



international bowel
ULTRASOUND GROUP

Standardized Documentation and Reporting – Tips for Central Reading

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Organized in
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The Sixth Affiliated Hospital, Sun Yat-sen University

Disclosure

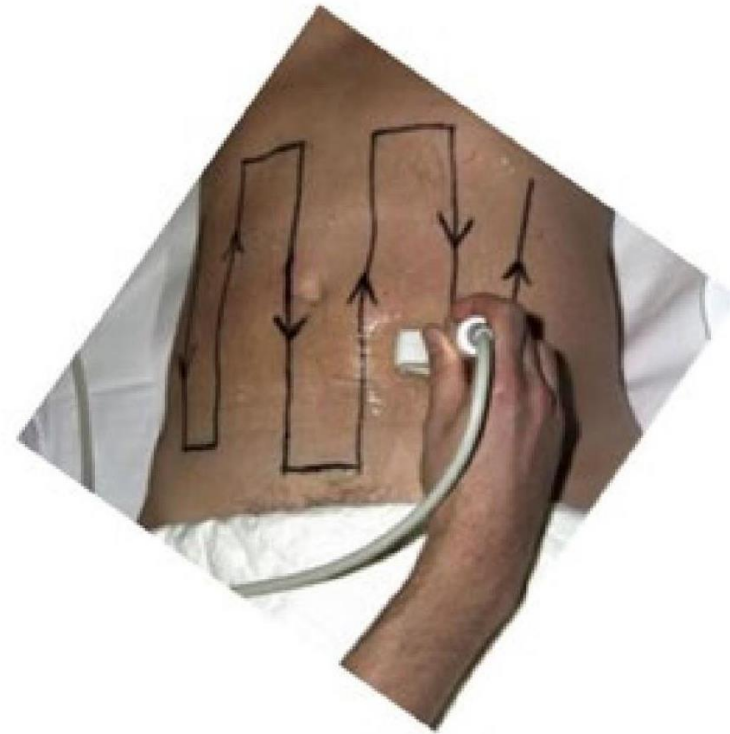
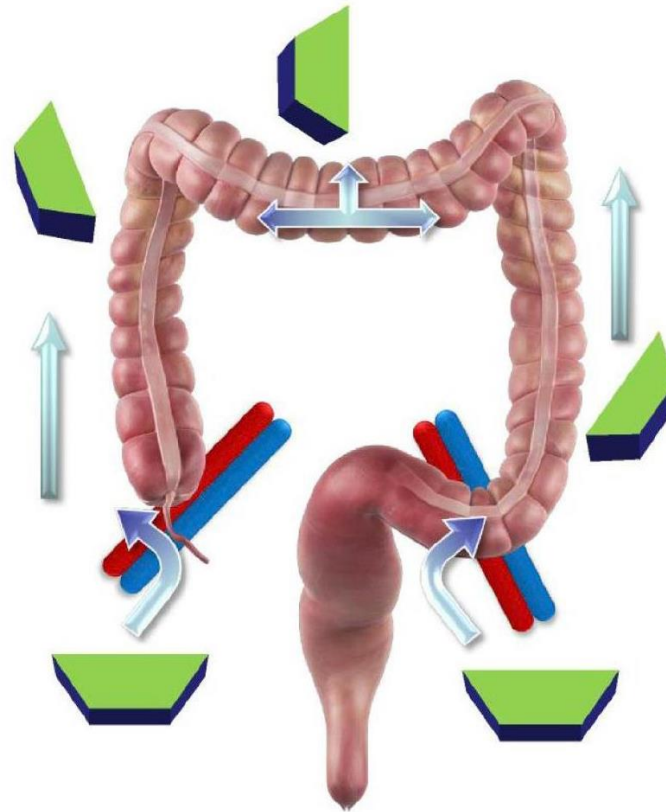
Consultancy

- Takeda Pharmaceuticals (Malaysia & Asia Pacific)
- Johnson & Johnson (Malaysia & Regional)
- AbbVie (Malaysia & Regional)

Speaker honoraria

- Takeda Pharmaceuticals (Malaysia & Asia Pacific)
- Johnson & Johnson (Malaysia & Regional)
- AbbVie (Malaysia & Regional)
- Ferring (Malaysia & Regional)
- Abbott Malaysia
- Servier Malaysia
- Biocodex International

IUS technique for a standardized complete evaluation of colon and terminal ileum (*left*) and small bowel (*right*).



Optimising IBD image reporting

an area of unmet need!

ECCO Topical Review

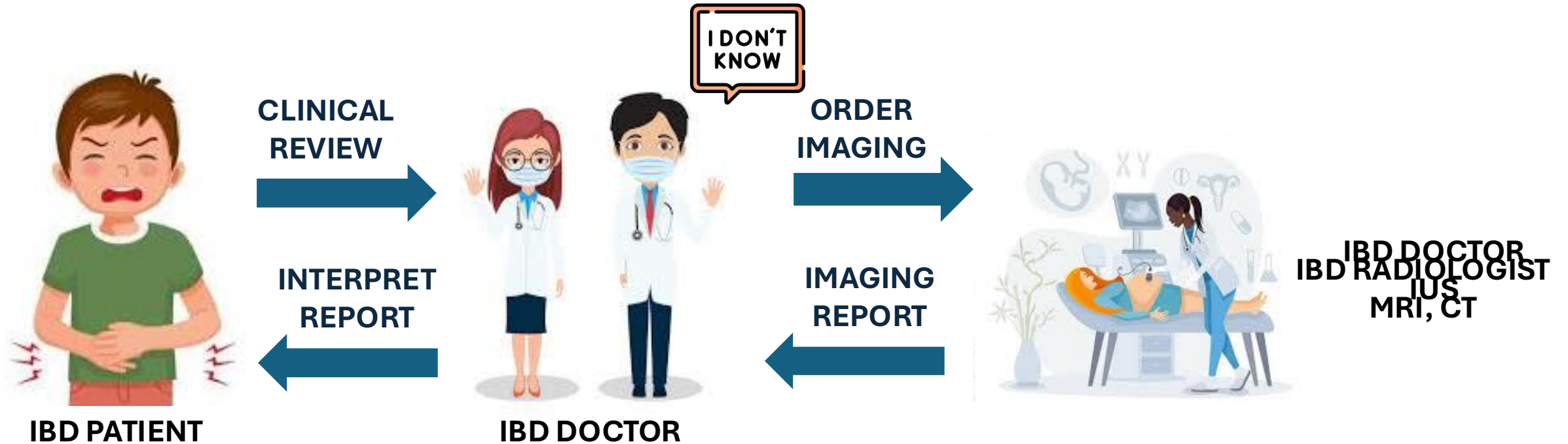
ECCO-ESGAR Topical Review on Optimizing Reporting for Cross-Sectional Imaging in Inflammatory Bowel Disease



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Optimising IBD image reporting

how does this manifest in clinical practice?



As IBD specialists who also perform IUS
YOU CAN HELP BRIDGE THIS GAP!

The IUS report

NOT simply the step after the scan



Communicate your findings as an IBD SPECIALIST
not simply a technician who performed the scan



...you've completed your scan

WHAT NEXT?

YOUR REPORT

The **most important part** is to
effectively communicate your findings!

The IUS report

the need for a structured approach

Current practice position 1

Reporting of findings should be structured to improve communication to clinicians, ensure inclusion of all important disease features and improve report structure and reproducibility

BUT, what does this mean?

AND, how do we translate this into clinical practice?

The IUS report

a practical framework for structured reporting



BEFORE THE SCAN

PRE-SCAN CHECKLIST

- Patient Details
- Clinical Indication
- Initial v follow-up scan
- Optimise & document
technical aspects of scan



DURING THE SCAN

INTRA-SCAN CHECKLIST

- Disease activity (bowel)
- Extraintestinal features
- Disease complications
- Examination extent



AFTER THE SCAN

POST-SCAN CHECKLIST

- Quality of scan
- Confidence in findings
- Standardised reporting template
- Recommendations & Follow-up
- Image storage

The IUS report

a practical framework for structured reporting

BEFORE **Part A:** The pre-scan check

DURING **Part B:** Measuring disease activity

AFTER **Part C:** Qualitative aspects

Part D: Clinical interpretation

Part E: Image capture & storage



Outline

The need to optimise image reporting in IBD
IUS Reporting: the need for structured approach

PART A: the pre-scan checklist

PART B: evaluating disease activity

PART C: qualitative aspects of your scan

PART D: clinical impression & recommendations

PART E: image capture & storage

Sample report structure

Recap



The IUS report

PART A : the pre-scan checklist

Who are we scanning?

Why are we performing an IUS?

Initial v follow-up scan?

Type of IUS performed?

Who is performing the IUS?

Which IUS machine are you using?

Which probes are used?

Optimise device settings

Patient details

IBD characteristics, Clinical question

Baseline assessment v response?

Targeted (PoC) Vs Comprehensive

Gastro or Radiologist (Trainee?)

US Model, CART based v Hand-held

Probes: linear, curved (frequency)

Patient specific adjustments

Outline

The need to optimise image reporting in IBD

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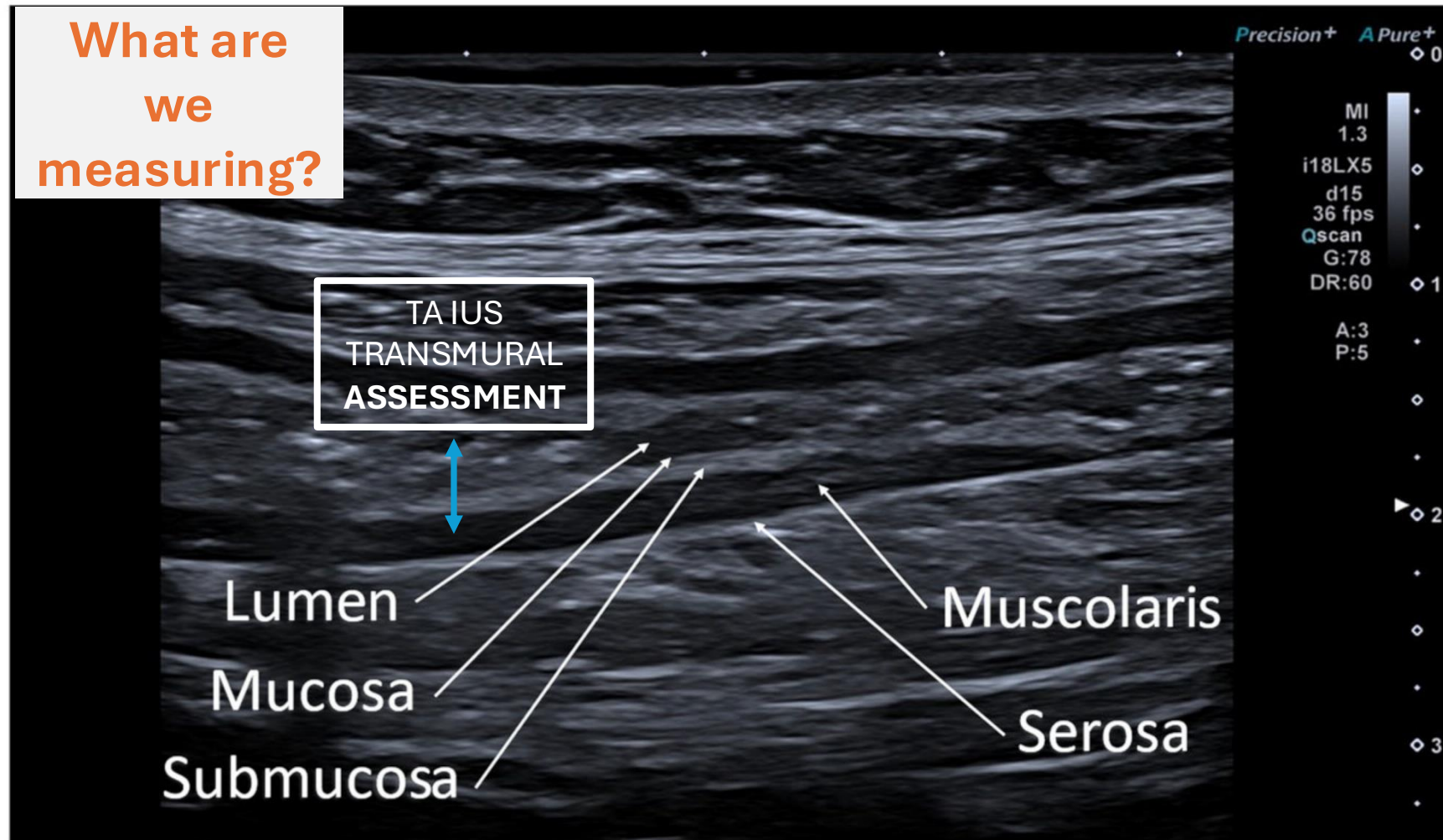
PART E: image capture & storage

Sample report structure

Recap

Transmural healing (TMH)

IUS facilitates transmural assessment

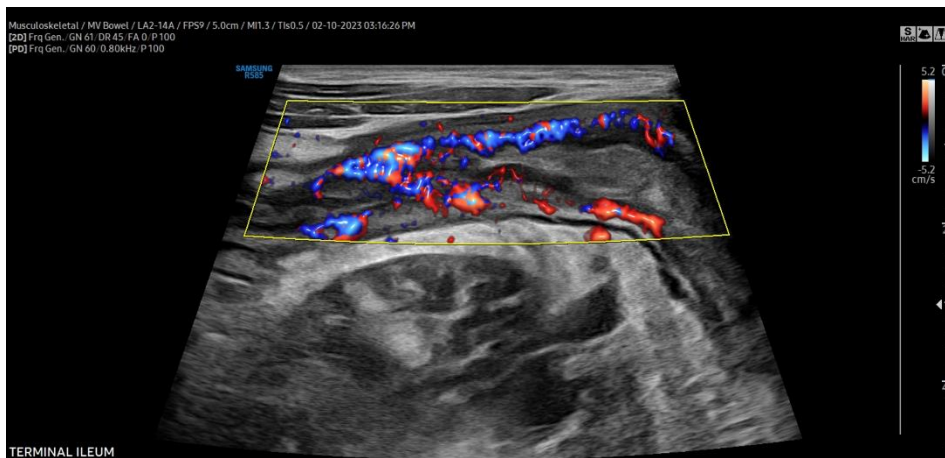


Sonographic features of active disease

key parameters



DOI: 10.3748/wjg.v29.i15.2272 Copyright ©The Author(s) 2023.



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Bowel Wall Thickness (BWT)

Colour Doppler Index (CDI)

Bowel Wall Stratification (BWS)

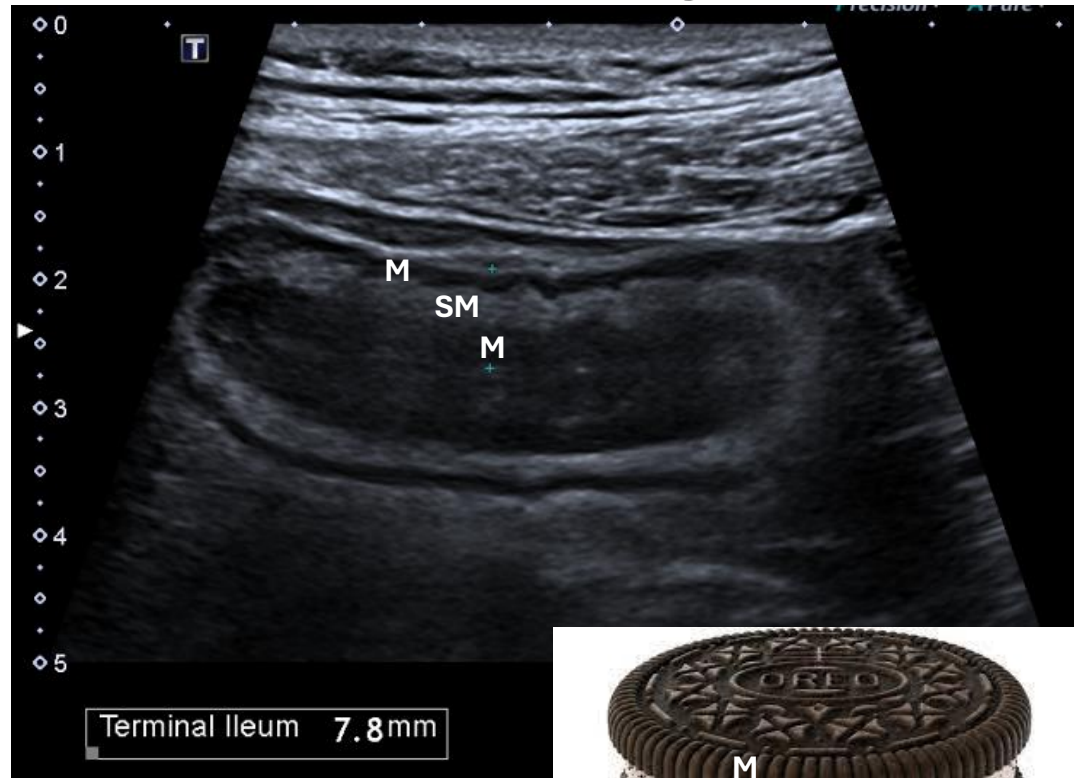
Mesenteric Inflammatory (i) Fat

Other: lymph nodes, motility, haustra coli, length, disease complications etc

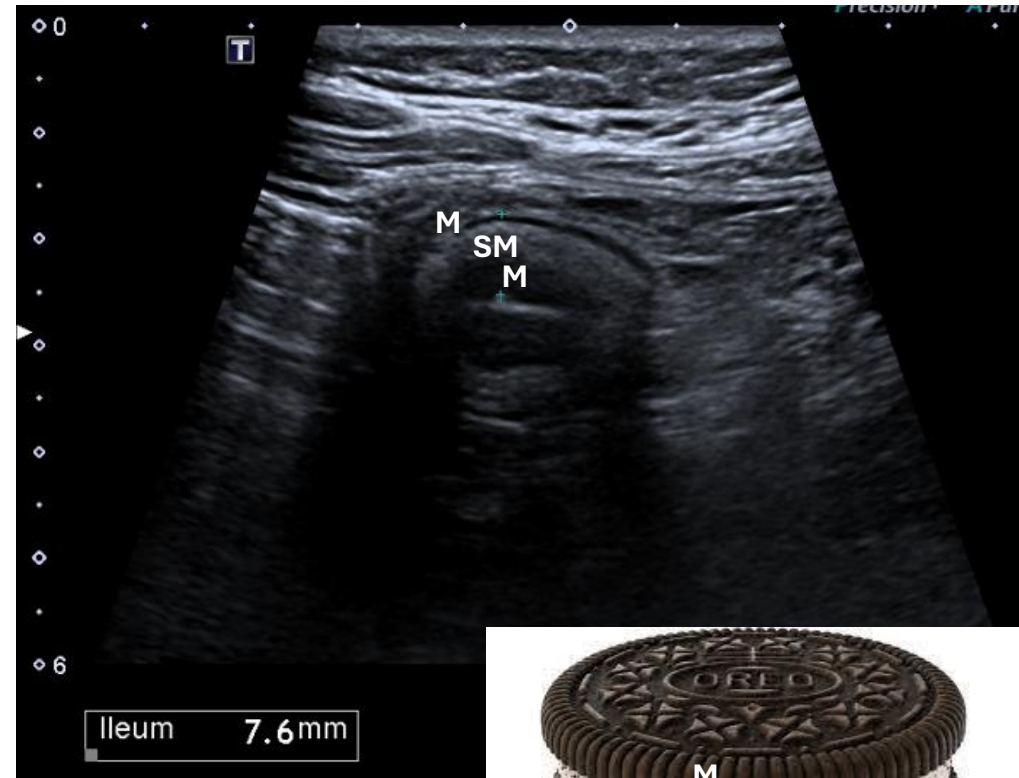
Bowel wall thickness

find your patient's inner Oreo

Active Long



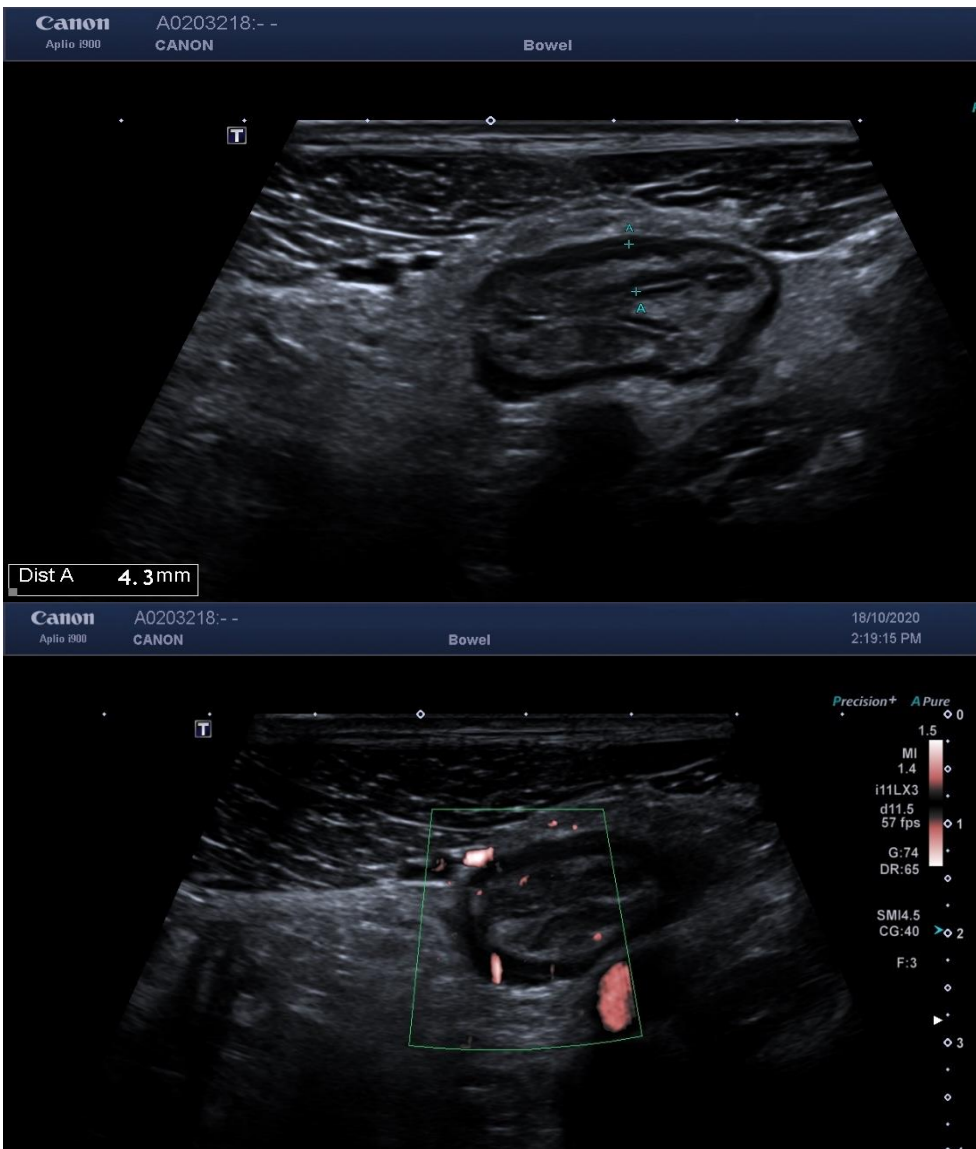
Active Short



A

Which is more active?

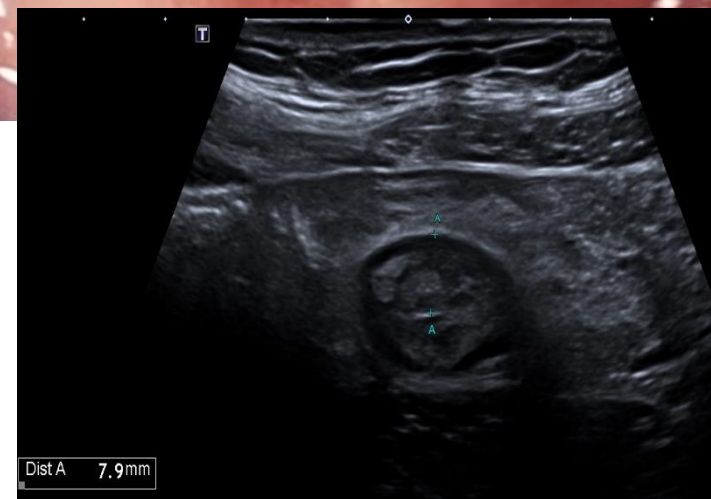
B



A



B



Bowel wall thickness

what is normal?

Current practice position 4

Thickness of the most involved small bowel and/or colonic segment, defined as bowel wall thickness (BWT), should be measured and reported. A threshold of 3 mm is the recommended cut-off for presence of mural inflammation for both small and large bowel

no consensus

Bowel wall thickness

what do the experts think is important?

Bowel wall thickness is a useful marker of disease activity	9 (0.18)	BWT is useful to Ax activity
Bowel wall thickness can only be accurately measured using a high frequency probe	7 (1.71)	
Bowel wall thickness should be measured from the interface of the intestinal contents and hypoechoic mucosa to the luminal margin of the hyperechoic serosa	9 (0.41)	Black (Muscularis) White (Submucosa) Black (Mucosa)
The same bowel wall thickness cut-off should be used for both the large and small bowel	7 (1.41)	
A bowel wall thickness of 3.0 mm should be used as a cut-off to distinguish normal from pathologic bowel in the colon	7 (1.12)	
A bowel wall thickness of 3.0 mm should be used as a cut-off to distinguish normal from pathologic bowel in the small bowel	8 (1.18)	3.0 mm BWT cut-off in SB
Bowel wall thickness is the most reliable marker of Crohn's disease activity	8 (0.65)	
Longitudinal and transverse bowel wall thickness should be measured separately	8 (1.00)	
When measuring bowel wall thickness, the average thickness from two or more measurements should be used	8 (0.82)	Take more than 1 BWT measurement
Bowel wall thickness should be scored continuously as a value in millimetres (to one decimal place, eg 3.0 mm) in a GIUS index for assessing Crohn's disease	8 (0.65)	
Bowel wall thickness should be weighted more than other parameters in a GIUS index for assessing Crohn's disease	8 (1.12)	BWT most important sonographic parameter (CD)



Intestinal vascularisation

(modified) Limberg score

Current practice position 6

Intestinal vascularization should be assessed by a semi-quantitative grading of intra- and extramural blood flow in abnormal bowel segments (colour Doppler on IUS). For MRE/CT, a qualitative impression of increased contrast hyperenhancement should be reported

Colour Doppler vascularity

(modified) Limberg score

Modified Limberg score

0 – No flow

1 – Small/round intramural signal

2 – Large/linear intramural signal

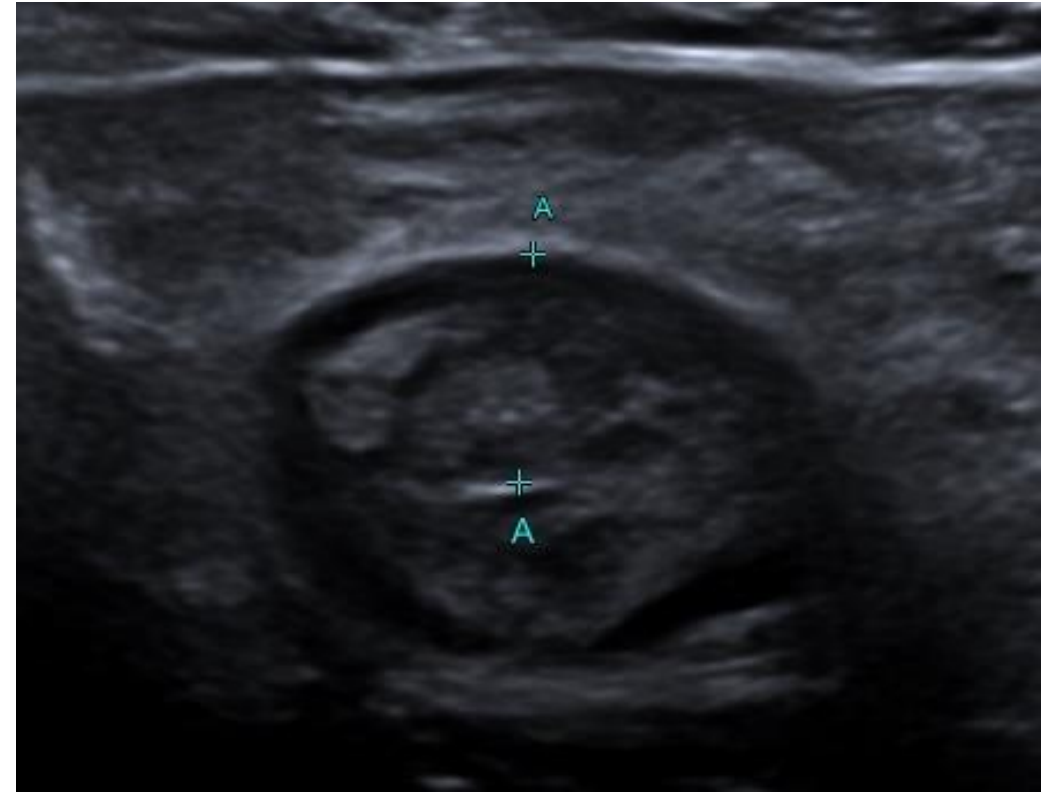
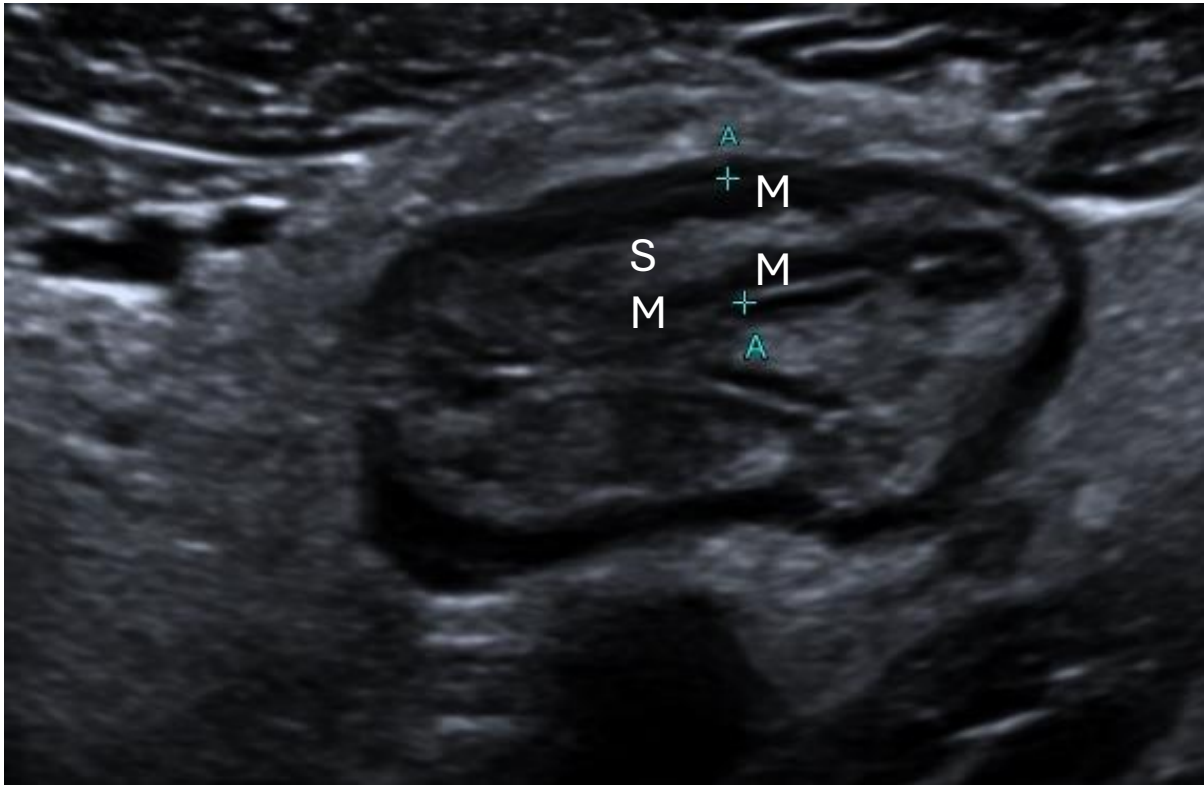
3 – Extending into mesentery

****Set velocity range: 4-7 cm/s****



Bowel Wall Stratification

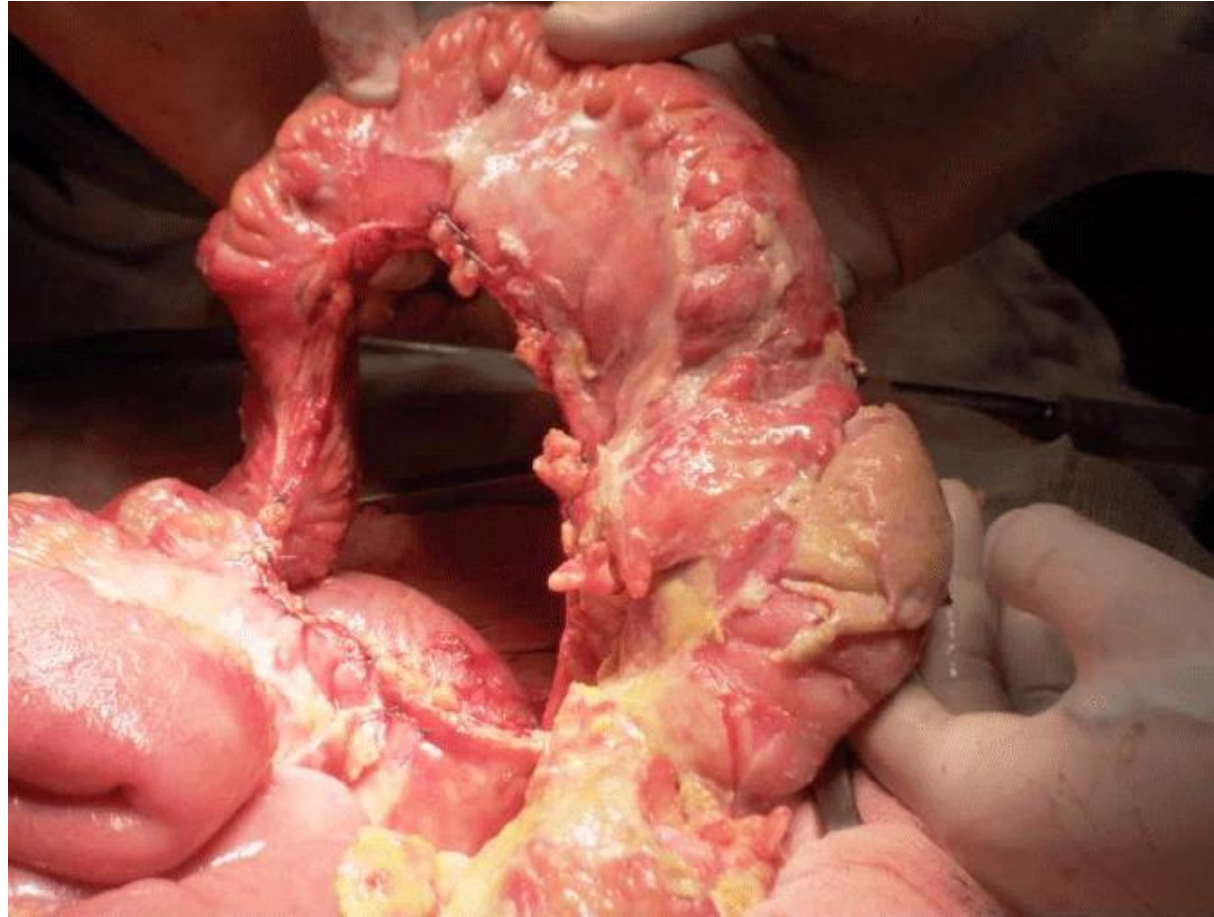
a marker of transmural disruption



Preserved Y/N* – if N: Focal (< 3cm) v extensive (> 3cm)

Useful to describe in conjunction with BWT & vascularity

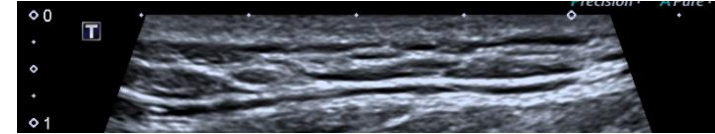
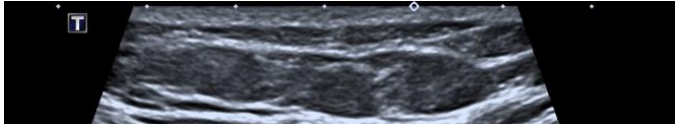
Inflammatory (i)-Fat



...a peri intestinal manifestation of inflammation

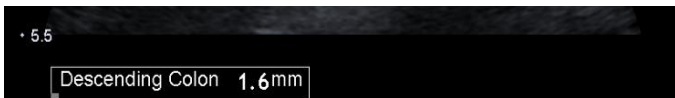
Mesenteric inflammatory fat

absent or present



Current practice position 7

The presence and location of perienteric inflammatory changes and mesenteric adipocyte proliferation [creeping fat] should be reported. Although non-specific, enlarged mesenteric lymph nodes can occur adjacent to transmural inflammation and thus may be supportive of disease activity and may be reported



Abse

How much bowel is involved?

length & locations of involvement

Current practice position 3

The number and anatomical location of intestinal segments with imaging findings of mural inflammation should be reported, including skip lesions. An estimate of the total affected length and length of all individual pathological areas of the small bowel is preferred. Segment(s) exhibiting the most severe mural inflammation should be reported in detail to guide therapeutic decision making

Which bowel segments?

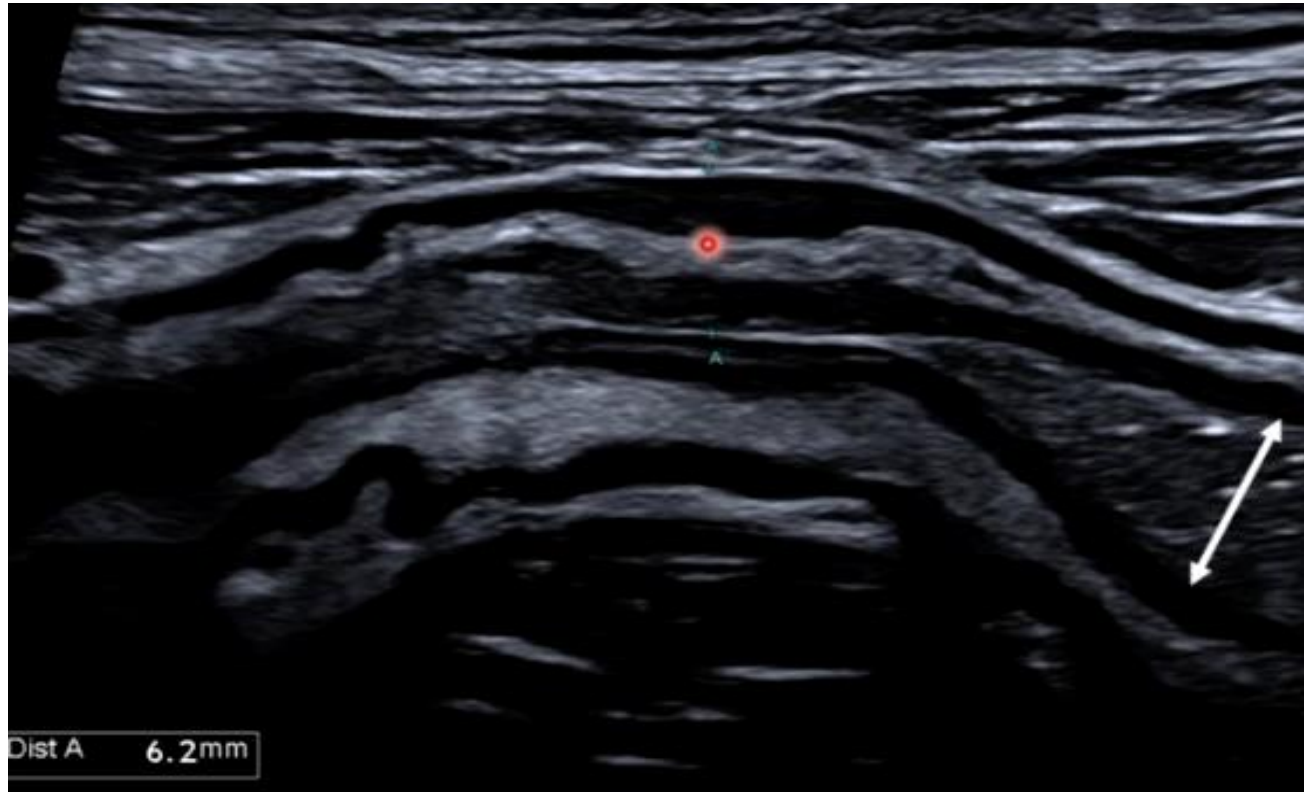
How many bowel segments involved?

How much bowel (in cms) is affected?

Detailed reporting of most involved bowel segment is important

Disease complications

stricturing disease



Stricturing small bowel disease

PSD: Pre-stenotic dilatation
ICV: Ileo-caecal valve
ICA: Ileo-caecal anastomosis

IUS Features

Increased BWT, Impaired motility

Narrowed lumen, PSD > 25mm

What should you think about when scanning?

How many? Where? How long?

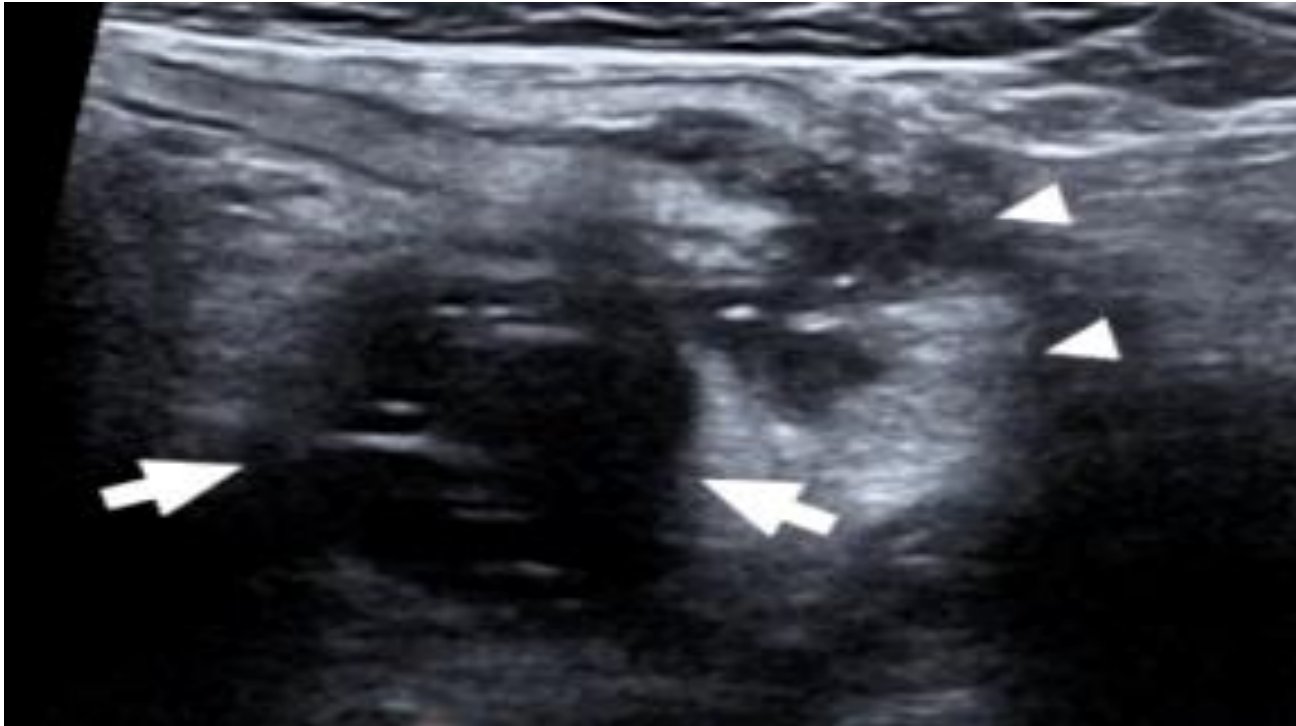
Relationship to ICV, ICA;

Anastomotic v Native

Associated features: BWT, loss BWS,
vascularity

Disease complications

penetrating disease



Penetrating small bowel disease

IUS Features - abscess

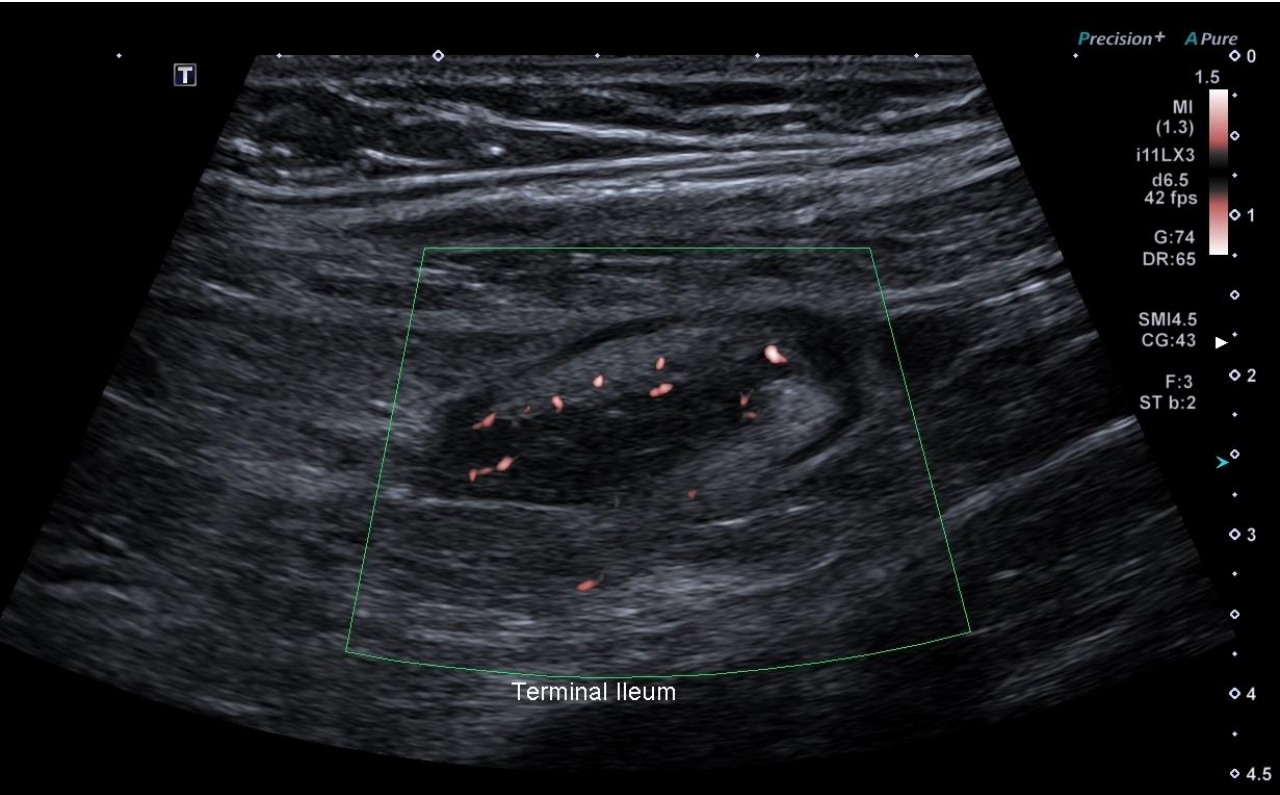
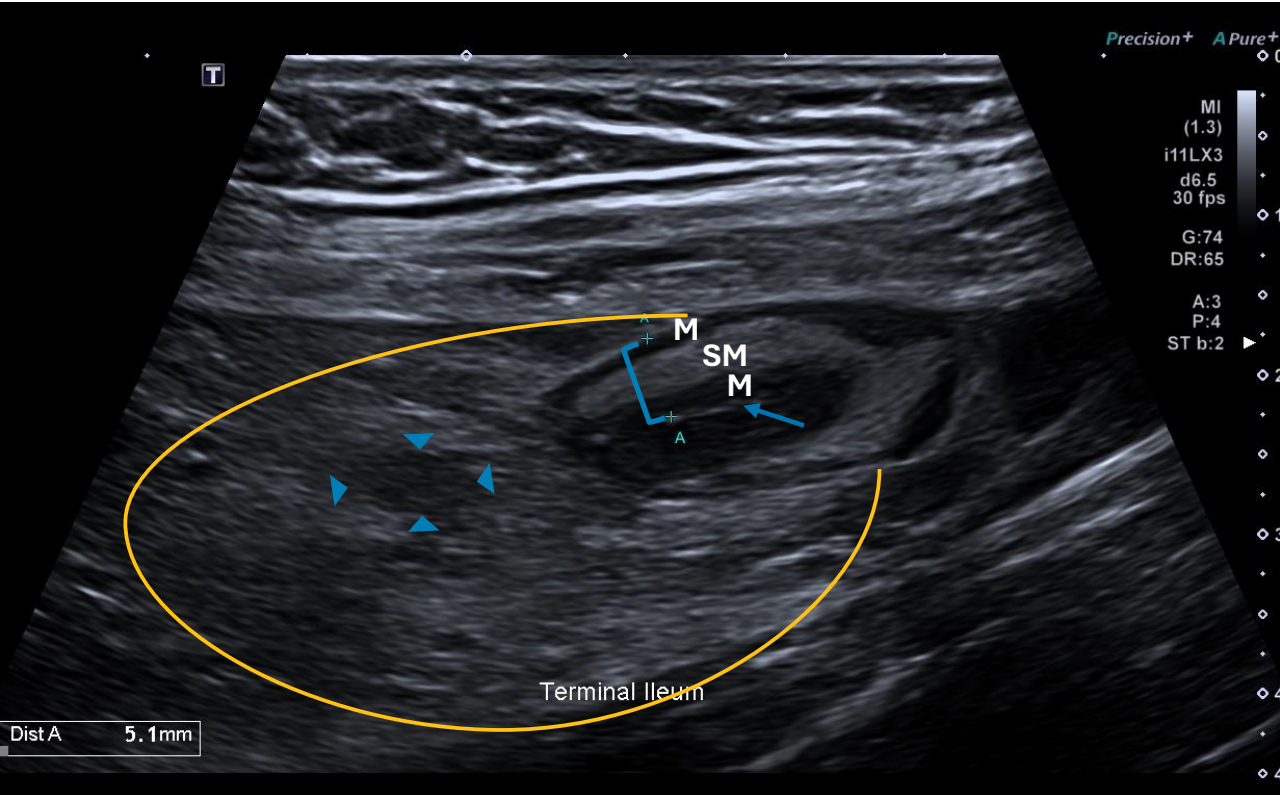
Hypo- or anechoic lesion
with fluid & gaseous artefacts
Posterior echo enhancement
Irregular margins

Frequently surrounded by mesenteric fat
CEUS: absence of vascularization in the mass

IUS Features - fistula

Hypo- or anechoic extension from bowel wall
filled with fluid and/or gaseous artefacts
Irregular margins
Frequently surrounded by mesenteric fat

BRINGING IT ALL TOGETHER Cross sectional images demonstrating terminal ileitis



B mode ultrasound image

increased wall thickness 5.1mm

BWT: blue bracket; luminal interface: blue arrow; Inflammatory fat with wrapping: yellow border; lymph node: blue arrow heads

Colour Doppler Imaging (CDI)

with short intramural signal

Modified Limberg score 1

Outline

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PART A: the pre-scan checklist

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PART D: clinical impression & recommendations

PART E: image capture & storage

Sample report structure

Recap

The IUS report

PART C : qualitative aspects

Current practice position 2

The examination quality should be reported together with any impact on diagnostic confidence





The IUS report

PART C: qualitative aspects

Quality of views

Good, Suboptimal, Poor (subjective)

Document limitations

Patient : BMI, discomfort

Sonographic: gas, anatomy, pelvic loops

Technical: machine, probe, time

Confidence in findings

How sure are you? Are further Ix req?

Standardised reporting template

Ensure a minimum standard is met



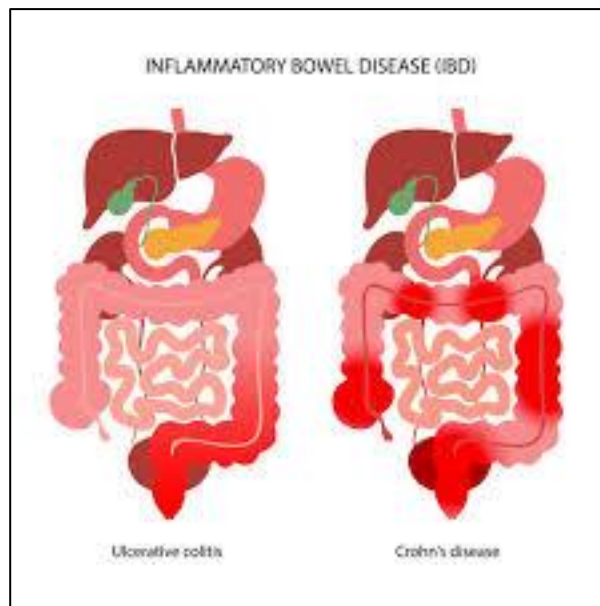
The IUS report

PART D : clinical impression & recommendations



DOCTORS

+



IBD SPECIALISTS

+



PERFORM IUS

**SO communicate your findings as an IBD
SPECIALIST**

who has performed the IUS

The IUS report

PART D: clinical impression & recommendations

Initial diagnosis

Presence/absence of active
disease

Document extent of disease

Presence/absence of
complications

Follow-up examination

Make an assessment of response

Document change in disease
extent

Status of complications

The IUS report

Current practice position 9

For follow-up examinations, reporting should focus on changes from the previous examination and should be categorized as transmural remission or significant transmural response, stable disease, or progression of inflammation. Changes in responsive features, including BWT, colour Doppler signal, BWS [IUS], ulcers, oedema [MRE], and perienteric inflammatory changes, should guide treatment response categorization

How do we define response? Does it correlate with other IBD endpoints?

SONOGRAPHIC RESPONSE (STARDUST STUDY) = 25% decrease in BWT (*Kucharzik CGH 2022*)

Moderate correlation with endoscopy and biochemical endpoints



The IUS report

PART E : image capture & storage

**A PICTURE IS WORTH A
THOUSAND WORDS**



Use body markers

esp. for anastomoses, small bowel

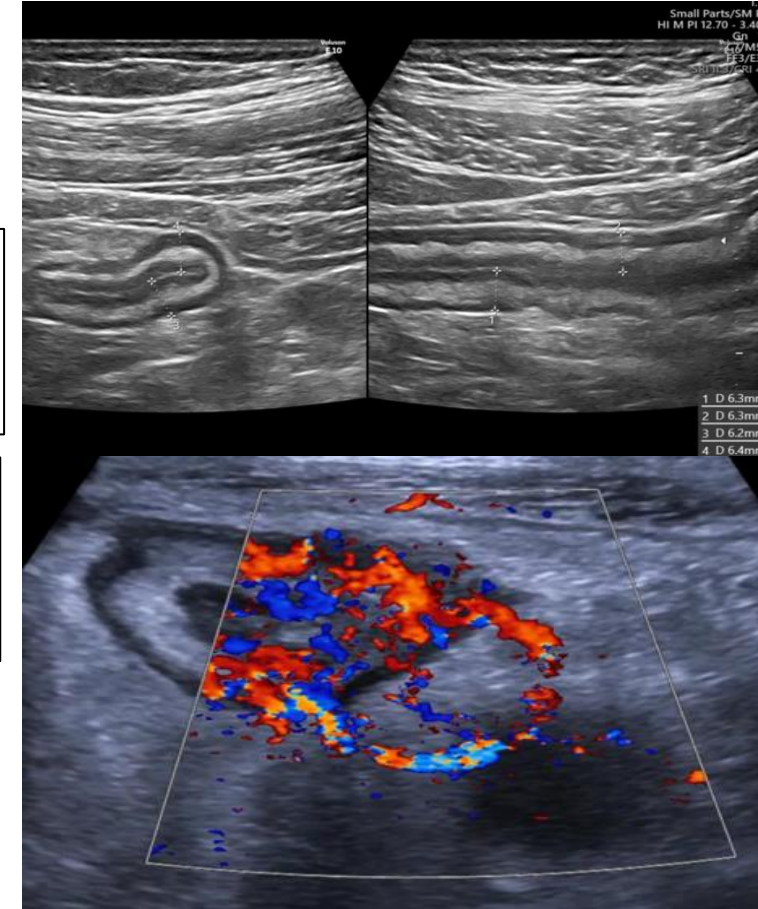
Ensure that all images

Are appropriately labelled.

Images are useful for follow-up scans

& assessments of response etc

State whether images can be accessed &
if so, how



CONVEYS ACTIVITY +/- SEVERITY
BASELINE FOR FUTURE IMAGING

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Sample report structure

Recap

IUS Report - 24y old man with ulcerative colitis

SAMPLE IBUS IUS REPORT

IUS REPORT

INDICATIONS and DISEASE CHARACTERISTICS

24y old man, ulcerative colitis since 2019, mesalamine-refractory, steroid-refractory, azathioprine-induced pancreatitis.

8-10 loose stools, blood, abdominal cramps, urgency

INTRA-PROCEDURE FEATURES

RESULTS

BWT: sigmoid colon 5.4 mm, descending colon 4.5 mm, transverse colon 4.5 mm, ascending colon 1.9 mm, TI 1.8 mm

Vascularisation (IBUS CDS Score): rectum: NA, sigmoid colon: 3, descending colon: 3, transverse colon: 3, ascending colon: 0; TI: 0, ileum: 0, jejunum: 0; duodenum: 0

Echostratification: Colon: normal; small bowel: normal

Mesenteric fat: sigmoid colon: descending colon: present (2); transverse colon: ascending colon: TI: absent (0)

COMPREHENSIVE, INCLUSIVE OF PICTURES
like an endoscopy report!

Image storage location: cine loops and images stored in PACS

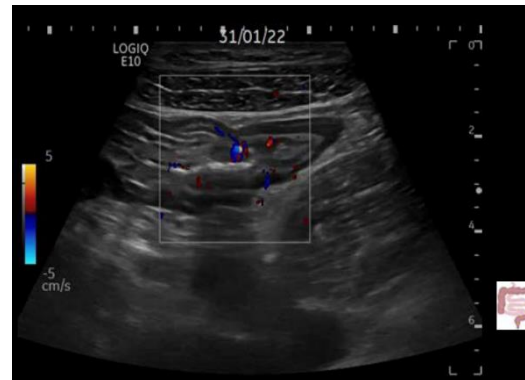
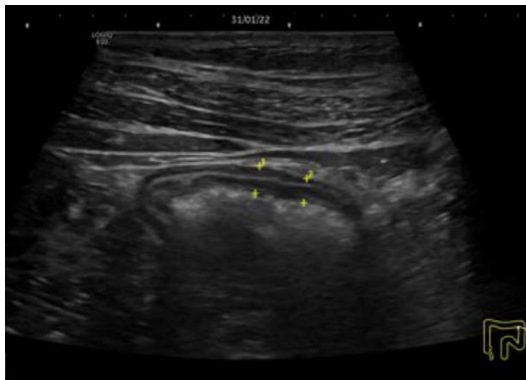
Examiner: Torsten Kucharzik

IUS machine: GE Logiq E10; Probe: 2-9 MHz

vascularisation, preserved echostratification, increased mesenteric fat, mesenteric lymphadenopathy, pseudopolyps, partial abrogated haustration in the left colon and free fluid

IUS DIAGNOSIS: Highly active ulcerative colitis, E3

RECOMMENDATIONS: Suggested IUS follow up in 2 weeks



PART A: PRE-SCAN CHECKLIST

PATIENT DETAILS
OPERATOR DETAILS
US MACHINE/SYSTEM
CLINICAL INDICATION
TARGETED v COMPLETE IUS

PART B: SYSTEMATIC EVALUATION OF DISEASE ACTIVITY

For each bowel segment
systematically assess
IUS parameters

CORE PARAMETERS
BWT (*by orientation, length*)
Bowel Wall Stratification
Modified Limberg (CDI)
iFat

DON'T FORGET
Peristalsis/Haustra Coli
Mesenteric LNs
Free Fluid

Gastrointestinal Ultrasound Scan Report

UR Number	
Patient Name	
Patient D.O.B	
GIUS Date	
GIUS Operator	

Referring clinician	
Clinical Question	
Patient Consent	☐ Yes, Verbal consent was obtained to perform IUS
Pregnant	☐ No ☐ Yes; if yes week of gestation _____
Type of GIUS performed	☐ Full examination ☐ Focused examination

	SC	DC	TC	AC	Caecum	TI	Proximal SB
Segment Examined	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
BWT (mm) - Longitudinal (2 measurements)							
BWT (mm) – Cross-Section (2 measurements)							
If BWT>3mm, measure each layer	☐ M: ☐ SM: ☐ S:	☐ M: ☐ SM: ☐ S:	☐ M: ☐ SM: ☐ S:	☐ M: ☐ SM: ☐ S:	☐ M: ☐ SM: ☐ S:	☐ M: ☐ SM: ☐ S:	☐ M: ☐ SM: ☐ S:
Stratification	☐ Normal ☐ Abnormal	☐ Normal ☐ Abnormal	☐ Normal ☐ Abnormal	☐ Normal ☐ Abnormal	☐ Normal ☐ Abnormal	☐ Normal ☐ Abnormal	☐ Normal ☐ Abnormal
Doppler vascularity 0 = normal 1 = short stretches 2 = long stretches 3 = reaching into mesentery	☐ 0 ☐ 1 ☐ 2 ☐ 3	☐ 0 ☐ 1 ☐ 2 ☐ 3	☐ 0 ☐ 1 ☐ 2 ☐ 3	☐ 0 ☐ 1 ☐ 2 ☐ 3	☐ 0 ☐ 1 ☐ 2 ☐ 3	☐ 0 ☐ 1 ☐ 2 ☐ 3	☐ 0 ☐ 1 ☐ 2 ☐ 3
Peristalsis/Haustra coli	☐ Present ☐ Abnormal ☐ Absent	☐ Present ☐ Abnormal ☐ Absent	☐ Present ☐ Abnormal ☐ Absent	☐ Present ☐ Abnormal ☐ Absent	☐ Present ☐ Abnormal ☐ Absent	☐ Present ☐ Abnormal ☐ Absent	☐ Present ☐ Abnormal ☐ Absent
Mesenteric hypertrophy	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Mesenteric lymphadenopathy	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Free fluid	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

**DISEASE COMPLICATIONS – strictures, abscesses, fistula (need to update!)



PART C: QUALITATIVE ASPECTS

Difficulties encountered – e.g.
BMI, pain, complex anatomy

Comment on quality of scan
(Adequate, Suboptimal, etc)

PART C: CLINICAL IMPRESSION

Active / Inactive disease
Comparison to prior scans
Distribution of involvement
Severity – scoring indices
Appropriateness of rpt IUS

Interpret findings as a
GASTROENTEROLOGIST
you're not simply a technician

PART E: IMAGE CAPTURE & STORAGE

Gastrointestinal Ultrasound Scan Report

UR Number	
Patient Name	
Patient D.O.B	
GIUS Date	
GIUS Operator	

Affected segment(s) (Tick all that apply)	☐ SC ☐ DC ☐ TC ☐ AC ☐ Caecum ☐ TI ☐ Proximal SB → ☐ RUQ ☐ LUQ ☐ RLQ ☐ LLQ
	☐ Segmental ☐ Continuous
Location of the disease (CD)	☐ L1 ☐ L2 ☐ L3 ☐ L4
Behaviour of the disease (CD)	☐ B1 ☐ B2 ☐ B3
Extent of the disease (UC)	☐ E1 ☐ E2 ☐ E3 ☐ no disease
Severity of the disease (UC)	☐ S0 ☐ S1 ☐ S2 ☐ S3

Any difficulty with scanning? (e.g. post-surgical, pregnancy, obesity)

Clinical note: (e.g. Patient's symptom, current medication)

Impression:



Patient Details

Patient Name	Crohn's Disease	Date of Scan	21 April 2026
Reg. No. (RN)	3300855877	Age / Sex	31 years 5 months / Female
Time	12:45 – 12:58	Equipment	Samsung V8 / LA2-14A
Indications	Known Crohn's disease — disease activity assessment		
Previous Surgery	—	FCalprotectin	—
Operator	Dr Alex Leow (PHKL)	Report Date	21 April 2026

Results — Bowel Segment Assessment

BWT = Bowel Wall Thickness Doppler: Modified Limberg Score (0–3)

Area	BWT (mm)	BWT (mm)	Stratification	Mesenteric Fat	Doppler	Image ref.
Sigmoid colon	2.9	2.4	Preserved	Normal	Limberg 1	Img 1–2
Descending colon	2.5–2.6	2.6–2.8	Preserved	Normal	Limberg 2	Img 3–7
Transverse colon	2.9–4.0	3.7–4.8	Preserved	Hypertrophy	Limberg 2	Img 8–13, 18–19
Ascending colon	3.8	3.7	Preserved	Hypertrophy	Limberg 1	Img 20
Terminal ileum	2.7–3.4	3.3	Preserved	Normal	Limberg 2	Img 14–17

All visualised colonic segments and terminal ileum show abnormal mural thickening. Doppler signals at sigmoid (Img 2), descending (Img 4, 7), transverse (Img 13) and terminal ileum (Img 15–16) represent true intramural hypervascularity consistent with active inflammation. Transverse colon is the most severely affected segment (BWT up to 4.0 mm, BMT up to 4.8 mm). Colour key: red = significantly abnormal; amber = mildly abnormal; green = within normal limits.

Additional Findings

Wall stratification	Wall stratification largely preserved across thickened segments, with hypoechoic mural thickening predominantly involving the submucosa and muscularis propria. No transmural loss of layering identified.
Doppler vascularity	True intramural Doppler hypervascularity demonstrated in multiple segments: sigmoid (Img 2, Limberg 1), descending colon (Img 4, 7, Limberg 2), transverse colon (Img 13, Limberg 2) and terminal ileum (Img 15–16, Limberg 2). Ascending colon shows only Limberg 1 signal despite marked wall thickening. Findings consistent with active inflammation across the colon and terminal ileum.
Peristalsis / Haustracoli	Reduced peristalsis across the affected colonic segments. Haustral pattern attenuated, particularly in the transverse colon.
Mesenteric fat hypertrophy	Mesenteric fat hypertrophy adjacent to the affected transverse and ascending colon segments.
Mesenteric lymphadenopathy	Reactive mesenteric lymph nodes noted adjacent to the affected bowel segments.
Fistula / Abscess / Stricture	No fistula, abscess, or stricture identified at this examination.

Summary / Impression

IUS performed across all five standard colonic segments and terminal ileum on 21 April 2026 in a patient with known Crohn's disease.

Diffuse abnormal mural thickening involving all visualised colonic segments and the terminal ileum. The transverse colon is the most severely affected segment (BWT 2.9–4.0 mm, BMT up to 4.8 mm), followed by the ascending colon (3.8/3.7 mm). The sigmoid (2.9 mm), descending colon (2.5–2.6 mm) and terminal ileum (2.7–3.4 mm) are also abnormally thickened. Wall stratification is largely preserved with hypoechoic submucosal/muscularis thickening. True intramural Doppler hypervascularity is present in the sigmoid, descending, transverse and terminal ileum segments (Limberg 1–2), consistent with active inflammation. Mesenteric fat hypertrophy adjacent to the transverse and ascending colon, and reactive mesenteric lymph nodes are noted. No fistula, abscess or stricture identified.

Overall impression: Active Crohn's disease with a pancolitis-pattern distribution and terminal ileum involvement. The transverse and ascending colon are the most severely affected segments. The combination of significant mural thickening, intramural Doppler hypervascularity (Limberg 2), mesenteric fat hypertrophy and reactive lymphadenopathy indicates active transmural inflammation. Recommend to continue with Upadacitinib.

Reporting Clinician	Designation	Report Date
Dr Alex Leow Hwong Ruey	Gastroenterologist & Hepatologist	21 April 2026

Sigmoid Colon



Fig 1 — Sigmoid colon: BWT 2.9 mm, BMT 2.4 mm

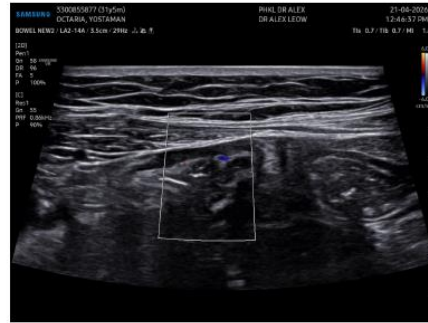


Fig 2 — Sigmoid colon: intramural Doppler signal

Descending Colon



Fig 3 — Descending colon: BWT 2.5 mm, BMT 2.8 mm

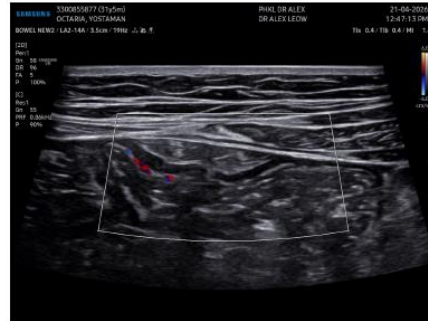


Fig 4 — Descending colon: intramural Doppler (Limberg 2)

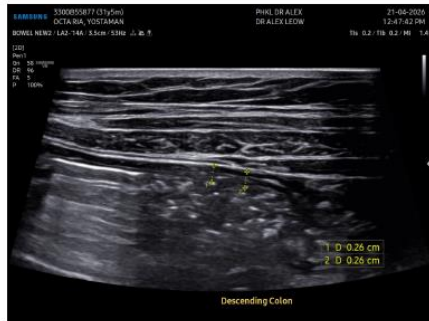


Fig 5 — Descending colon: BWT 2.6 mm, BMT 2.6 mm

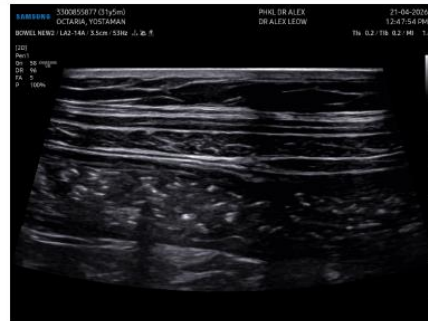


Fig 6 — Descending colon: long-axis grey-scale

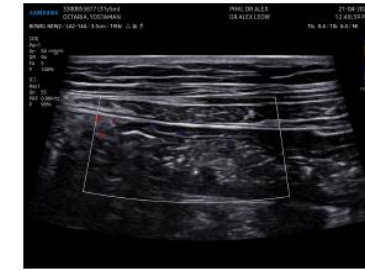


Fig 7 — Descending colon: Doppler with mural signals

Transverse Colon — most severely affected segment

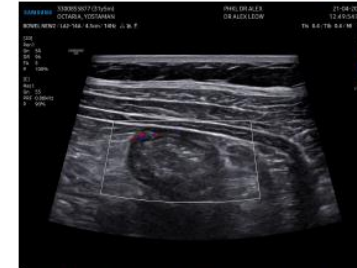


Fig 8 — Transverse colon: cross-sectional view



Fig 9 — Transverse colon: BWT 2.9 mm



Fig 10 — Transverse colon (mid): BWT 3.9 mm, BMT 4.8 mm



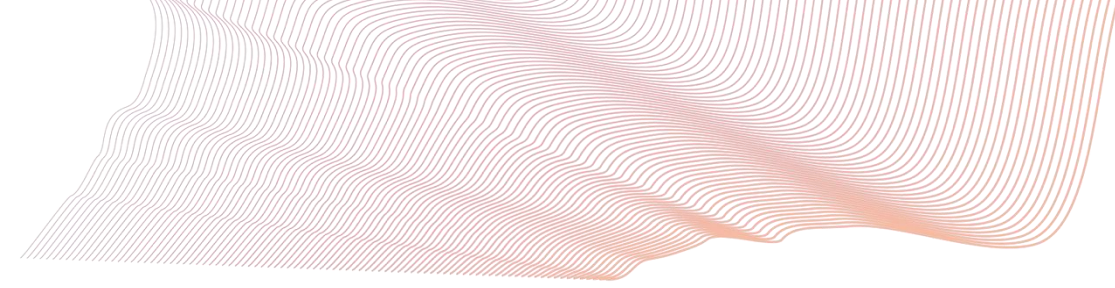
Fig 11 — Transverse colon: BWT 4.0 mm, BMT 4.5 mm



Fig 12 — Transverse colon: BWT 3.2 mm, BMT 4.0 mm



Fig 13 — Transverse colon: intramural Doppler (Limberg 2)

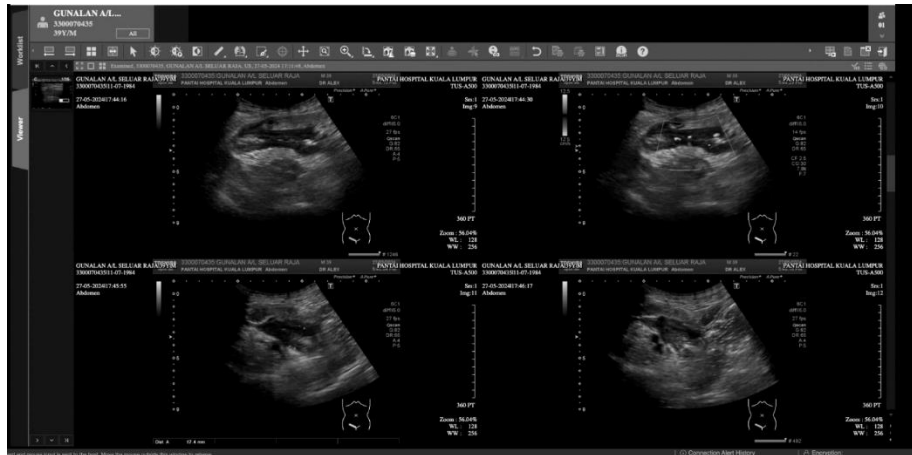


Standardized IUS documentation is suggested in guidelines

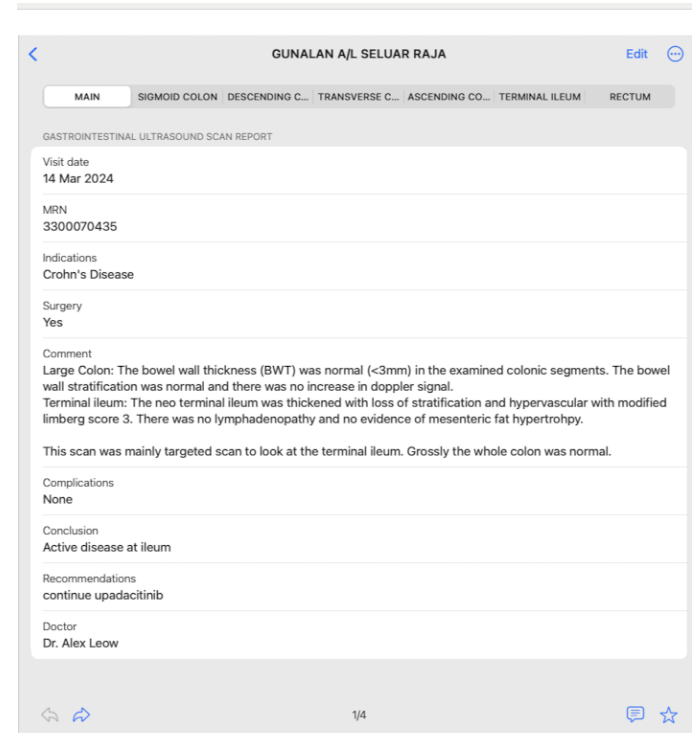
Recommendation 56

All cross-sectional imaging (IUS, MRE and CT) reporting should include an indication, scan quality, and any uncertainties in interpretation. The description of all segments examined should be reported in detail and images stored and available in an electronic patient file. We recommend using a picture archiving and communication system (PACS) for digital storage. [EL3] AGREEMENT 94%

Storage of images and records



Through Hospital PACS system



Electronic Database



Storage of images and records



Video recorder

- Can record longer videos



IUS Activity Scoring

Standardised indices underpin central reading

DOCUMENTATION & REPORTING

MUC

Milan Ultrasound Criteria

- **Components:** BWT + colour Doppler (2 parameters)
- **Active cut-off:** > 6.2
- **Positivity:** BWT > 3 mm + CDS, or BWT > 4.43 mm alone
- **Evidence:** Only score with hard longitudinal outcome data — MUC > 6.2 predicts escalation/colectomy (HR 3.87)

Best for: fast point-of-care activity + prognosis in UC.

IBUS-SAS

Segmental Activity Score

- **Components:** BWT + CDS + i-fat (highly weighted 15x) + wall stratification (4 parameters)
- IBUS-SAS uses a 0-100 point scale
- **Significant/Moderate Activity:** ≥ 23.8 to ≥ 40.0 (Crohn's Disease) or > 23 (Ulcerative Colitis)
- **Strength:** Best remission discrimination; distinguishes MES 0 from MES 1
- **Trade-off:** Two subjective components → more operator-dependent; segmental, no validated global sum

Best for: serial monitoring & trial-grade documentation across IBD.

Take-home: MUC for prognosis in UC; IBUS-SAS for responsive serial monitoring across IBD. *The 2025 consensus endorses both for different contexts — structured, index-ready documentation is what makes either usable for central reading.*

1. Allocca M, et al. *United European Gastroenterol J.* 2022;10(2):190–197. doi:10.1002/ueg2.12206
2. Allocca M, et al *J Crohns Colitis.* 2026;20(Suppl 1):i1039 (P0308, jiaf231.489).
3. Innocenti T, et al. *Inflamm Bowel Dis.* 2025 Nov 1;31(11):3194-3212

Technical and image quality requirements for trials (Central Reading)

- The **same machine, probes, and IUS settings** should be used for the same patient at each visit
- Each bowel segment (affected and unaffected) should be recorded on three separate 5-10s cineloops (longitudinal, cross-sectional and CDI); if several recordings have been made, the best three cineloops should be chosen by the investigator for upload
- Additional still images can be accepted if cineloops are not of sufficient quality according to the investigator
- **Cineloops** should be covering bowel, mesentery and possible lymph nodes. Loops should **start (if possible) at the non-inflamed part** of the bowel distal/rectal of the affected bowel segment, should **cover the affected bowel segment** and should **end at the non-inflamed part** proximal/oral to the affected bowel segment

Technical and image quality requirements for trials (Central Reading)

- Every cineloop (and image) should have an **annotation** stating the segment being evaluated (preferred option) and/or alternatively a body marker illustrating the probe position.
- **Optimization for each bowel segment** by adjusting depth, gain and focus as often as needed is key
- The **velocity range of the color Doppler** should be set in a consistent and low flow range (from -/+5-7 cm/s)
- Ensure that the **Doppler box encompasses the complete wall + ≥ 1 cm** of the surrounding mesentery
- Record the **Doppler cineloop in the plane (cross-sectional or longitudinal) where it is most severe**, if no difference ideally use the cross-sectional plane as the mesenteric fat and thus vessels extending into the surroundings are best represented here

The IUS report

a practical framework for structured reporting



PRE SCAN

Part A: The pre-scan check



DURING SCAN

Part B: Measuring disease activity



POST SCAN

Part C: Qualitative aspects

Part D: Clinical interpretation

Part E: Image capture & storage



international bowel
ULTRASOUND GROUP

Q&A