



international bowel
ULTRASOUND GROUP

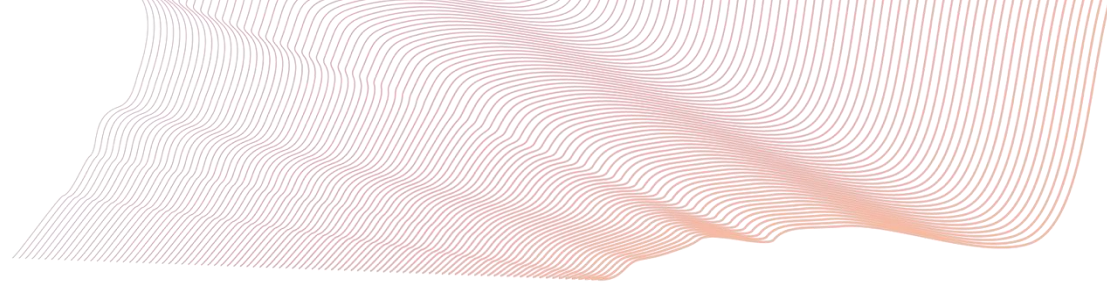
Intestinal Ultrasound in UC

Joëlle St-Pierre, MD PhD

University of Calgary, Calgary, Alberta, Canada



Panama City, August 2026



Thank you to all contributors who helped create this presentation:

Dr. Federica Furfaro
Dr. Frauke Petersen
Dr. Kayal Vizhi

Intended learning outcomes (ILOs)

By the end of this session, the learner will be able to:

1. Apply bowel wall thickness (BWT) measurements according to standard and research criteria.
2. Evaluate the overall diagnostic and monitoring performance of IUS for ulcerative colitis assessment against established reference standards (e.g., endoscopy, cross-sectional imaging, histology).
3. Understand the relative time course over which different IUS parameters typically respond to effective treatment in ulcerative colitis.
4. Define different IUS response and remission definitions used in UC assessment and explain how they can be used to predict and monitor disease activity over time.



Intended Learning Outcomes

From image acquisition to bedside decisions

1



Measure BWT

Apply standard and research criteria

2



Assess extent & activity

Interpret IUS against endoscopy, imaging and histology

3



Monitor response

Recognize how BWT and Doppler change over time

4



Define response/remission

Use UC IUS response and remission concepts

5

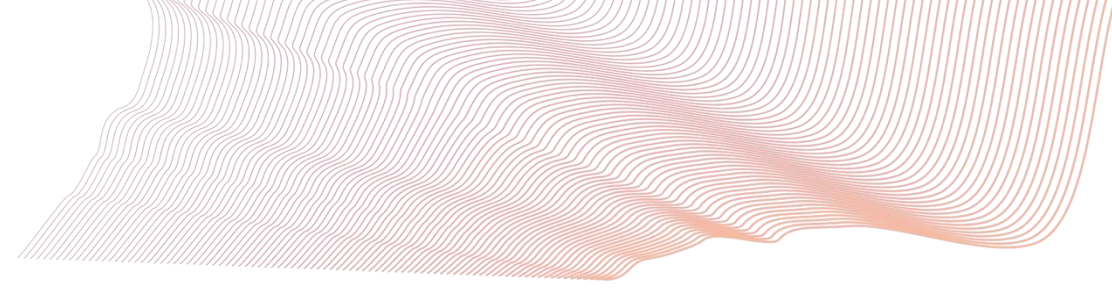


Apply clinically

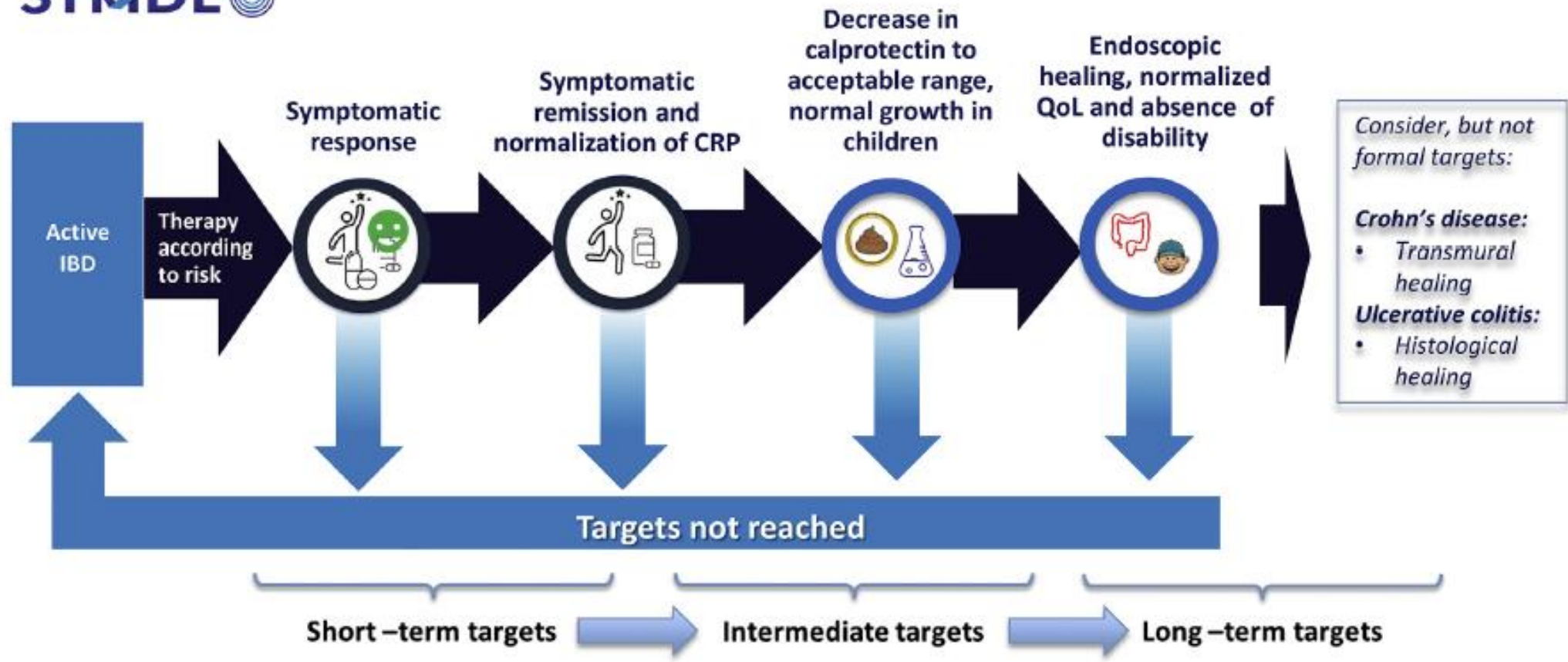
Support decisions in flare, ASUC and follow-up



By the end of this session, learners should be able to move from image acquisition to bedside decisions.



Part I - Why IUS in UC



ECCO-ESGAR-ESP-IBUS Guideline on Diagnostics and Monitoring of Patients with Inflammatory Bowel Disease: Part 1

Part 1: initial diagnosis, monitoring of known inflammatory bowel disease, detection of complications

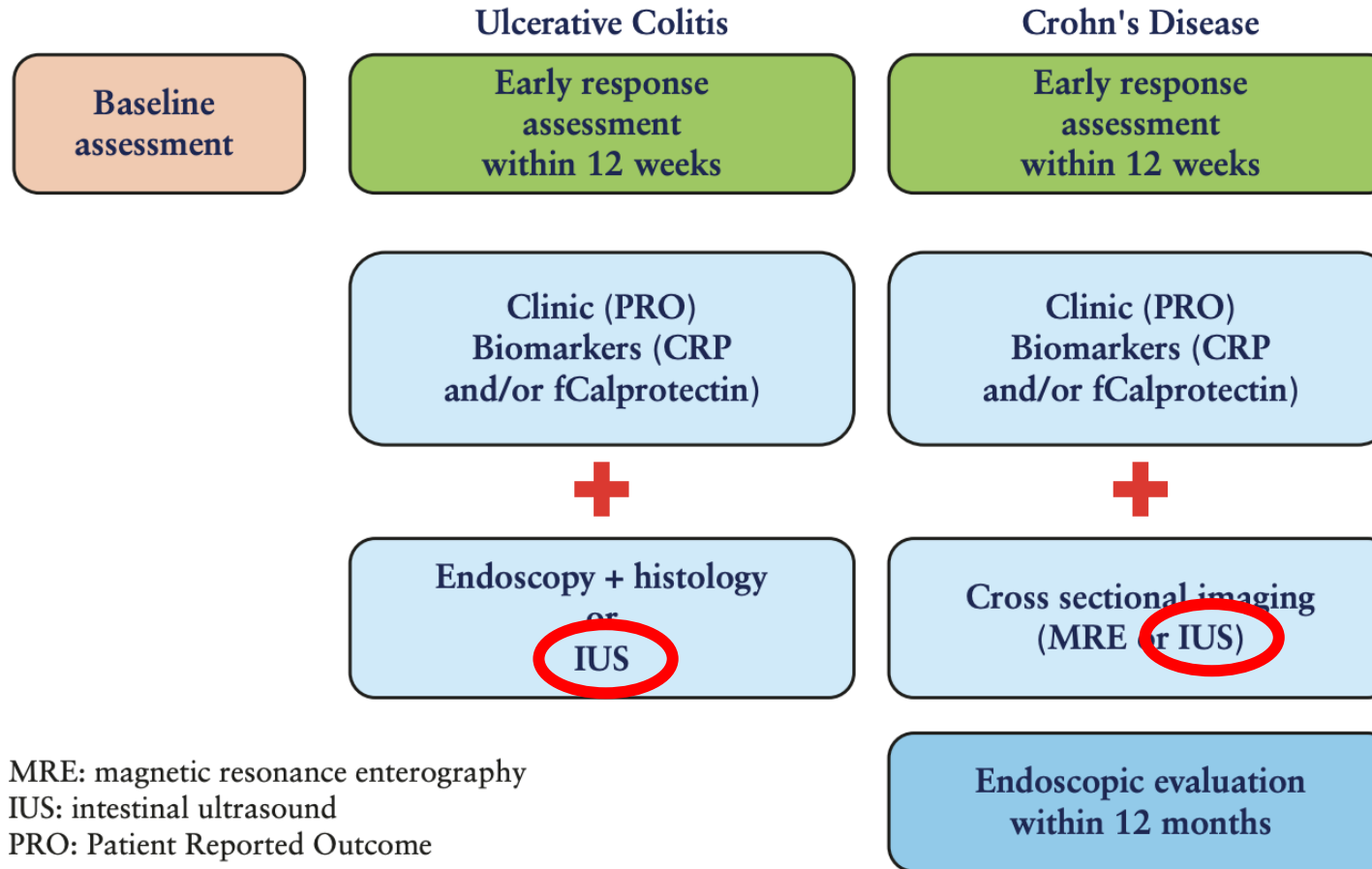
Torsten Kucharzik^{1,*}, Stuart Taylor², Mariangela Allocca^{3, ID}, Johan Burisch^{4,5,6, ID}, Pierre Ellul⁷, Marietta Iacucci^{8, ID}, Christian Maaser⁹, Pamela Baldin¹⁰, Gauraang Bhatnagar¹¹, Shomron Ben-Horin¹², Dominik Bettenworth¹³, Mallory Chavannes^{14, ID}, Ann Driessen¹⁵, Emma Flanagan^{16, ID}, Frederica Furfaro¹⁷, Giovanni Maconi^{18, ID}, Konstaninos Karmiris^{19, ID}, Amelia Kellar^{20,21, ID}, Isabelle De Kock²², Konstantinos Katsanos²³, Uri Kopylov^{24, ID}, Cathy Lu^{25, ID}, Olga Maria Nardone^{26, ID}, Nurulamin M Noor^{27, ID}, Kerri Novak^{28, ID}, Paula Borralho Nunes^{29, ID}, Patrick van Rheenen^{30, ID}, Jordi Rimola^{31, ID}, Francesca Rosini³², David Rubin^{33, ID}, Martina Scharitzer^{34, ID}, Jaap Stoker^{35,36, ID}, Mathieu Uzzan^{37, ID}, Stephan Vavricka³⁸, Bram Verstockt^{39, ID}, Rune Wilkens^{40, ID}, Nina Zidar^{41, ID}, Alessandra Zilli^{42, ID}, Henit Yanai^{43,44, ID}, Roger Feakins^{45,46}, on behalf of the European Crohn's and Colitis Organisation (ECCO), the European Society of Gastrointestinal and Abdominal Radiology (ESGAR), the European Society of Pathology (ESP), and the International Bowel Ultrasonography Group (IBUS)

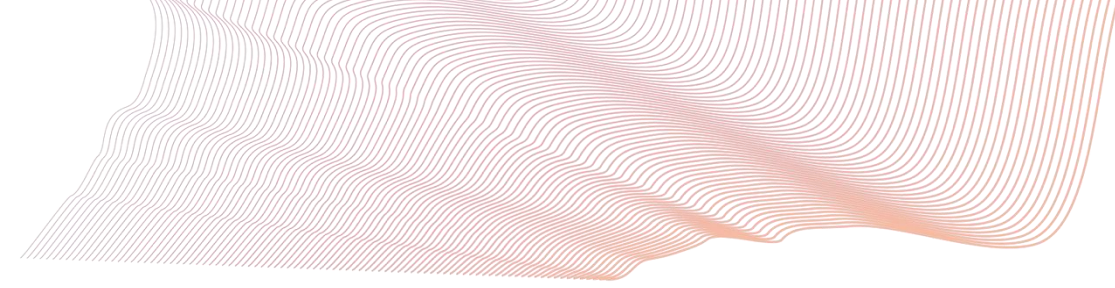
Acknowledges IUS as accurate, reliable, repeatable, and patient-centered - not a future tool, but *a current standard*.

ECCO-ESGAR-ESP-IBUS Guideline on Diagnostics and Monitoring of Patients with Inflammatory Bowel Disease: Part 2

Part 2: IBD scores and general principles and technical aspects

Henit Yanai^{1,2,*}, Roger Feakins^{3,4,†}, Mariangela Allocca^{5, ID}, Johan Burisch^{6,7,8, ID}, Pierre Ellul⁹, Marietta Iacucci^{10, ID}, Christian Maaser¹¹, Alessandra Zilli^{12, ID}, Nina Zidar^{13, ID}, Rune Wilkens^{14, ID}, Bram Verstockt^{15, ID}, Stephan Vavricka¹⁶, Mathieu Uzzan^{17, ID}, Jaap Stoker^{18,19, ID}, Martina Scharitzer^{20, ID}, David Rubin^{21, ID}, Francesca Rosini²², Jordi Rimola^{23, ID}, Patrick van Rheenen^{24, ID}, Paula Borralho Nunes^{25, ID}, Kerri Novak^{26, ID}, Nurulamin M Noor^{27, ID}, Olga Maria Nardone^{28, ID}, Cathy Lu^{29, ID}, Uri Kopylov^{30, ID}, Konstantinos Katsanos^{31, ID}, Isabelle de Kock³², Amelia Kellar^{33,34, ID}, Konstaninos Karmiris³⁵, Giovanni Maconi^{36, ID}, Frederica Furfaro³⁷, Emma Flanagan^{38, ID}, Ann Driessen³⁹, Mallory Chavannes^{40, ID}, Dominik Bettenworth⁴¹, Shomron Ben-Horin⁴², Gauraang Bhatnagar⁴³, Pamela Baldin⁴⁴, Torsten Kucharzik^{45,†}, Stuart Taylor^{46,†}, on behalf of the European Crohn's and Colitis Organisation [ECCO], the European Society of Gastrointestinal and Abdominal Radiology [ESGAR], the European Society of Pathology [ESP], and the International Bowel Ultrasonography Group [IBUS]





Part II – How to scan and measure

IUS Parameters – Ulcerative colitis



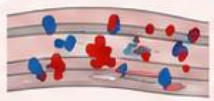
Mural findings



1 Bowel wall thickness



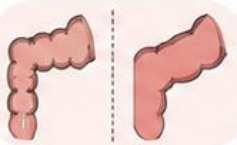
2 Bowel wall stratification



3 Colour Doppler activity



4 Small intestinal motility



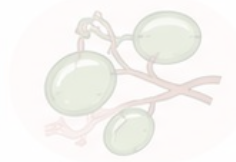
5 Large intestine –
loss of haustrae



Extra-mural findings



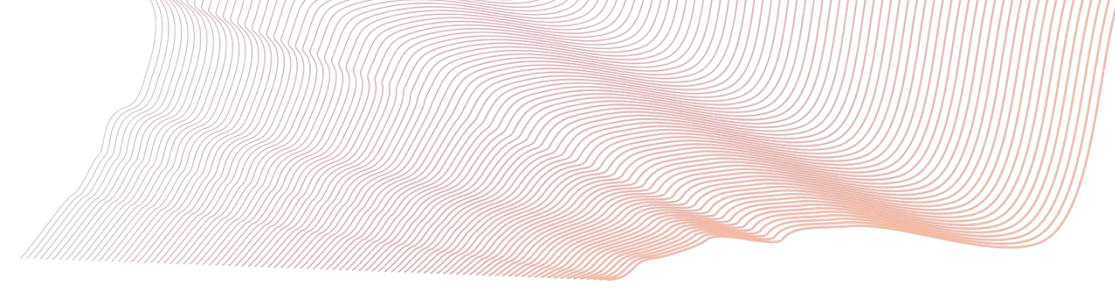
1 Proliferation of
inflammatory
mesenteric fat



2 Lymph nodes



3 Free fluid



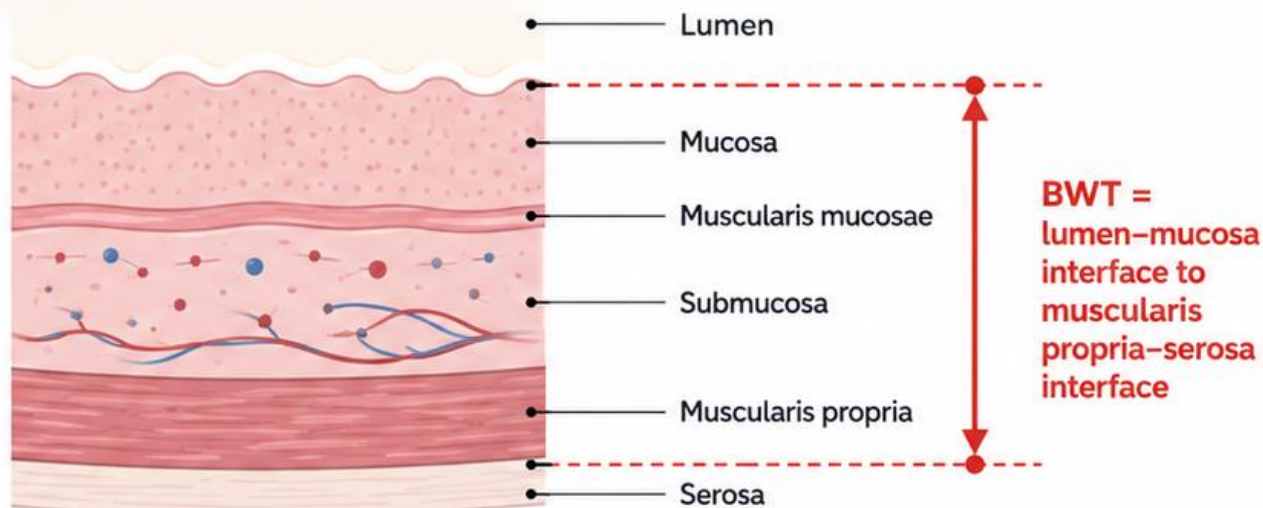
How to measure bowel wall thickness (BWT) according to standard and research criteria?



How to measure bowel wall thickness (BWT)



Bowel wall cross-section



1



Measure from the lumen-mucosa interface to the muscularis propria-serosa interface

2



Avoid intestinal folds

3



Measure at the **thickest** abnormal segment

4



Use the **mean of 4** measurements (nearest 0.1 mm)



Research criteria



2 longitudinal measurements at least 1 cm apart



2 cross-sectional measurements at least 90° apart

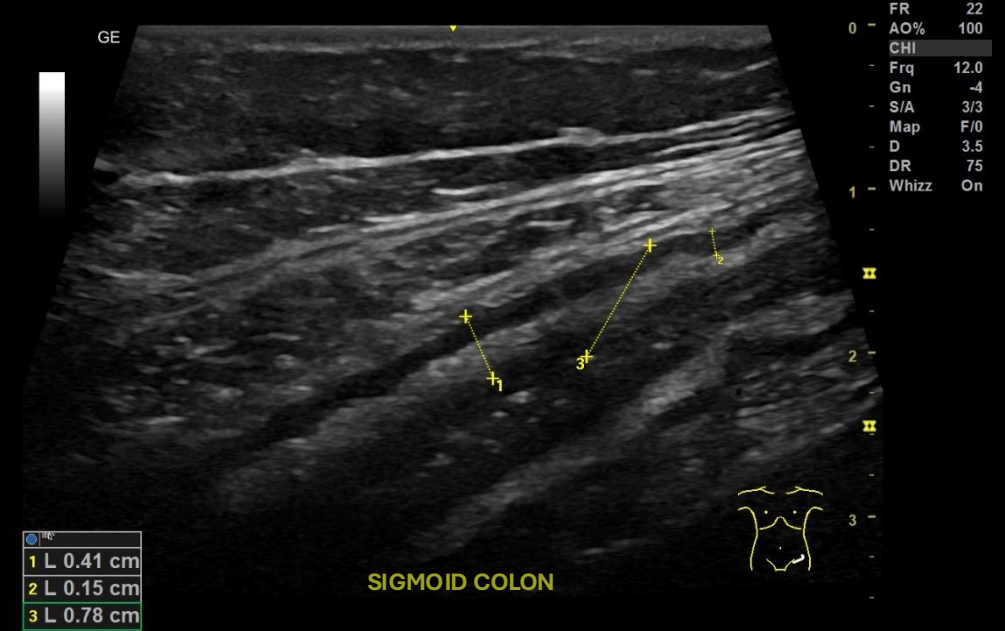
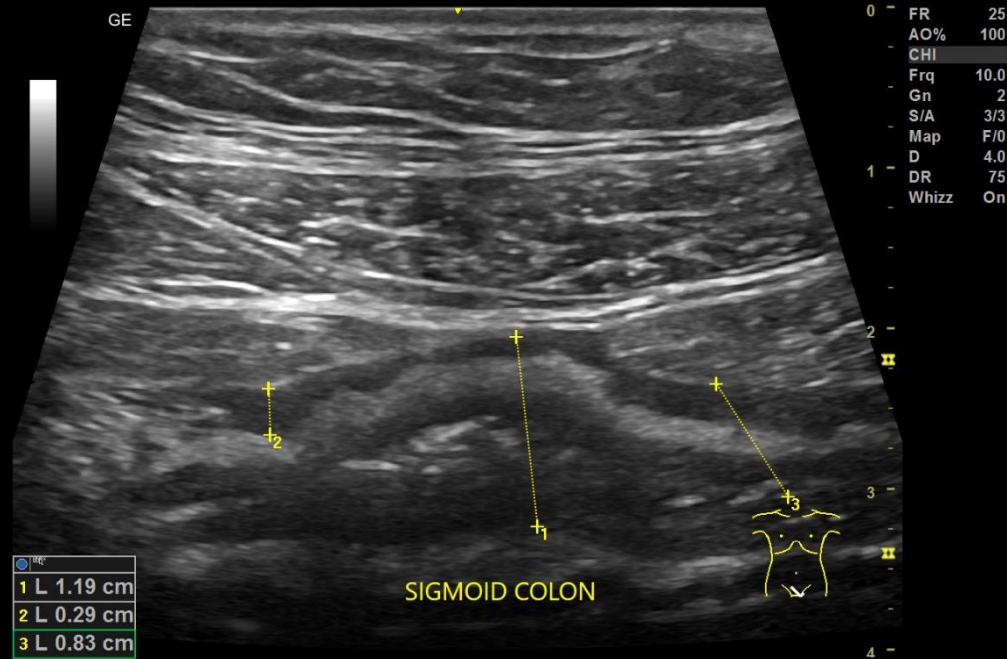


Pearls

Keep the probe steady • Freeze the best image • Record the segment scanned

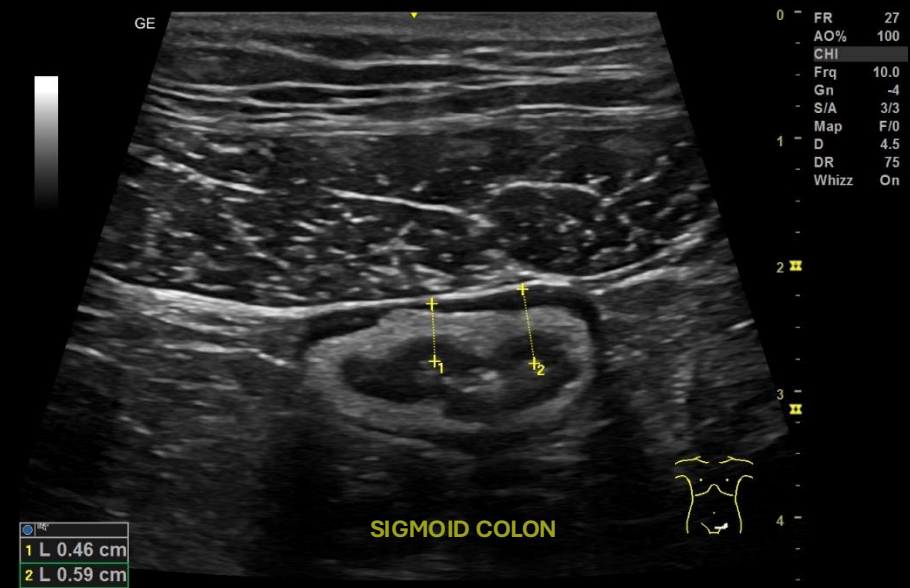
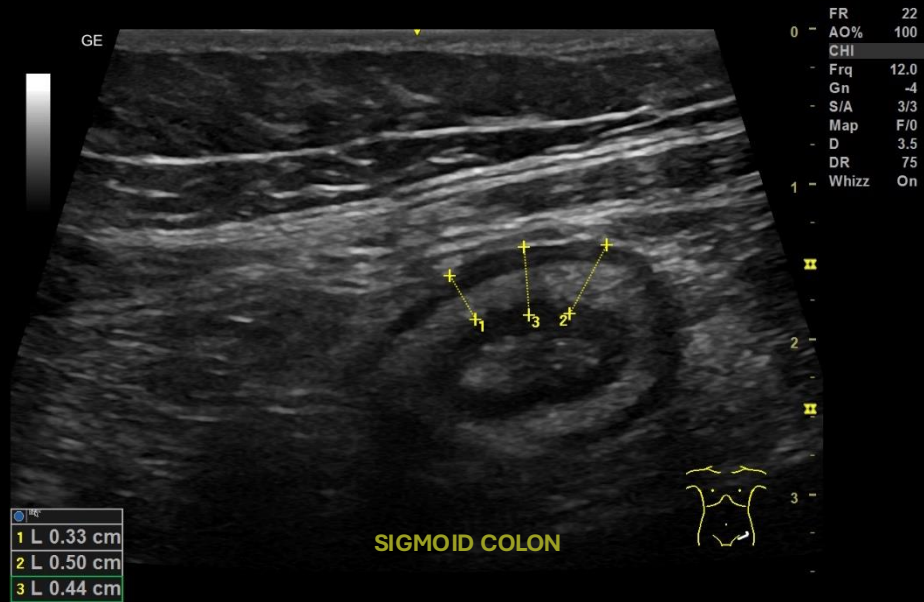


Are the measurements correct?





Are the measurements correct?





A Reliability Study: Strong Inter-Observer Agreement of an Expert Panel for Intestinal Ultrasound in Ulcerative Colitis

Floris De Voogd¹, Rune Wilkens², Krisztina Gecse¹, Mariangela Allocca³, Kerri Novak⁴, Cathy Lu⁴, Geert D'Haens¹, Christian Maaser⁵

- **Two** measurements in a **longitudinal scan plane** with **at least 1 cm between** the two measurements
- **Two** measurements in a **cross-sectional scan plane** with a **minimum of 90°** between the two measurements

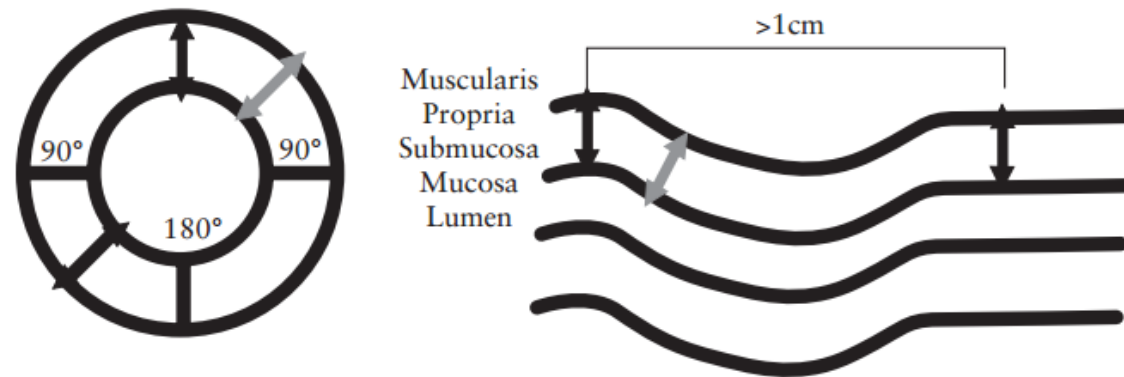
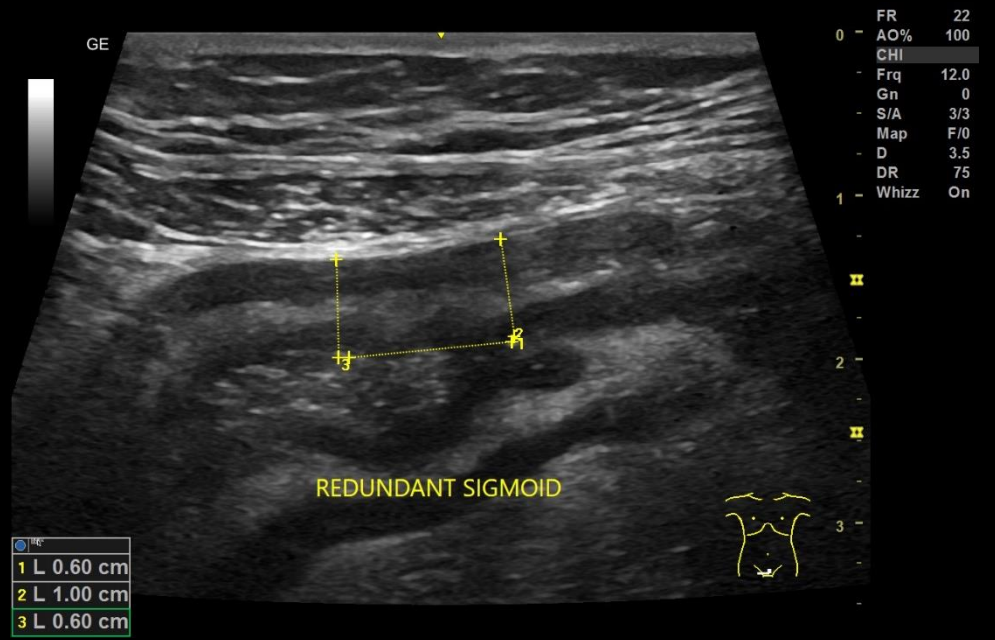
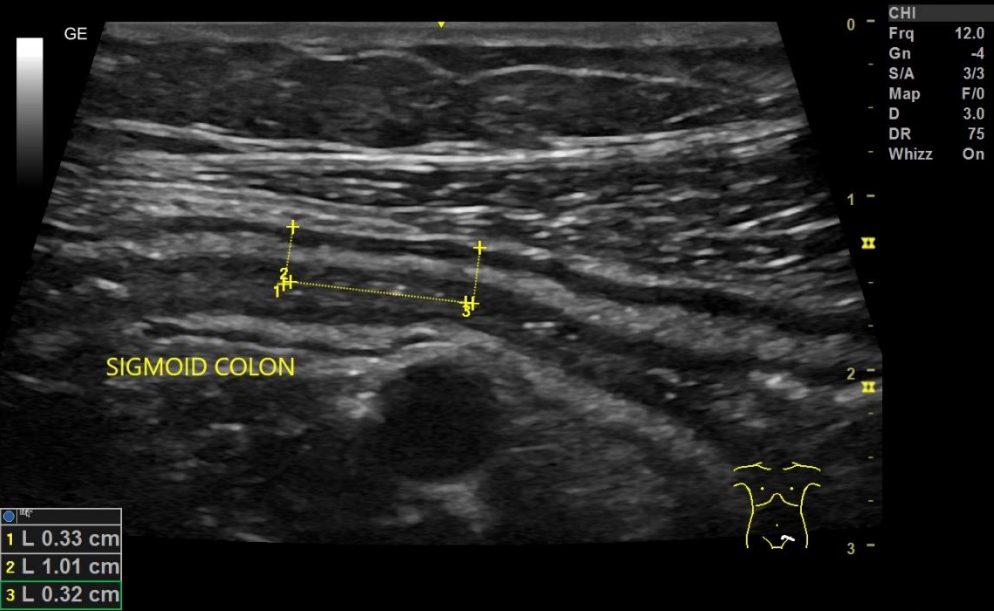
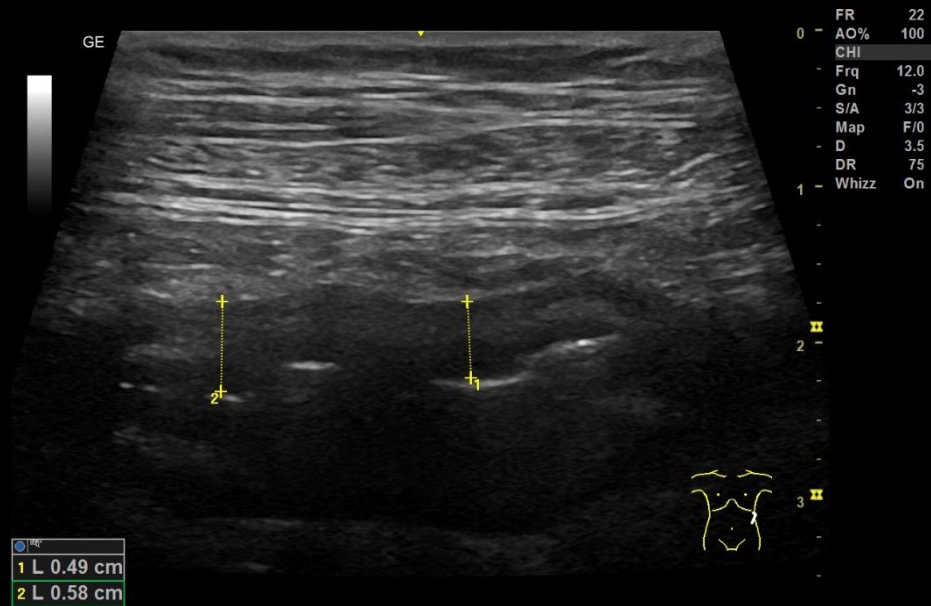
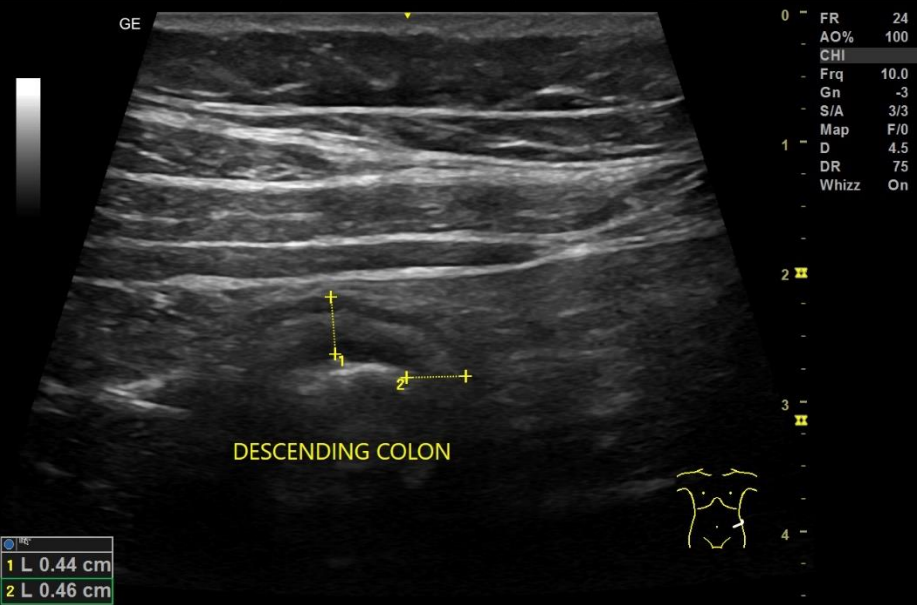
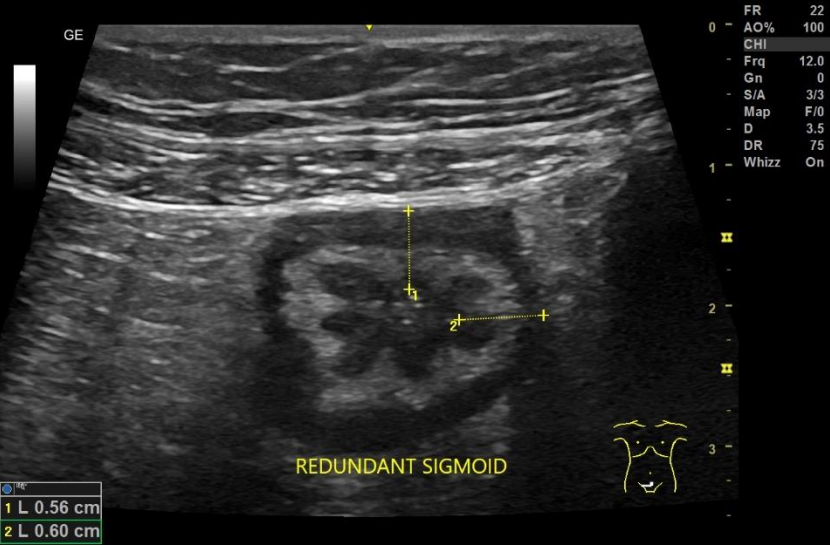
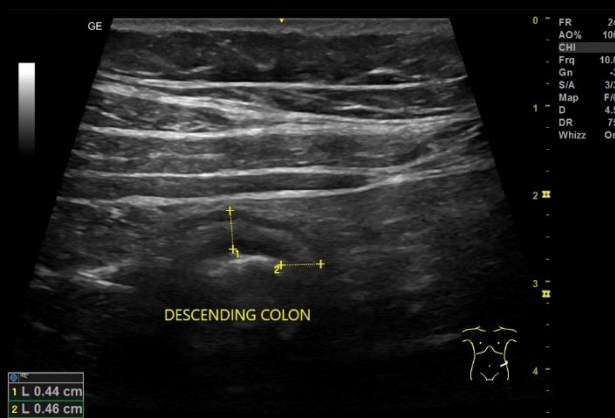
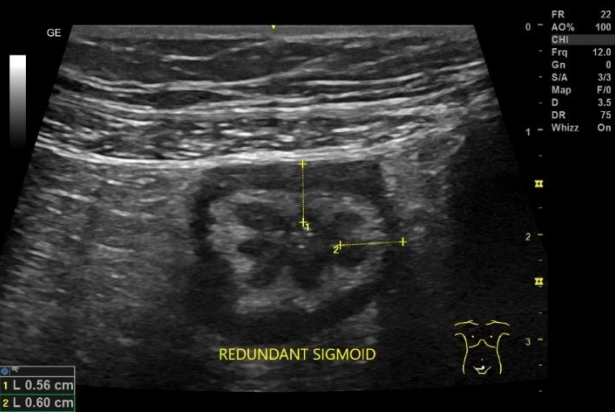
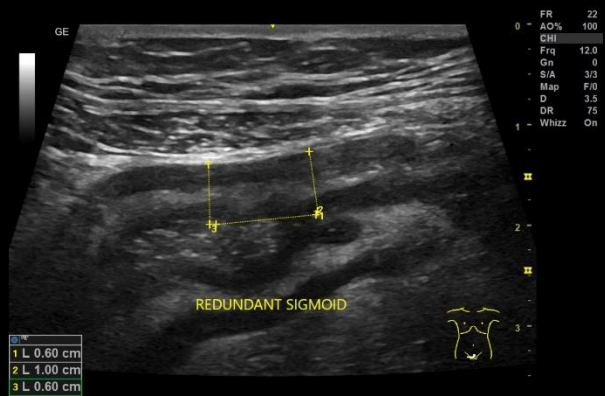


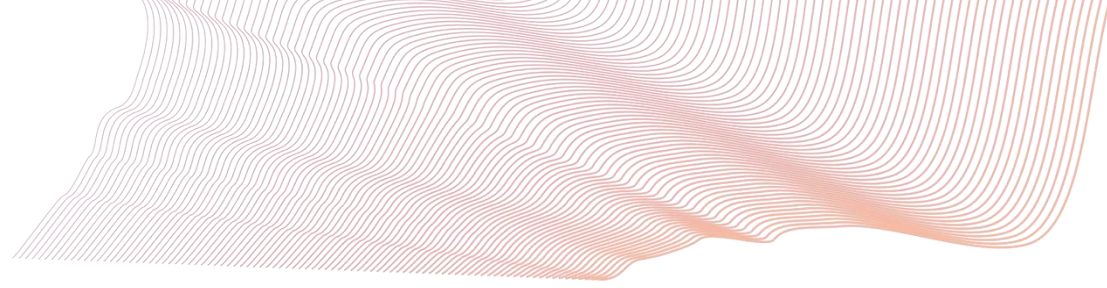
Figure 1. The black arrow indicates the first correct measurement, grey arrow indicates incorrect second measurement, and black arrow indicates correct second measurement.







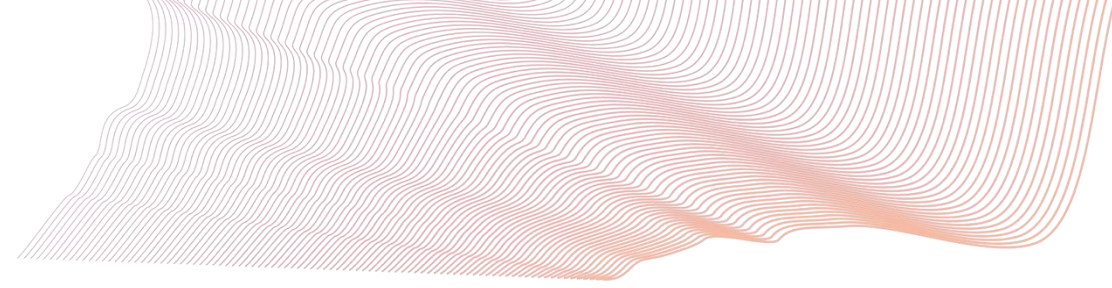




Part III – UC case

UC case

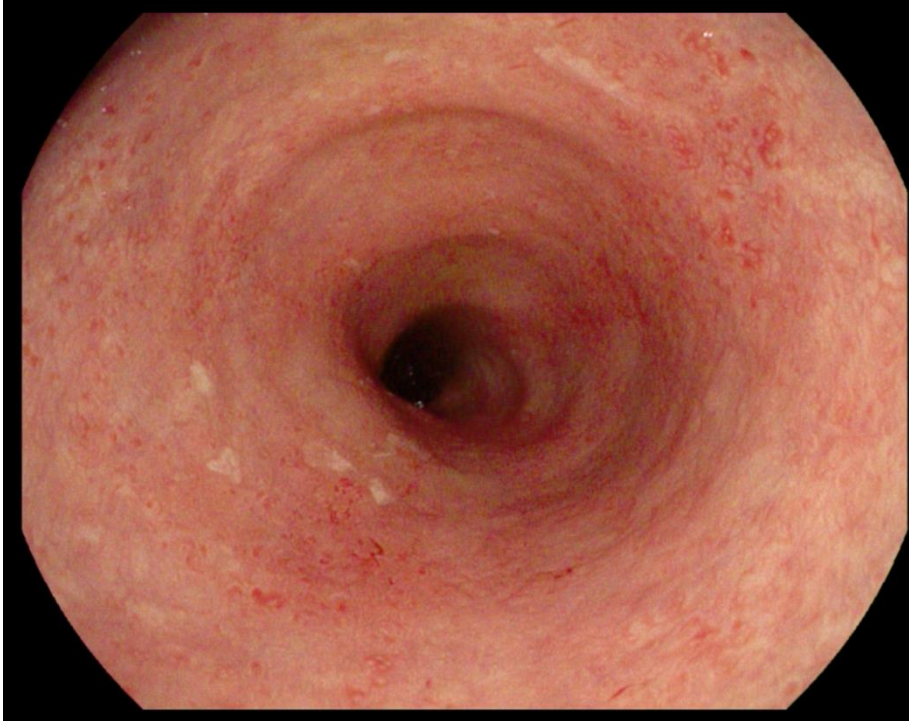
- 20F seen at the High-Risk IBD clinic
- Referred to GI for chronic diarrhea x 6 months
- Family history of UC (mother)
- HPI
 - 6 watery BMs/day, 0-1 nocturnal
 - Occasional blood
 - Abdominal cramping, urgency and tenesmus



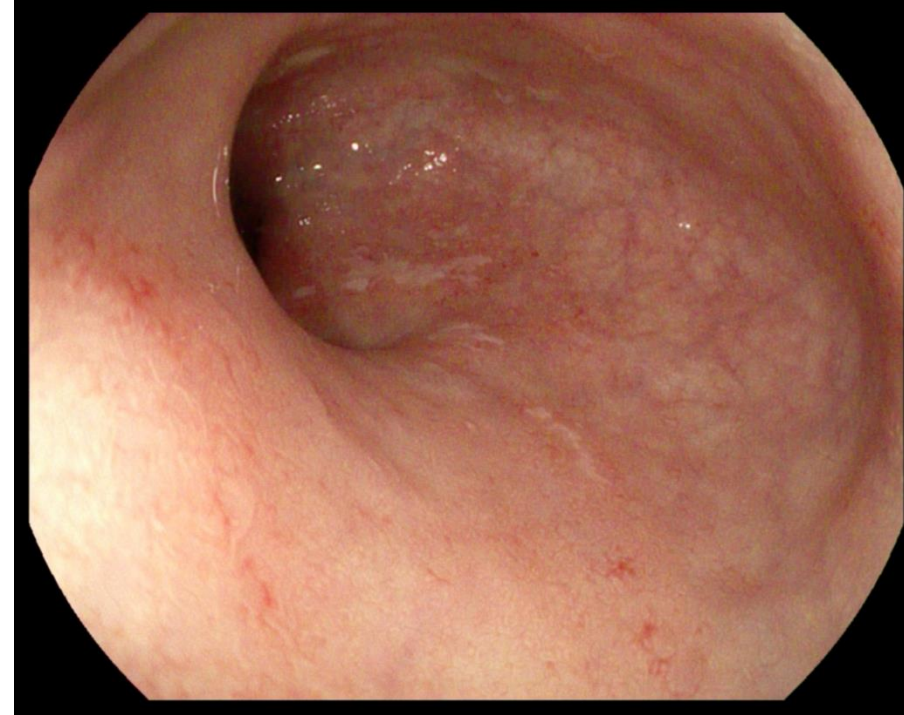


POCIUS: This examination is suspicious for a new diagnosis of UC with moderate to severe inflammation to the proximal TV colon. Normal small bowel.

Colonoscopy 3 days later



Descending colon

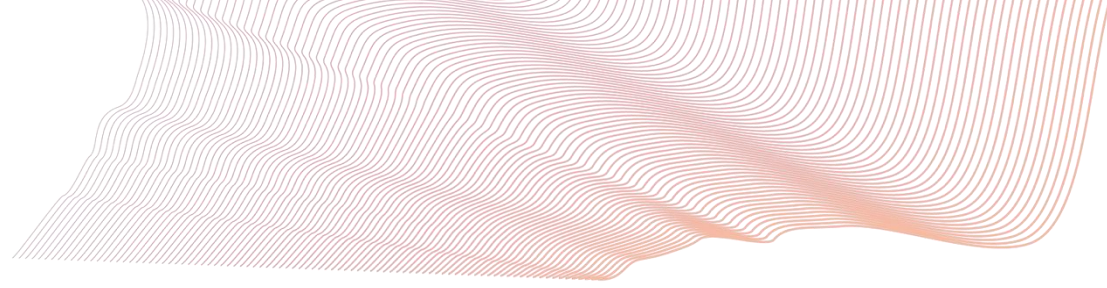


Splenic flexure

Path: Chronic active colitis in TV, descending, sigmoid and rectum biopsies

Case continued

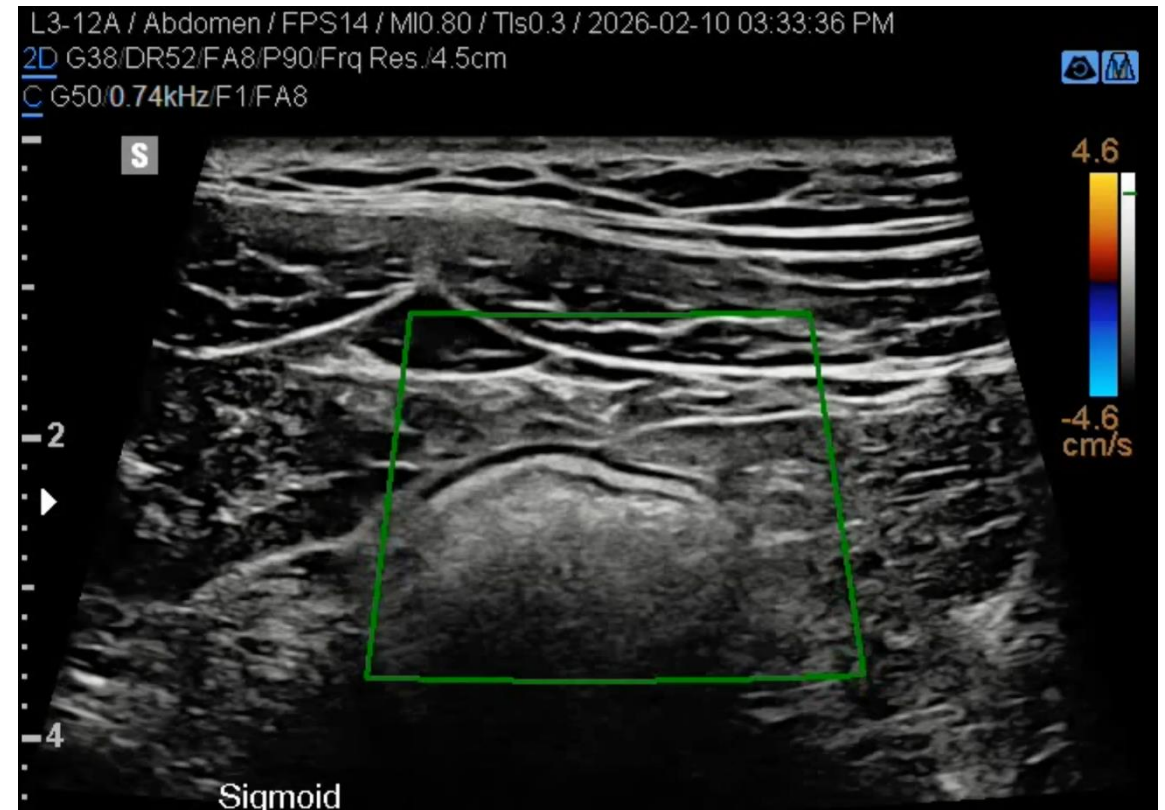
- Started on prednisone and Entyvio
- Still having some watery stools (3 per day), no blood
- Mild cramping



Case continued – POCIUS 3 months post therapy



Normal BWT (<3mm)



No Doppler flow (no microvascular flow)

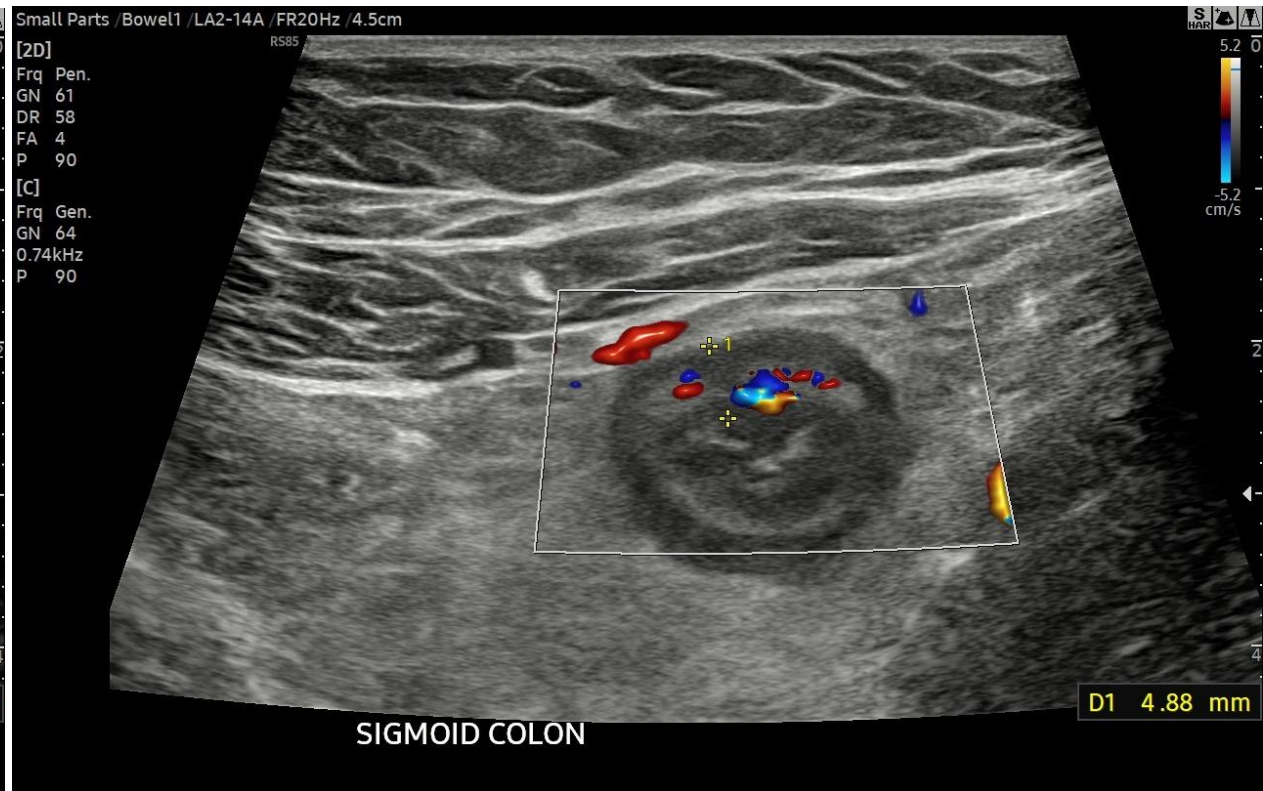
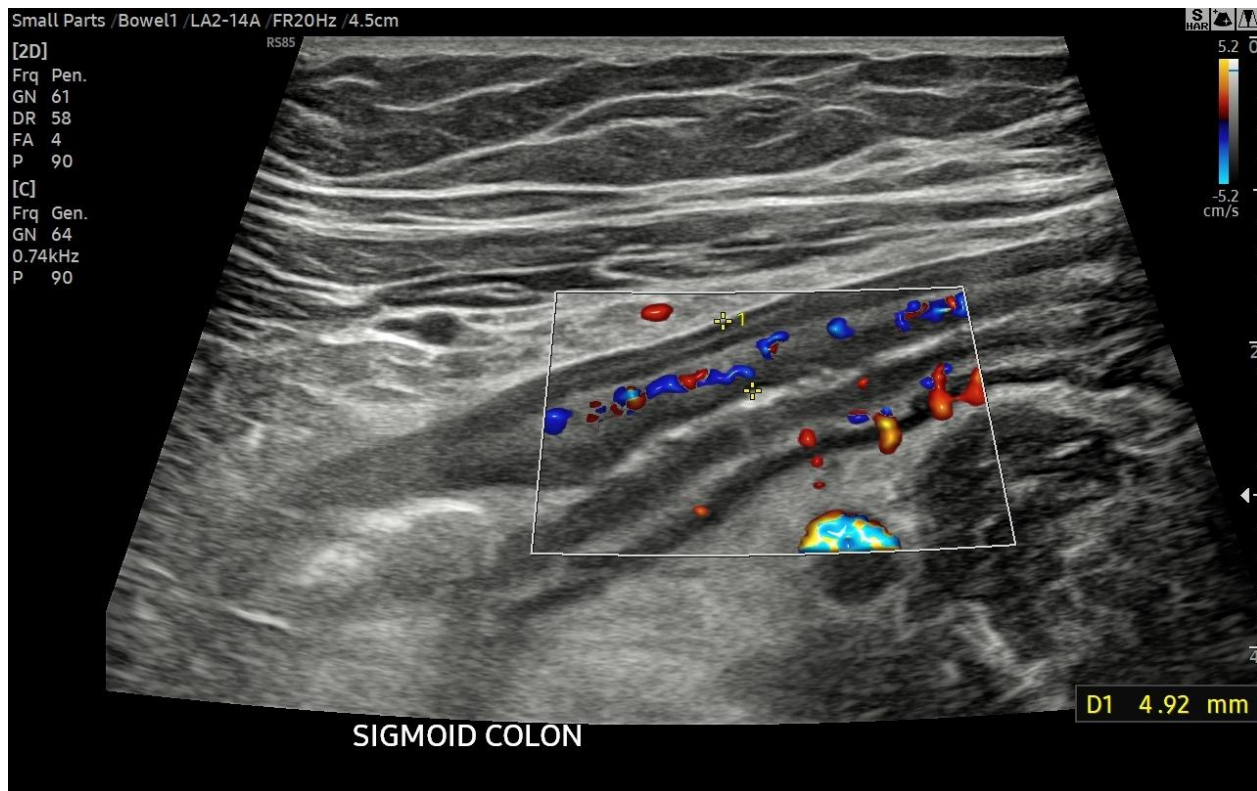
No other findings to suggest inflammation

Complement the POCIUS with FCP (195)

Case continued

- Before month 6-9 colonoscopy, contacts your office for worsening symptoms.
- Back to >8 watery BMs per day, blood in stools
- Weight loss
- Infectious work-up negative
- FCP 1080

Case – POCIUS for flare at month 6

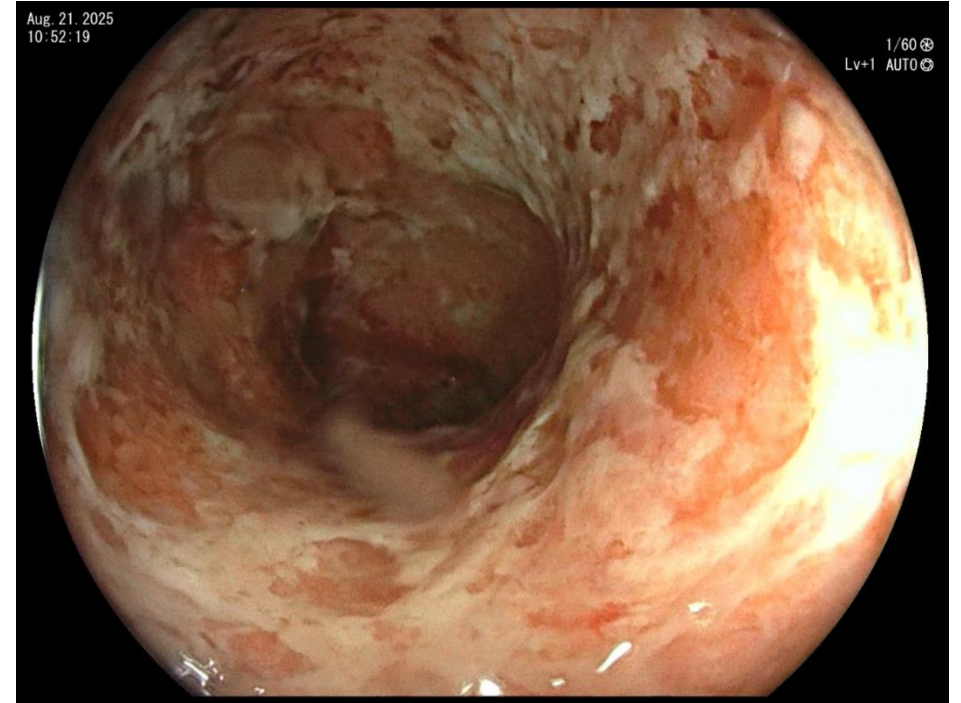


Case – POCIUS for flare



Case – Continued

- Admitted to hospital and started on steroids
- No sonographic improvement (scanned q2-3 days)
- Stated on infliximab as inpatient, with accelerated dosing
- Colorectal surgery consulted
- Symptomatically improved and discharged

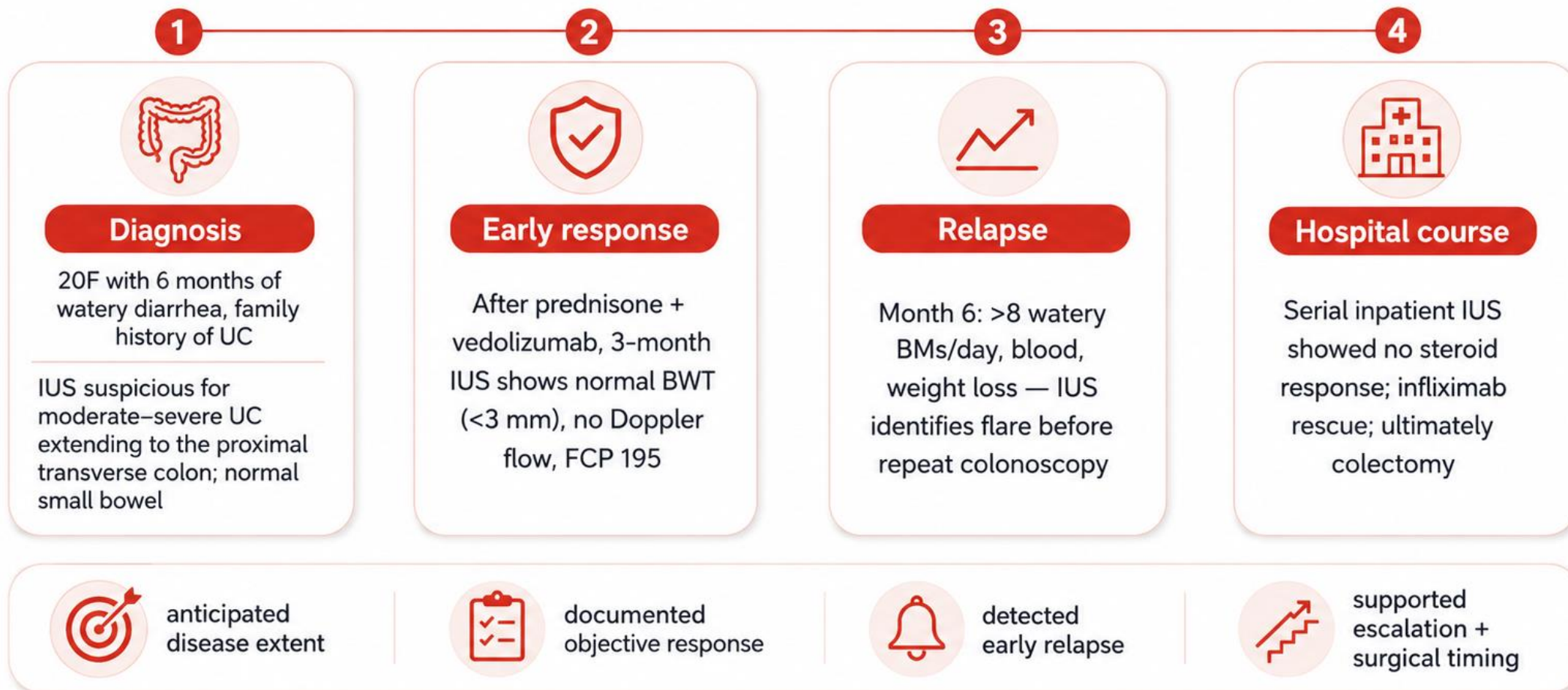


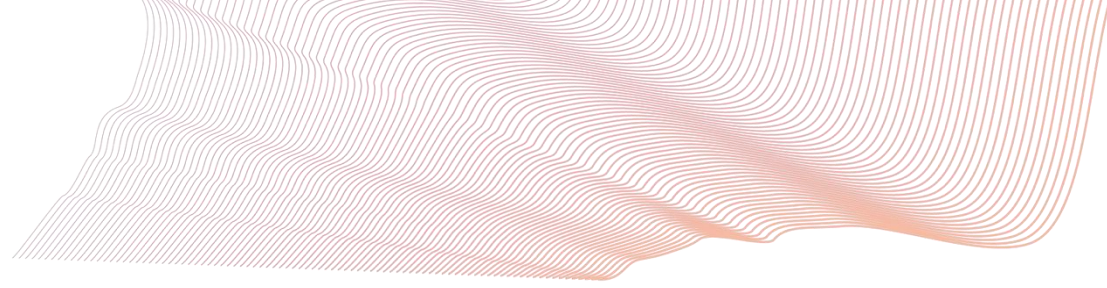
Case – POCIUS 12 weeks post discharge



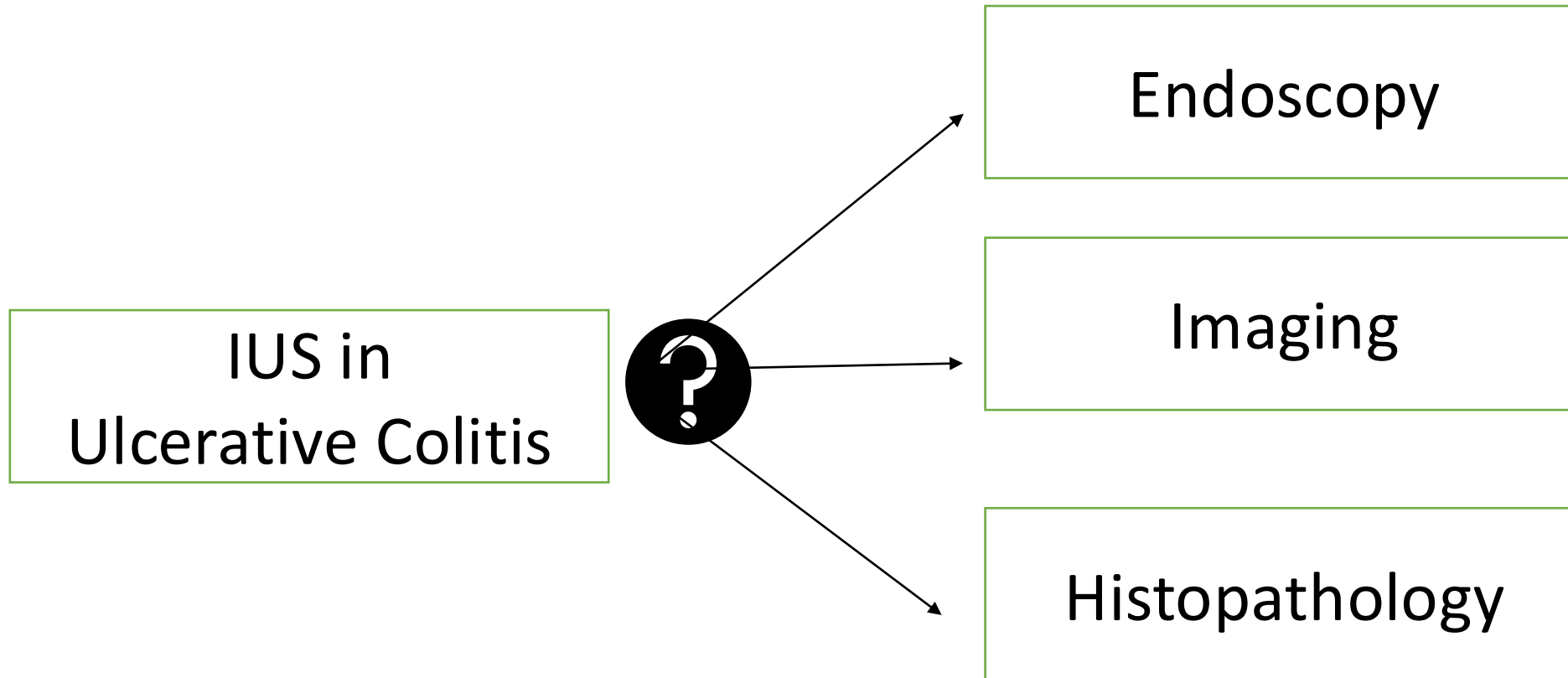
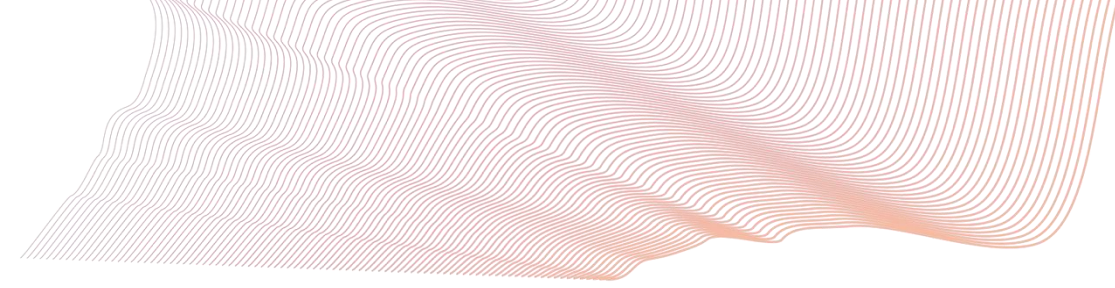
Ultimately went for colectomy

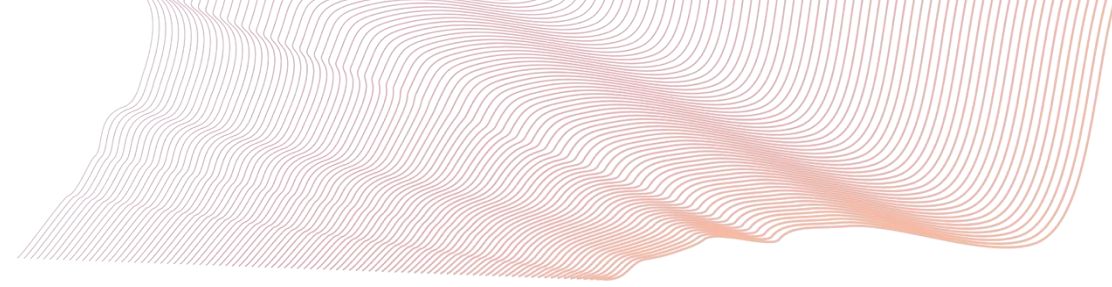
Clinical integration case — how IUS changed management



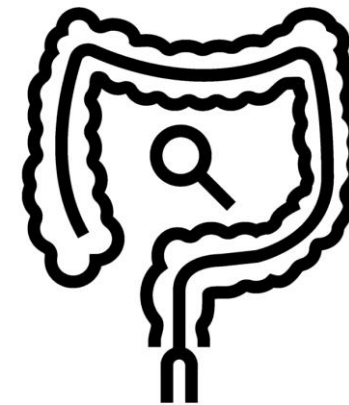


Part IV – How does IUS compare to other modalities





Vs



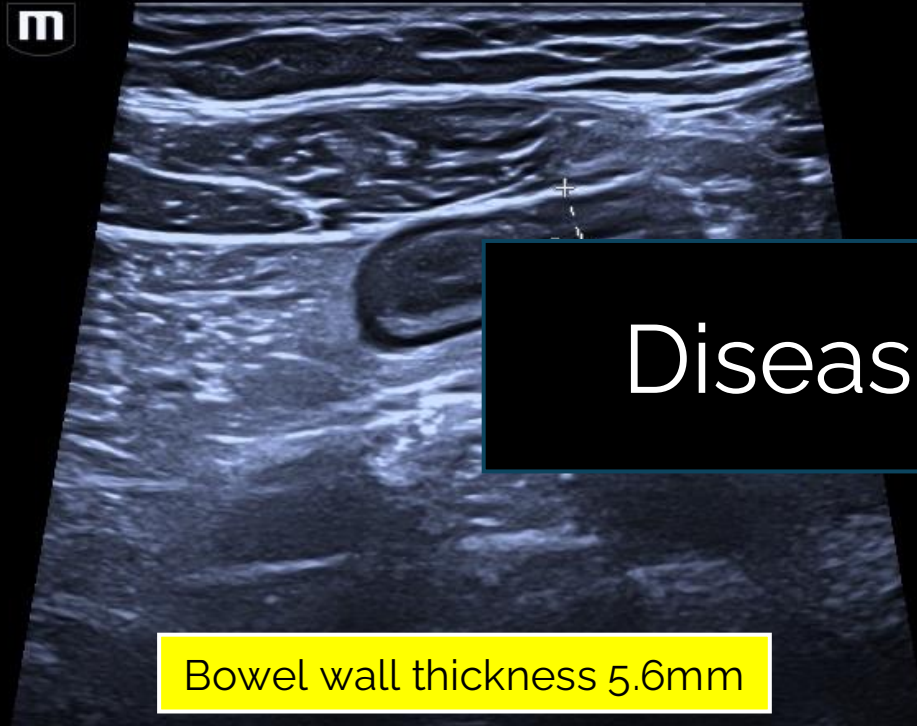


Case Capsule

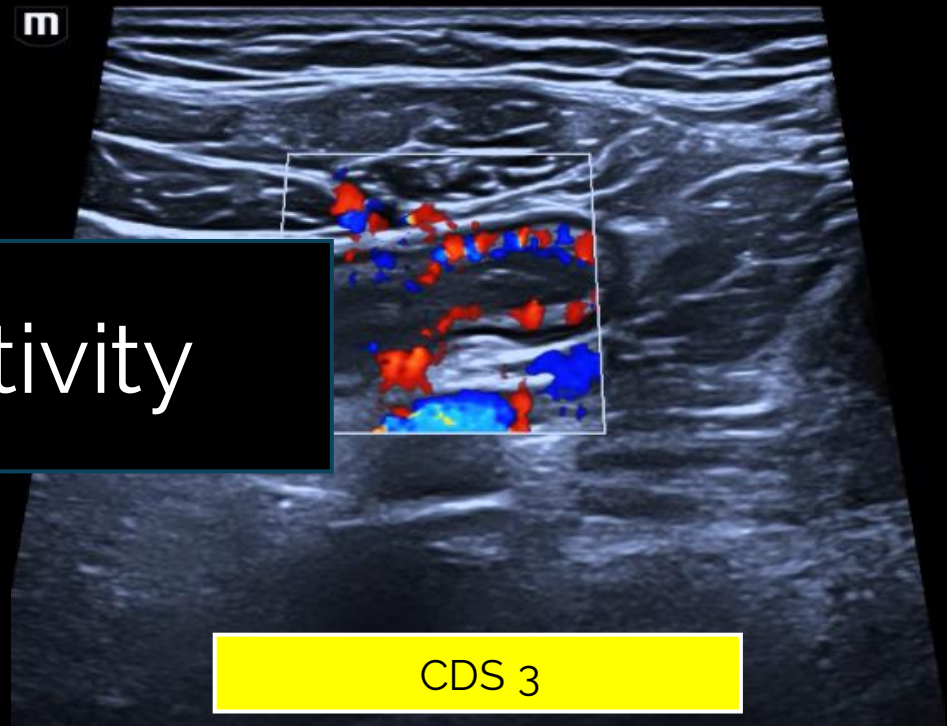
- 55 yr old lady with Ulcerative colitis - Proctitis
- 3 weeks bloody diarrhea: 6-8 stools/day

Hb: 10.5gm%
PR: 78/min
Fecal Calprotectin:
1400
CRP: 18

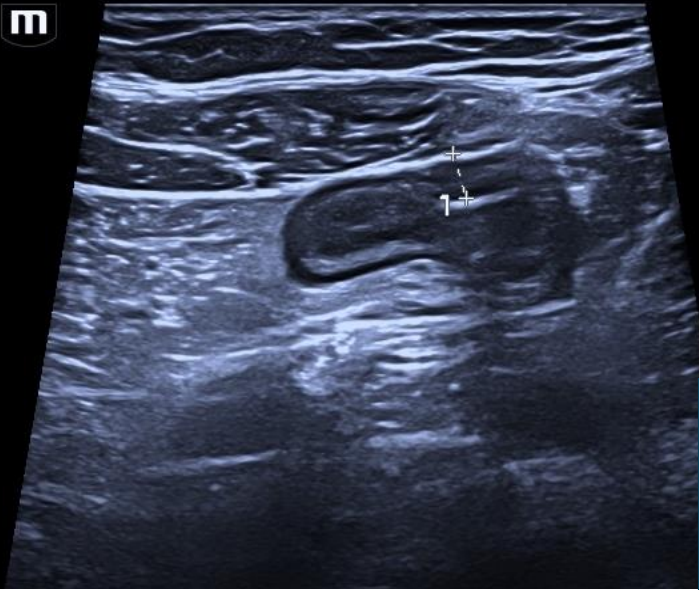
m



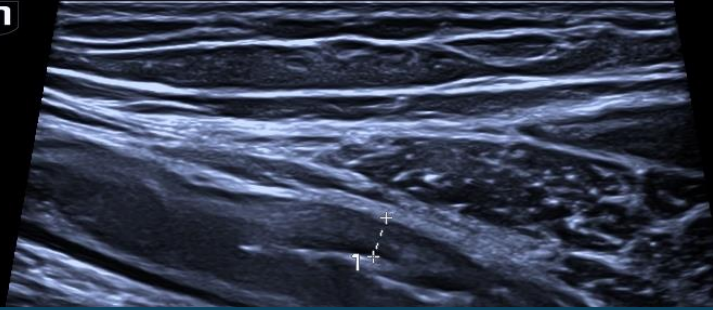
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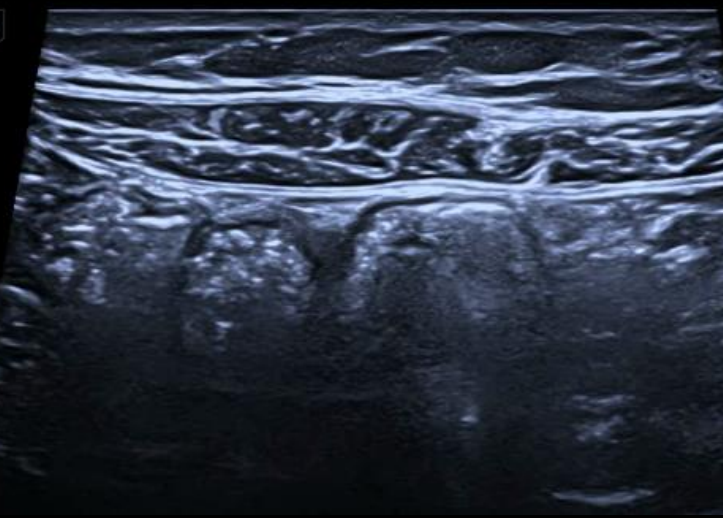
Disease activity



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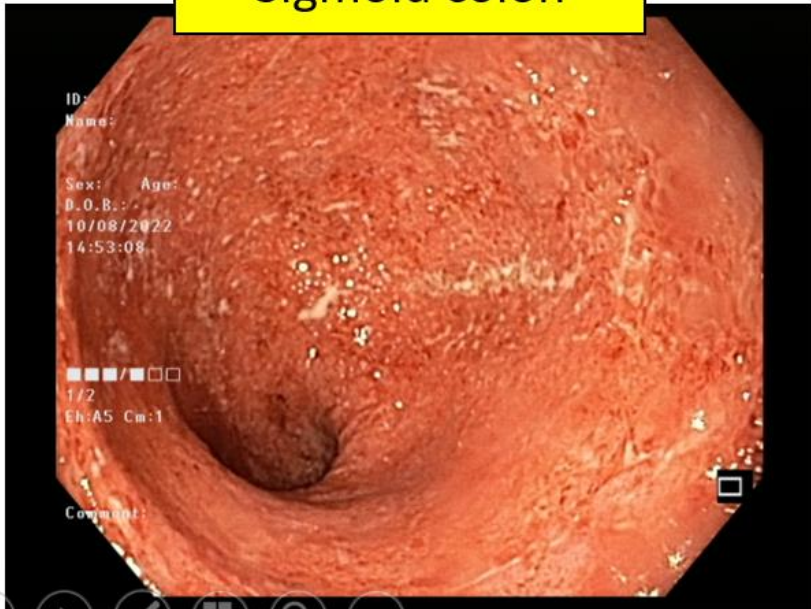


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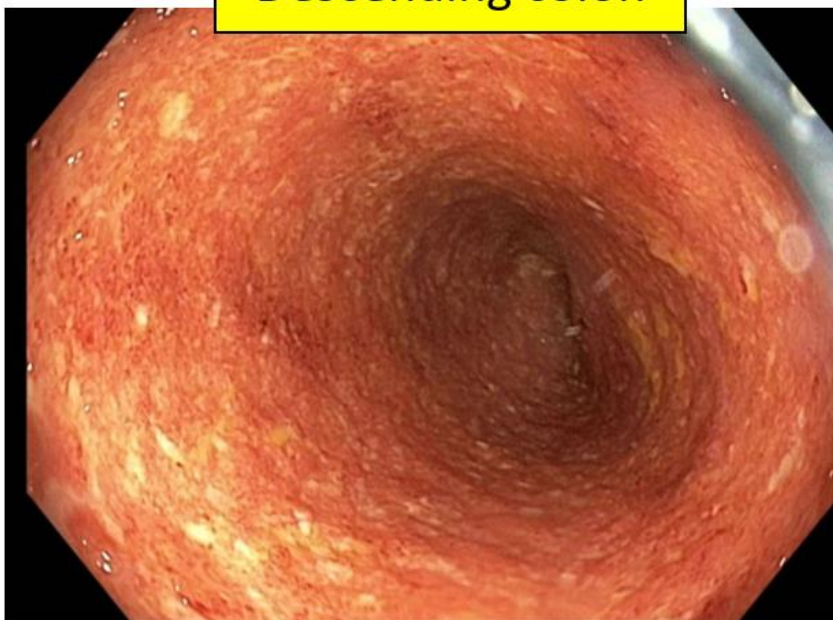


Extent of disease

Sigmoid colon



Descending colon



Transverse colon





Accuracy of Ultrasound for Evaluation of Colorectal Segments in Patients With Inflammatory Bowel Diseases: A Systematic Review and Meta-analysis

Shintaro Sagami¹, Taku Kobayashi², Yusuke Miyatani¹, Shinji Okabayashi³, Hajime Yamazaki⁴,
Toshihiko Takada³, Kenji Kinoshita⁵, Mariangela Allocca⁶, Reiko Kunisaki⁷,
Pradeep Kakkadasam Ramaswamy⁸, Manabu Shiraki⁹, Toshifumi Hibi¹, Yuki Kataoka¹⁰

Bowel wall thickness ≥ 3 mm identified **colorectal segments** with **inflammation** with

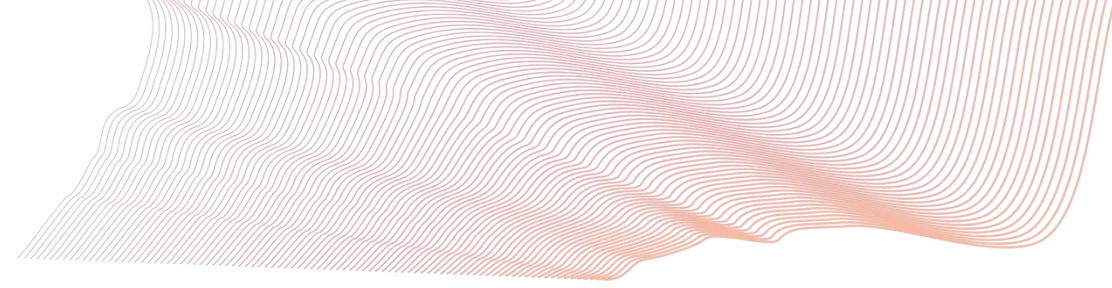
86.4% pooled **sensitivity** (95% CI, 76.1%–92.7%) and

88.3% pooled **specificity** (95% CI, 58.1%–97.6%).

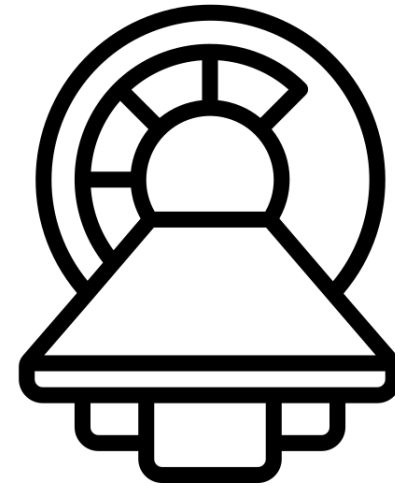
In **rectum** only, bowel wall thickness **≥ 3 mm** identified **inflammation** with

74.5% sensitivity (95% CI, 53.0%–88.3%) and

69.5% specificity (95% CI, 33.6%–91.1%).



Vs





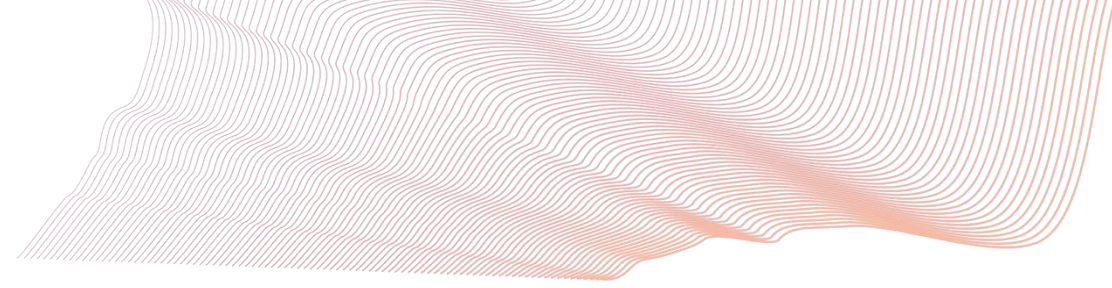
Role of intestinal ultrasound in ulcerative colitis: A systematic review

Partha Pal, Mohammad Abdul Mateen, Kanapuram Pooja, Nandhakumar Rajadurai, Rajesh Gupta, Manu Tandan, Nageshwar Reddy Duvvuru

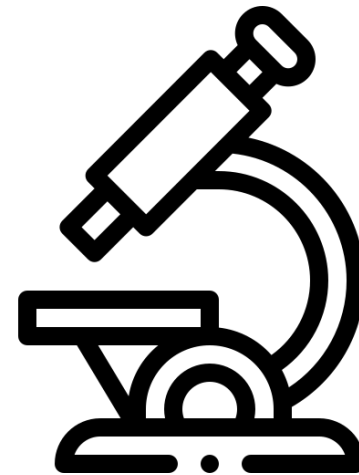
Table 9 Summary of studies comparing intestinal ultrasound and magnetic resonance enterography

Ref.	Study type	Number of patients	Follow-up duration	Comparator	IUS parameters	Gold standard	Results
Kamel <i>et al</i> [56]	Prospective	40 (14 UC, 26 CD)	Cross-sectional	Bowel ultrasound and MRE	BWT, CDS, mesenteric fat and lymph nodes, complications	MRE and colonoscopy	Accuracy of IUS (in IBD): 85% ileum, 70% large bowel, 100% correlation with MRI/colonoscopy with respect to active disease (in IBD) (no separate analysis for UC)
Ziech <i>et al</i> [8]	Prospective	28 suspected IBD pediatric	Cross-sectional	MR colonography	BWT, CDS, BWS, i-fat, haustrations, lymph nodes, motility	MR colonography	Sensitivity IUS: 55%; MR colonography: 57%; Specificity IUS: 100%; MR colonography: 75%; cannot effectively differentiate UC and CD unless terminal ileum is involved
Barber <i>et al</i> [71]	Retrospective	53 children	Cross-sectional	MRE	Scoring based on METRIC trial	Combined consensus score based imaging and clinical scores	Clinical correlation of IUS score (0.657) > MRE score (0.598). Agreement for IUS scoring: Lin coefficient 0.95 > MRE 0.60

CD: Crohn's disease; UC: Ulcerative colitis; MRE: Magnetic resonance enterography; CTE: Computed tomography enterography; TI: Terminal ileum; BWT: Bowel wall thickness; BWS: Bowel wall stratification; AUC: Area under the curve; IBUS-SAS: International bowel ultrasound segmental activity score; HR-US: High resolution ultrasound.



Vs





> Inflamm Bowel Dis. 2024 Feb 1;30(2):190-195. doi: 10.1093/ibd/izad043.

Composite Assessment Using Intestinal Ultrasound and Calprotectin Is Accurate in Predicting Histological Activity in Ulcerative Colitis: A Cohort Study

Thomas M Goodsall^{1 2}, Alice S Day^{2 3}, Jane M Andrews^{2 3}, Andrew Ruskiewicz⁴,
Christopher Ma^{5 6}, Robert V Bryant^{2 3}

IUS activity - MUC

Histological activity - NHI

Endoscopic activity - MES

Histological activity demonstrated a significant linear association with overall IUS activity (coefficient 0.14; 95% CI, 0.03-0.25; P = .011)

A **composite of IUS and FC** showed the greatest association (1.31; 95% CI, 0.43-2.18; P = .003) and **accurately predicted histological activity in 88% of cases (P = .007), with sensitivity of 88% specificity 80%, positive predictive value 95%, negative predictive value 57%**

P355 Correlation of Intestinal Ultrasound with histological activity in patients with Ulcerative Colitis ^{FREE}

M Katsaros, MD, M Kalogirou, A Katsoula, P Paschos, E Katsiki, O Giouleme

Journal of Crohn's and Colitis, Volume 18, Issue Supplement_1, January 2024, Pages i748-i750, <https://doi.org/10.1093/ecco-jcc/jjad212.0485>

Published: 24 January 2024

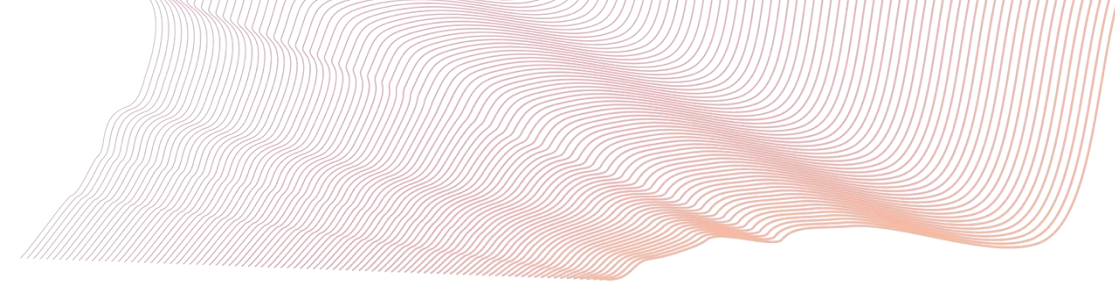
IUS activity - MUC

Endoscopic activity - EMS

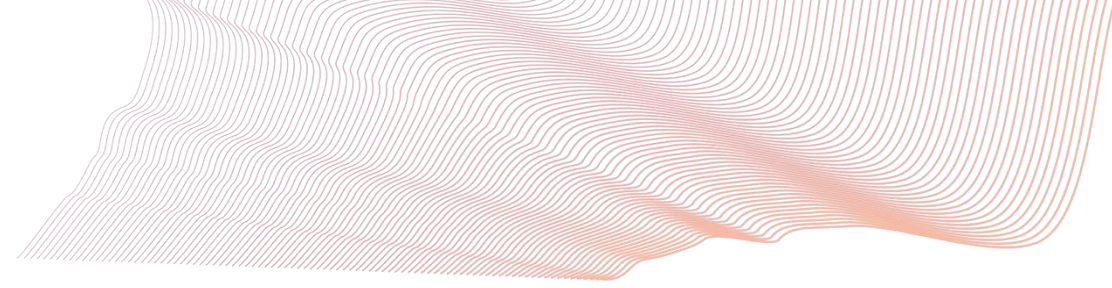
Histological activity - NHI > 1.

Strong correlation between MUC and NHI [ρ: 0.811 (p< 0.001)].

MUC optimal cut-off value of 5.67, sensitivity of 97.1% specificity of 90% [(AUC: 0.973, 95% CI: 0.918-1.000, (p<0.0001)] in predicting histological activity (NHI>1), in patients with UC.



- Assess severity of disease activity? ✓
- Assess response to therapy: Monitoring ?
- Benefit in patients with ASUC?
- Predict risk of colectomy ?



Monitoring response to therapy

Tight control



Treat to target





June 2022

Sep 2022

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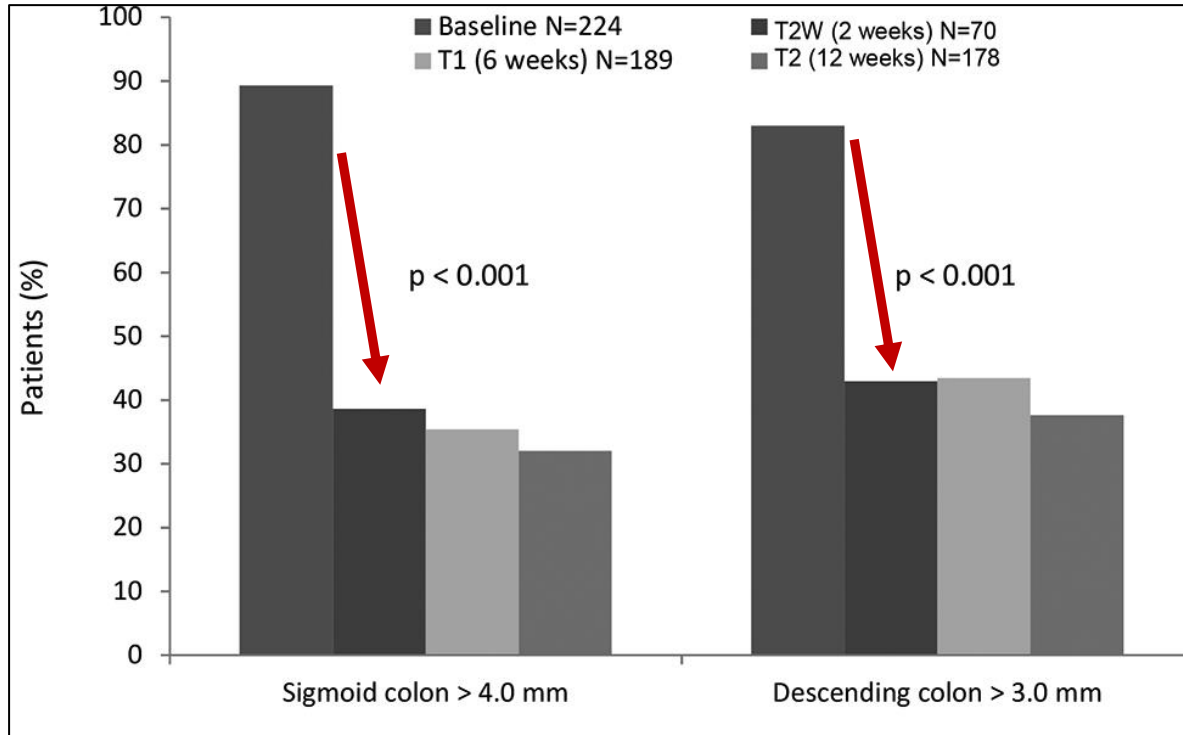
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Monitoring response to therapy

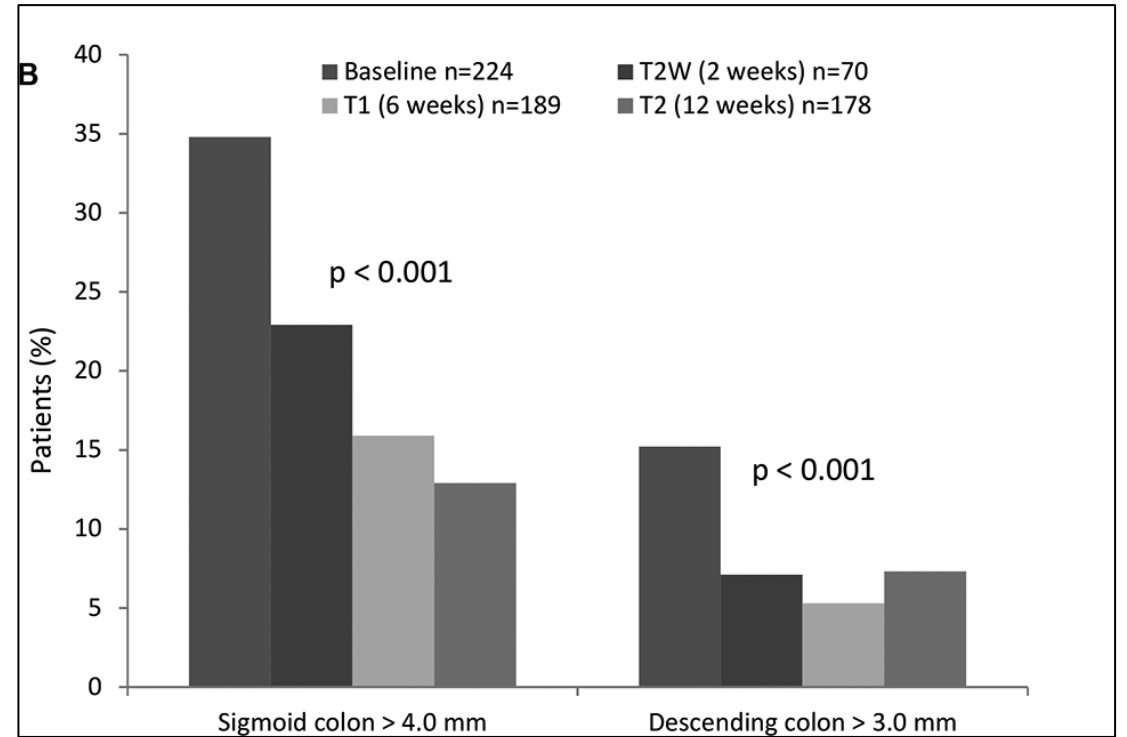
Bowel wall thickness 5.6mm

Bowel wall thickness ~3mm

TRUST & UC Study



Percentage of patients
with BWT > 4mm



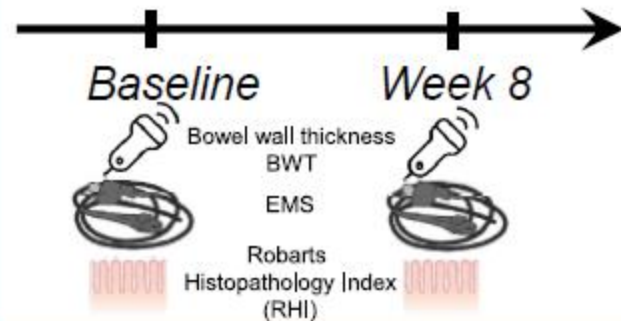
Percentage of patients with
increase Doppler signals



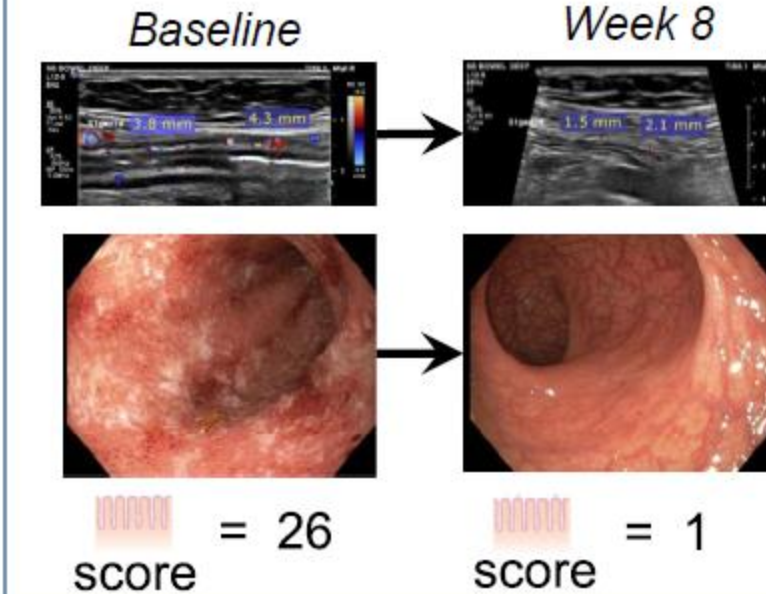
Intestinal ultrasound is accurate to determine endoscopic response and remission in patients with moderate to severe ulcerative colitis

Cohort and design

 $n=30$ starting tofacitinib
 endoscopic Mayo score (EMS) ≥ 2



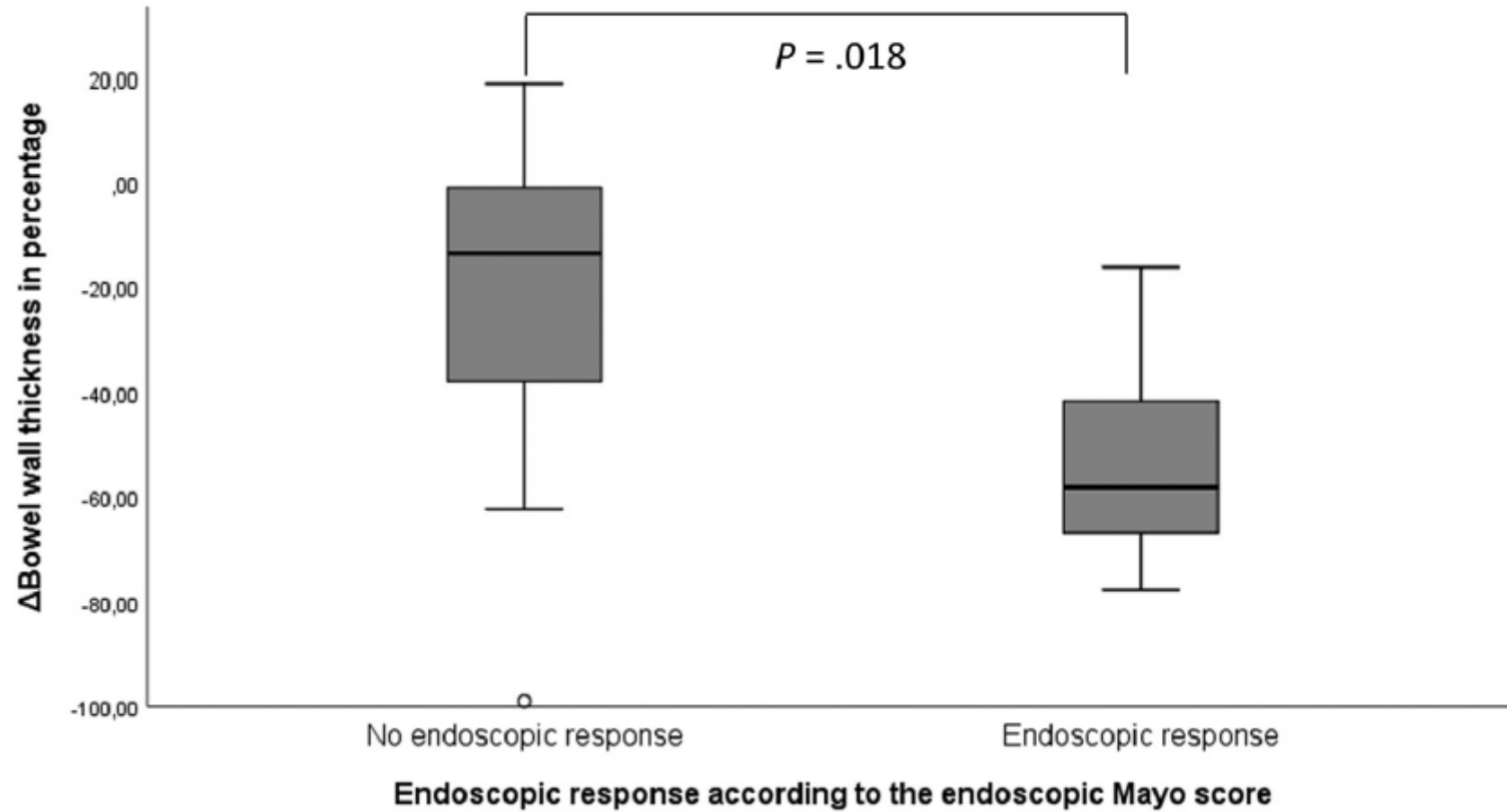
Results



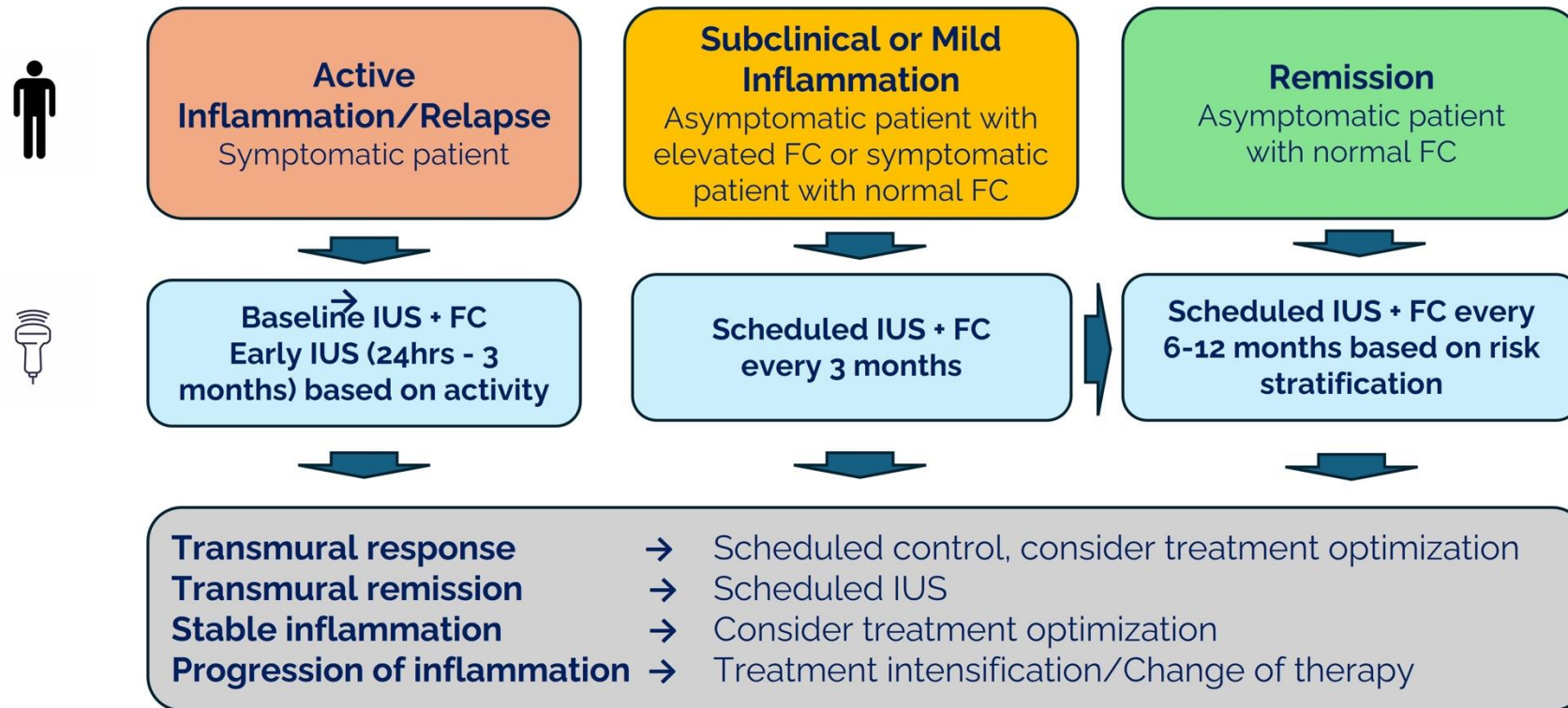
Remission EMS=0	} BWT 2.8 mm
Improvement EMS $\leq$ 1	} 3.9 mm
Response EMS $\geq$ 1 decrease	} 32% decrease
p=0.49: RHI vs BWT Gastroenterology	



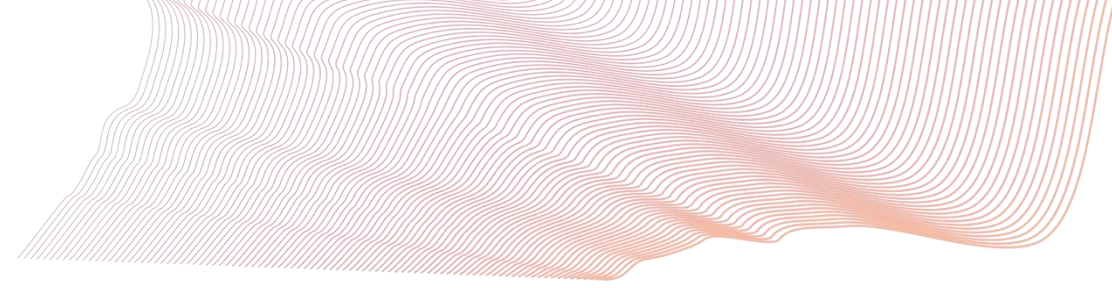
A Boxplot for Δ percentage bowel wall thickness in the sigmoid colon for patients with and without endoscopic response



Proposed diagnostic algorithm for non-invasive monitoring in Ulcerative Colitis



FC: fecal calprotectin
IUS: intestinal ultrasound
PoC: point of care



➤ [J Crohns Colitis](#). 2022 May 10;16(4):554-580. doi: 10.1093/ecco-jcc/jjab173.

Defining Transabdominal Intestinal Ultrasound Treatment Response and Remission in Inflammatory Bowel Disease: Systematic Review and Expert Consensus Statement

Johan F K F Ilvemark¹, Tawnya Hansen², Thomas M Goodsall^{3 4}, Jakob B Seidelin¹, Heba Al-Farhan⁵, Mariangela Allocca^{6 7}, Jakob Begun⁸, Robert V Bryant⁹, Dan Carter¹⁰, Britt Christensen¹¹, Marla C Dubinsky¹², Krisztina B Gecse¹³, Torsten Kucharzik¹⁴, Cathy Lu¹⁵, Christian Maaser¹⁶, Giovanni Maconi¹⁷, Kim Nylund^{18 19}, Carolina Palmela²⁰, Stephanie R Wilson²¹, Kerri Novak¹⁵, Rune Wilkens^{22 23}

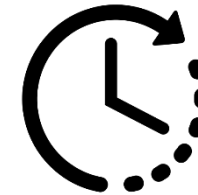


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Johan F K F Ilvemark¹, Tawnya Hansen², Thomas M Goodsall^{3, 4}, Jakob B Seidelin¹, Heba Al-Farhan⁵, Mariangela Allocca^{6, 7}, Jakob Begun⁸, Robert V Bryant⁹, Dan Carter¹⁰, Britt Christensen¹¹, Marla C Dubinsky¹², Krisztina B Gecse¹³, Torsten Kucharzik¹⁴, Cathy Lu¹⁵, Christian Maaser¹⁶, Giovanni Maconi¹⁷, Kim Nylund^{18, 19}, Carolina Palmela²⁰, Stephanie R Wilson²¹, Kerri Novak¹⁵, Rune Wilkens^{22, 23}



- 3.3.2.2. Response rate in intestinal ultrasound is dependent on:
- 3.3.2.2.1. class of drug (5-aminosalicylate [5-ASA] vs. steroids vs. immunosuppressants vs. Biologics); [InA. 1, Unc. 3, App. 13]
 - 3.3.2.2.2. disease duration [new-onset vs. long-term established disease]; [InA. 0, Unc. 2, App. 15]
 - 3.3.2.2.3. histological composition of a pathological segment [active inflammation only vs. fibrotic only vs. combined].



- 3.3.2.3. Response time is generally shorter in ulcerative colitis compared with Crohn's disease. [InA. 0, Unc. 1, App. 16]
- 3.3.2.4. In responders, colonic disease tends to respond faster with respect to reduced bowel wall thickness than small bowel disease. [InA. 0, Unc. 2, App. 15]



3.5. Ulcerative colitis

3.5.1. Response definition and timing of assessment in ulcerative colitis

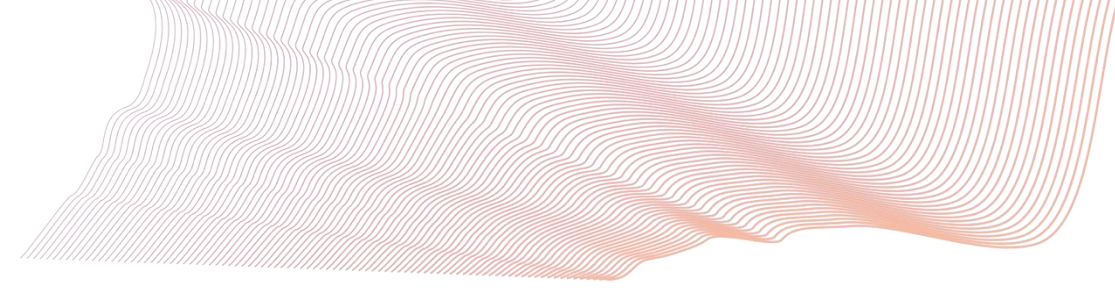
- 3.5.1.1. Treatment response in ulcerative colitis is identified by reduction of bowel wall thickness [continues measurements] [$>25\%$] or [>2.0 mm] or [>1.0 mm and one colour Doppler signal reduction]. [InA. 0, Unc. 3, App. 15]
- 3.5.1.2. Ideal assessment of intestinal ultrasound response within the first year of treatment initiation/escalation/change is at baseline, Week 14 ± 2 , and between Weeks 26–52 + intestinal ultrasound depending on elevated faecal calprotectin or symptoms or clinical suspicion of flare. [InA. 0, Unc. 2, App. 14]
- 3.5.1.3. After treatment initiation, response should be measured in all segments that were affected at baseline. [InA. 0, Unc. 0, App. 14]

REDUCTION of Bowel Wall Thickness
[$>25\%$] or
[>2.0 mm] or
[>1.0 mm and one CDS reduction]

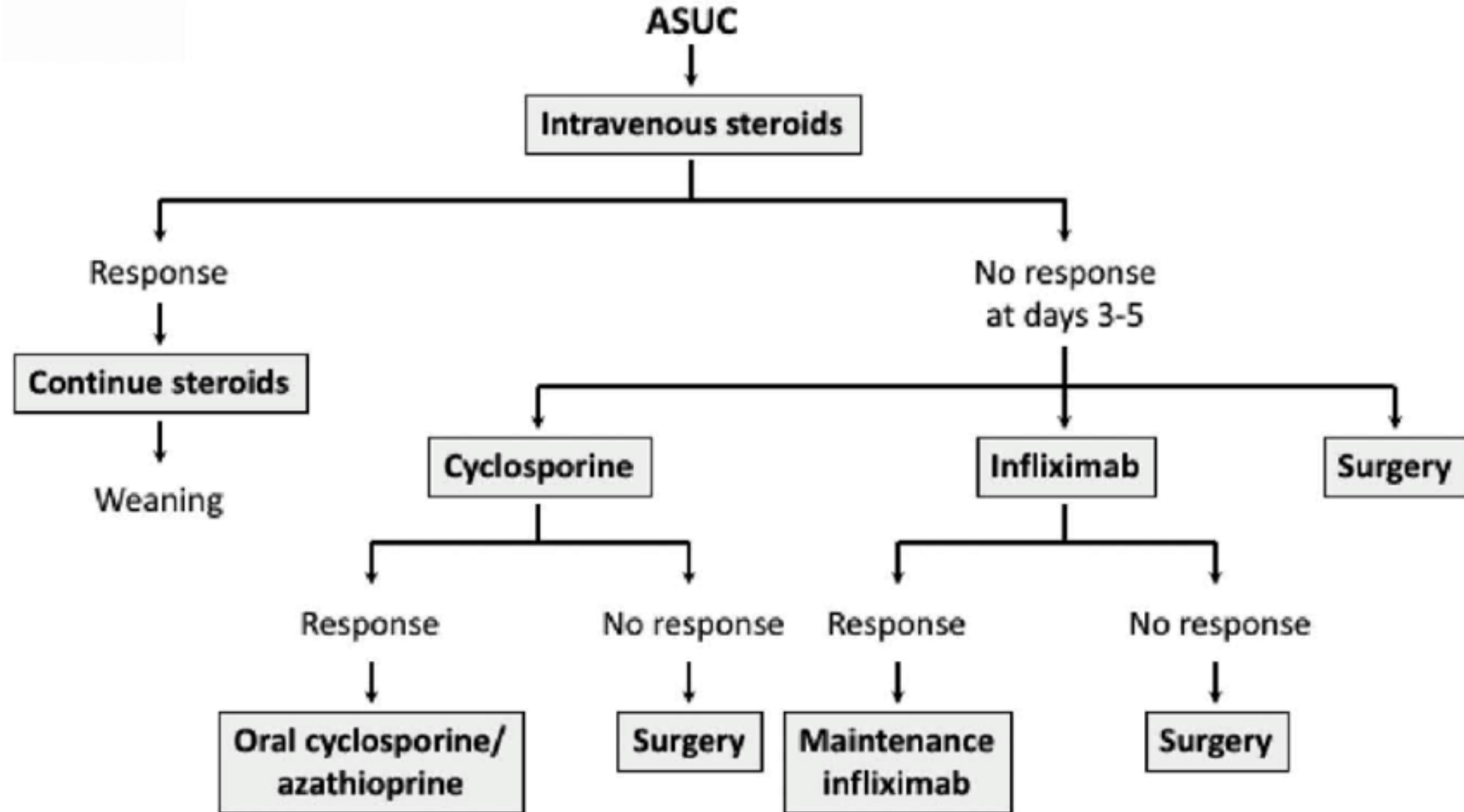
TREATMENT Initiation/Escalation/Change
baseline
Week 14 ± 2
between Weeks 26–52

Scoring systems

Scores	Reference	Indices used	Severity Grades	Index Calculation	Outcomes
Ulcerative colitis					
MUC	Colonoscopy	BWT CDF	Active disease (Mayo endoscopic score ≥ 2): MUC ≥ 6.3 points	$1.4 \text{ BWT} + 2 \times \text{CDF}$	MUC ≥ 6.3 points (sensitivity 71%, specificity 100%) to Detect endoscopic active disease
UC-IUS	Colonoscopy	BWT CDF Abnormal haustrations Fat wrapping	Continuous score ranging from 0 to 7 points	Bowel wall thickness (> 2 mm: 1; > 3 mm: 2; > 4 mm: 3) Doppler signal (Spots: 1; Stretches: 2) Abnormal haustrations: 1 Fat wrapping: 1	Strong correlation with endoscopic Mayo score ($\rho = 0.83$, $p < 0.001$) and UCEIS index ($\rho = 0.759$, $p < 0.001$)



- Assess severity of disease activity? ✓
- Assess response to therapy: Monitoring ? ✓
- Benefit in patients with ASUC?
- Predict risk of colectomy ?

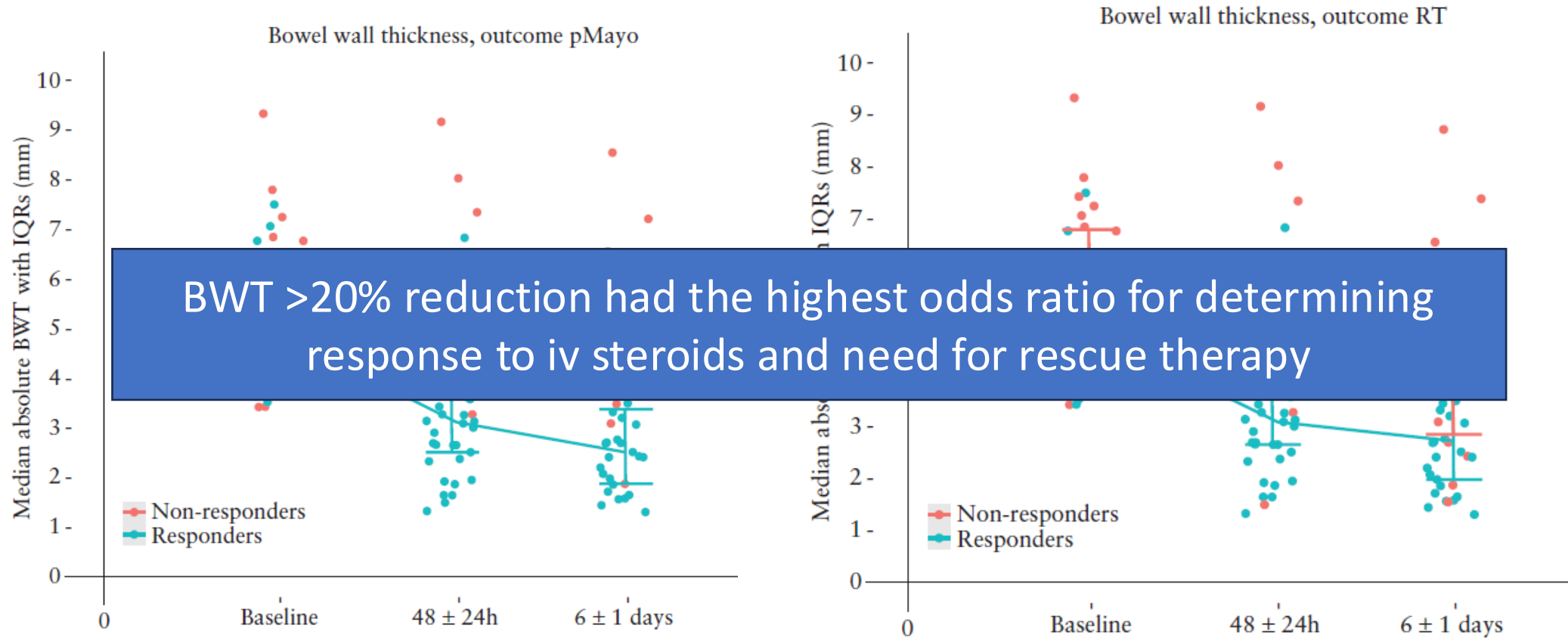


Decision of response based on

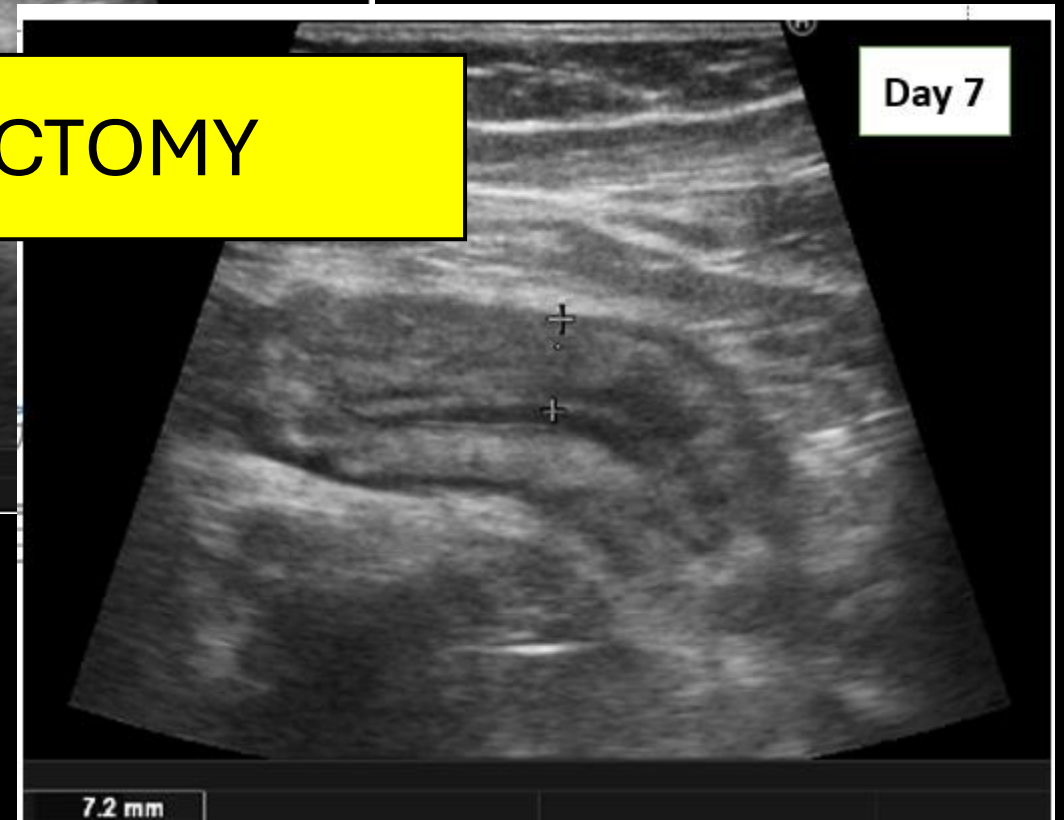
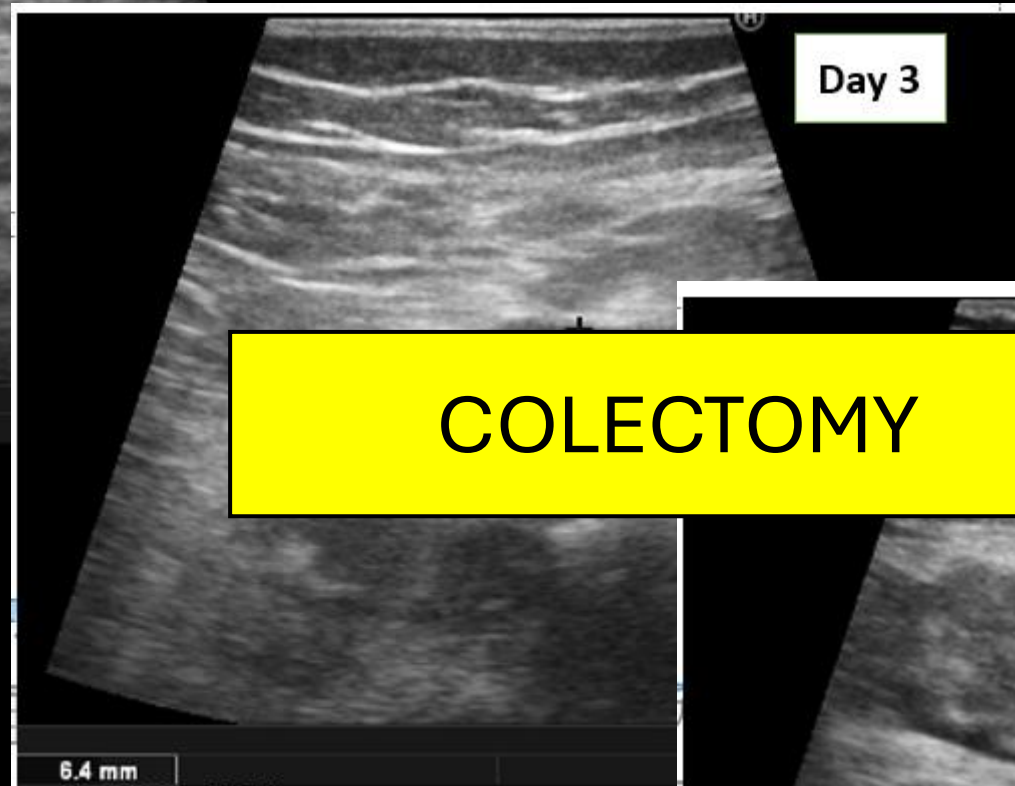
Score	Criteria	Probability of IV Corticosteroids Failure
Travis or Oxford criteria	>8 stools or CRP > 45 mg/L	If any present on day 3 = 85% probability of colectomy
Ho or Scottish index	Colonic dilatation > 5.5 cm = 4 points Albumin < 3 g/dl on admission = 1 point Average daily number of stools over first 3 days: < 4 = 0 points; 4–6 = 1 points, 6–9 = 2 points; ≥ 9 = 4 points	≥ 4 points on day 3 = 85% probability of non-response
Lindgren score	Stool frequency per dag + 0.14 × CRP (mg/L)	>8 points on day 3 = 72% probability of non-response

INTESTINAL ULTRASOUND

Early IUS predicts response to IV steroids in ASUC

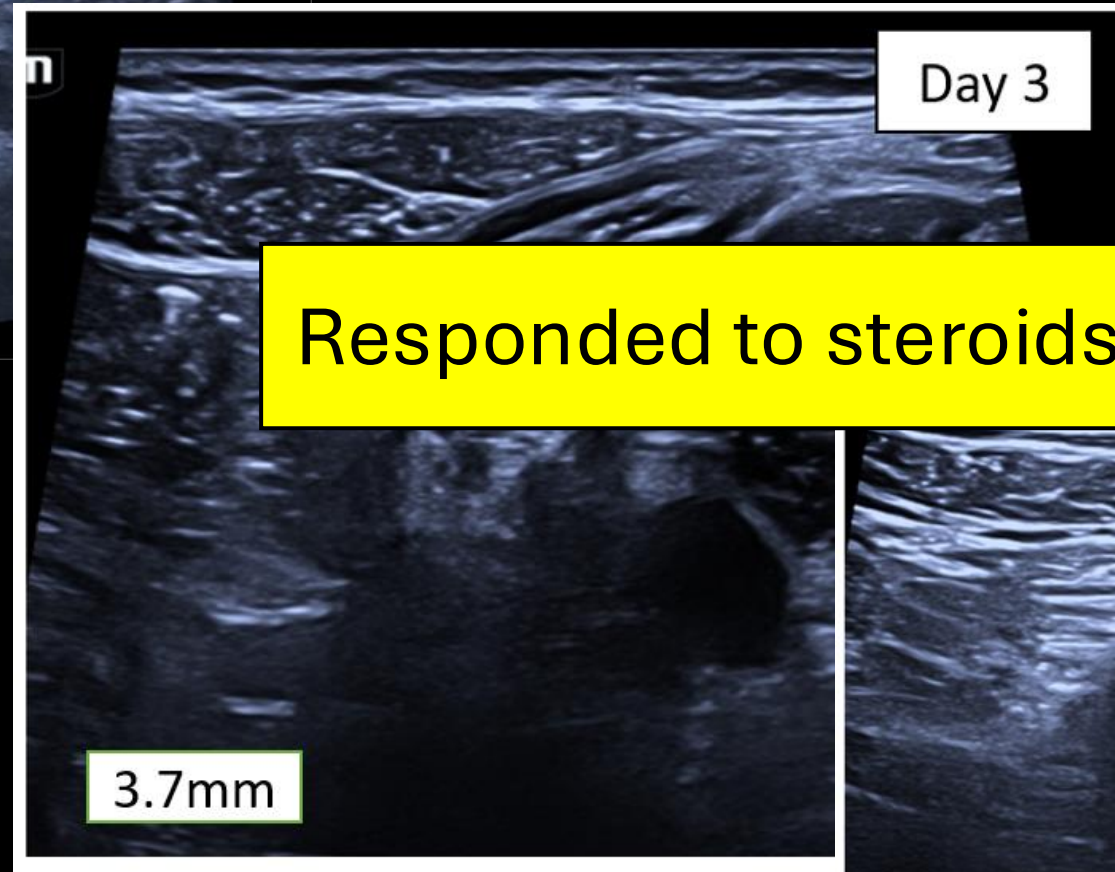
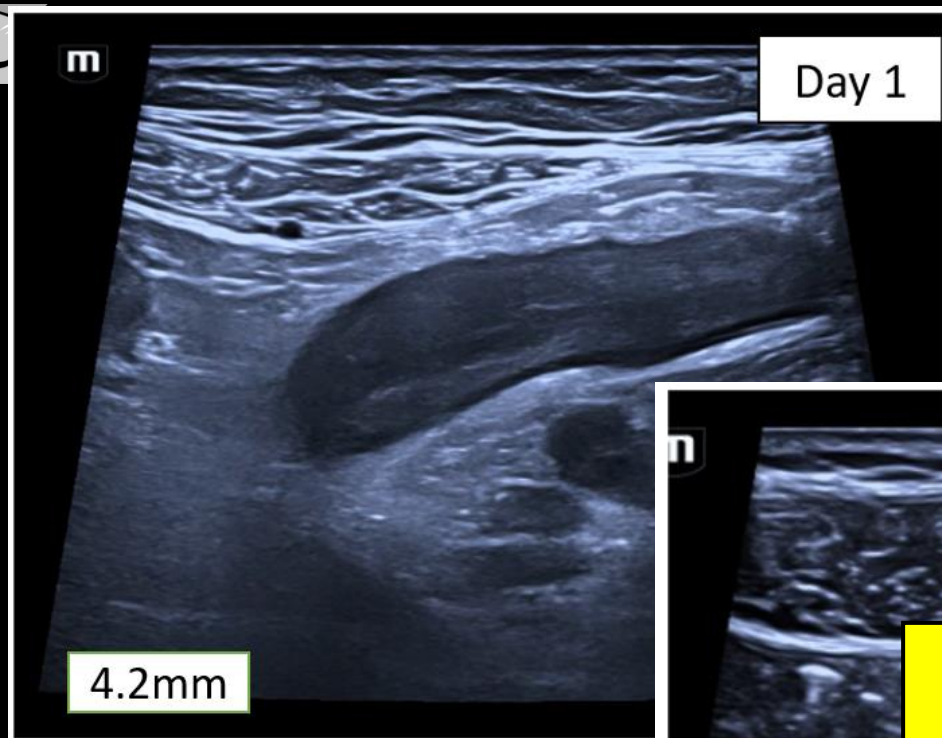


ASUC: Case 1

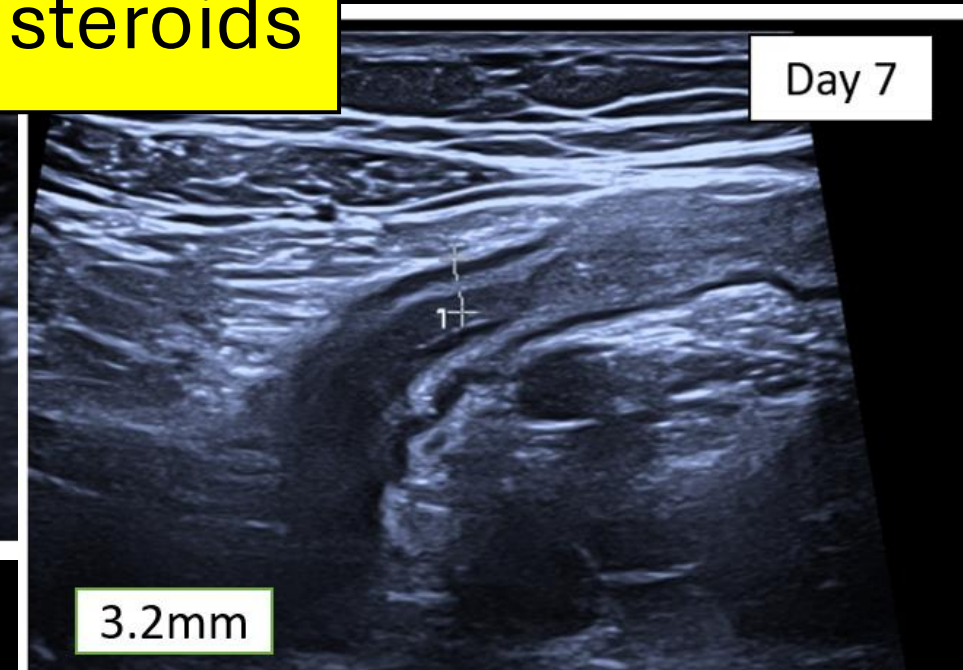


COLECTOMY

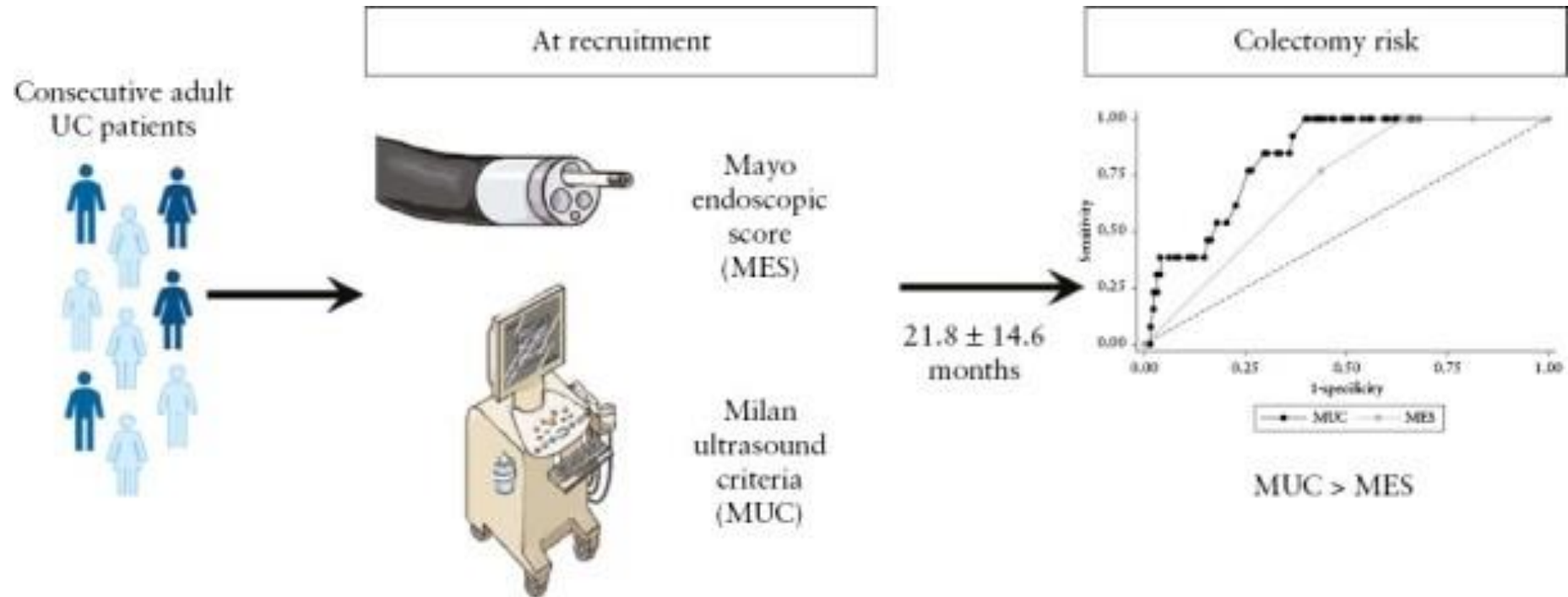
ASUC: Case 2



Responded to steroids



Predictive value of colectomy with IUS



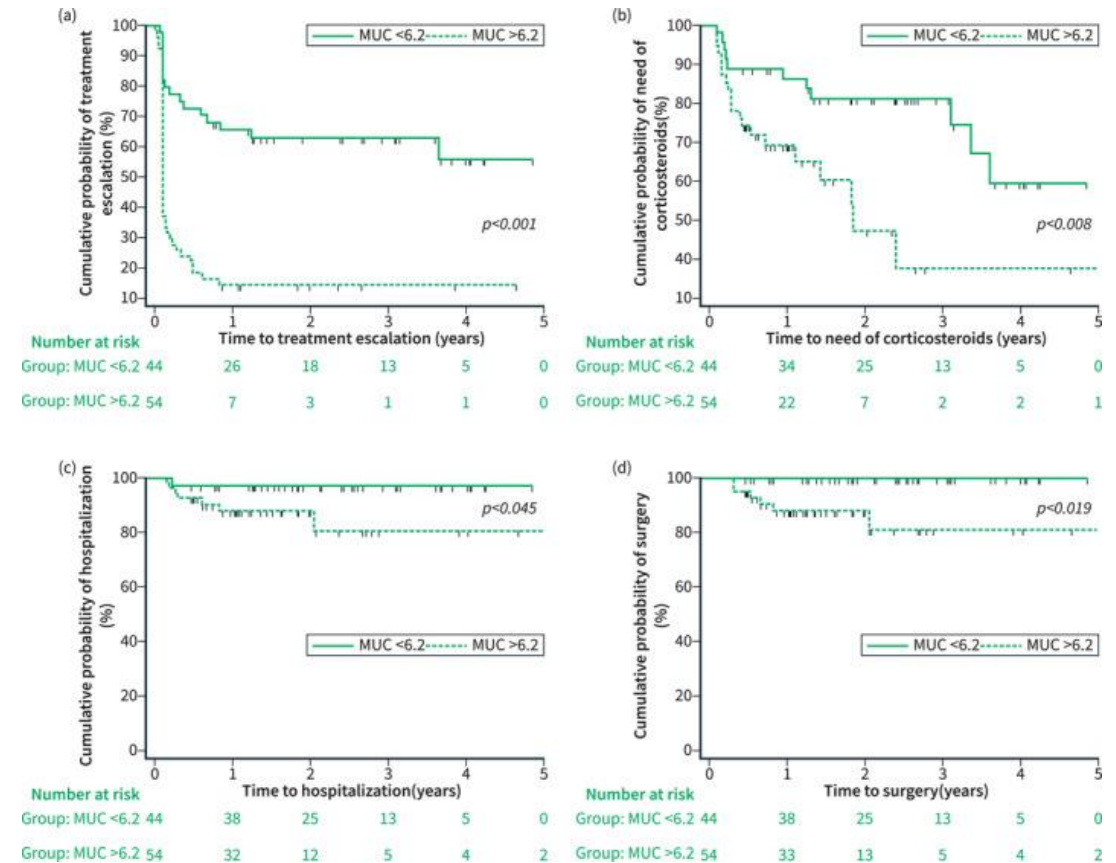
Nicole Piazza O Sed. Superior predictive value of transmural over endoscopic severity for colectomy risk in ulcerative colitis: a multicentre prospective cohort study, JCC 2024



Predictive value of Milan ultrasound criteria in ulcerative colitis: A prospective observational cohort study

Mariangela Allocca¹, Cecilia Dell'Avalle², Vincenzo Craviotto³, Federica Furfaro³,
Alessandra Zilli¹, Ferdinando D'Amico^{1,2}, Stefanos Bonovas^{2,3}, Laurent Peyrin-Biroulet⁴,
Gionata Fiorino¹, Silvio Danese¹

- **98 UC** patients were **followed up** for a median time of **1.6 years**
- **MUC and MES** significantly correlated at baseline ($p = 0.653$; $p < 0.001$)
- **UC-related negative course** (need for corticosteroids, or treatment escalation, or hospitalization, or need for colectomy: a composite outcome)
- **MUC ≤ 6.2 at baseline vs MUC > 6.2** lower cumulative probability of treatment escalation, need of corticosteroids, hospitalization and colectomy - (**$p < 0.05$ for all outcomes**)





Early Intestinal Ultrasound Predicts Clinical and Endoscopic Treatment Response and Demonstrates Drug-Specific Kinetics in Moderate-to-Severe Ulcerative Colitis

Floris A de Voogd¹, Steven J Bots¹, Elsa A van Wassenae², Maria de Jong¹, Maarten J Pruijt¹,
Geert R D'Haens¹, Krisztina B Gecse¹

51 UC patients with endoscopic disease activity (**EMS ≥ 2**) starting anti-inflammatory treatment.

W0 – Endoscopy, IUS, Clinical Scores, Biomarkers

W2 - IUS, Clinical Scores, Biomarkers

W6 - IUS, Clinical Scores, Biomarkers

W8-W26 - Endoscopy, IUS, Clinical Scores, Biomarkers

Endoscopic remission (EMS = 0), improvement (EMS ≤ 1), response (decrease in EMS ≥ 1), and clinical remission (Lichtiger score ≤ 3) were assessed and correlated with common IUS parameters.

W6 - BWT ≤ 3.0 mm (OR, 25.13; 95% C.I, 2.01-3.14; P = 0.012) and **CDS 0 (OR, 0.35; 95% C.I, 0.14-0.88; P = 0.026)**

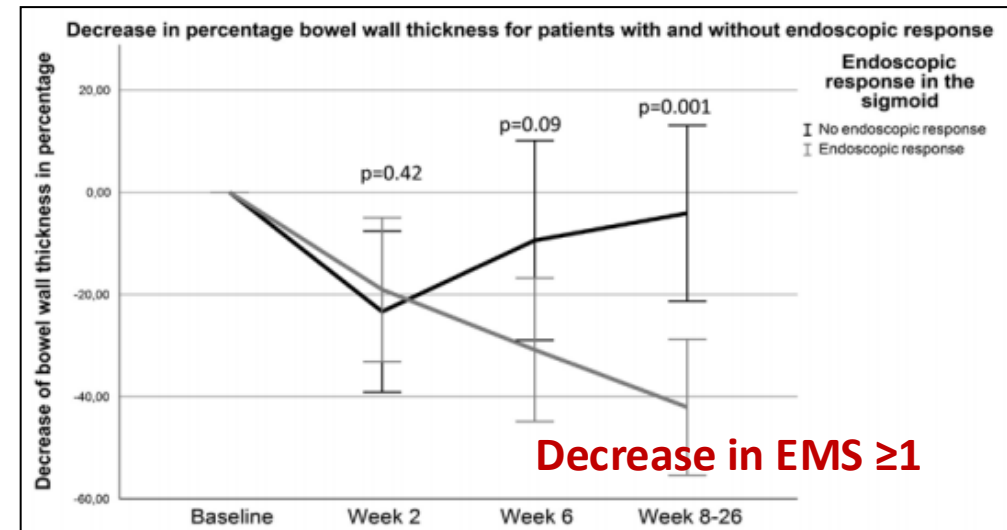
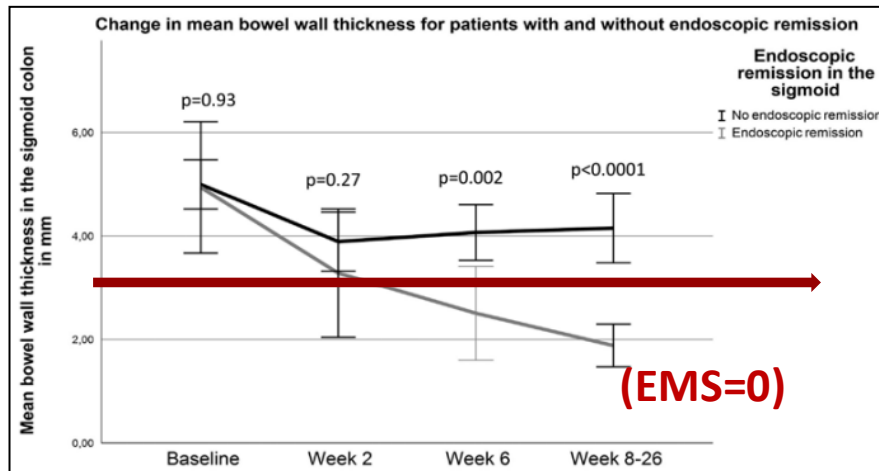
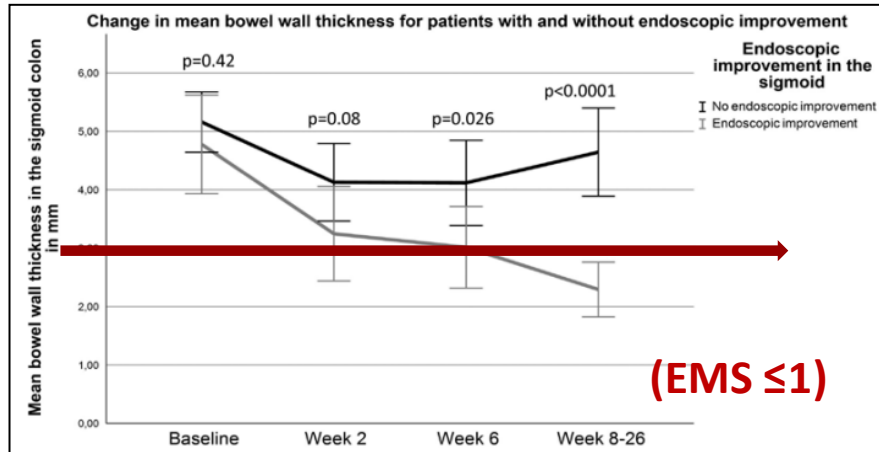
predicted endoscopic remission and improvement, respectively.

W6 - Submucosal layer thickness *predicted endoscopic remission* (OR, 0.09; P = 0.018) and *improvement* (OR, 0.14; P = 0.02).



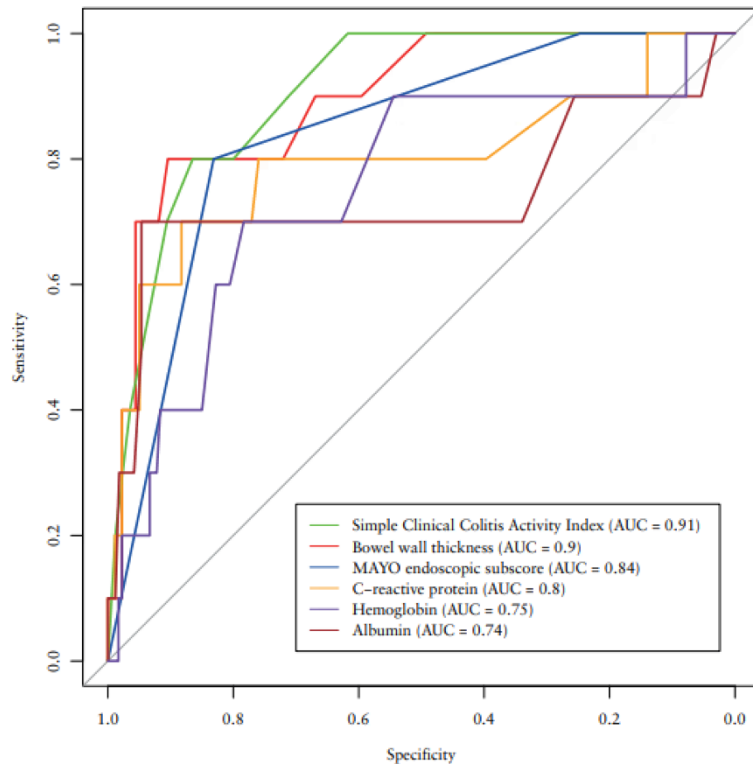
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Predictive Value of IUS in Early UC

Prospective population-based cohort of newly diagnosed E2/E3 UC patients: 193 patients were followed up with symptoms, biochemical parameters, IUS (baseline, 3M and 12M) and endoscopy.



IUS was a predictor of colectomy within the first 3M with **BWT >6 mm** as the optimal cut-off (OR 38, 95% CI 8-270, $P < .0001$)

At 3M, 59% of patients achieved TMR:

TMR was associated with:

- higher rates of steroid-free clinical remission in all subsequent follow-ups
- reduced need for steroids during follow-up (6% vs. 19%, $P=0.036$).

IUS in Ulcerative colitis...

- Disease activity & Extent of disease ✓
- Response to therapy: Monitoring ✓
- Any benefit in patients with ASUC? →
- Predict risk of colectomy ? →



international bowel
ULTRASOUND GROUP

Thank you!