AMSER Case of the Month: February 2025

74-year-old man with acute suprapubic pain

Lauren Fane
Case Western School of Medicine

Ismail Khan, MD (PGY-5); Barak Friedman, MD; Amita Kamath, MD
Mount Sinai

Patient Presentation

- 74 y/o man with PMH of metastatic colon cancer, presenting with pain inferior to umbilicus for 2-3 days
  - Non-bilious small volume emesis after eating a cracker
  - Last BM 2 days ago. Passed flatus today
- Vitals: stable, afebrile
- Physical exam: abdominal
  - Palpable mass in RUQ
  - Liver edge 7 cm below right midclavicular line

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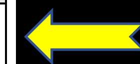
What Imaging Should We Order?

ACR Appropriateness Criteria

Variant 4: **Acute nonlocalized abdominal pain. Not otherwise specified. Initial imaging.**

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



This imaging modality was ordered by the oncologist

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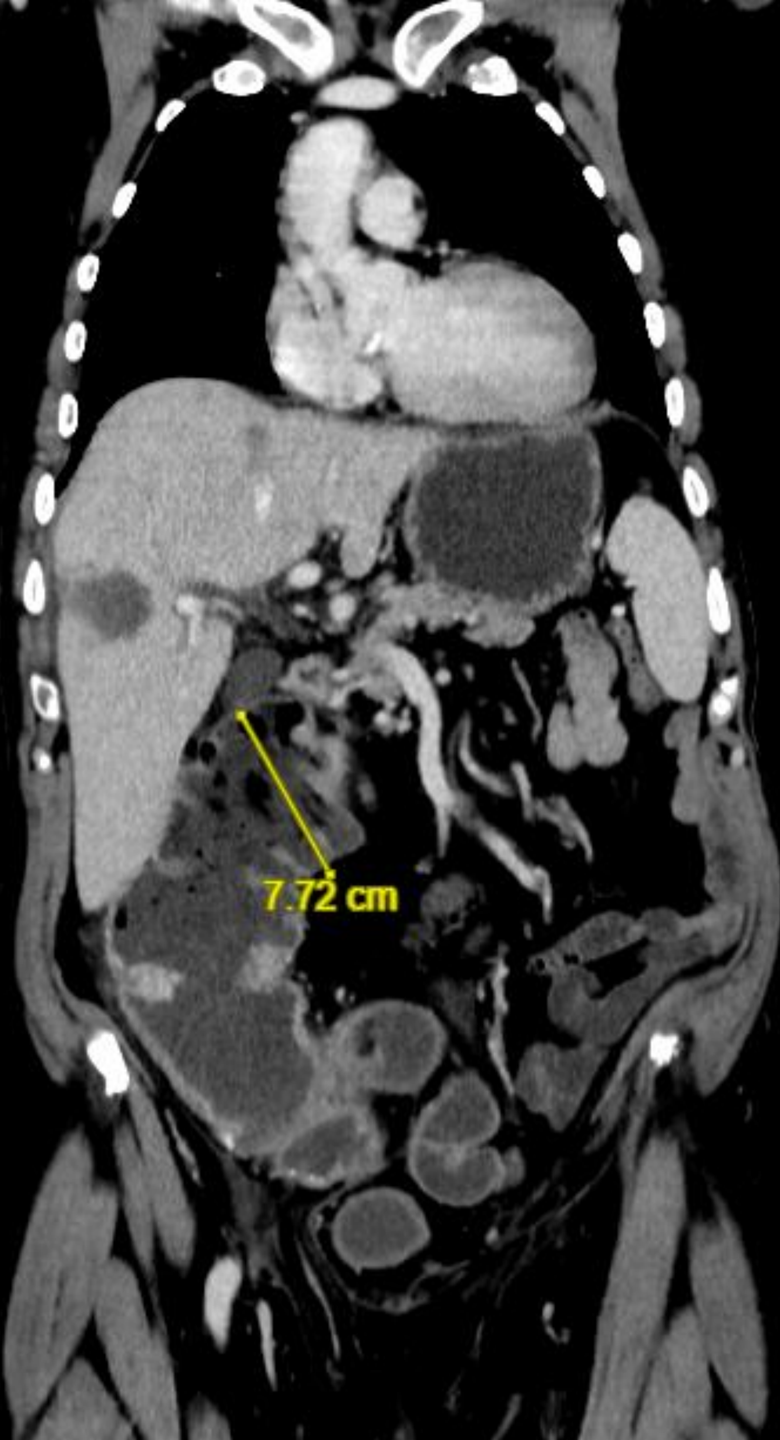
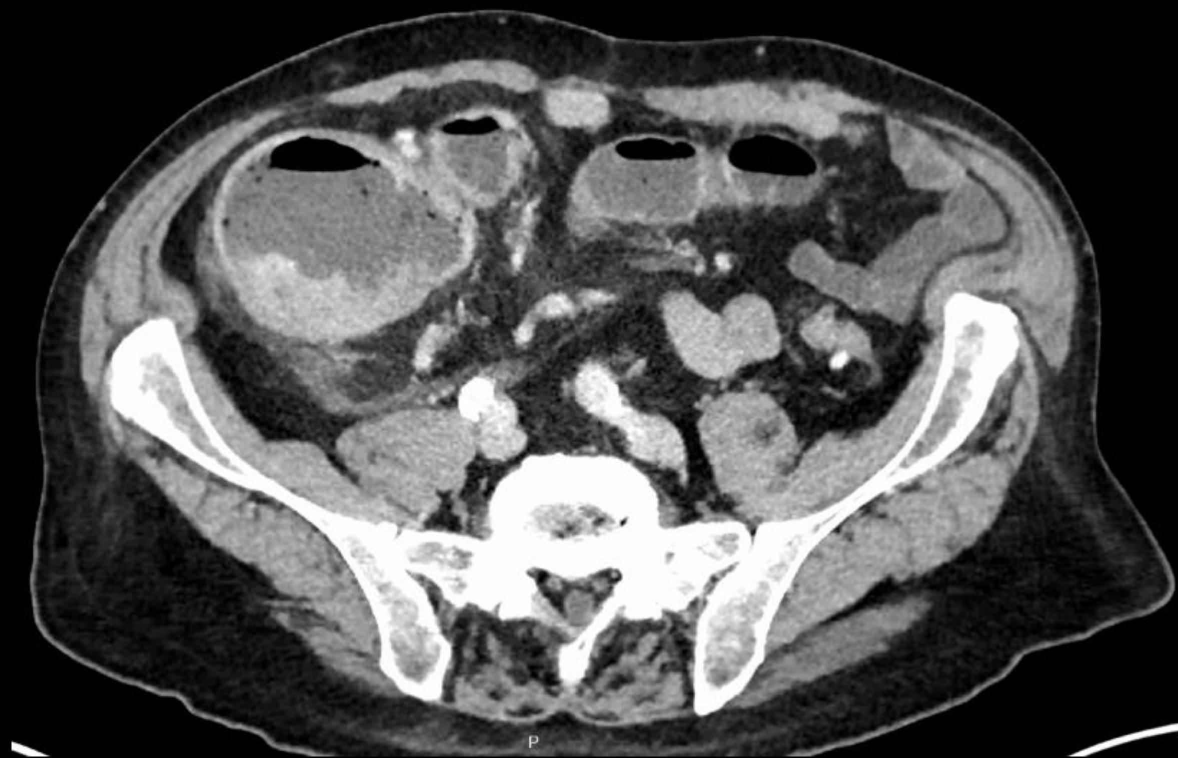
Findings (unlabeled)





Current (July 10)

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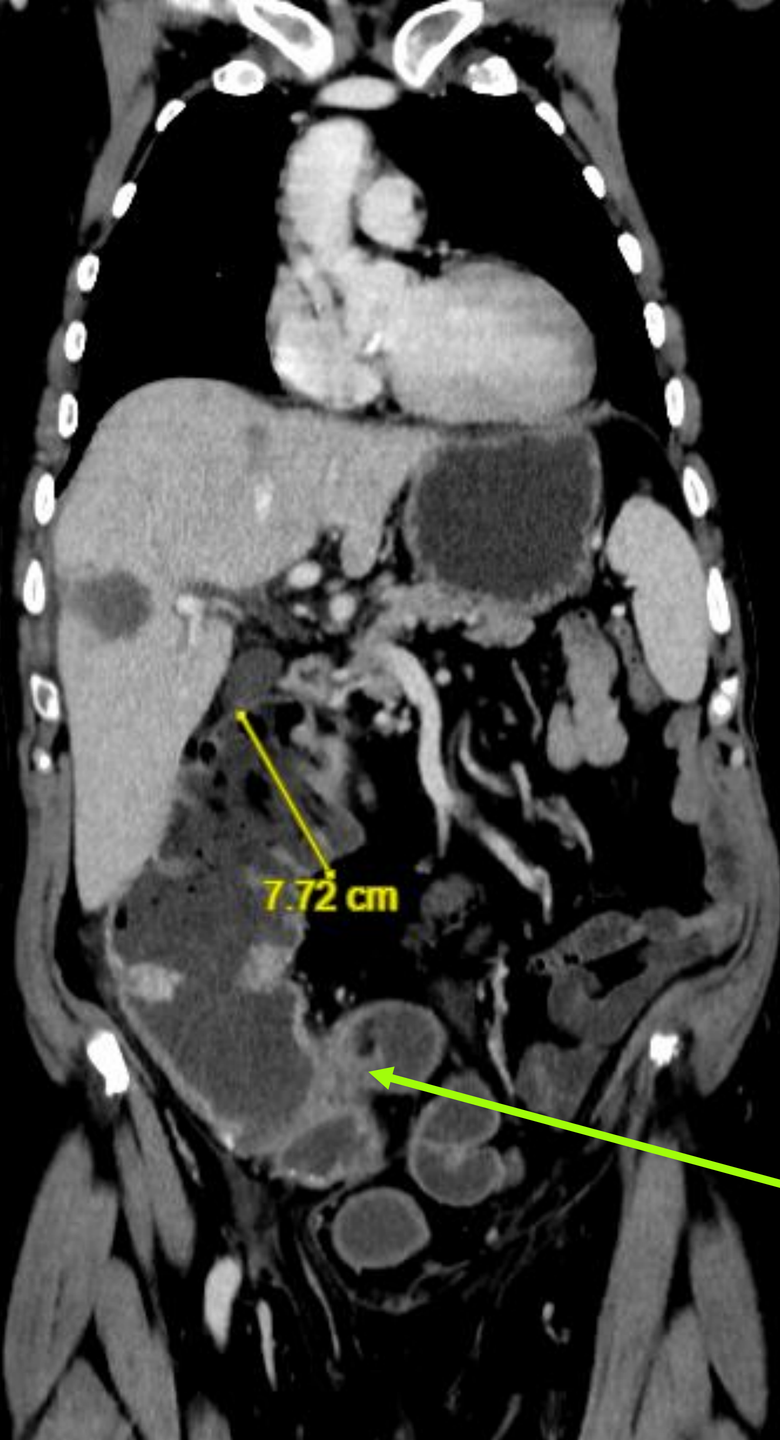
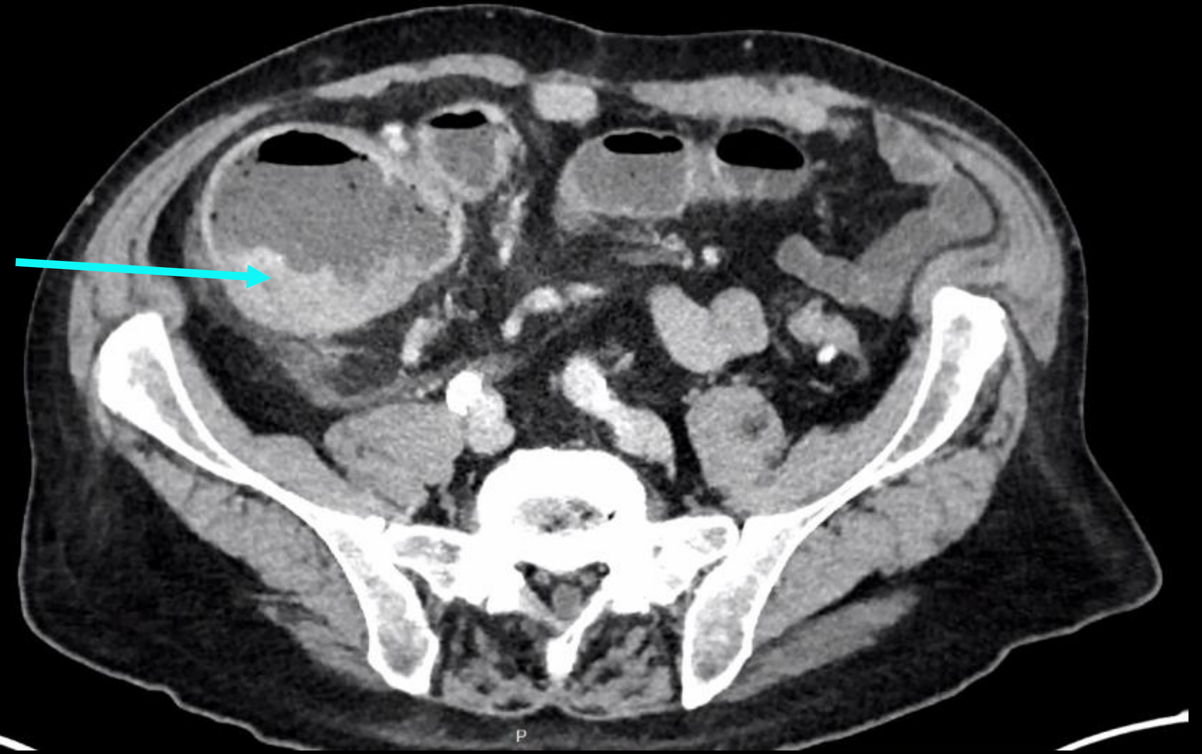
Findings (labeled)



Ileocecal valve



Cecal mass

Current (July 10)

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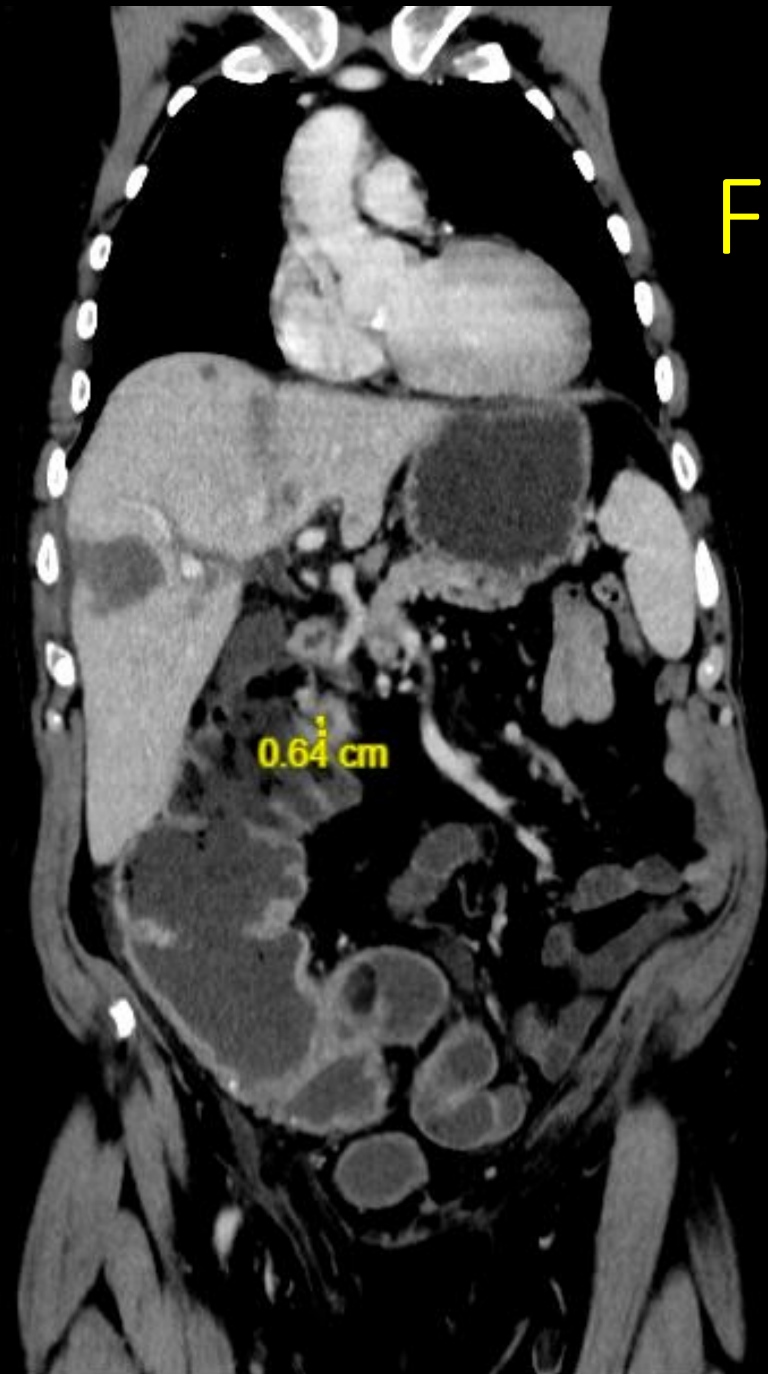
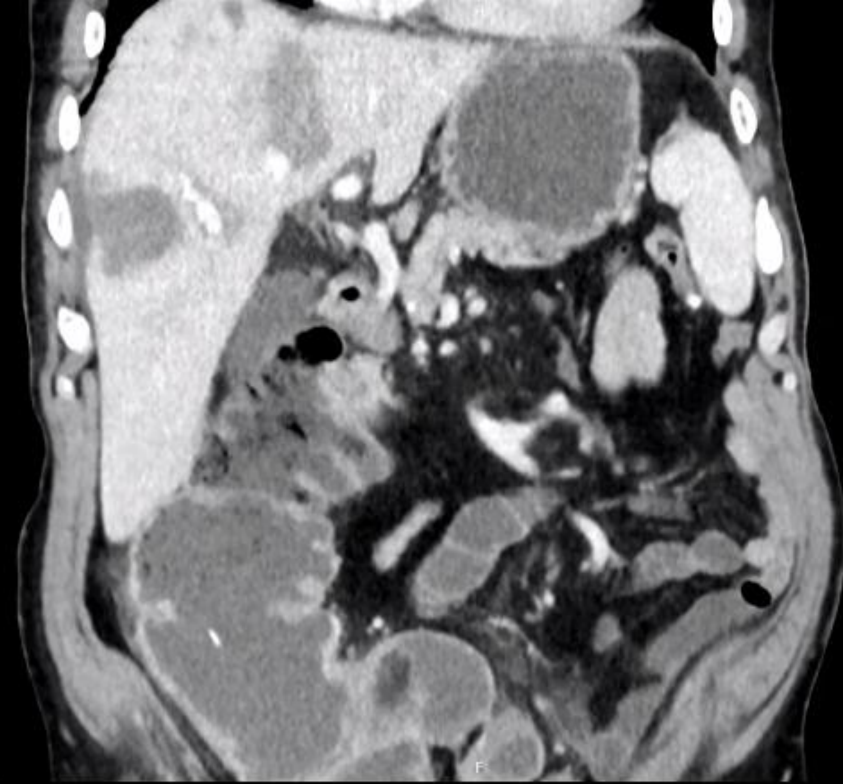
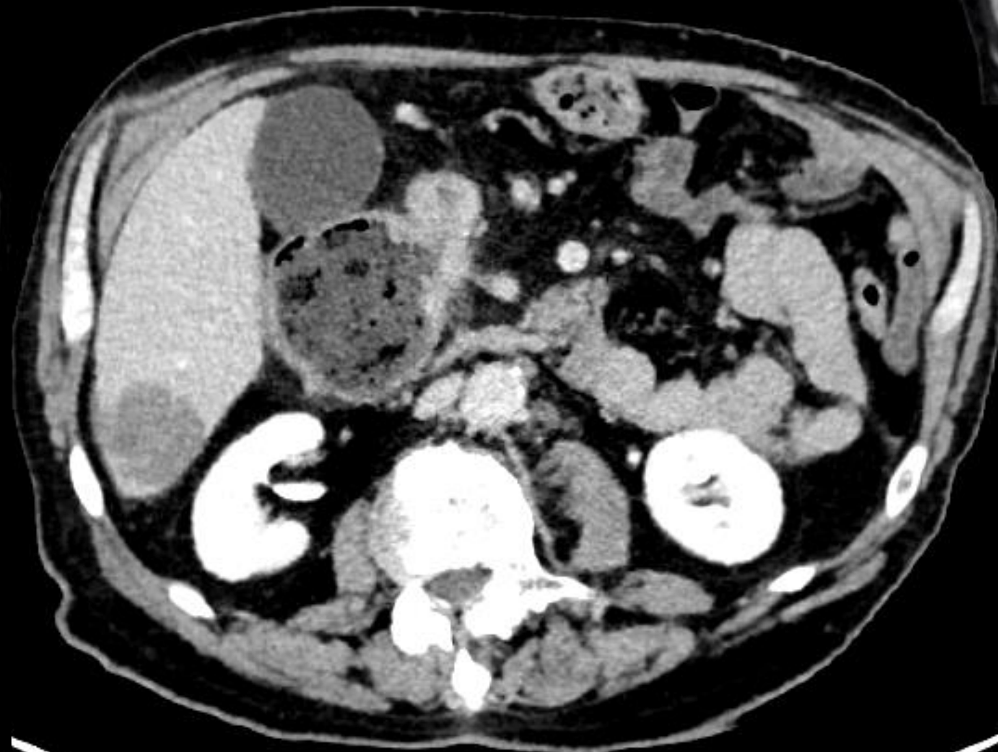
Findings (unlabeled)







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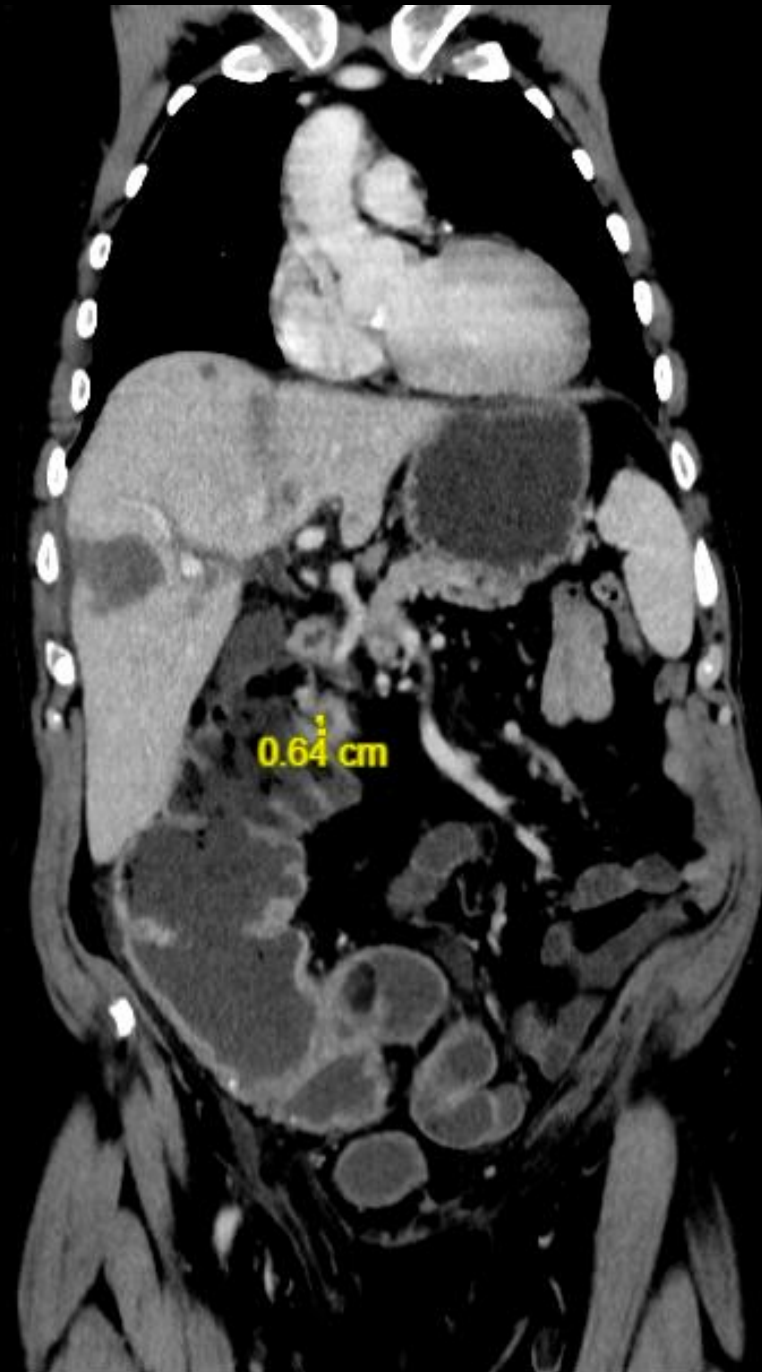
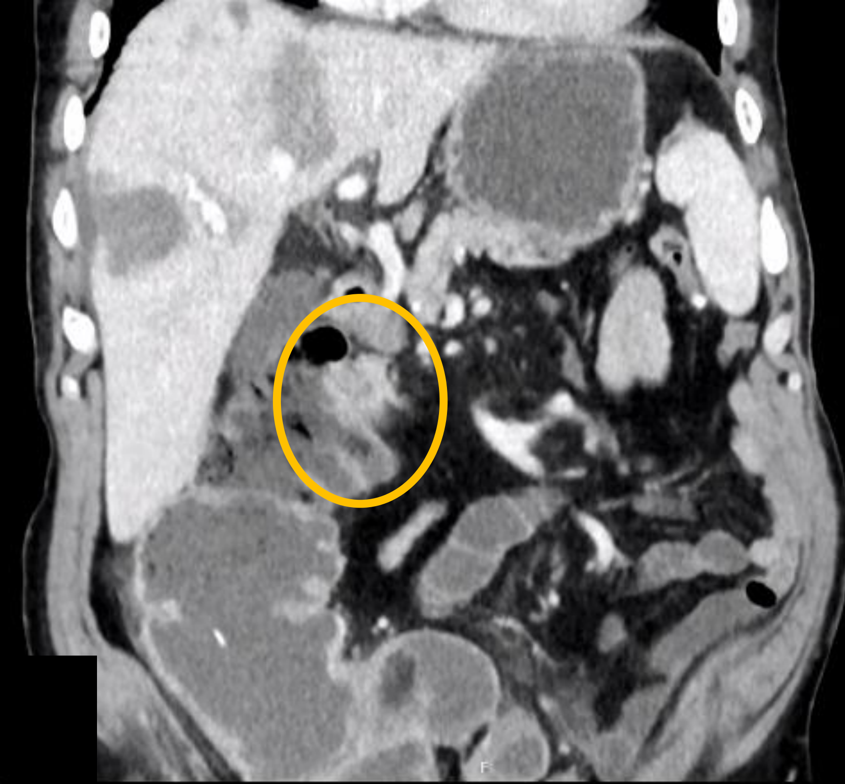
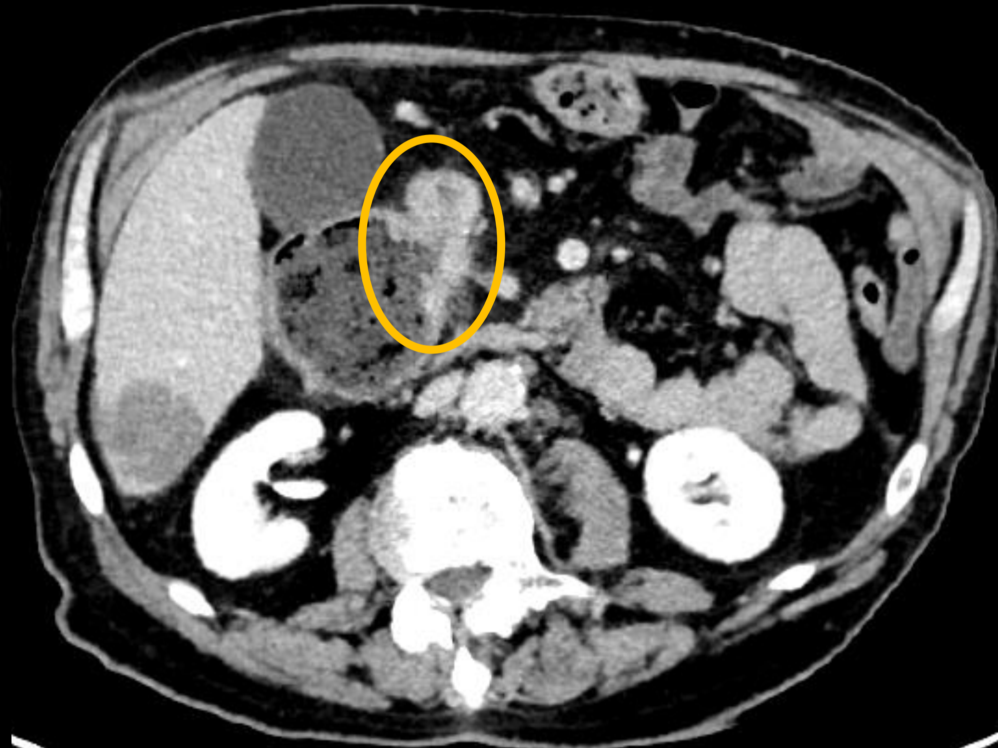
Findings (labeled)



Dilated ascending colon + transition point → large bowel obstruction





Cause of obstruction?

2nd colon mass at hepatic flexure

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Final Diagnosis:

Large bowel obstruction,

secondary to additional colonic mass at hepatic flexure

Discussion: Differential of LBO Etiologies

- Colorectal cancer
- Diverticulitis
- Volvulus
- Intraluminal contents (e.g., fecal impaction)
- Adult intussusception
- Hernias
- Adhesions
- IBD
- External compression

Mimic: acute colonic pseudo-obstruction (ACPO) / Ogilvie syndrome

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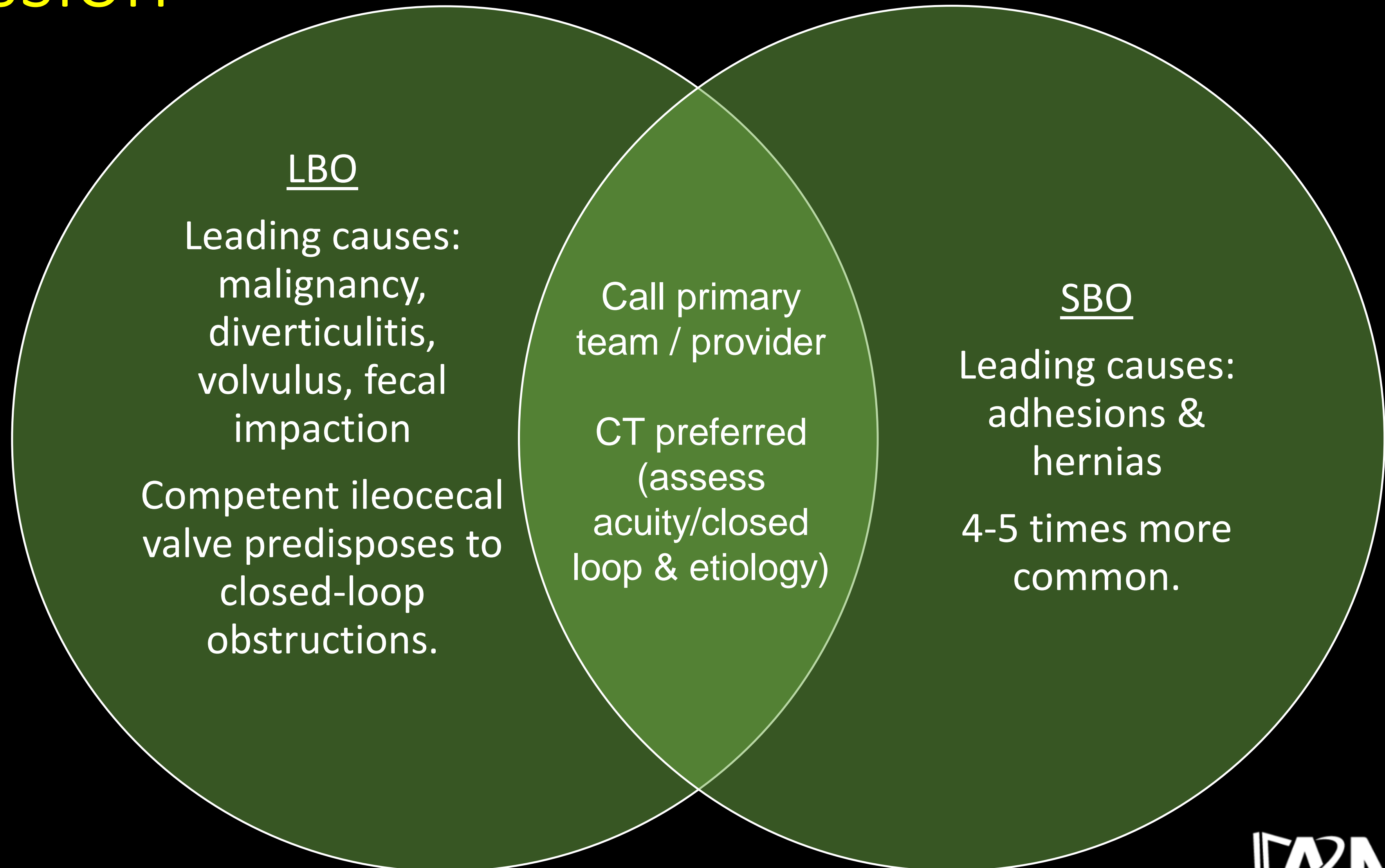
Discussion



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Closed-loop obstructions

A competent/one-way ileocecal valve serves as a 2nd transition point[1,2]

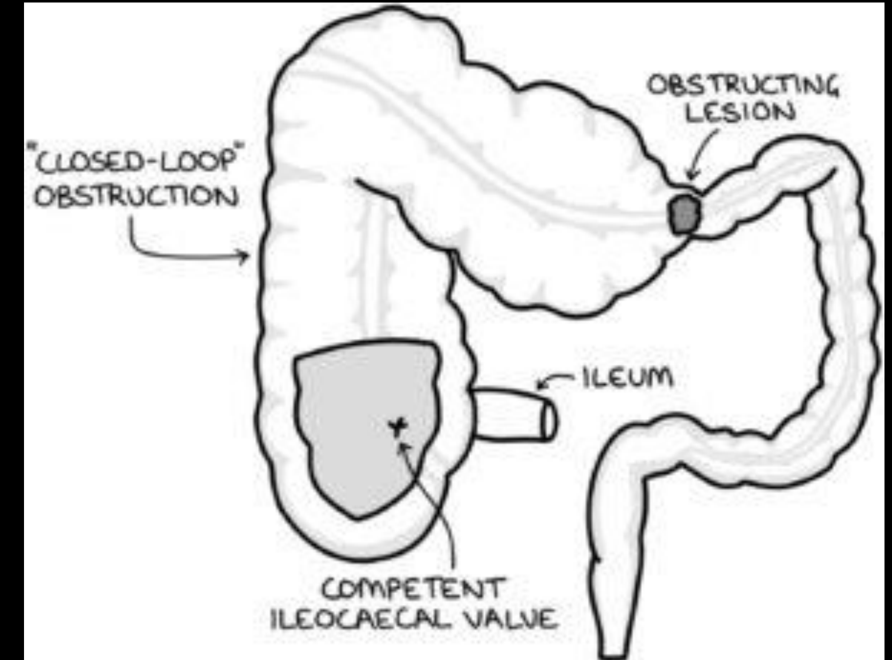
- 25-40% ileocecal valves are incompetent[3]

LBOs are predisposed to becoming closed-loop obstructions

- Closed loops more quickly dilate, become ischemic, and perforate

LBOs more often require emergency surgery

- Open-loop obstructions can be decompressed proximally with NGT.



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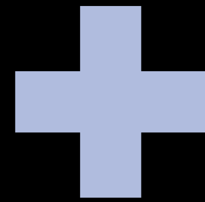
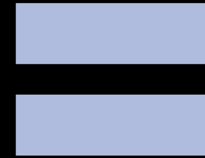
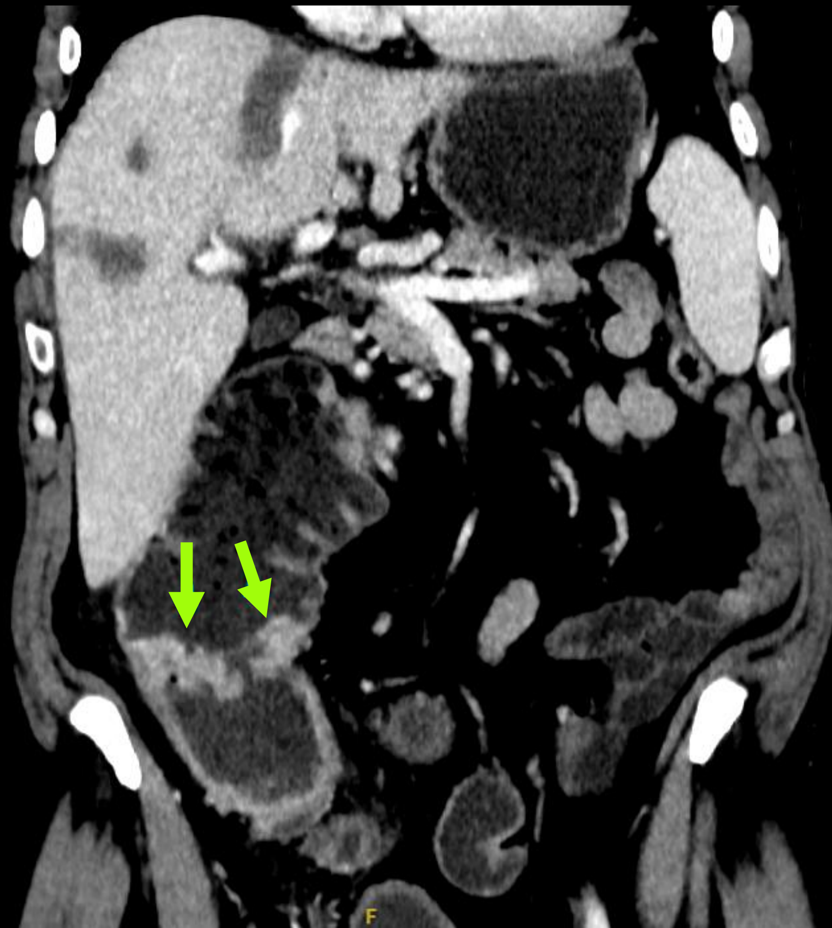
Bowel dilatation extending retrograde into ileum

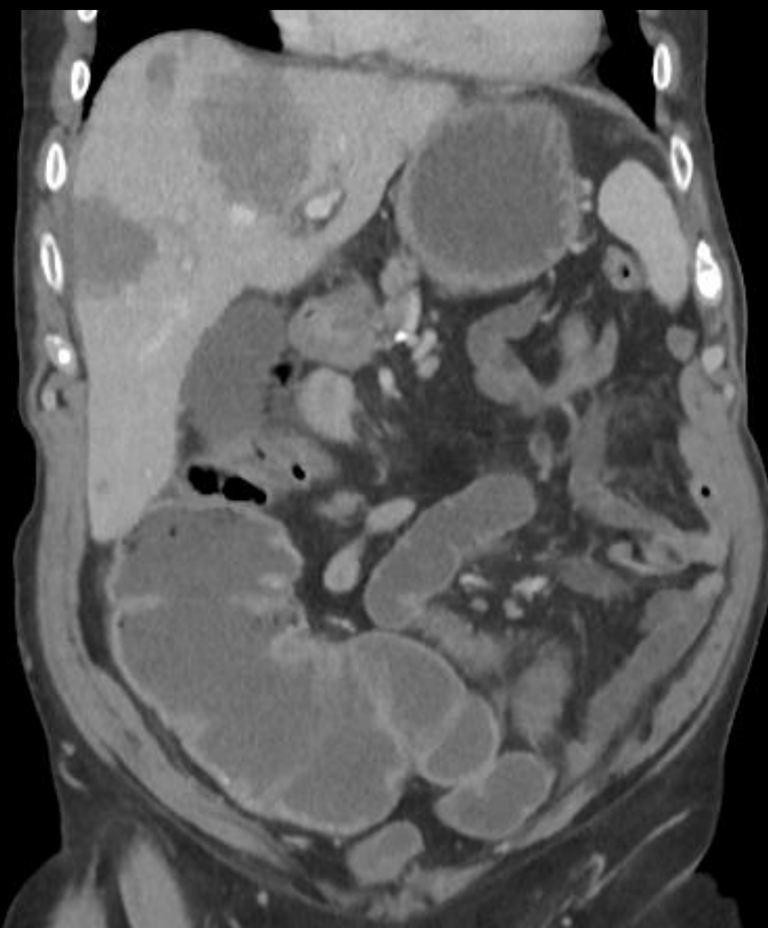


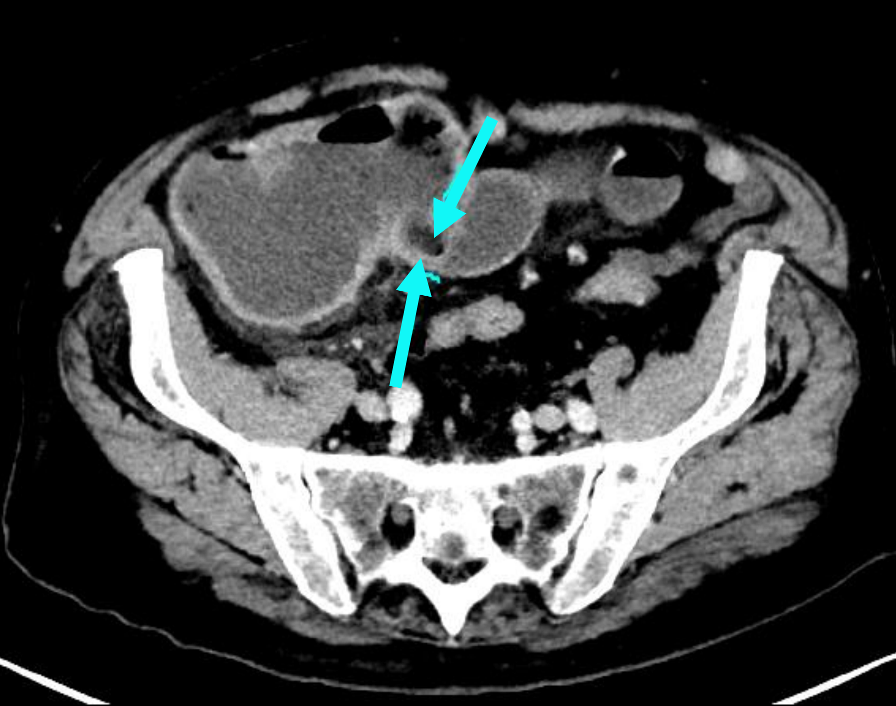
No 2nd transition point demonstrated



Incompetent ileocecal valve + no closed-loop obstruction







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References:

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4. Muldoon RL. Malignant Large Bowel Obstruction. Clinics in Colon and Rectal Surgery. 2021;34(04):251-261. doi:https://doi.org/10.1055/s-0041-1729922
5. Lieske B, Meseeha M. Large Bowel Obstruction. Nih.gov. Published 2021. https://www.ncbi.nlm.nih.gov/books/NBK441888/

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