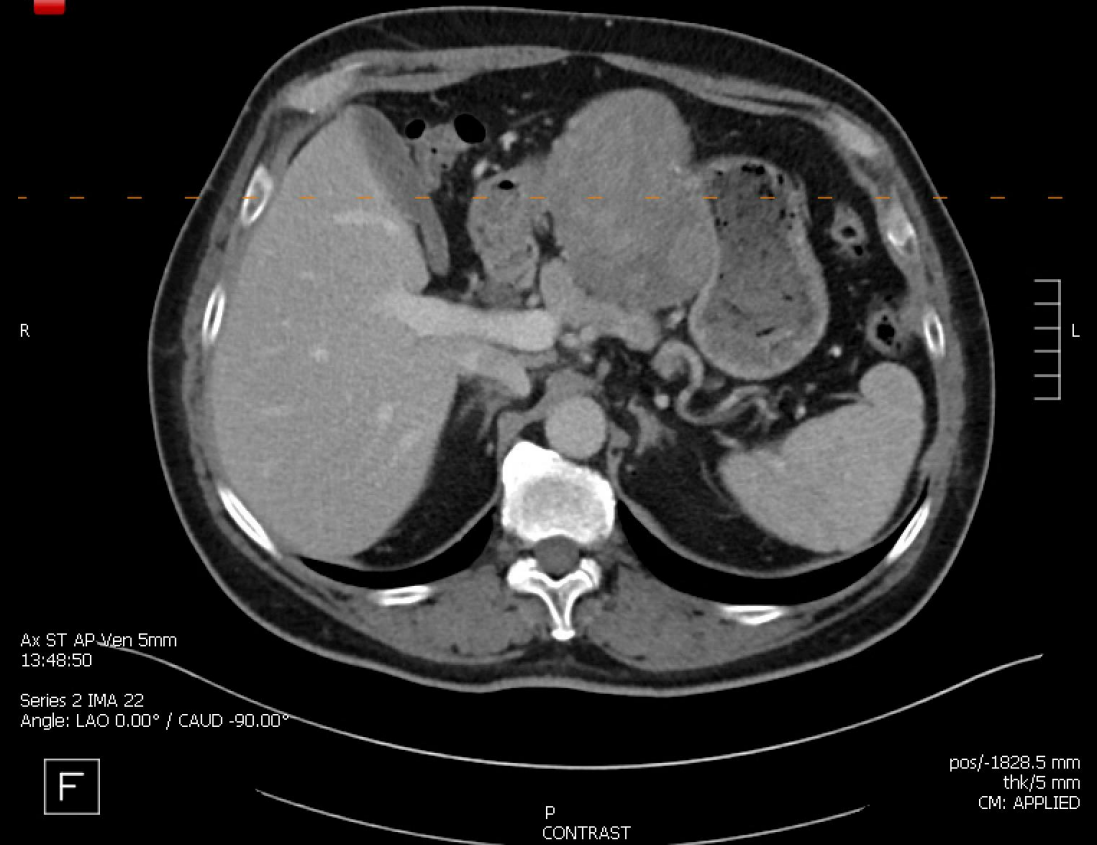
Scenario	Scenario ID	Procedure	Adult RRL	Peds RRL	Appropriateness Category
Abd pain, acute, nonlocalized, initial exam	3141529	● MRI abdomen and pelvis without and with IV contrast	0 mSv O	0 mSv [ped] O	Usually appropriate
		● CT abdomen and pelvis with IV contrast	1-10 mSv ⦿⦿⦿	3-10 mSv [ped] ⦿⦿⦿⦿	Usually appropriate
		● CT abdomen and pelvis without IV contrast	1-10 mSv ⦿⦿⦿	3-10 mSv [ped] ⦿⦿⦿⦿	Usually appropriate
		● US abdomen	0 mSv O	0 mSv [ped] O	May be appropriate
		● Radiography abdomen	0.1-1mSv ⦿⦿	0.03-0.3 mSv [ped] ⦿⦿	May be appropriate
		● MRI abdomen and pelvis without IV contrast	0 mSv O	0 mSv [ped] O	May be appropriate
		● CT abdomen and pelvis without and with IV contrast	10-30 mSv ⦿⦿⦿⦿	10-30 mSv [ped] ⦿⦿⦿⦿⦿	May be appropriate
		● Fluoroscopy contrast enema	1-10 mSv ⦿⦿⦿	3-10 mSv [ped] ⦿⦿⦿⦿	Usually not appropriate
		● Fluoroscopy upper GI series with small bowel follow-through	1-10 mSv ⦿⦿⦿	3-10 mSv [ped] ⦿⦿⦿⦿	Usually not appropriate
		● HIDA scan	0.1-1mSv ⦿⦿		Usually not appropriate
		● FDG-PET/CT skull base to mid-thigh	10-30 mSv ⦿⦿⦿⦿	3-10 mSv [ped] ⦿⦿⦿⦿	Usually not appropriate
		● WBC scan abdomen and pelvis	10-30 mSv ⦿⦿⦿⦿		Usually not appropriate

A CT Abd/Pelv with contrast was obtained 2 days after nonspecific KUB radiograph

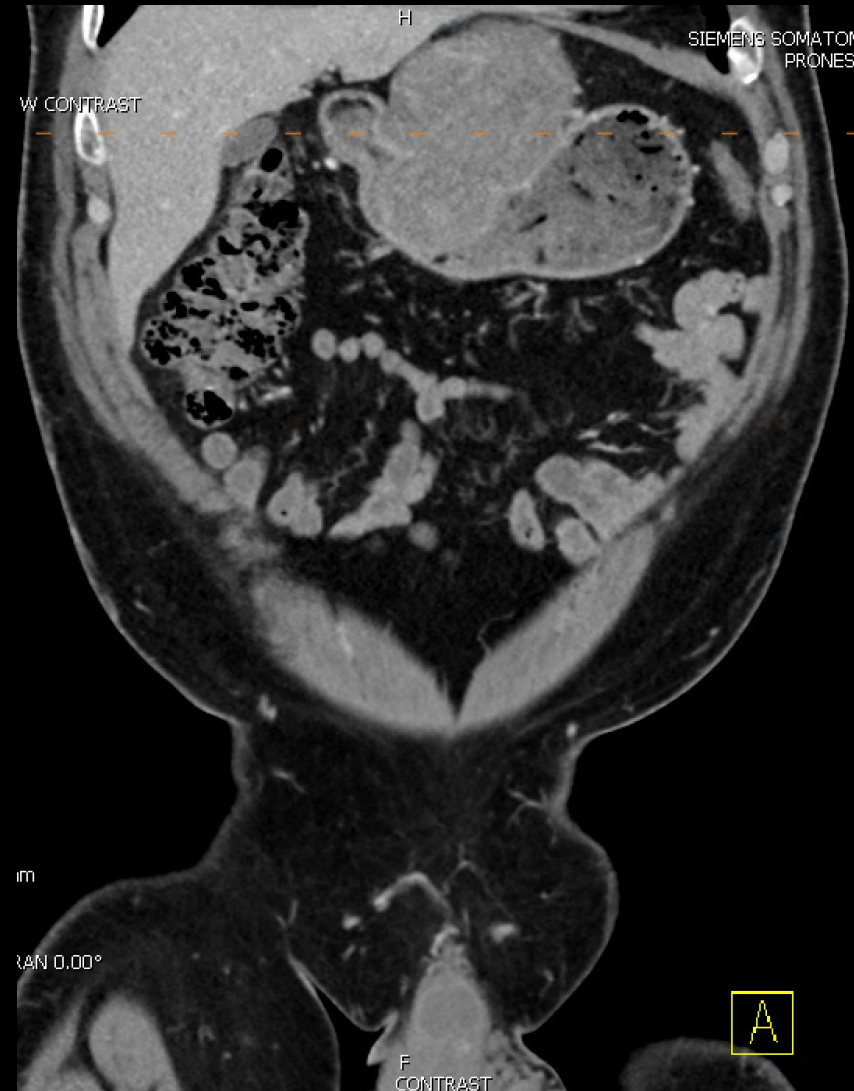
Findings (unlabeled)



CT ABDOMEN PELVIS W CONTRAST
2026-Apr-22



Findings (unlabeled)



Findings (labeled)

solid, slightly heterogeneous
mass

CT ABDOMEN PELVIS W CONTRAST
2026-Apr-22



R

Ax ST AP Ven 5mm
13:48:50

Series 2 IMA 22
Angle: LAO 0.00° / CAUD -90.00°

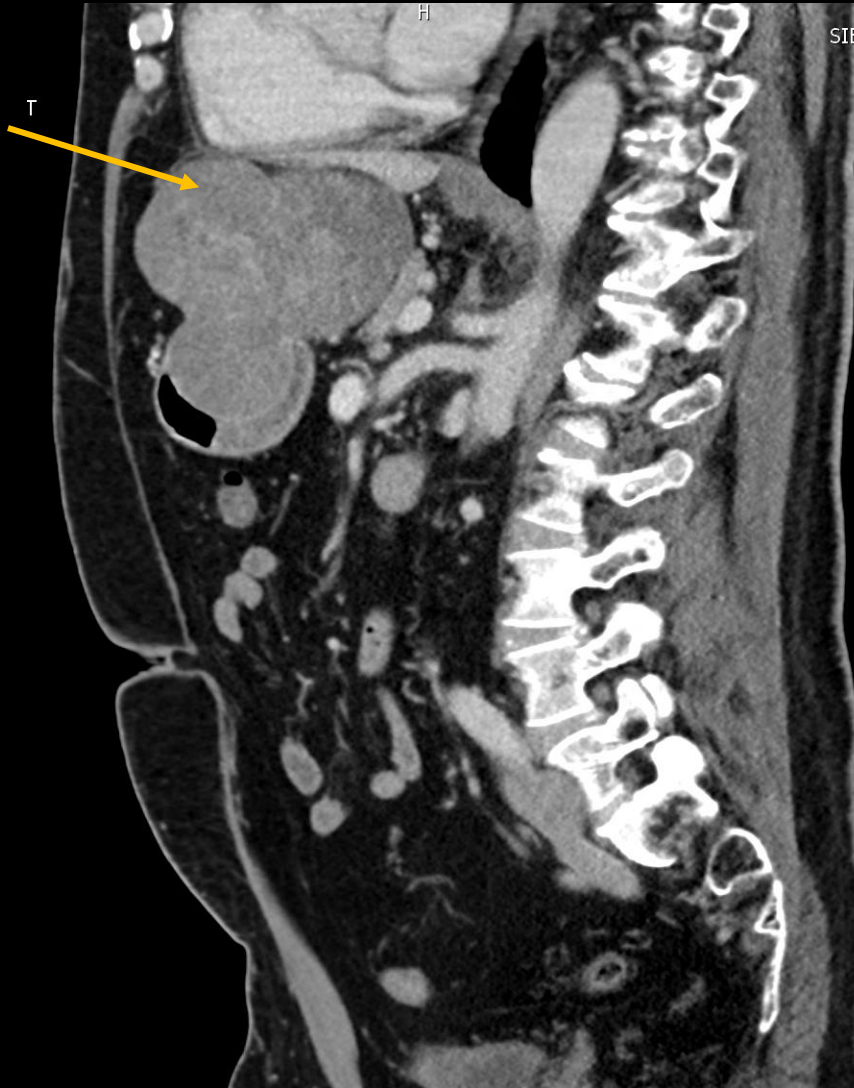


P
CONTRAST

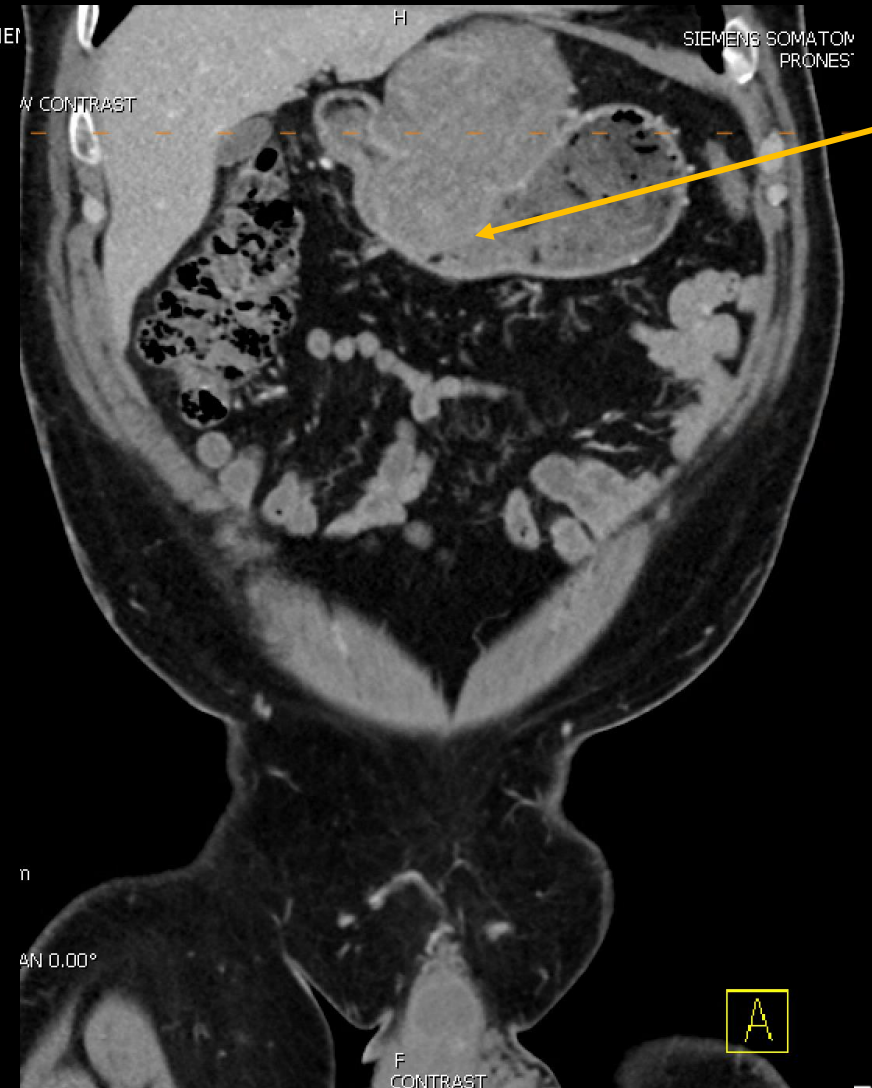
pos/-1828.5 mm
thk/5 mm
CM: APPLIED

Findings (labeled)

Solid mass in the
gastrohepatic
ligament/space



Submucosal
component with
the stomach



Diagnostic Report

EG junction, stomach, and duodenal sweep: 9.8 x 5.7 x 8.2cm (AP by tranverse by craniocaudal) solid, slightly heterogenous mass along the gastrohepatic ligament. The mass at least compresses the stomach in the region of the pylorus antrum and likely an at least a submucosal component. No obvious calcifications or pockets of gas contained within.

Recommend gastroenterology consultation with possible endoscopic sampling for issue diagnosis.

Endoscopic Ultrasound 5-8-2026

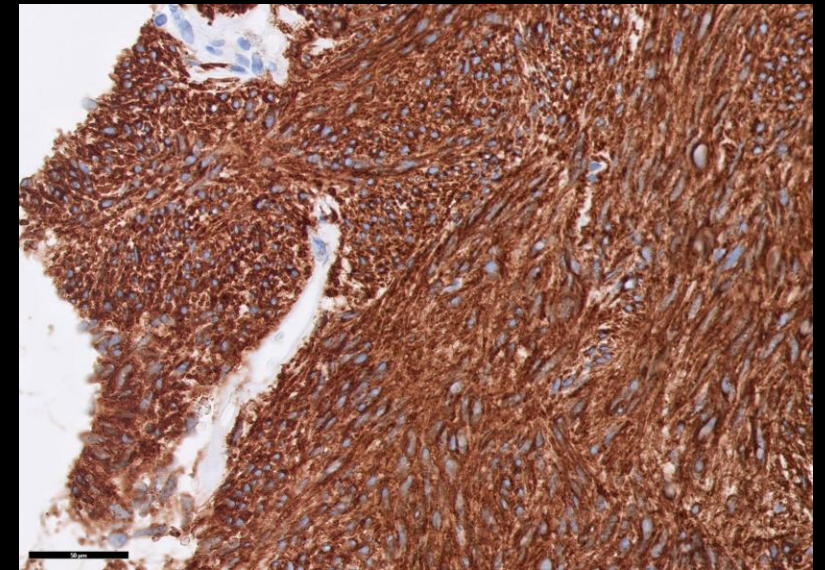
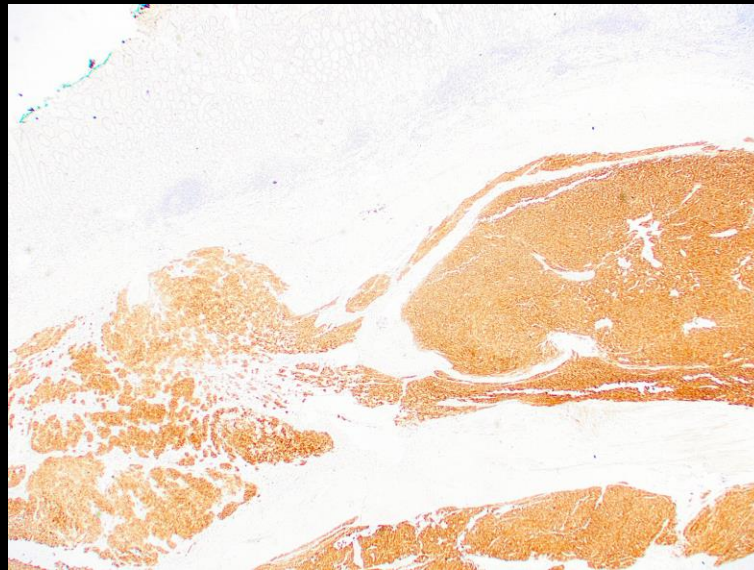
The esophagus, stomach, and duodenum were examined endosonographically. A round intramural (subepithelial) lesion was found in the body of the stomach/peri-gastric location. The lesion was isoechoic. The lesion measured 114 mm (in maximum thickness). The lesion also measured 74mm in diameter. The outer endosonographic borders were well defined. Fine needle biopsy was performed.

There were no signs of significant pathology in the common bile duct, entire pancreas, and ampulla.

FNA Report

- Immunohistochemical stains performed on the biopsy show that the tumor cells are positive for strongly and diffusely positive for DOG-1, CD117, and CD34. Additional stains S100 and SMA are interpreted as negative. The overall findings are consistent with a gastrointestinal stromal tumor.

9.8 x 5.7x8.2cm
1 mitosis per 5mm²
G1, low grade
Mixed type



External source examples¹ : DOG-1 (left), KIT/CD117 (right)

Final Dx:

Gastrointestinal Stromal Tumor (GIST)

The patient underwent a laparotomy, partial gastrectomy/resection of gastric mass with retrocolic roux-en-y gastrojejunostomy was discharged POD5 without complications

Case Discussion

Clinical Presentation:

- Abdominal pain/distention is the most common presentation of GISTs¹
- Stomach most common site (60-70%), followed by small bowel (~1/3), colon or rectum (5%), esophagus (<2%), and appendix².

Staging:

- For higher risk recurrence requiring adjuvant drug therapy:
 - Tumors >5cm diameter with mitotic count > 5/50 high powered fields
 - Tumors >10cm with any mitotic rate
- Mitotic rate most important prognostic factor and determines if adjuvant drug therapy is necessary for non-ruptured GIST³.

Treatment:

- Gold standard: laparoscopic surgical resection with adjuvant imatinib 400 mg daily
- Recurrence rate is high. Hepatic or mesenteric recurrence occurs in 40–90% of patients undergoing apparently curative surgery. Percutaneous biopsy is best avoided⁴.

Prognosis:

- Median disease-free survival rate:
 - 5 years - nonmetastatic GIST
 - 10–20 months - metastases are present
- Nearly all patients with metastatic disease show good response to imatinib therapy, with most being in remission at 24 months⁴.

Case Discussion

Features by Size:

- **Small** GISTs: symmetric masses, well demarcated with sharp borders and intraluminal growth patterns.
- **Intermediate-sized** GISTs: less symmetry, intraluminal AND extraluminal growth patterns, may show infiltration into other organs in primary or recurrent GIST
- **Large** GISTs: aggressive behavior with peritoneal or distant metastasis.

Imaging Features

- Before chemotherapy - usually hypervascular on CT and MRI
- Dual-phase CT or MRI w/ gadolinium - bright homogeneous enhancement in the late arterial (portal venous inflow) phase
 - almost complete washout on the hepatic venous phase.
- Mesenteric and liver metastases – hypovascular or completely cystic on CT, even after 1 month of targeted chemotherapy⁵.

Case Discussion

CT vs MRI

- CT displays thickness of the entire small bowel -> greater visualization of deep ileal loops and mesentery -> better for detecting mesenteric metastases than MRI⁵
- MRI - identifying rectal GISTs, liver metastasis, hemorrhage, and necrosis of tumors⁶.

Other Modalities

- Ultrasound – if tumor > 5 cm
 - Modality variability: presence of necrosis, ulceration, bowel air, and operator expertise⁷
- Endoscopy – limited role in detection of GISTs due to the high prevalence of extraluminal tumors⁸

References:

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8. Park CH, Kim EH, Jung DH, et al. Impact of periodic endoscopy on incidentally diagnosed gastric gastrointestinal stromal tumors: findings in surgically resected and confirmed lesions. *Ann Surg Oncol*. 2015;22(9):2933-2939. doi:10.1245/s10434-015-4517-0\