Is Thick Bowel Always IBD?

Avoiding Diagnostic Pitfalls on IUS

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Diagnostic Pitfalls Ahead

- One of the biggest errors in early IUS is not missing IBD, it's overcalling it.

- Common traps:
  - Anchoring on imaging reports ("consistent with IBD")
  - Over-reliance on BWT
  - Ignoring discordant endoscopy/pathology

Diagnostic Pitfalls Ahead

- What you're about to see:
  - Cases that look like IBD
  - Imaging that points you in the wrong direction
  - Clinical-pathologic discordance

- Your job during this talk:
  - Don't diagnose
  - Interrogate the pattern
  - Ask "what doesn't fit?"

Patient Case #1

Case 1 - 48F

- Chronic abdominal pain, bloating, constipation and weight loss (50 lbs) in last 5 months.

- CT scan: Multiple thick-walled loops of bowel seen in the mid to distal bowel. Mid to distal jejunum to the ileum, with distal ileum greater than 20 cm in the length with markedly thick-walled bowel. Associated free fluid, stranding of the mesentery small lymph nodes likely reactive. No perforation.

- Albumin 22
- Hgb 113, Ferritin 447
- CRP 51.7

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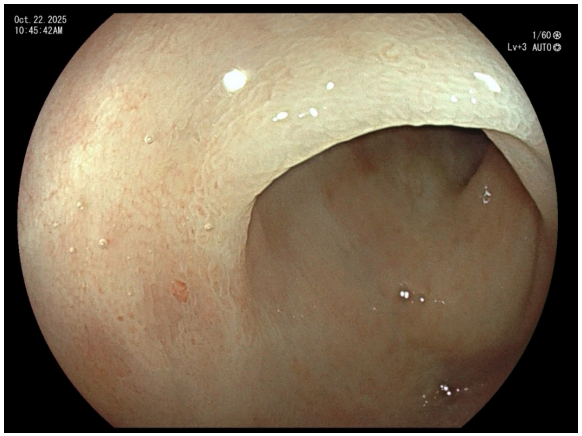
Ileocolonoscopy



TI

Descending colon

Ileocolonoscopy Oct 22, 2025: There is not clear inflammation to diagnose Crohn's based on the colonoscopy today. Biopsies were taken throughout this terminal ileum and colon. However, I suspect the inflammation may be more proximal to the assessed areas.

Final Diagnosis

A. Ascending Colon Polyps x 2 Polypectomy:
- Sessile serrated lesions (SSA) x 2
- Negative for dysplasia
- Inactive chronic colitis

B. Ascending Colon Biopsy:
- Within normal limits

C. Transverse Colon Biopsy:
- Within normal limits

D. Left Colon Biopsy:
- Within normal limits

E. Terminal Ileum Biopsy:
- Within normal limits (regenerative villous blunting)
- See micro

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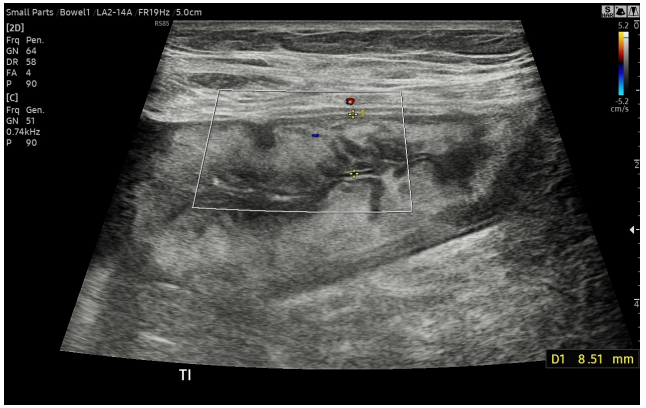
POCIUS clinic - Abnormal TI



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TI

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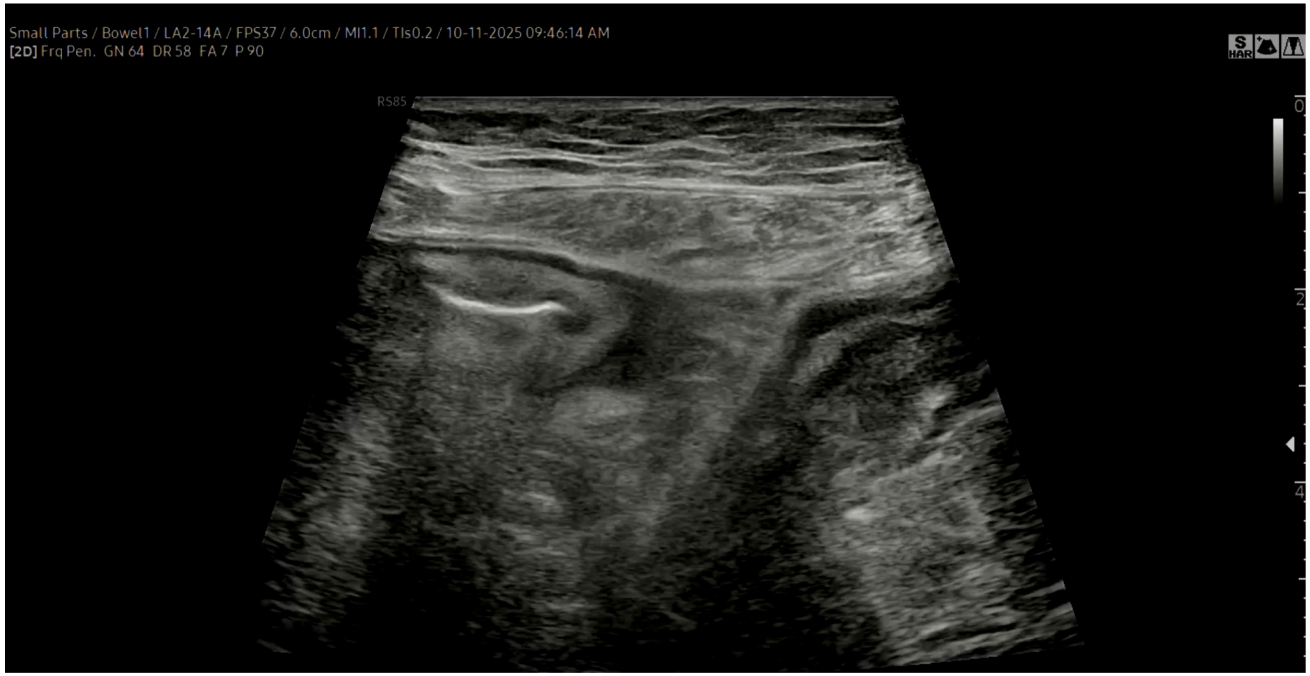
LLQ



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LLQ 1-7 MHz probe

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Free fluid

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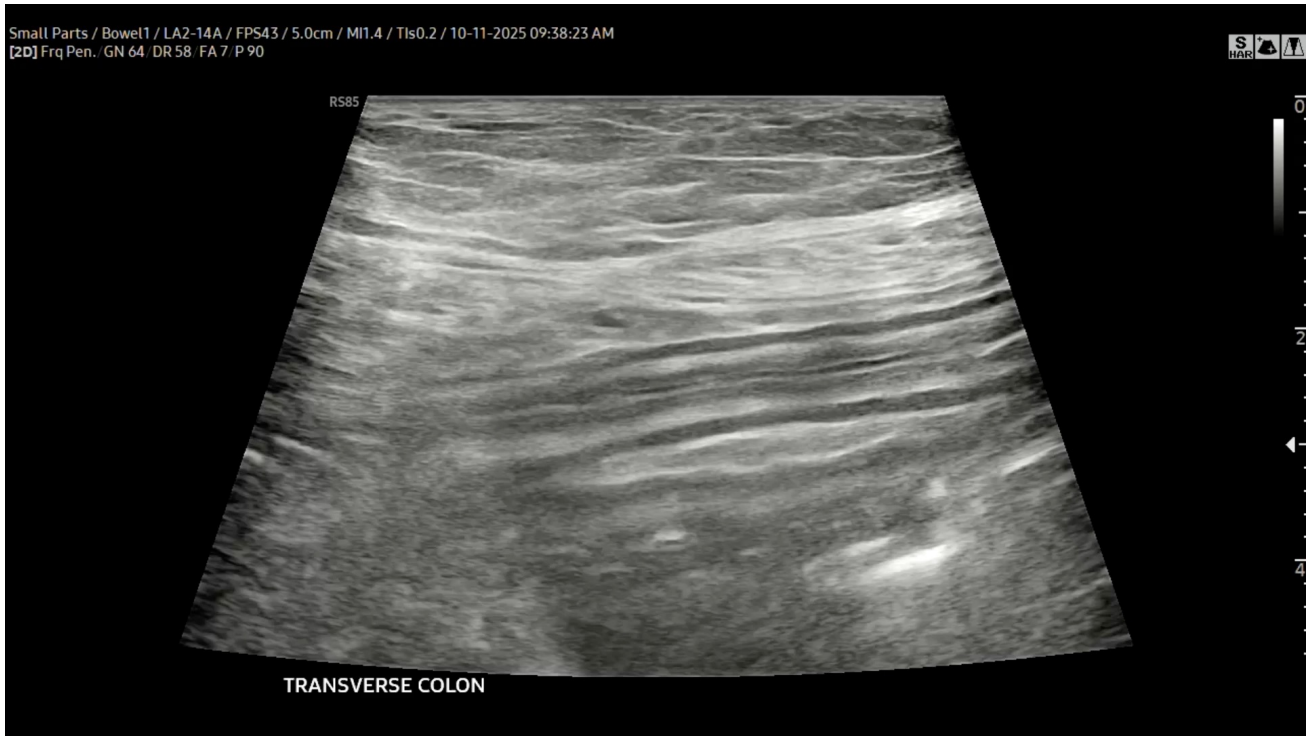
Transverse colon



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Final report

	Rectum	Sigmoid	DC	Transverse	AC	TI	Prox SB
BWT	2.89, 2.66	2.55, 3.07, 3.92	4.69, 4.76	4.18, 3.35	3.41, 3.93	8.51, 11.71	See description
Limberg	N/A	1	0	0	0	1	0
Echostrat	Normal	Normal	Normal	Normal	Normal	Focal loss	Normal
iFat	N/A	Absent	Absent	Absent	Absent	Present	Absent
Complications	No	No	No	No	No	Yes, see description	See description
Length of compromise						At least 10cm	

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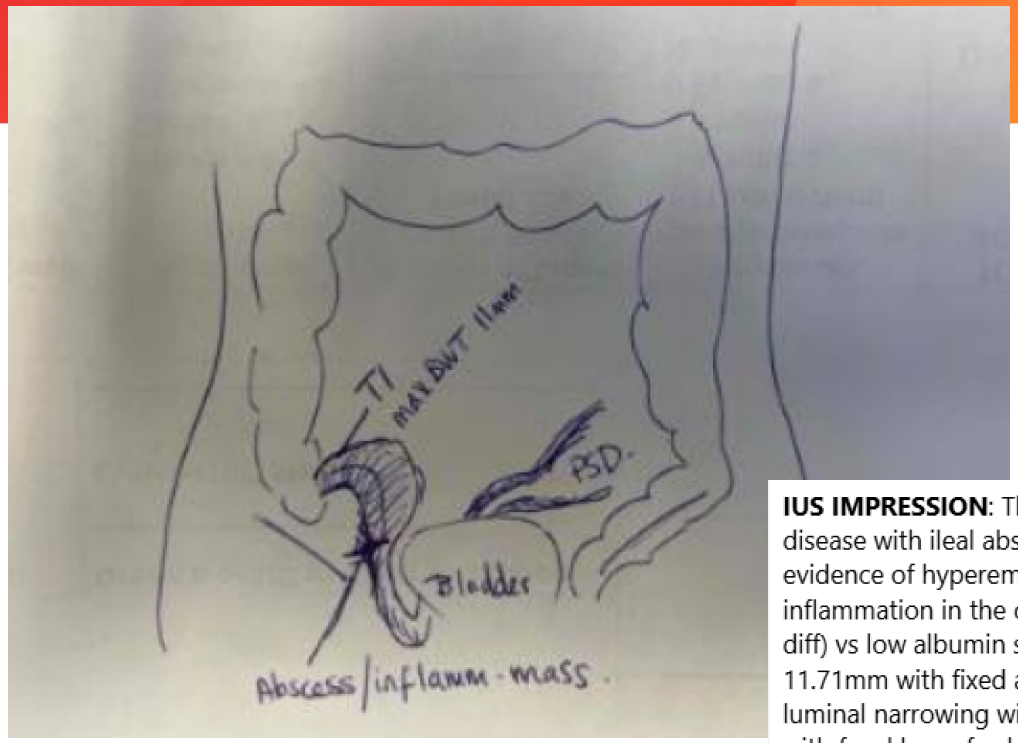

IUS IMPRESSION: This exam identified multiple findings suspicious for penetrating Crohn's disease with ileal abscess +/- contained perforation. The colon is diffusely thickened with no evidence of hyperemia, which is surprising given the recent colonoscopy without any mucosal inflammation in the colon. This gives rise to the possibility of new infectious etiology (rule out C diff) vs low albumin state, or transmural process. The distal terminal ileum is thickened up to 11.71mm with fixed angulation as it dives into the pelvis, with hyperemia (MLS = 1). There is also luminal narrowing with no content passing through the TI during the examination. There is an area with focal loss of echostratification 3-4 cm from the ICV, with associated spiculations and possible abscess vs inflammatory mass. There is also free fluid in this area, with raises the possibility of a contained perforation at TI. There is another loop of small bowel to the right and above the bladder that is thickened with prestenotic dilation up to 3.71cm and to-and-fro motion of bowel content, uncertain if contiguous with terminal ileum or separate loop as the bowel cannot be fully traced in the deep pelvis/behind the bladder.

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EMERGENCY
Patient
Drop-Off
Public
Parking

CT enterography

- As described above, wall thickening, mucosal hyperenhancement and engorgement of the vasa recta involving most of the mid to distal small bowel, most pronounced at the level of the distal ileum. Additionally, segment of luminal narrowing with associated hyperenhancement at the level of the terminal ileum. Findings are again most compatible with acute on chronic inflammatory bowel disease and similar compared to prior.
- Similar although slightly less pronounced findings are noted throughout the colon and also similar allowing for the change in the degree of fluid distention.
- Mild worsening of the degree of free fluid in the abdomen.
- The imaging findings are discordant with the pathology results from the biopsies of October 22, 2025. Given the extent of the imaging findings, repeat tissue sampling should be considered.

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Bowel US with radiology

Distal TI:
Wall thickness: 7 mm, moderately thickened.
Length: 10 cm
Comments: Folded loop from the ileocecal valve to about 10cm proximal. MIld prominence otherwise normal in appearance.

TI stricture:
Located 10 cm proximal to the ileocecal valve.
Wall thickness: 8 mm, severely thickened.
Length: 2 cm
Color Doppler: Moderately increased.
Inflammatory fat: Severe.
Additional Features: Fixed acute angulation and wall layer destruction.
SWE: Elastography shows a median value of 2.5 m/s with an IQR/median of 18. This indicates variability of measurement. Based on our experience, this indicates abnormally stiff bowel.
CEUS: Peak enhancement of 20 dB indicates moderate disease activity.
Complications: Stricture with proximal small bowel dilatation.
Comments: TIght stricture measuring approximately 2cm in length with wall layer destruction. The bowel at this stricture is stuck with possible cicatrization. Possible fibrotic vs phlegmon mass 1.5 x 1.3 x 1.2 cm located medial to angulated loop of terminal ileum. CEUS shows this to be a hypoenhancing pocket. There is prestenotic dilation of the bowel proximal of up to 7cm in diameter. There is a thin line of fluid seen on dynamic real time shooting through the narrowed portion of the bowel at the level of the stricture.

Proximal small bowel:
Wall thickness: 7 mm, moderately thickened.
Length: 40 cm
Color Doppler: Moderately increased.
Comments: Extensive wall thickening. There is at least 40cm of thickened small bowel proximal to the distal stricture that is dilated with dysfunctional peristalsis. There is evidence of at least one more stricture.

Bowel US with radiology

IMPRESSION:

There is extensive stricturing within the small bowel with a tight stricture located approximately 10cm from the ileocecal valve measuring approximately 2 cm in length with proximal small bowel dilatation measuring up to 7 cm in diameter. There is associated wall layer destruction cicatrization with a possible phlegmonous mass. No convincing evidence of perforation. We would assess this stricture as showing acute on chronic change. Overall the entire imaging sequences suggests complicated Crohn's disease.

Findings were discussed with Dr. St-Pierre,at the time of the study.

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What are your next steps?

Hospital stay

- Started on steroids
- Completely obstructs, NG tube placed
- Trial of Rinvoq
- Serial imaging shows no significant improvement

- Brought to the OR for extensive ICR, with additional sampling of peritoneum and free fluid

Pathology

- […] specimen demonstrates a segment of small bowel extensively involved by **adenocarcinoma with signet ring features (poorly differentiated)**. Carcinoma appears to arise within the dominant ileal stricture with transmural invasion and involvement of the serosal surface. Serosal involvement is very extensive, including innumerable deposits on the ileal serosa, omentum, and peritoneal wall. […]
- Examination of the ileal mucosa shows features of **active ileitis with focal areas of erosion and ulceration**. Features of **chronicity are also present** […]. Areas of stenosis also show muscularis mucosae and muscularis propria hypertrophy […]. Granulomas are not identified; transmural inflammation is also present. In the appropriate clinical setting, these findings, especially given the presence of fibromuscular stenosis, could be compatible with the diagnosis of Crohn's disease. A possibility of obstruction-associated active and chronic changes was also considered, but is thought to be less likely. **Overall, given a multitude of confounding factors (adenocarcinoma), clinical correlation is necessary to establish a definitive diagnosis of Crohn's disease.**
- Path addendum: **Adenocarcinoma, poorly differentiated, with neuroendocrine differentiation and signet ring cell features**

Patient Case #2

Case 2 – 38M

- CVID diagnosed at age 13
  - On monthly IVIG
  - Not many infections other than in his 20s, with many chest infections, URTIs
  - Episode of sepsis from E. coli bacteremia in March 2024 requiring hospitalization.
- Liver Transplant for Sclerosing Cholangitis / Autoimmune Hepatitis in 2013
  - EGD March 2025: Small varices noted but otherwise normal gastroscopy. Prescribed carvedilol but has not started.
  - On tacrolimus and prednisone 5mg for immunosuppression
- Monomorphic PTLD [classical Hodgkin lymphoma morphology]
  - Stage IVB with widespread involvement diagnosed in February 2023 on bone marrow biopsy. EBER positive.
  - Achieved a complete metabolic remission on the end of treatment PET scan August 2023.

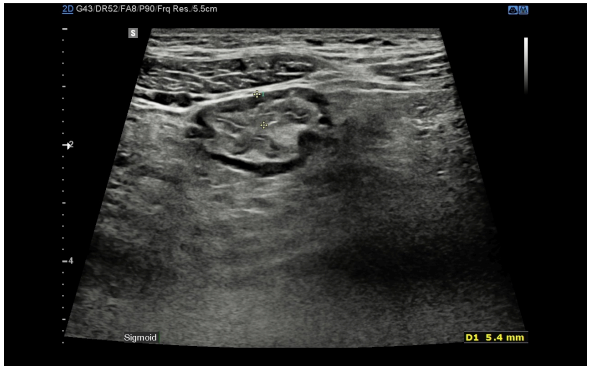
Referral to GI

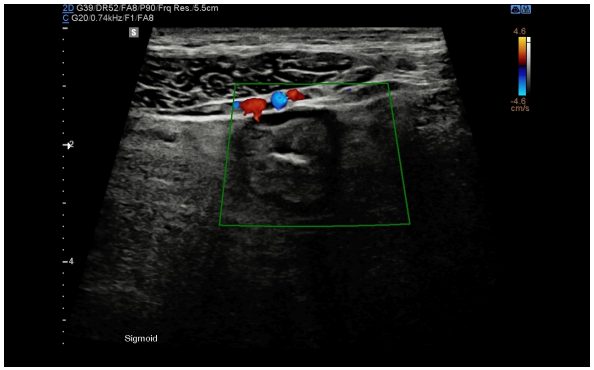
- Referred for chronic diarrhea x 8 months
  - 4-6 loose BMs per day
  - Nocturnal stooling, abdominal cramping, urgency (w/ incontinent episodes), no bleeding
- Previous diarrhea in 2018 (started around the time of treatment with PTLD with rituximab), resolved post treatment
- No prior colonoscopy

- ?CVID enteropathy

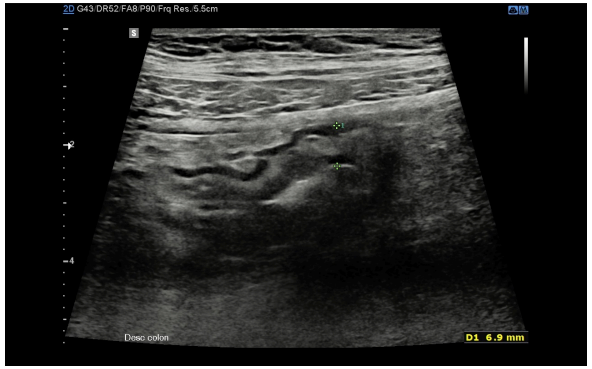
POCIUS

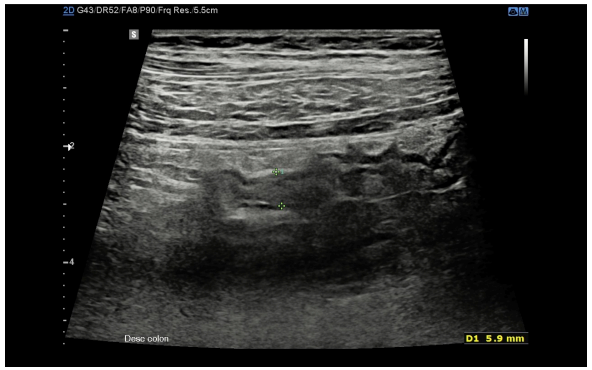
Sigmoid



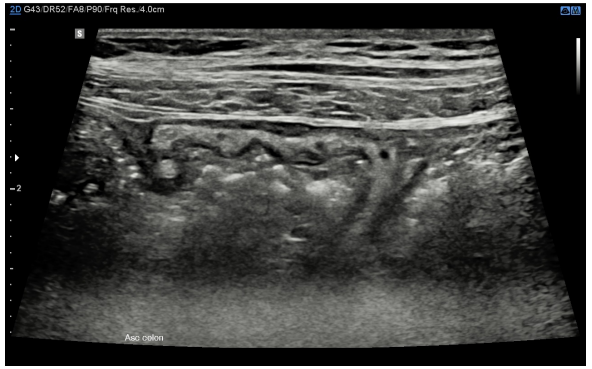


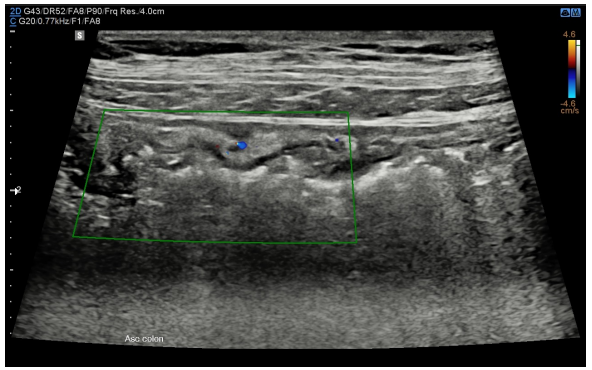
Descending





Ascending





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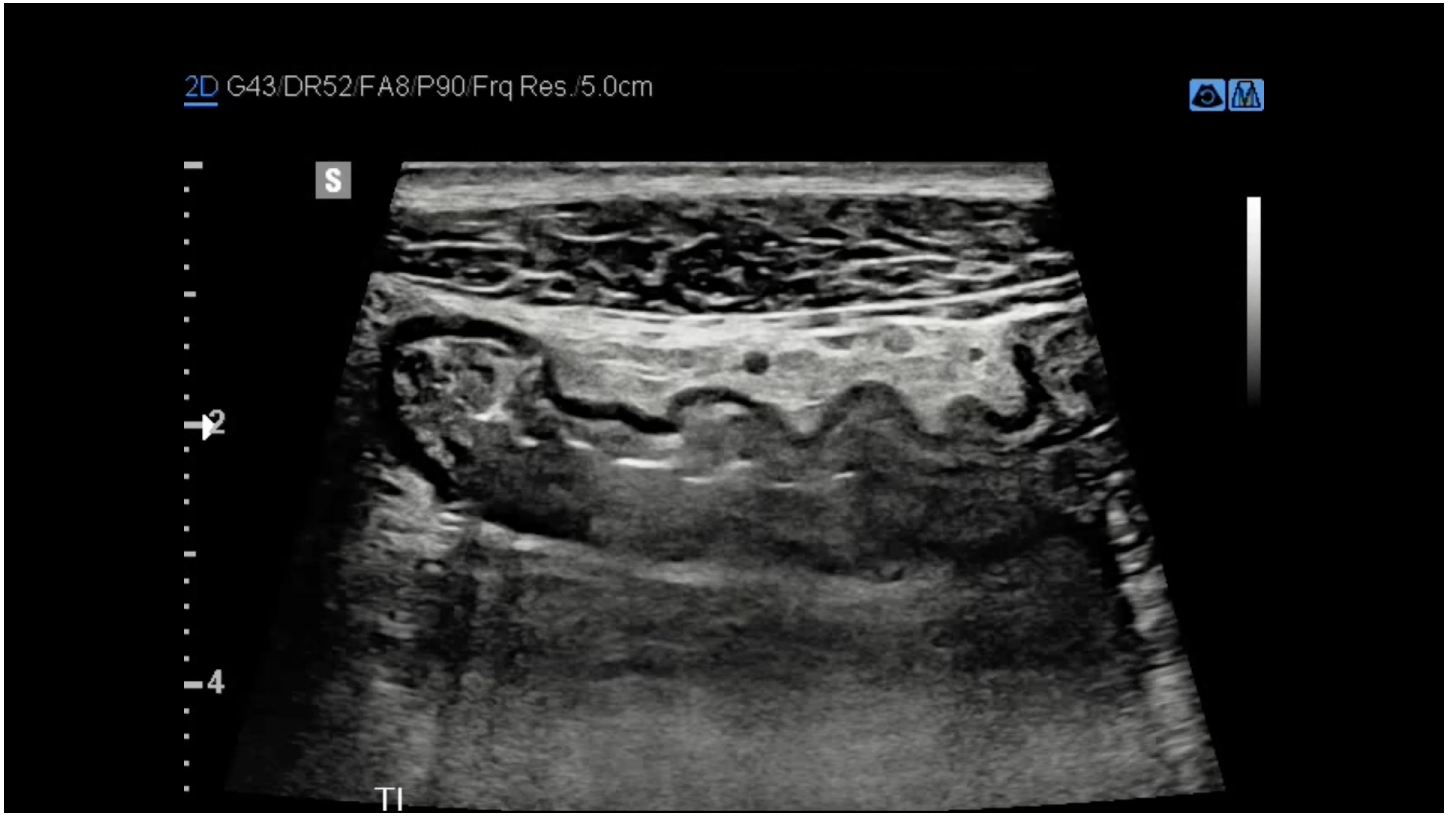
Transverse colon



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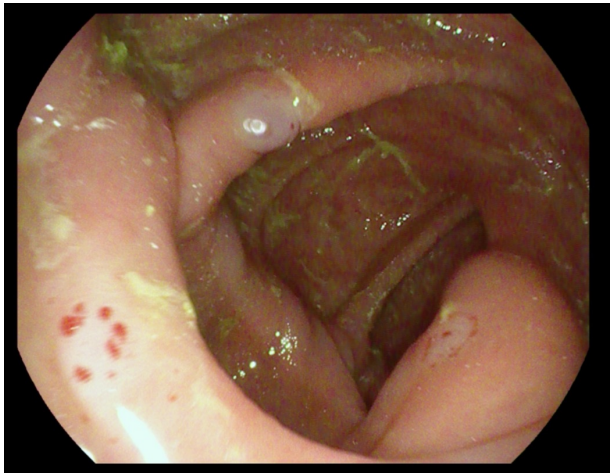
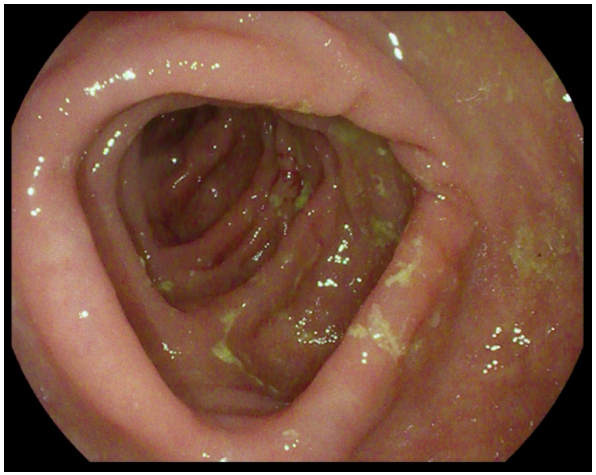
POCIUS impression

- Impression: Today's bowel ultrasound showed increased bowel wall thickness throughout the colon and high burden of mesenteric fat throughout the abdomen. There is no hyperemia present. Although sonographic findings in patients with CVID are not well reported, these findings of increased bowel wall thickness and mesenteric fat wrapping are usually present in patients with inflammatory bowel disease with active inflammation. In this context, however, it is difficult to interpret but certainly suspicious for a transmural inflammatory and/or infiltrative process.

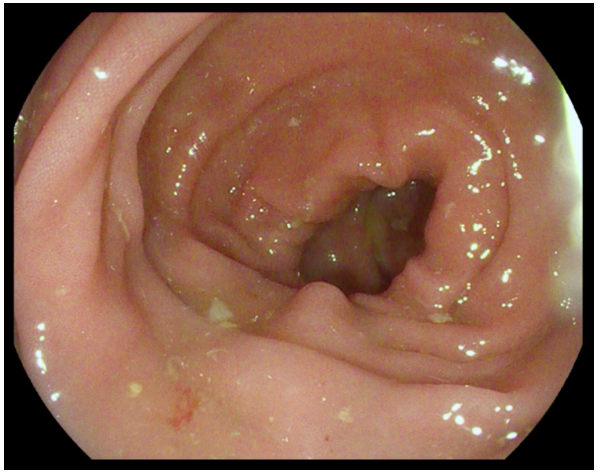
Endoscopic correlate



Ascending colon



Transverse colon



Descending colon

Overall this is a normal colonoscopy. There was a small erosion in the ascending colon as a comment on the lower which I biopsied separately. There is no gross evidence of inflammation, ulceration, loss of vascular pattern, polyps, and the distal small bowel appeared fine. Biopsies were taken in the nontargeted fashion of the colon and small bowel.

Pathology

- Random Colon and Terminal Ileum, Biopsies:
  - Compatible with **T/NK cell lymphoproliferative disorder**
  - No evidence of previously diagnosed monomorphic PTLD (marginal zone B-cell lymphoma)
- Ascending Colon Erosion, Biopsy:
  - Colonic mucosa with mild active inflammation
  - No morphologic features of T/NK cell lymphoproliferative disorder

Patient Case #3

Case #3 – 56F

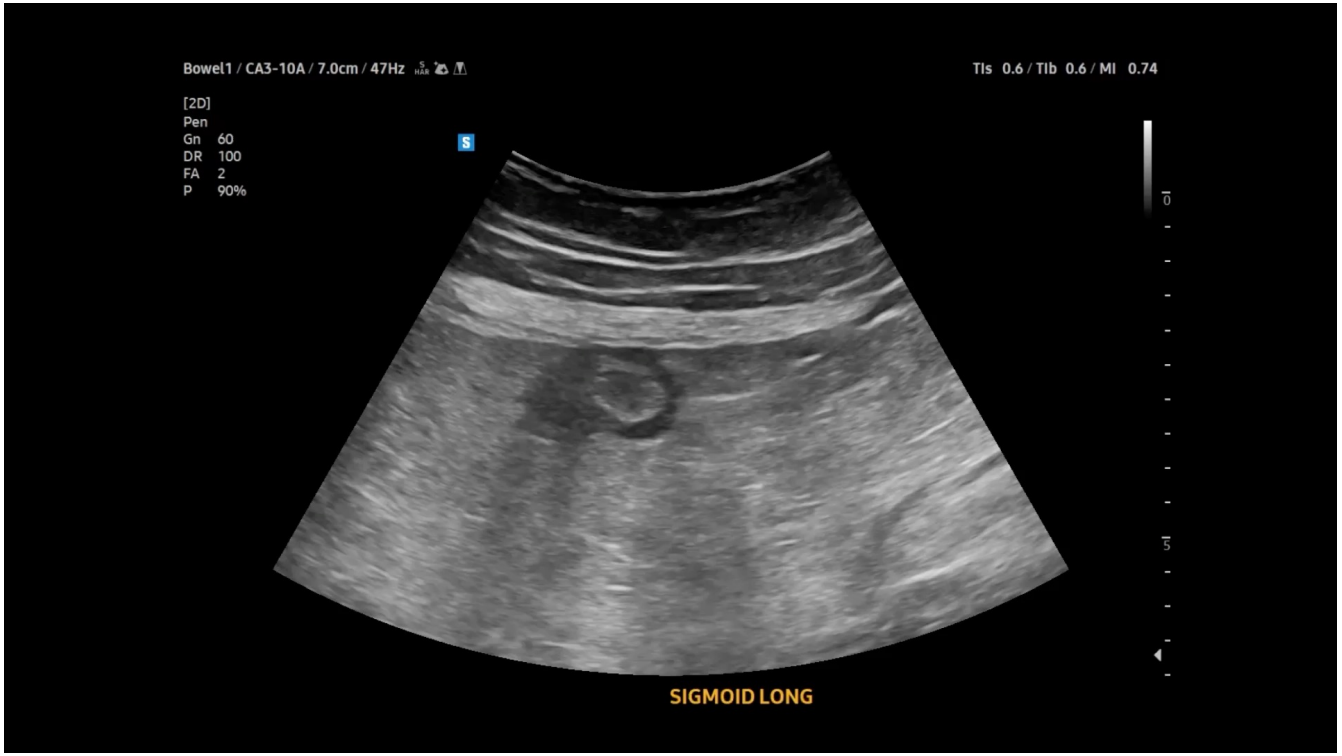
- CVID
  - Weekly IVIG
  - CVID nodular regenerative hyperplasia (NRH) liver disease, with F2-like damage, non cirrhotic, portal hypertension
- Prior C difficile
- Dx with Microscopic colitis in 2022, followed by GI
  - Cortiment 9mg and Imodium QID since 2022

Referred for second opinion

- Referred for chronic diarrhea refractory to entocort
  - 2-6 loose bowel movements, 1-2 nocturnal
  - A/w abdominal cramping, urgency
  - Fluctuating weight
  - Poor QoL

- Albumin 29
- Hgb 117, plt 125, ferritin 33

Sigmoid



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Transverse

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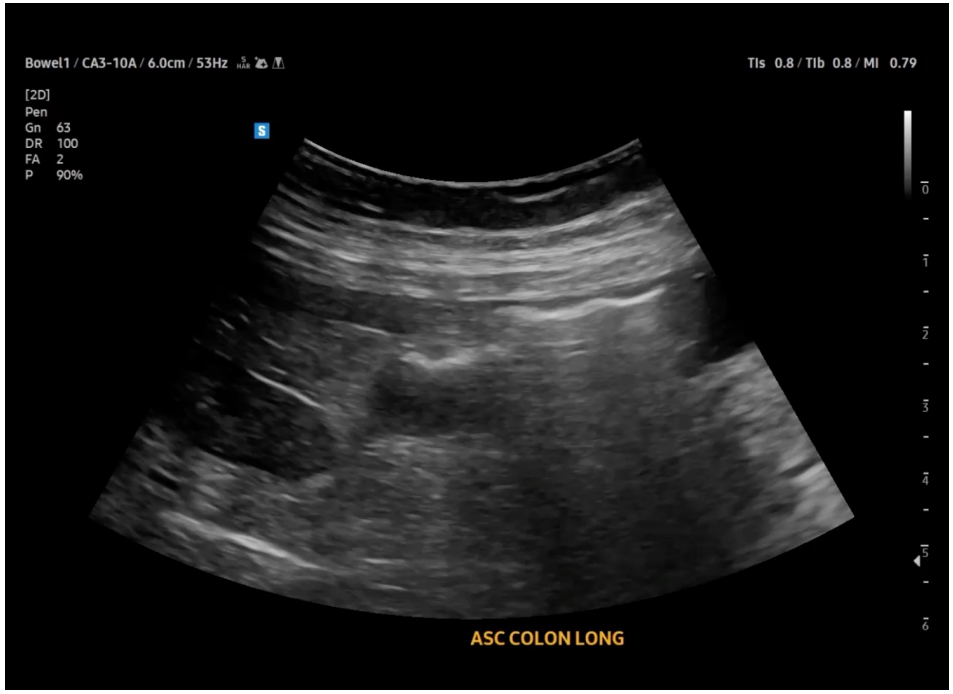
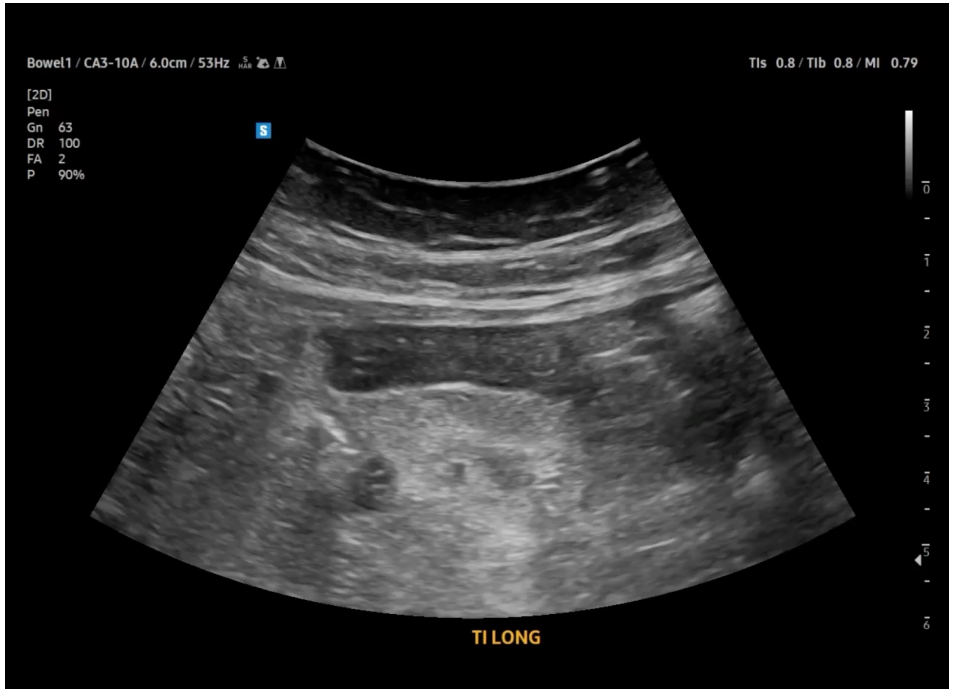
AC and TI





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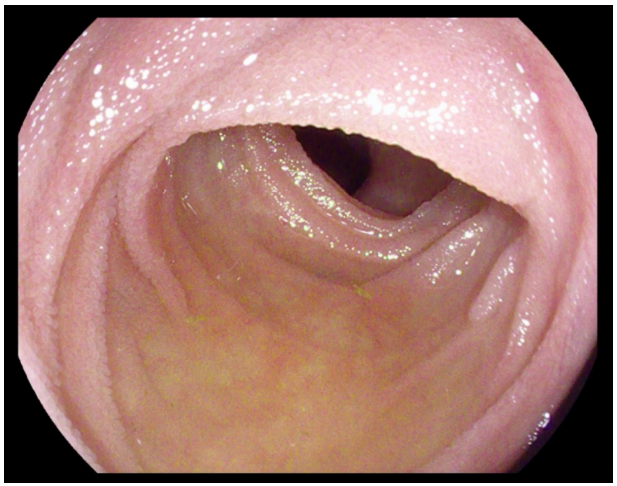
POCIUS

INTESTINAL ULTRASOUND FINDINGS

	Rectum	Sigmoid	Descending	Transverse	Ascending	TI/NTI	Proximal SB
BWT (mm)		6.2 (axial)	5.8 (long)	7 (long) 8.6 (axial)	4.5 (long), 5.7 (axial)	2.3, 4 (long)	
Limberg Score		1	1	2	1	1	
Echostratification		Extensive	Extensive	Extensive	Extensive	Extensive	
Inflammatory Fat		Present	Present	Present	Present	Present	
Complications		No	No	No	No	No	
Length of compromise (cm)							

IMPRESSION: Overall, significant pan-colonic inflammation with very thickened bowel wall thickness (normal <3mm) throughout. Increased doppler signal, extensive loss of echostratification, extensive inflammatory fat. Not specific for a particular etiology, but very inflamed colon, new since prior imaging about one year ago with CT.

Endoscopic correlate



TI

Descending colon

Descending colon

Pathology

- A. Terminal Ileum; Biopsy:
  - Small bowel mucosa with active enteritis, complete loss of goblet cells, markedly reduced Paneth cells, prominent apoptosis, and moderate villous blunting, **highly concerning for autoimmune enteritis**
  - Paucity of plasma cells, consistent with history of CVID
- B. Random Colon; Biopsy:
  - Colonic mucosa with active colitis, reduced goblet cells, absent Paneth cells, and prominent apoptosis, highly concerning for **autoimmune colitis**
  - Paucity of plasma cells, consistent with history of CVID
  - Focal subepithelial collagen thickening, compatible with history of collagenous colitis (though not prominent)
- These features are concerning for autoimmune enterocolitis and were not identified in previous biopsies. […] There are no features of chronicity to suggest IBD.

When Thick Bowel Is NOT IBD

Focal = malignancy until proven otherwise

Loss of stratification = not typical IBD

Discordance = pause and rethink