



international bowel
ULTRASOUND GROUP

IBUS HYBRID module 1

7-8TH
NOVEMBER, 2025
MILAN, ITALY

How to document an IUS examination, IUS scoring

Dr. Frauke Petersen
Lüneburg, Germany



Professional Standards in Medical Ultrasound – EFSUMB Position Paper (Long Version)

General Aspects

- Wüstner M et al. Professional Standards in... Ultraschall in Med 2022; 43: e36–e48 | © 2022





ECCO Topical Review

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

Torsten Kucharzik^{a,*}, Jeroen Tielbeek^{b,*}, Dan Carter^c, Stuart A. Taylor^d,
Damian Tolan^e, Rune Wilkens^{f,☉}, Robert V. Bryant^g, Christine Hoeffel^h,
Isabelle De Kockⁱ, Christian Maaser^j, Giovanni Maconi^k, Kerri Novak^l,
Søren R. Rafaelsen^m, Martina Scharitzerⁿ, Antonino Spinelli^{o,†},
Jordi Rimola^{p,†,☉}





Key Quality Indicators for a good report



- **Pre-procedural and technical circumstances described:**
 - Indication, complaints
 - Medical history, former treatment
 - Known phenotype, missing segments due to surgery
 - (fasting period)
 - Known results of former imaging
- Machine system and transducers used for the exam
- Modalities and special techniques in use
- (MI, TI and presets): are usually documented on the image as well
- If necessary: contrast , oral or iv





Key indicators for a good report



- Name of the examiner
- Precise time of the examination
- Which organs had been scanned
- General remarks about the conditions and limitations

Limitations of the examination quality and confidence level should be indicated

- 3 Parts of the report:
 - Precise description (without judgement!)
 - Conclusion, summary (with activity score, signs of complication?)
 - Advice for the next step
- Storage, ways to retrieve the images





The exam



- US examinations should follow a predefined standardized scheme ,standard algorithm
 - Every bowel segment should be depicted, documented at least in still images,
 - Both long and cross-sectional aspects
 - video loops preferred with all pathology
 - Consider panoramic-view, if difficult to retrieve, or surgery planning
 - Colour-doppler evaluation for activity
 - Landmarks, body marker or text marking each segment
- “Topographic pictograms are better and more rapidly understood than written transducer position labels, with the advantage of being independent of any language differences, mis-labelling avoided”



IUS: Assessment and reporting of inflammation

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



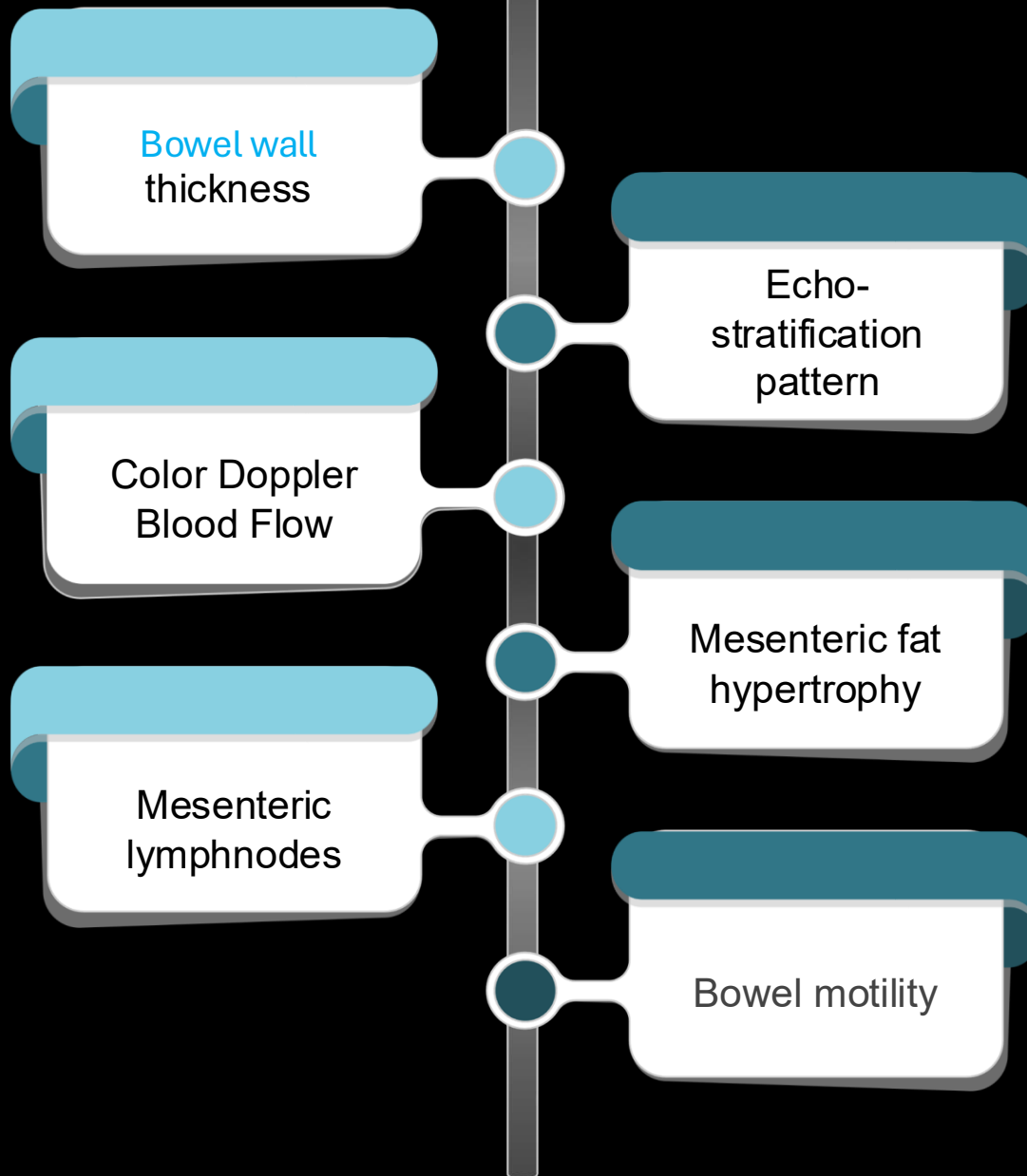
Relevant findings for inflammation/complications that should be described

Table 2. Relevant findings for assessing inflammation and complications

Findings to be assessed on a segment basis	Extension/ localization of the disease	Overall interpretation
Abnormal bowel: <ul style="list-style-type: none"> - Thickness* - Ulceration(s) - Oedema[†] - Vascularization - Perienteric inflammatory changes Adjunctive techniques: <ul style="list-style-type: none"> - Motility - Restricted diffusion Complications <ul style="list-style-type: none"> - Stricture[§] - Fistula and/or sinus[¶] - Mesenteric mass/abscess** - Vascular complications^{†∞††} 	Terminal or neo-terminal ileum [‡] Distal ileum [‡] Proximal small bowel [‡] Individual colonic segments	Initial diagnosis <ul style="list-style-type: none"> - No evidence of active disease - Evidence of active disease ± complications Follow-up examination Treatment response <ul style="list-style-type: none"> - Transmural remission - Significant transmural response - Stable disease - Progression of disease Status of complications



Key Sonographic parameters of active IBD



Bowel Wall
Thickness

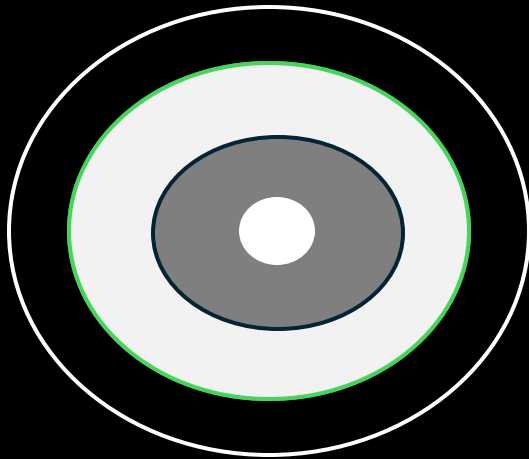
Key parameter in bowel pathology

Serosal echo

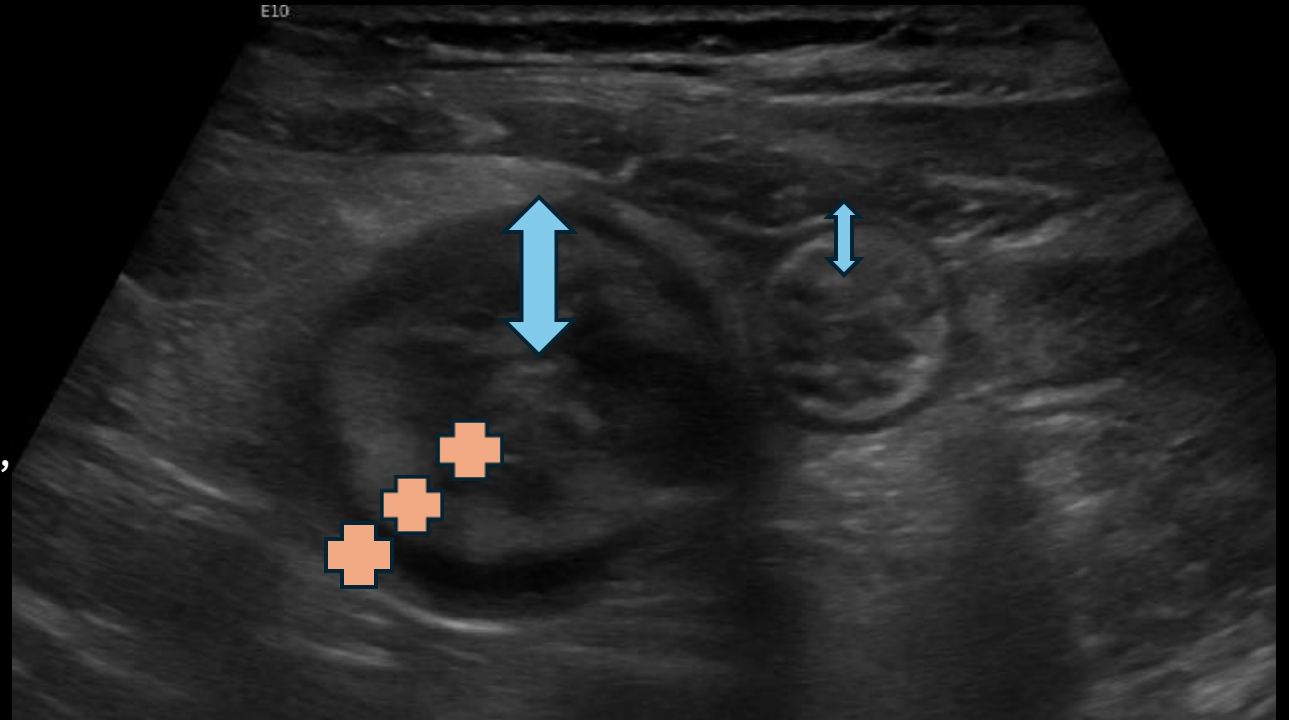
Muscularis propria

Submucosa

Mucosa



Luminal interface,
gas reflexes



Bowel wall thickness



Current practice position 4

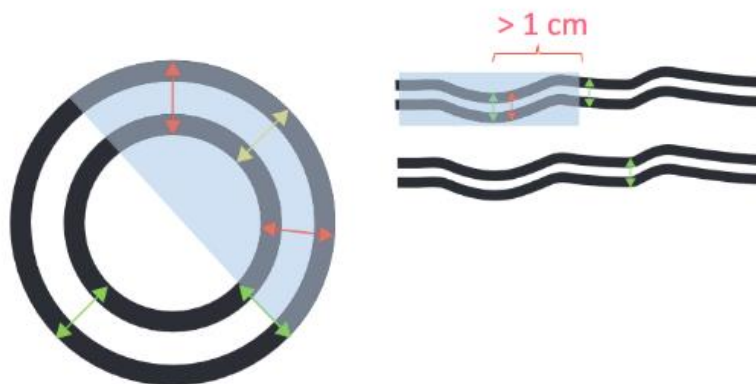
Thickness of the most involved small bowel and/or colonic segment, defined as bowel wall thickness (BWT), should be measured and reported. A threshold of 3 mm is the recommended cut-off for presence of mural inflammation for both small and large bowel



Measuring in theory

Expert Consensus on Optimal Acquisition and Development of the International Bowel Ultrasound Segmental Activity Score [IBUS-SAS]: A Reliability and Inter-rater Variability Study on Intestinal Ultrasonography in Crohn's Disease

Kerri L Novak,^a Kim Nylund,^{b,c} Christian Maaser,^d Frauke Petersen,^e Torsten Kucharzik,^e Cathy Lu,^a Mariangela Allocca,^{f,g} Giovanni Maconi,^h Floris de Voogd,^{i,o} Britt Christensen,^{j,o} Rose Vaughan,^j Carolina Palmela,^k Dan Carter,^l Rune Wilkens^{m,n,o}, IBUS Group



Yellow arrow represents first measurement. Green arrows are allowed second measurement, red arrows are false second measurements

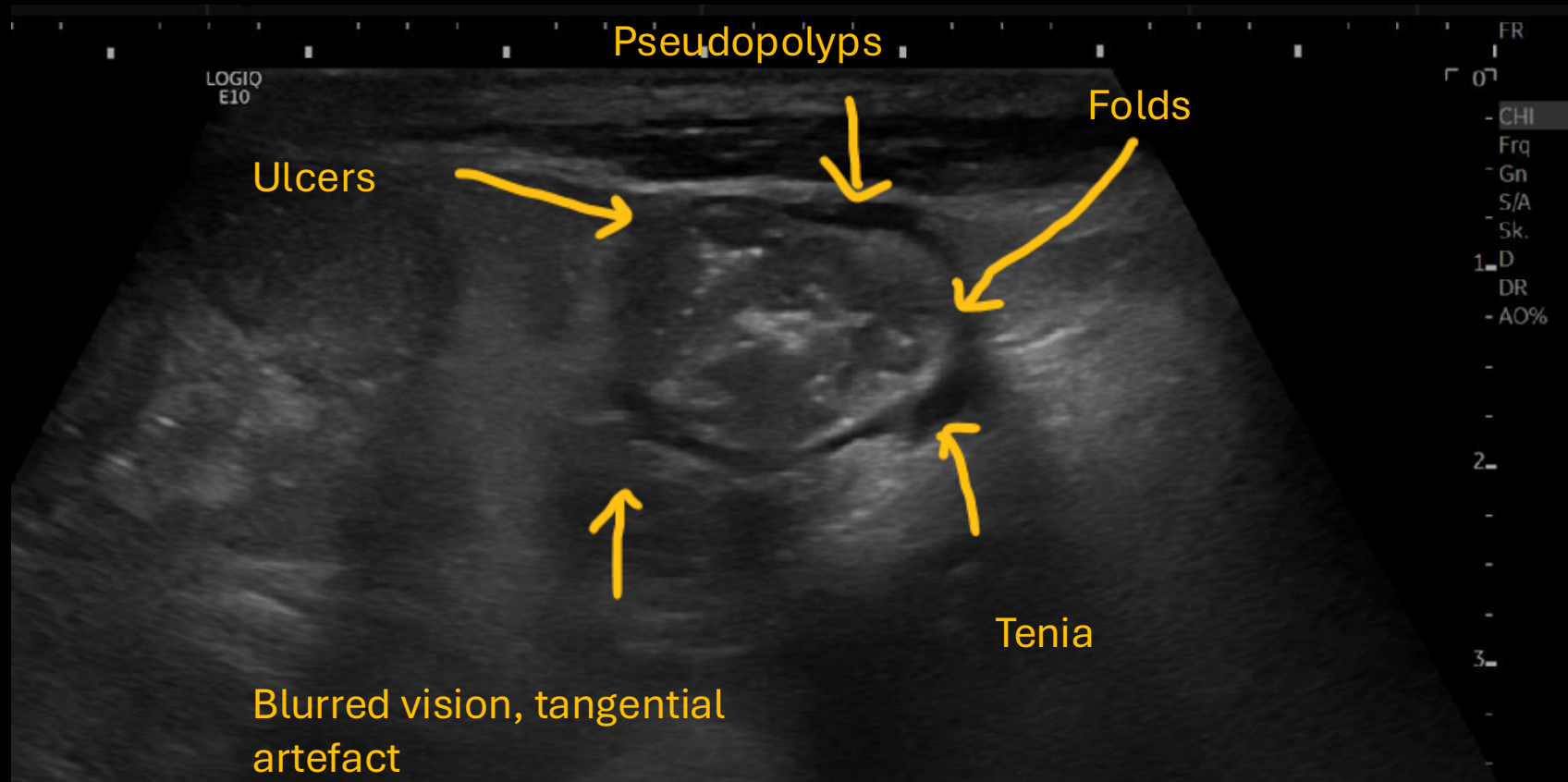
Interobserver variability
 $k = 0.72-1$

Fraquelli M et al. Dig Liver Dis 2008

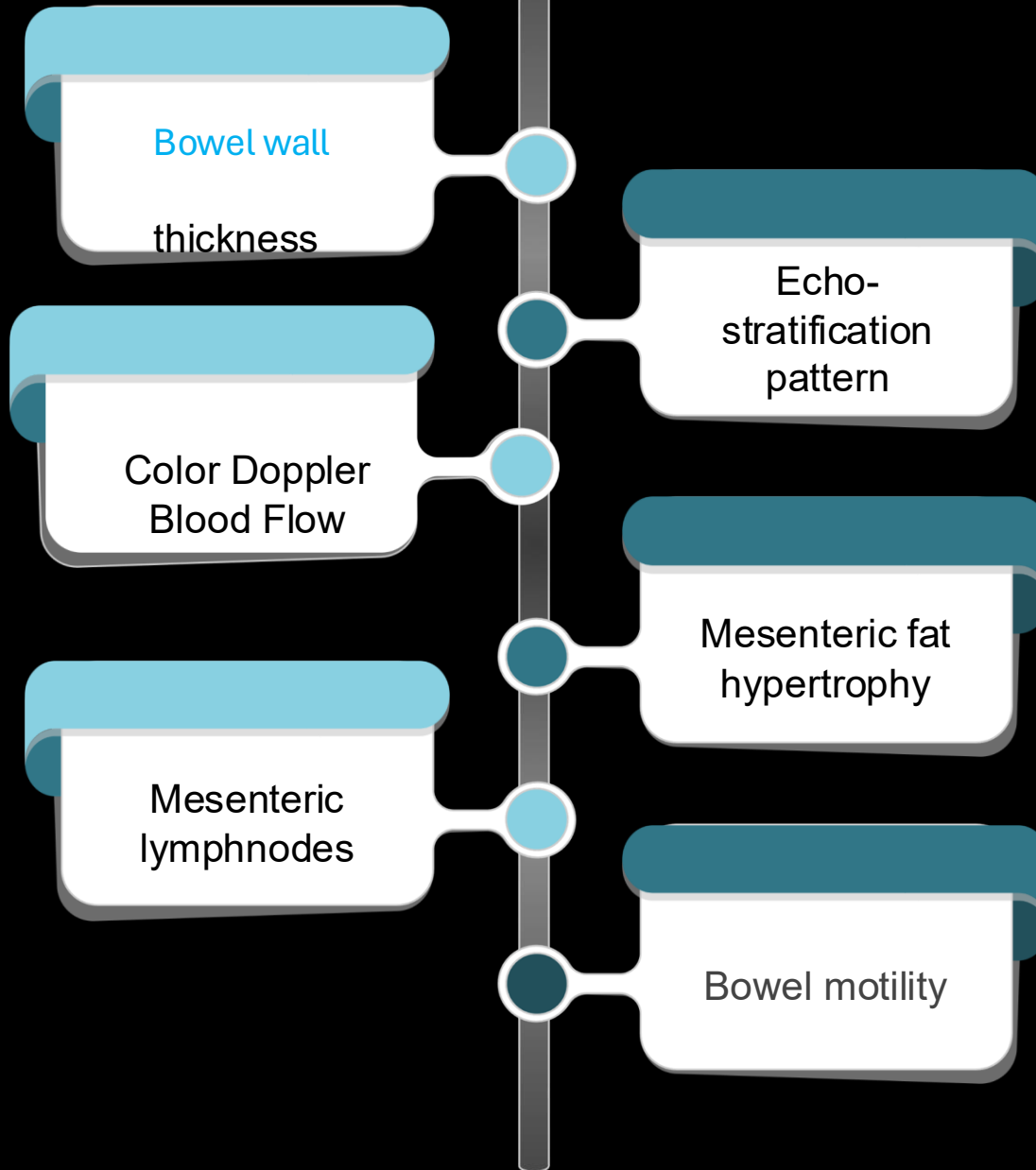
$k = 0.96$

Novak K et al. JCC 2021

Measuring problems



Key Sonographic parameters of active IBD

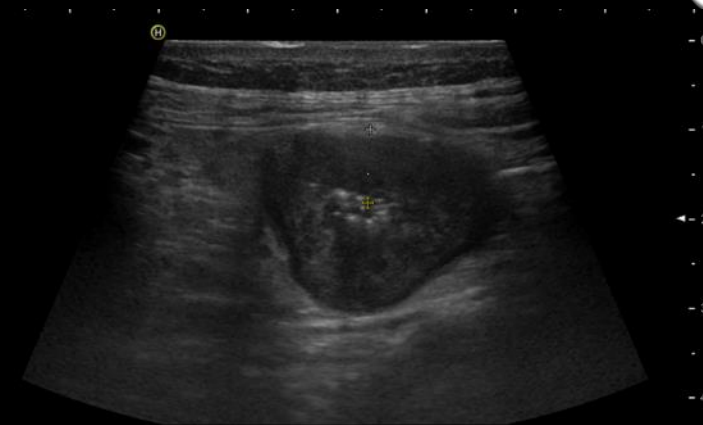
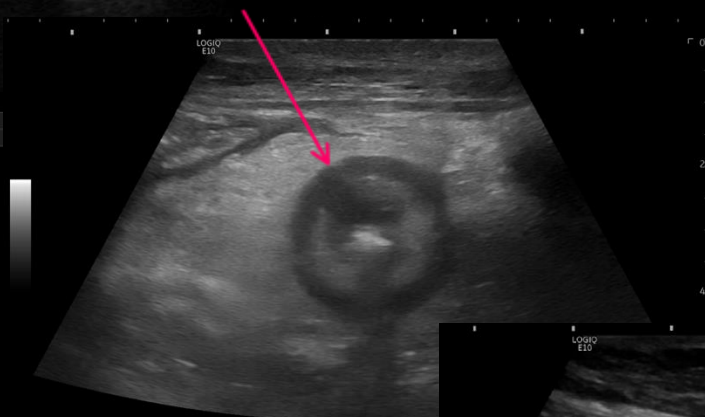


ECHOSTRATIFIC
PATTERN

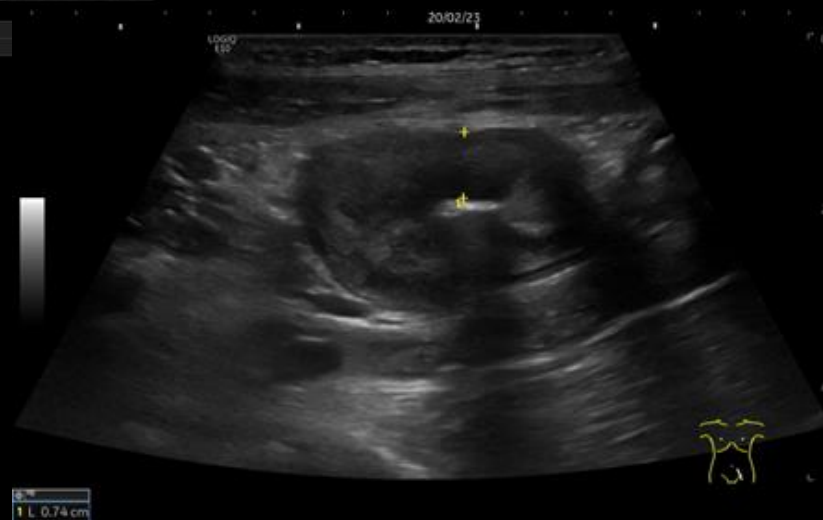
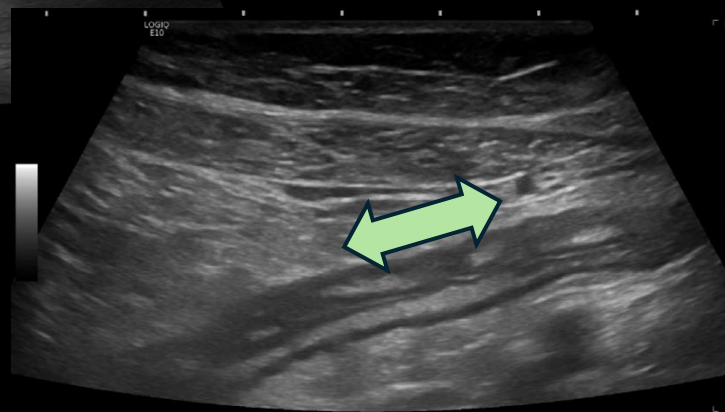
HITACHI Darm P:100% MI 1.2 TIS<0.4



Calip
+ D1 5.1 mm
FR:25 BG:18 DR:80
L73S HdTHI-P



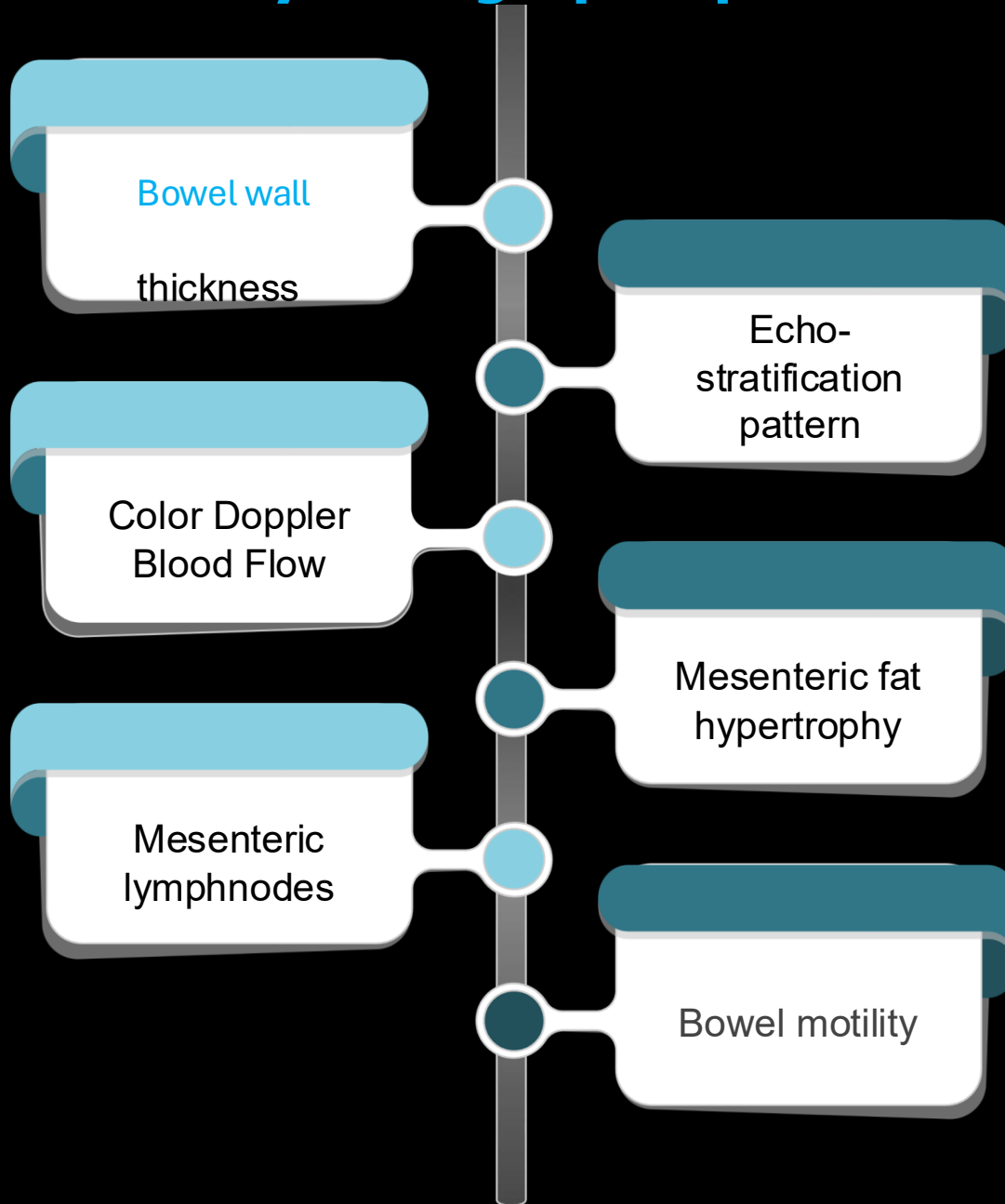
8.2 mm
BG:18 DR:80
L73S



Categories

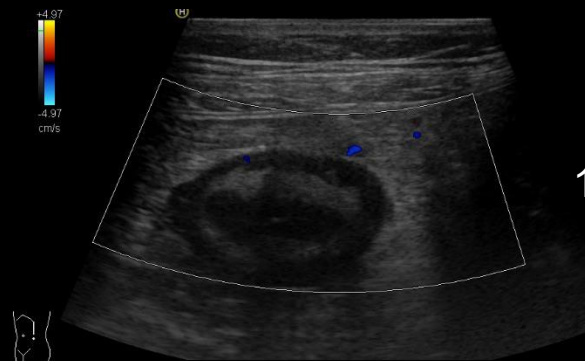
- 0: Normal/preserved echostatification
- 1: Uncertain
- 2: Focal disruption (< 3 cm)
- 3: Extensive disruption (> 3 cm)

Key Sonographic parameters of active IBD



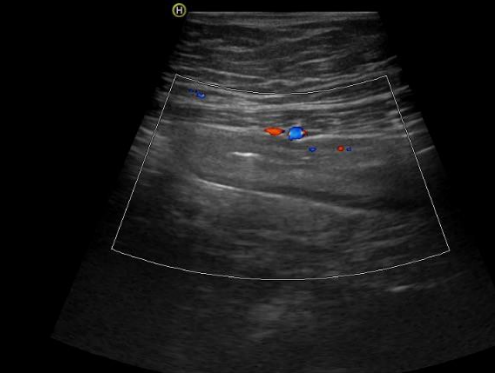
Vascularisation:
colour duplex

Modified Limberg score



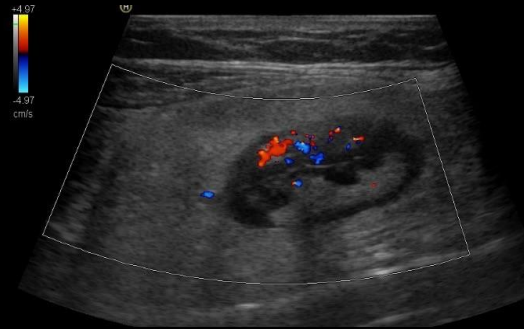
0 – No signal

+4.97
-4.97
cm/s

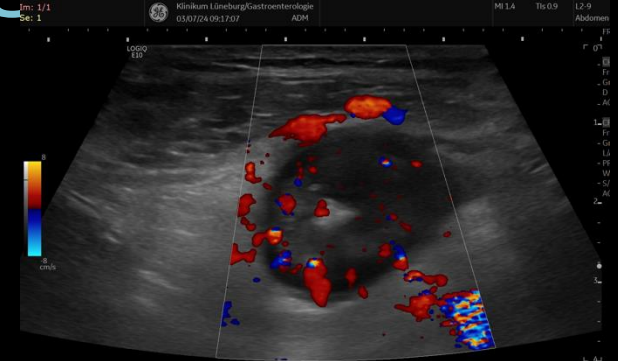


1 – minimal pixels,
scant

+4.97
-4.97
cm/s



2 – increased colour signal
limited to the wall



3 – signal is significant in the wall
as well as the mesentery

set velocity range: 5-7 cm/s



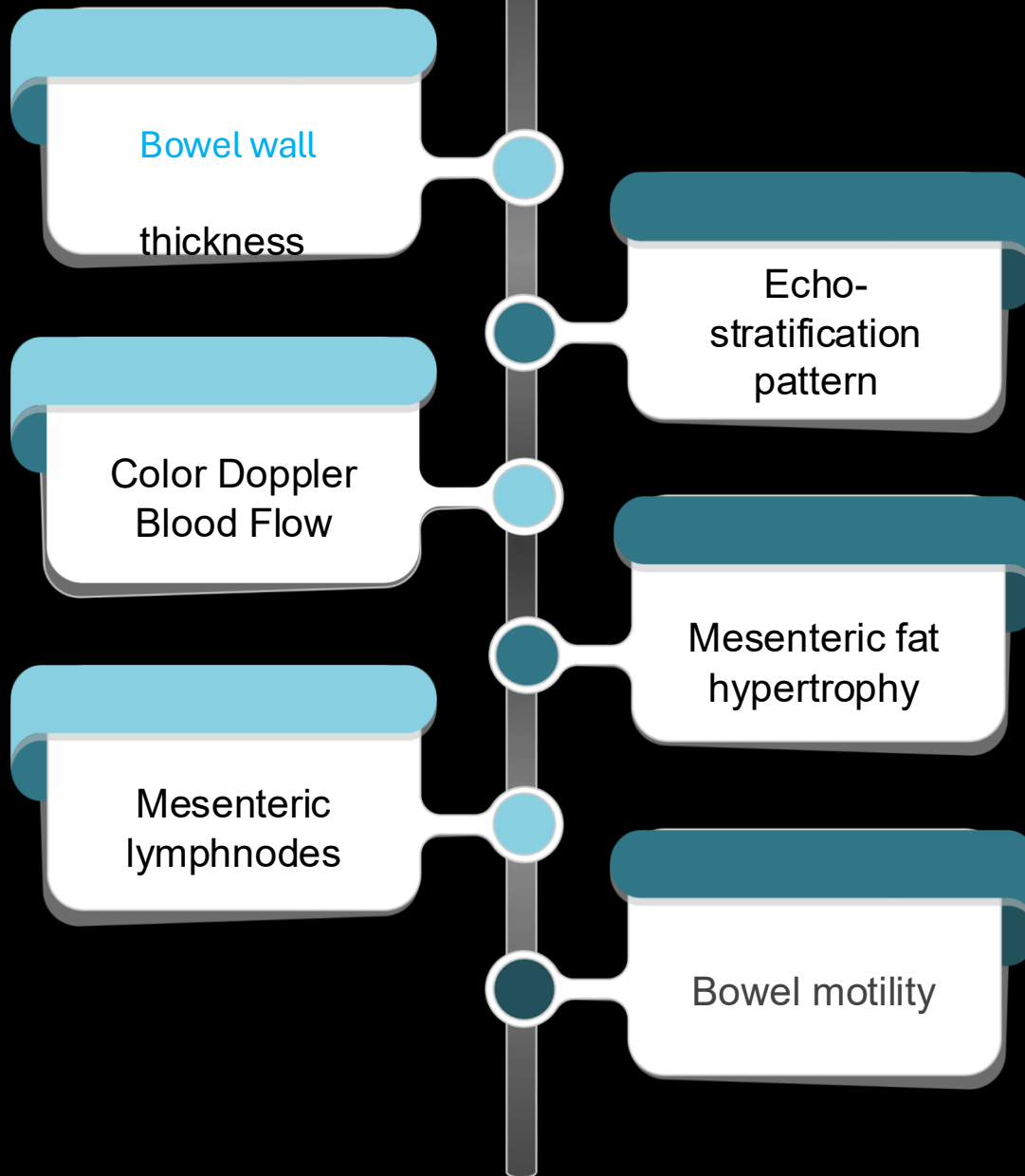
Vascularization - Doppler signal

Current practice position 6

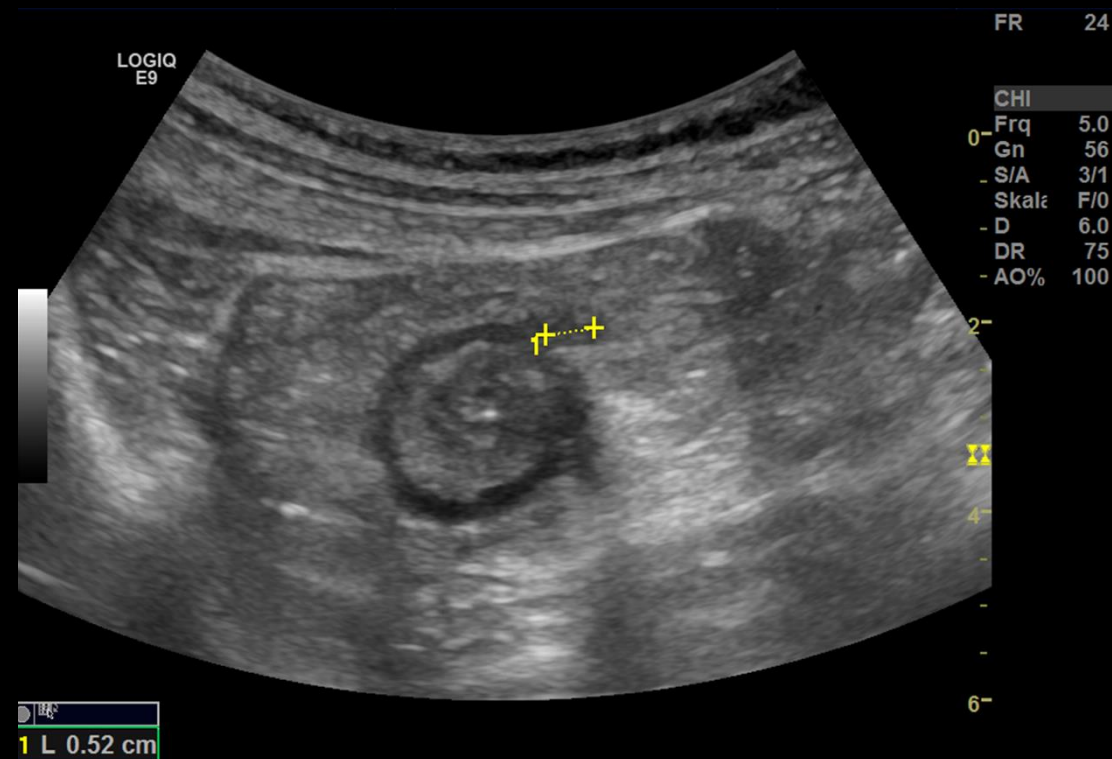
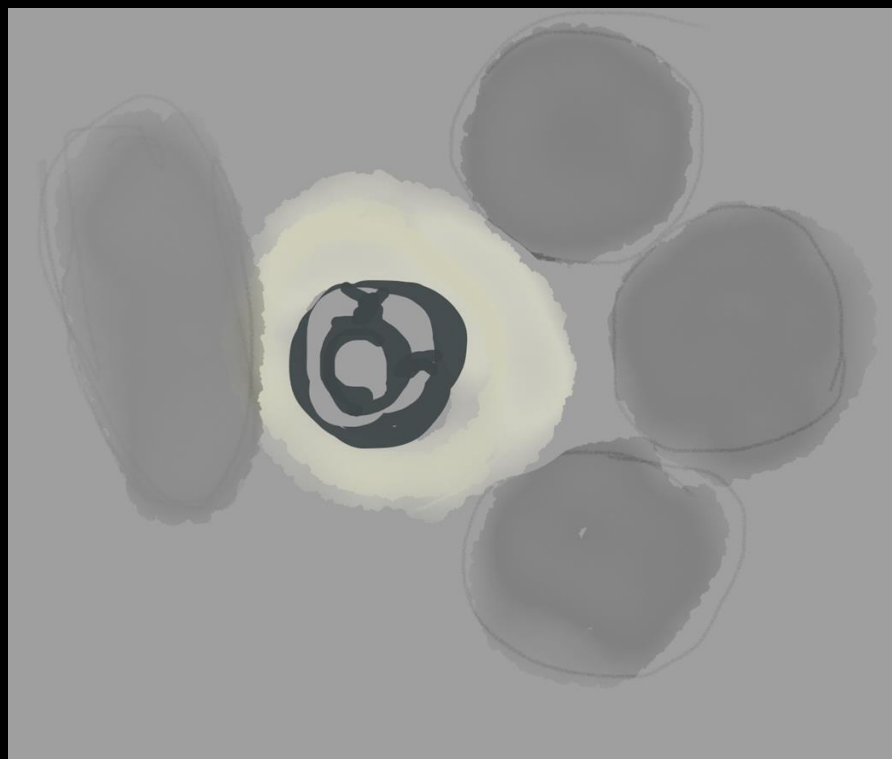
Intestinal vascularization should be assessed by a semi-quantitative grading of intra- and extramural blood flow in abnormal bowel segments (colour Doppler on IUS). For MRE/CT, a qualitative impression of increased contrast hyperenhancement should be reported



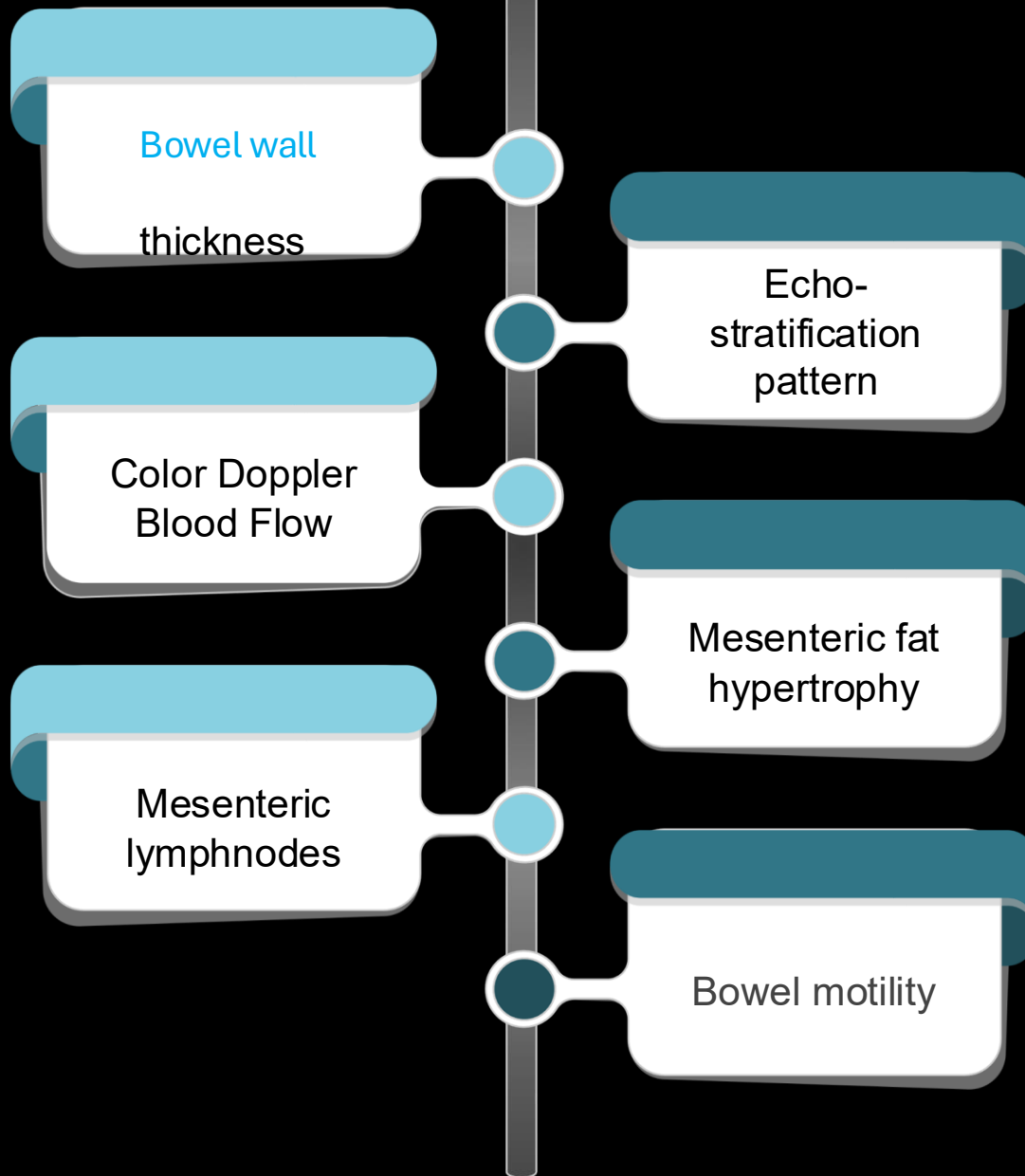
Key Sonographic parameters of active IBD



Mesenteric fat
hypertrophy



Key Sonographic parameters of active IBD



Mesenteric
lymphnodes

ession (EG)

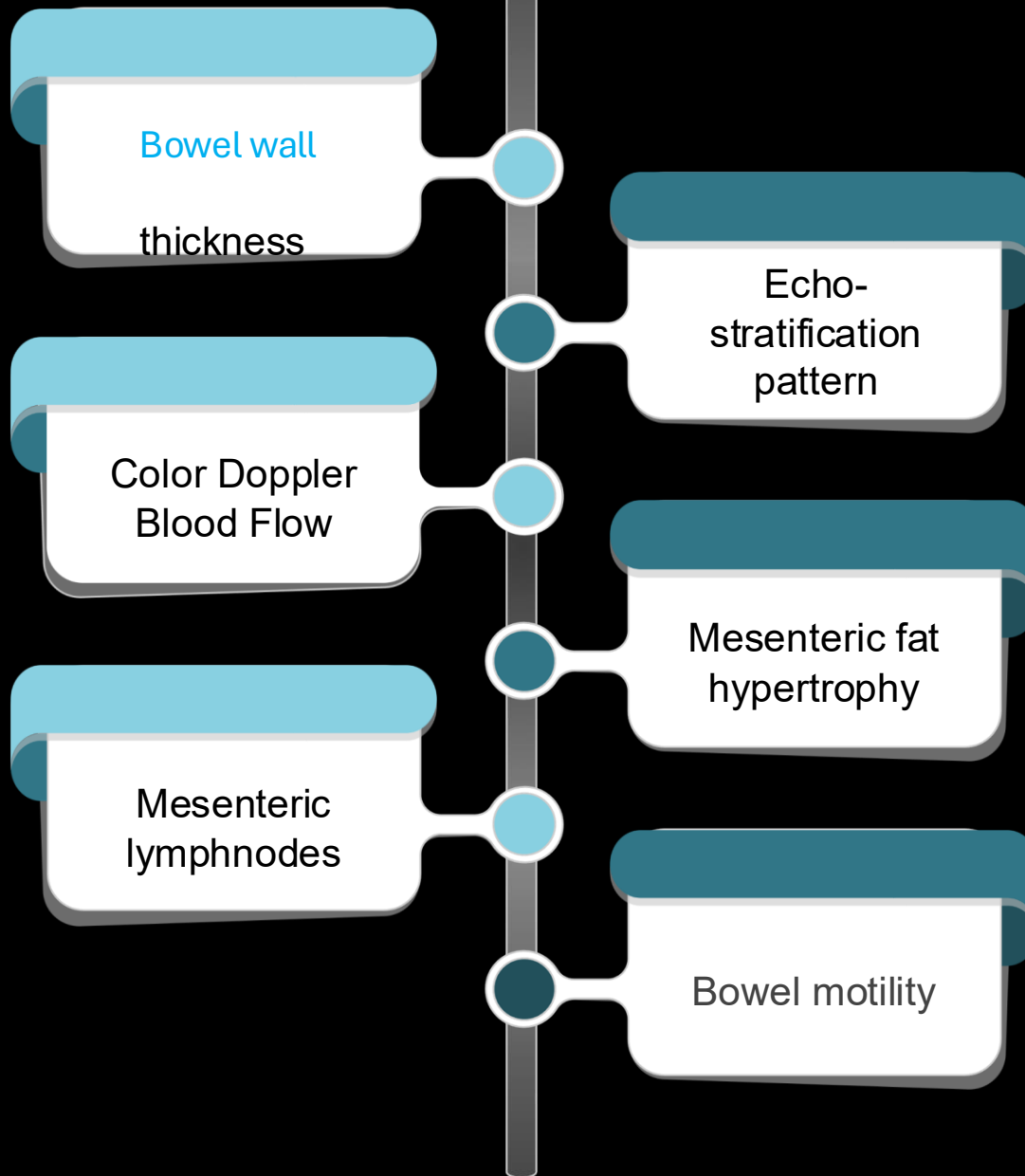
LOGIQ
E10

IBUS
HYBRID
module 1

TH
2025

WL: 128 WW: 256 [D]

Key Sonographic parameters of active IBD



Bowel motility

HITACHI

Abdomen.

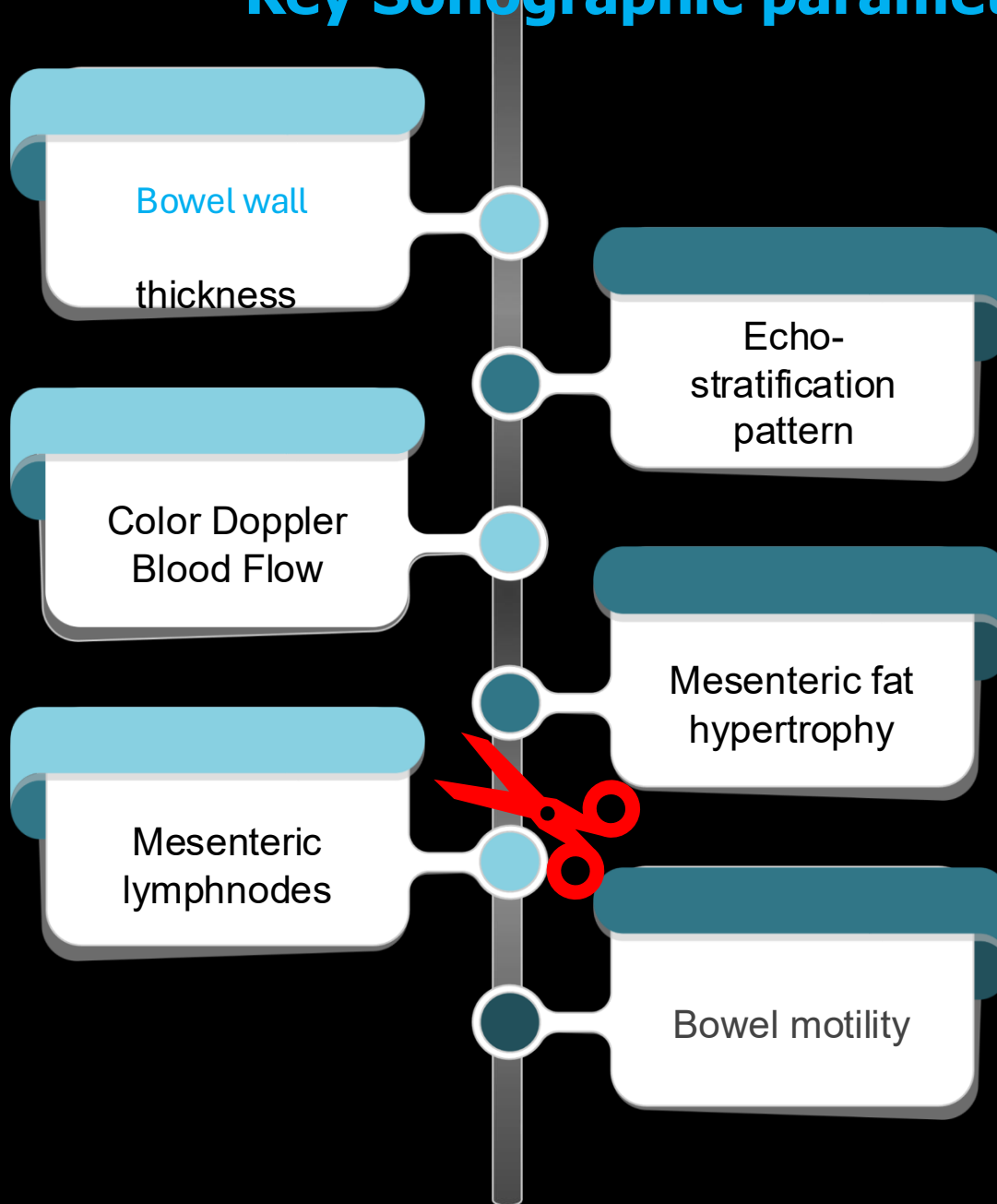
P:100%

MI 1.4

TIS<0.4

FR:25
C715BG:26 DR:75
HdTHI-R

Key Sonographic parameters of active IBD





IUS Core Activity Parameters



Table 2. Core activity parameters, Delphi grading consensus

	Normal	Uncertain	Activity	
BWT	≤3 mm	NA	>3 mm	
i-fat	0 = Absent	1 = Uncertain	2 = Present	
CDS	0 = Absent [none]	1 = Short signals	2 = Long signals inside bowel	3 = Long signals inside & outside bowel
BWS	0 = Normal	1 = Uncertain	2 = Focal [≤ 3 cm]	3 = Extensive [>3 cm]

BWT, bowel wall thickness; i-fat, inflammatory fat; CDS, colour Doppler signal; BWS, bowel wall stratification; NA, not applicable.

Novak K et al. JCC 2021



SYSTEMATIC REVIEW
& META-ANALYSIS

Diagnostic accuracy of
intestinal ultrasound and its
advanced modalities in the
detection of intra-abdominal
complications in Crohn's
disease



1498 studies screened



68 studies included in this review
23 studies in the meta-analysis



3863 patients



Sensitivity
Specificity
Accuracy

B-mode

81%
90%
86%

SICUS

94%
95%
94%



Sensitivity
Specificity
Accuracy

B-mode

87%
95%
91%

SICUS

91%
97%
94%



Sensitivity
Specificity
Accuracy

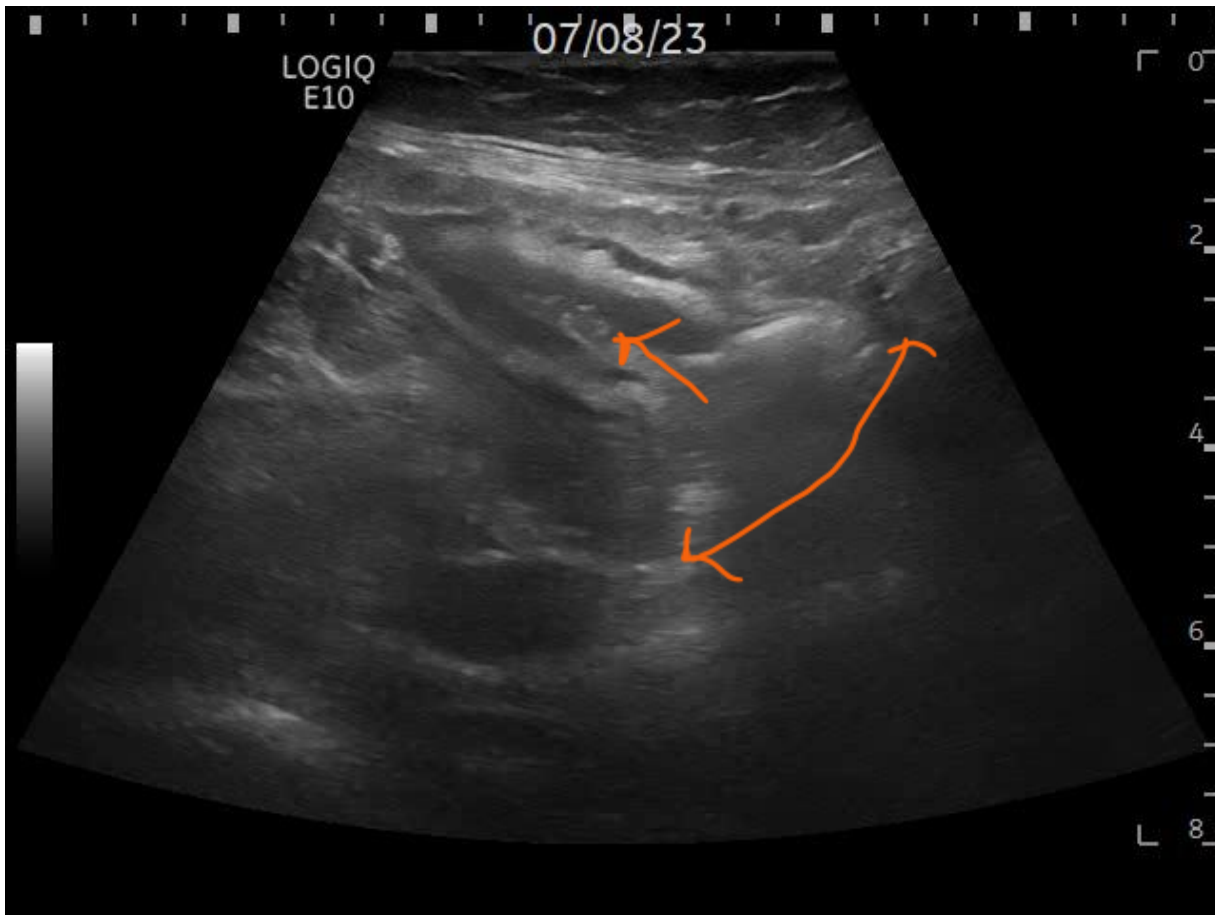
B-mode

67%
97%
82%

SICUS

90%
94%
92%

Complications - stenosis



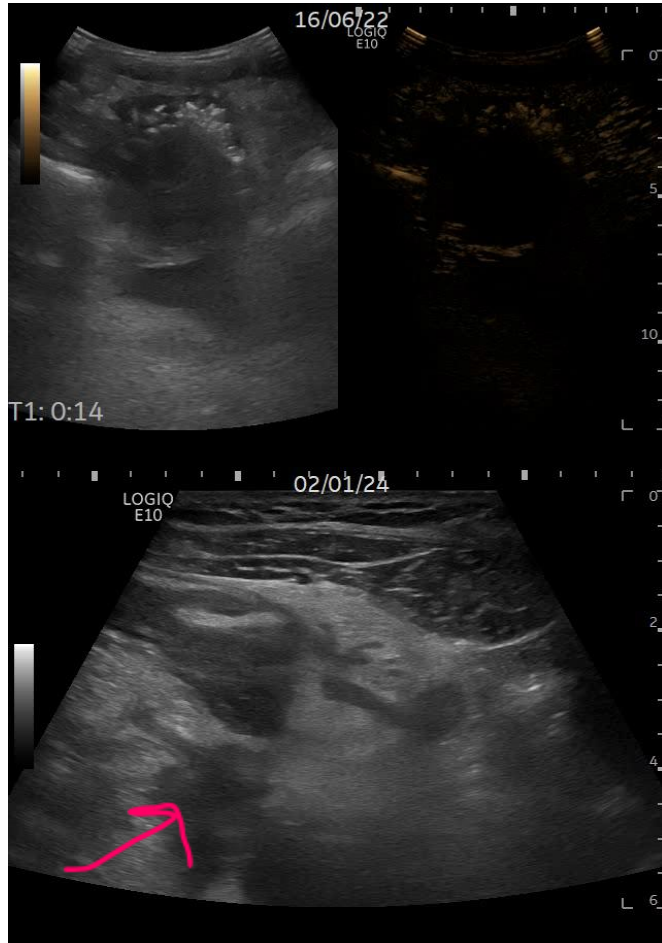
Stenosis - IUS criteria

- Increased bowel wall thickness
- Stiff bowel wall, loss of motility
- Narrowing of the lumen
- Prestenotic dilatation (> 2.5 cm)
- Small bowel:
Hyperperistalsis and gas collection in the upstream part



Describe your findings!

Complications – abscess/fistula



IUS criteria - abscess

- Hypo- or anechoic lesion with fluid and gaseous artefacts
- Posterior echo enhancement
- Irregular margins
- Frequently surrounded by mesenteric fat
- **CEUS:** absence of vascularization in the mass

IUS criteria - fistula

- Hypo- or anechoic extension from bowel wall sometimes with gaseous artefacts
- Irregular margins
- Frequently surrounded by mesenteric fat





**IBUS
HYBRID**
module 1



Relevant findings for inflammation/complications that should be described: Part2 Mapping

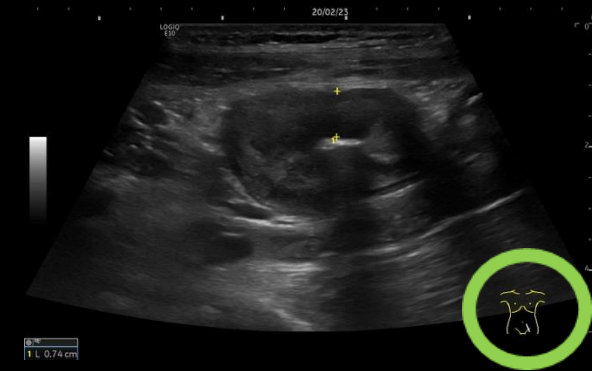
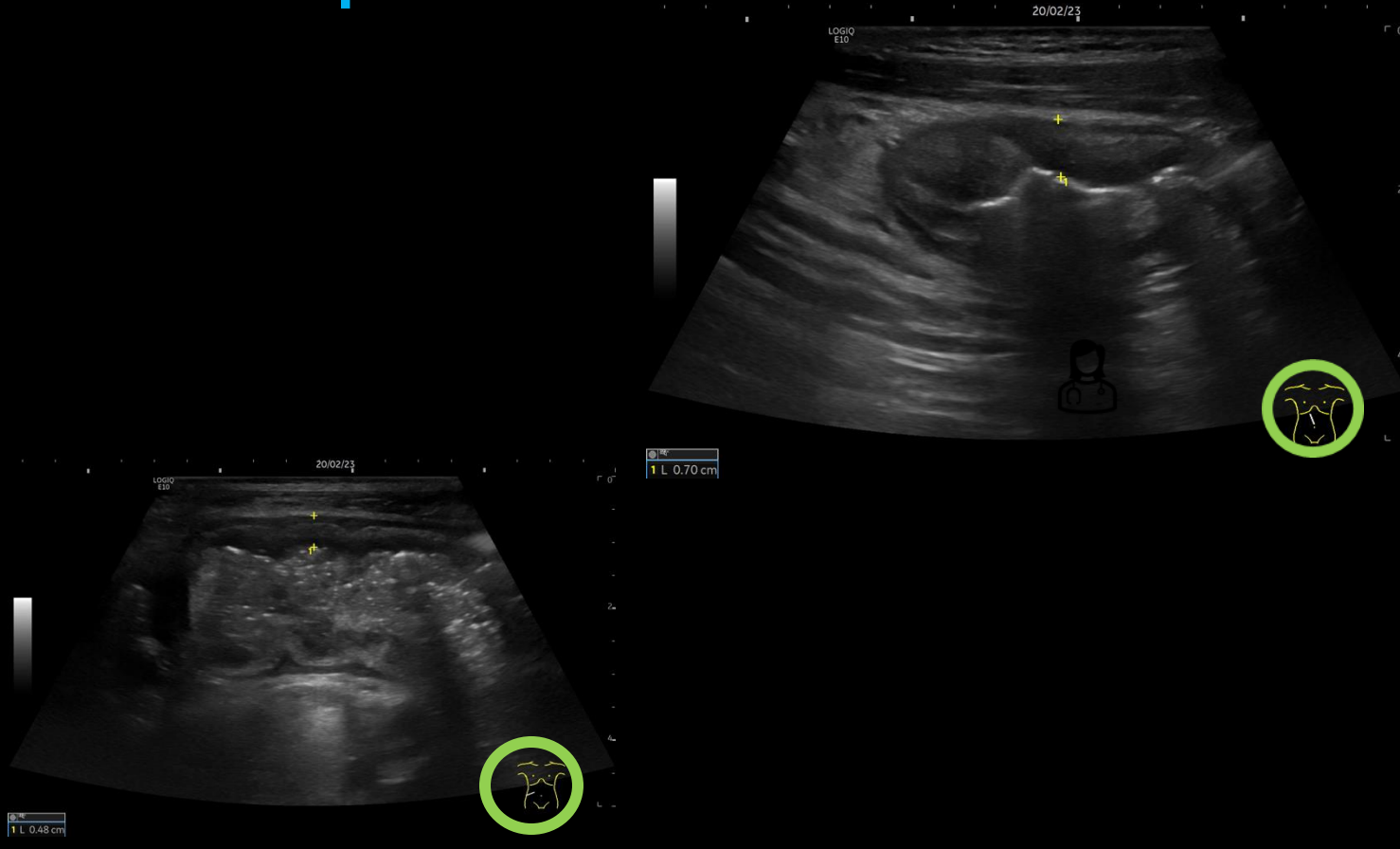
Table 2. Relevant findings for assessing inflammation and complications

Findings to be assessed on a segment basis	Extension/ localization of the disease	Overall interpretation
<p>Abnormal bowel:</p> <ul style="list-style-type: none"> - Thickness[*] - Ulceration(s) - Oedema[†] - Vascularization - Perienteric inflammatory changes <p>Adjunctive techniques:</p> <ul style="list-style-type: none"> - Motility - Restricted diffusion <p>Complications</p> <ul style="list-style-type: none"> - Stricture[§] - Fistula and/or sinus[¶] - Mesenteric mass/abscess^{**} - Vascular complications^{†∞††} 	<p>Terminal or neo-terminal ileum[‡]</p> <p>Distal ileum[‡]</p> <p>Proximal small bowel[‡]</p> <p>Individual colonic segments</p>	<p>Initial diagnosis</p> <ul style="list-style-type: none"> - No evidence of active disease - Evidence of active disease ± complications <p>Follow-up examination</p> <p>Treatment response</p> <ul style="list-style-type: none"> - Transmural remission - Significant transmural response - Stable disease - Progression of disease <p>Status of complications</p>



Extent mapping

Example Ulcerative Colitis



Videoloop with landmarks : Crohns' colitis left flank position

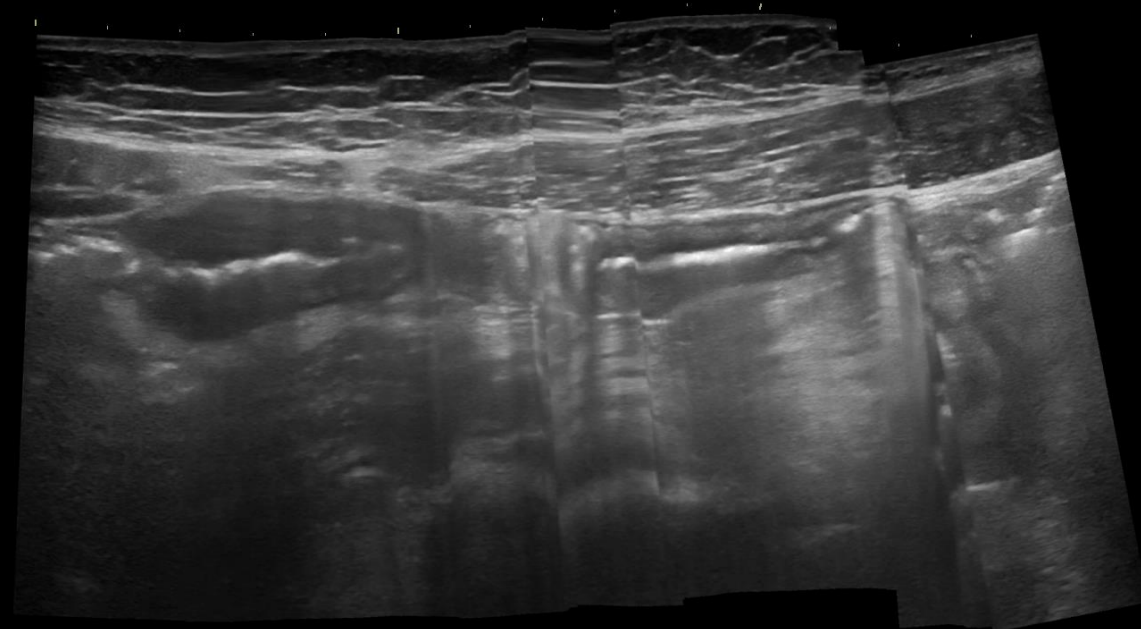
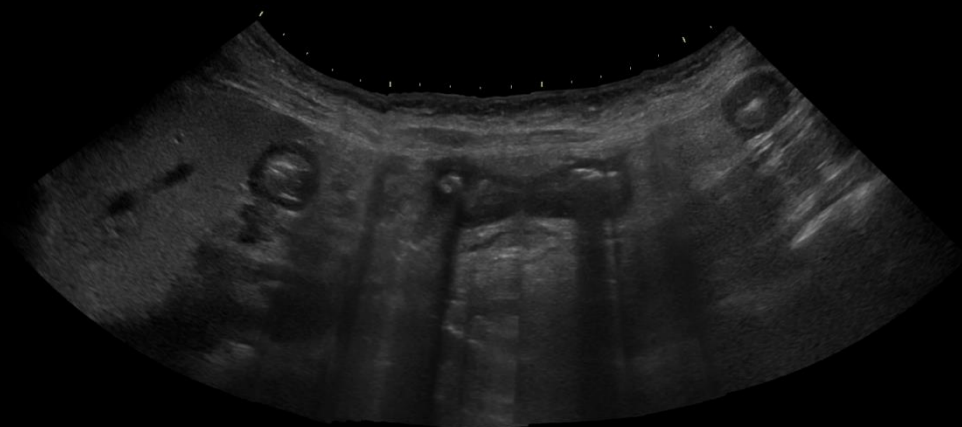


Video loop in case of multisegmental involvement of the jejunum: difficult assignment

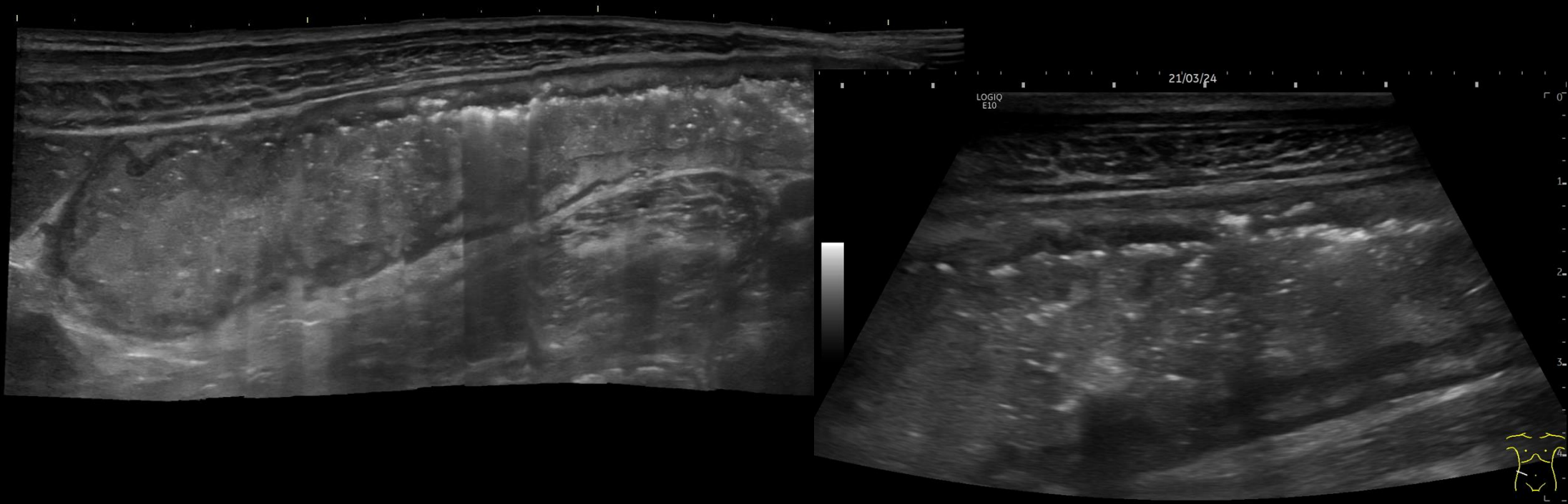




Panoramic image of multisegmental jejunal involvement

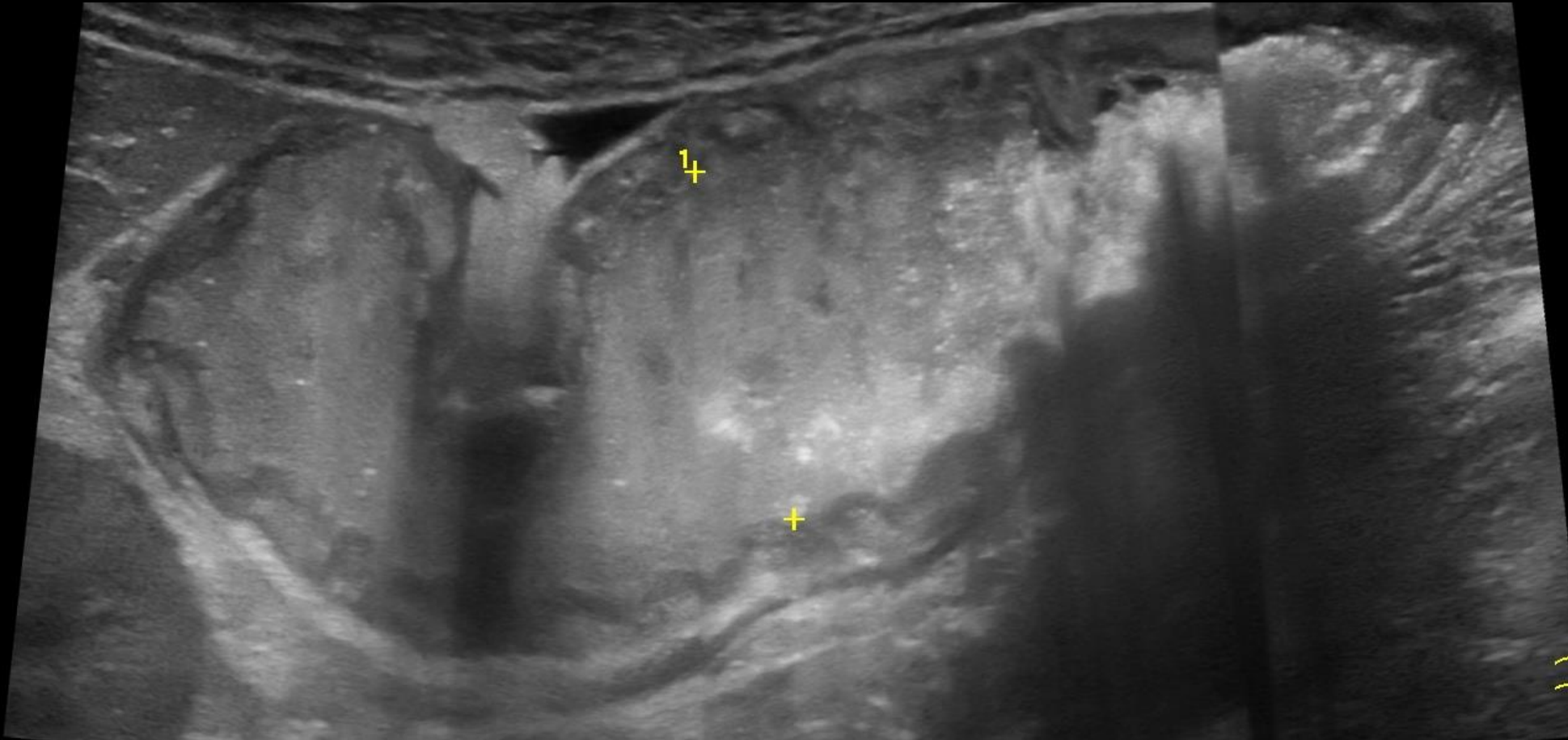


Panoramic aspect of the c ascendens, very deep ulcers, risk of colectomy high





The same patient, 2 days later



Surgeon convinced
without further
imaging





Relevant findings for inflammation/complications that should be described

Table 2. Relevant findings for assessing inflammation and complications

Findings to be assessed on a segment basis	Extension/ localization of the disease	Overall interpretation
Abnormal bowel: <ul style="list-style-type: none">- Thickness*- Ulceration(s)- Oedema[†]- Vascularization- Perienteric inflammatory changes Adjunctive techniques: <ul style="list-style-type: none">- Motility- Restricted diffusion Complications <ul style="list-style-type: none">- Stricture[§]- Fistula and/or sinus[¶]- Mesenteric mass/abscess**- Vascular complications^{†∞††}	Terminal or neo-terminal ileum [‡] Distal ileum [‡] Proximal small bowel [‡] Individual colonic segments	Initial diagnosis <ul style="list-style-type: none">- No evidence of active disease- Evidence of active disease ± complications Follow-up examination Treatment response <ul style="list-style-type: none">- Transmural remission- Significant transmural response- Stable disease- Progression of disease Status of complications

Monitoring disease activity

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.

Categories

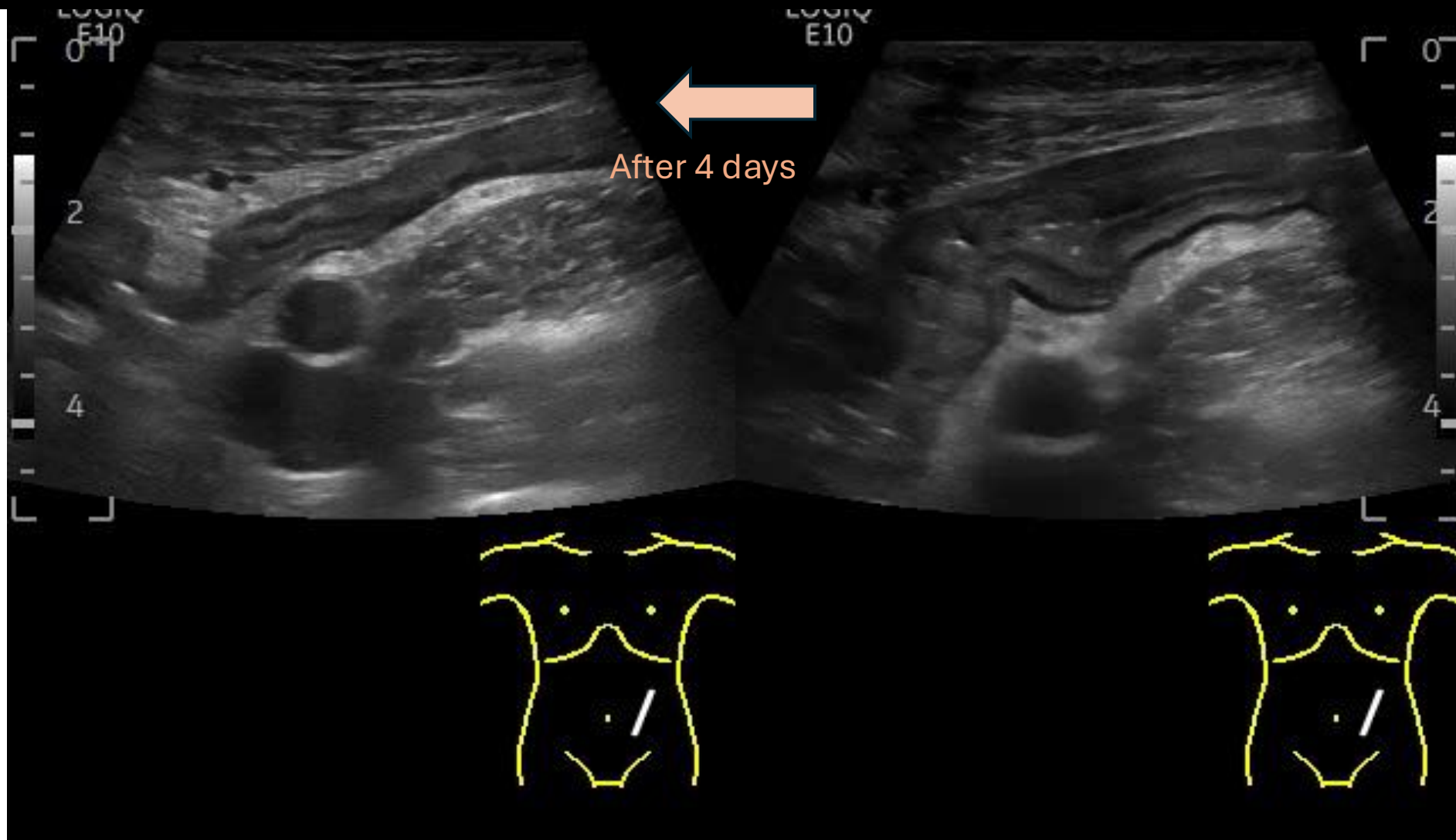
- Transmural remission ($BWT \leq 3 \text{ mm} + CDS 0$)
- Significant transmural response
- Stable disease
- Progression of inflammation



example : Treatment Monitoring in ASUC



IBUS
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module 1





The written report



- Select and save **representative images** and **cine loops** that accurately depict IUS findings
- **Annotate** (label or body marker) the identified structures appropriately to facilitate interpretation and documentation
- Describe the steps involved in **storing ultrasound images and cine loops**, including data security and retrieval considerations
- Recall the standard terminology and abbreviations used in documenting intestinal ultrasound findings and construct a **well-structured IUS report**



IUS report example



Bowel ultrasound report

Name: _____

Date of birth: ____/____/____ Patient number: _____

Crohn's disease ☐

Age at onset: _____; Extension: L1 ____ L2 ____ L3 ____ L4 ____

Behavior: B1 ____ B2 ____ B3 ____ p+ ____

Ulcerative colitis ☐

Extension: E1 ____ E2 ____ E3 ____

Current medication:

5-ASA ☐ AZA/6-MP ☐ MTX ☐ Infliximab ☐ Adalimumab ☐
Ustekinumab ☐ Steroids ☐ Other _____

Prior surgeries: _____

Prior imaging: _____

Current disease activity: _____

Date ____/____/____

Probes used: Convex ☐ Linear ☐

Exam quality: _____

	Small Bowel	Terminal ileum	Ascending colon	Transverse colon	Descending colon	Sigmoid colon
Bowel wall thickness (cross-section and longitudinal)	mm					
	mm					
Loss of stratification	Y/N					
Hyperemia (Limberg score)	0 – 4					
Length of involved segment	cm					
Mesenteric fat hypertrophy	Y/N					
Lymphadenopathies	Y/N					
Free fluid	Y/N					

Example from Dan Carter, Israel





Complications: Yes ☐ No ☐

☐ Stenosis: Location _____

☐ Fistulae: Location _____

☐ Abscess: Location _____

☐ Inflammatory mass: Location ____

Conclusion/Impressions: _____

Confidence on findings

Failure to find a structure should be reported

Recommendations: _____

Medication

Additional imaging, use of contrast

Provide contact information (optional)





IUS Core Activity Parameters



Scoring:

Different Scores use different parameters

and try to find a formula with responsiveness, cut-off-value and correlation:

Table 2. Core activity parameters, Delphi grading consensus

	Normal	Uncertain	Activity	
BWT	≤3 mm	NA	>3 mm	
i-fat	0 = Absent	1 = Uncertain	2 = Present	
CDS	0 = Absent [none]	1 = Short signals	2 = Long signals inside bowel	3 = Long signals inside & outside bowel
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BWT, bowel wall thickness; i-fat, inflammatory fat; CDS, colour Doppler signal; BWS, bowel wall stratification; NA, not applicable.

Novak K et al. JCC 2021



Scores in IUS (selection)

Crohn's disease	Parameters	Validation	Responsive	Strength	Weakness
IBUS-SAS	BWT, CDS, iFat, Strat	+	+, predictive corr. +	Sens , spec, Interrater ↑	Calculation!! semiquant. parameters
BUSS	BWT, CDS	+	+, corr+	Sens ↑ spec →	Less in severe
SUS-CD	BWT, CDS	+	+ corr histol	Sens ↑ spec →	Less in severe
UC	Parameters	Validation	Responsive		
IBUS-SAS	BWT,CDS,iFat, Strat	_*	+	Correl. MES, UCEIS	Calculation, Semiquant. parameters
MUC	BWT, CDflow	+	Pred of colectomy	Corr Colos	Not granular
UC-IUS	BWT,CDS, iFat, Strat	+ (not prospectiv.)	-		

IUS Scoring CD BUSS Score

prospective observational study of 49 patients with active CD

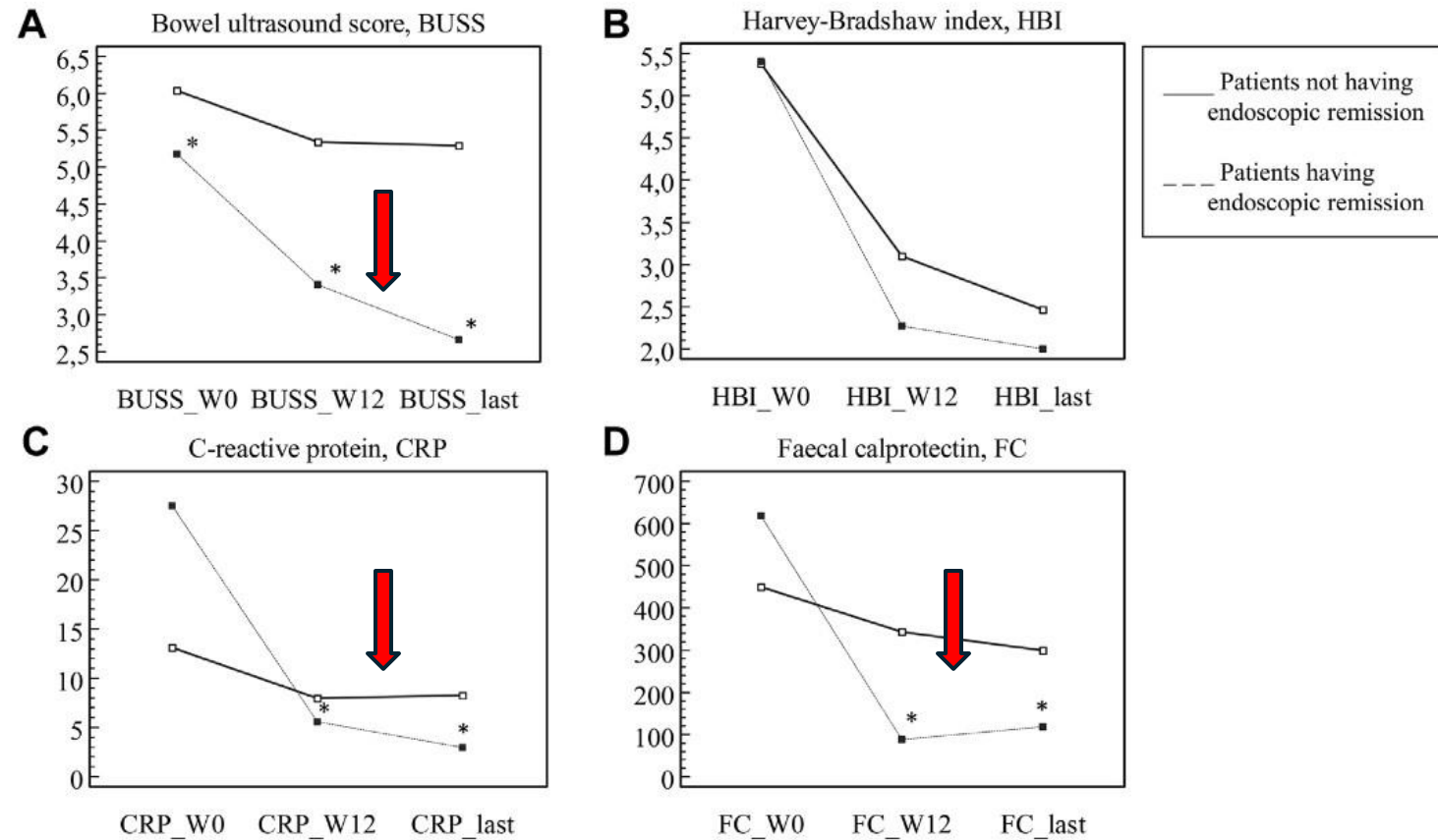
assess the sensitivity to change of BUSS in patients treated for active CD, using the SES-CD as reference

$$\text{BUSS} = 0,75 \times \text{BWT}(\text{mm}) + 1,65 \text{CDS}$$

BUSS >3.52 is an indicator of endoscopic activity (SES-CD >2)

- Sensitivity: about 83–90%
- Specificity: about 74–85%
- ROC-AUC: 0.86



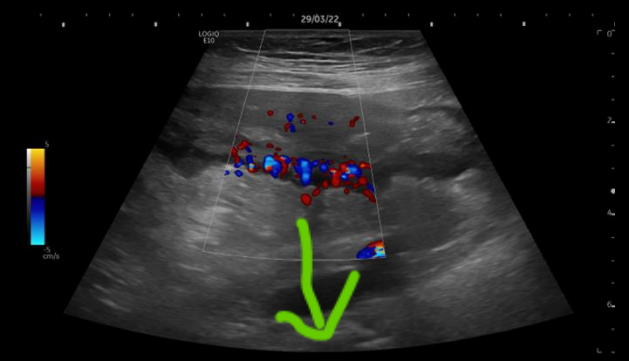
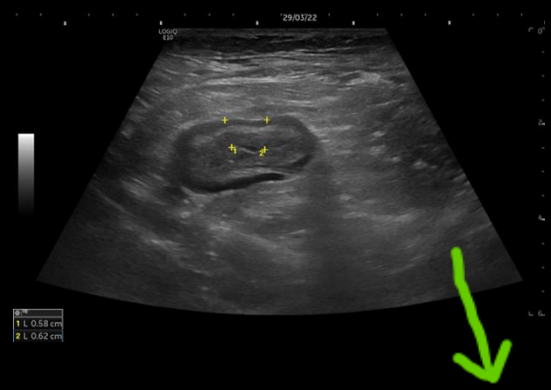


Change of clinical characteristics over time, according with the achievement of the endoscopic outcomes



IBUS-SAS-Score

ICC 0.97, p < 0.001)



$$\text{IBUS-SAS}(0-100) = 4 \cdot \text{BWT} + 15 \cdot \text{i-fat} + 7 \cdot \text{CDS} + 4 \cdot \text{BWS}$$



Novak ,K et al J Crohns Colitis. 2021 Apr; 15(4): 609–616.

Cut-offs and sensitivities 1

- Cut- off for normal 23,5
- OC analysis of IBUS-SAS for CBR revealed an area under the curve of 0.92 (95% CI 0.86–0.97),
- with a sensitivity of 83.3% and a specificity of 91.3% for a cut-off value of 42.9.

Dragoni et al *Journal of Crohn's and Colitis*, Volume 15, Issue Supplement_1, May 2021, Pages S226–S227, <https://doi.org/10.1093/ecco-jcc/jjab076.268>
IBUS-SAS for Crohn's disease ultrasound activity: initial validation and research of the optimal cut-off score



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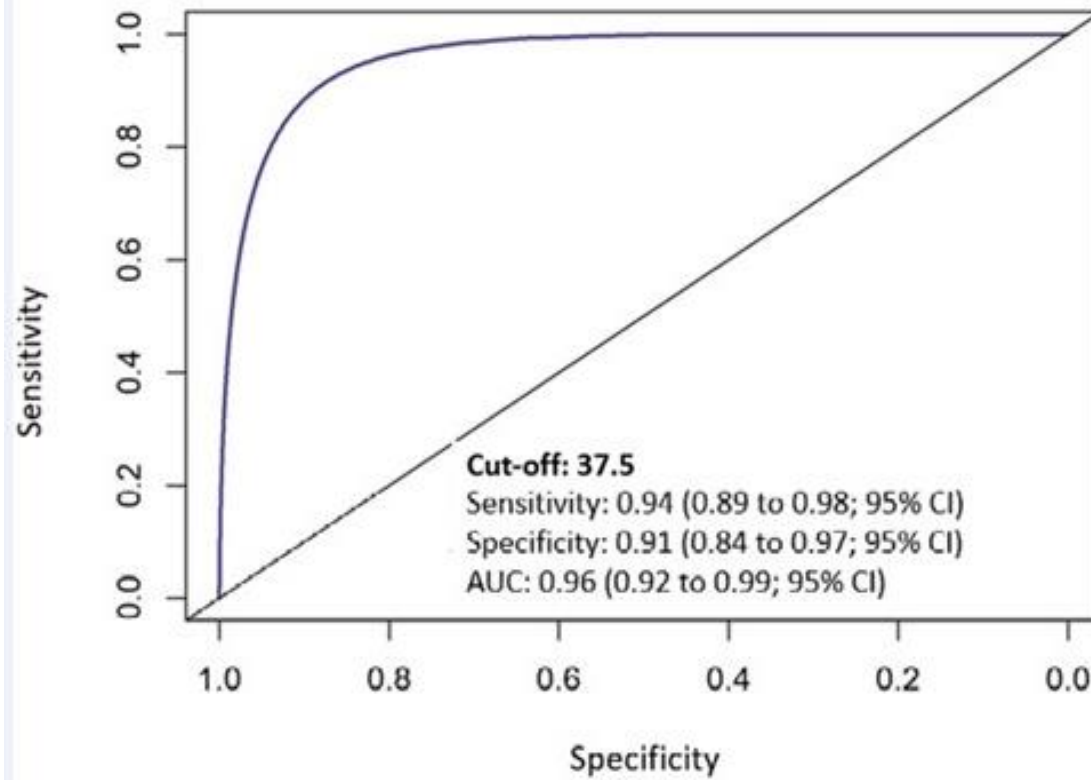


Validations and cut-offs in CD one example



IBUS
HYBRID
module 1

Cut-off IBUS-SAS to predict endoscopic disease activity (SES-CD > 3)



The IBUS-SAS score of > 37.5





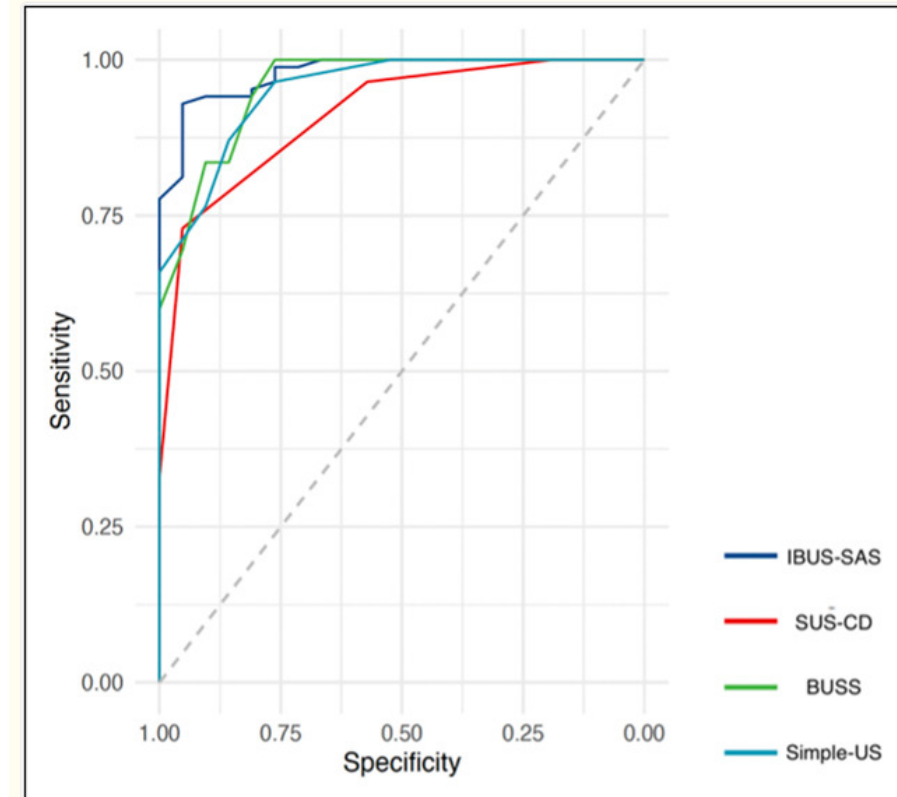
Which score to use in CD?

Determining the Accuracy and Interobserver Agreement of 4 Ultrasound Scores in Crohn's Disease Assessment: Correlations With Endoscopy

A total of 106 patients with CD were enrolled for retrospective independent analysis of 4 scores

IBUS-SAS had **only moderate agreement** (Cohen $\kappa = 0.427$; $P < 0.001$).

BUSS had substantial interobserver agreement (Cohen $\kappa = 0.947$; $P < 0.001$),



Qin, J et al Clin Transl Gastroenterol. 2025 Jan 10;16(4):e00812.

Details in response between iliac and colonic disease

Table 2. BUS Parameters at Baseline and at 3, 6, and 12 Months

BUS parameters	V0 Baseline n = 188	V1 3 mo n = 188	V2 6 mo n = 171	V3 12 mo n = 156	P value V1 vs V0 n=188
BWT					
Median, range (mm)					
Ileal disease	6 (3.4–11.5)	5.5 (3–10)	5 (3–10)	5 (3–9)	<.0001
Colonic disease	6.35 (4.3–9)	5.5 (4–8)	4.9 (4–8)	4 (4–8)	.07
Lesion length					
Median, range (cm)					
Ileal disease	15 (4–60)	10 (0–60)	10 (0–60)	10 (0–50)	.009
Colonic disease	40 (20–100)	30 (0–100)	20 (0–100)	10 (0–100)	.98
Fibrofatty proliferation					
Ileal disease	94	64	57	44	.0002
Colonic disease	15	9	6	6	

Calabrese, (2021): Ultrasonography Tight Control and Monitoring in Crohn's Disease During Different Biological Therapies: A Multicenter Study. In: Clinical gastroenterology and hepatology : the official clinical practice journal of the American Gastroenterological Association. DOI: 10.1016/j.cgh.2021.03.030



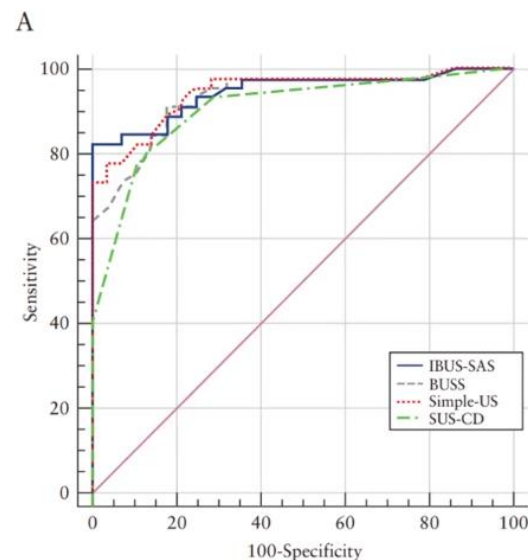
Superiority of IBUS-SAS in severe endoscopic activity



Any endoscopic activity

(segmental SES-CD ≥ 3
or Rutgeerts score $\geq 12b$)

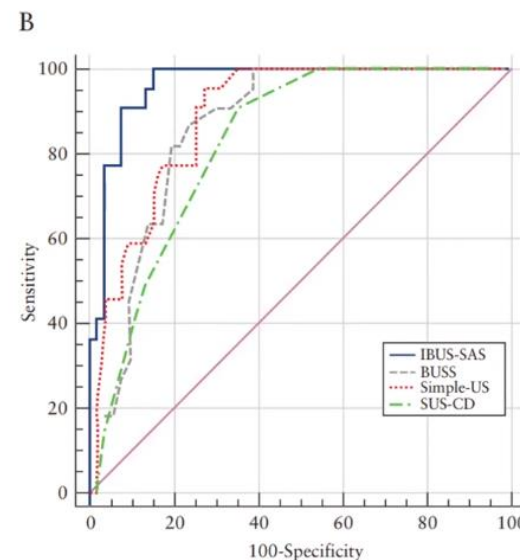
no significant difference



Severe endoscopic activity

(segmental SES-CD ≥ 9
or Rutgeerts score ≥ 14)

superiority of IBUS-SAS ($p < 0.005$)



Dragoni G et al. JCC 2023.





Ulcerative colitis : MUC Score



$$\text{MUC} = 1,4 \times \text{BWT} + 2,0 \times \text{CWF}$$

Threshold 6,2

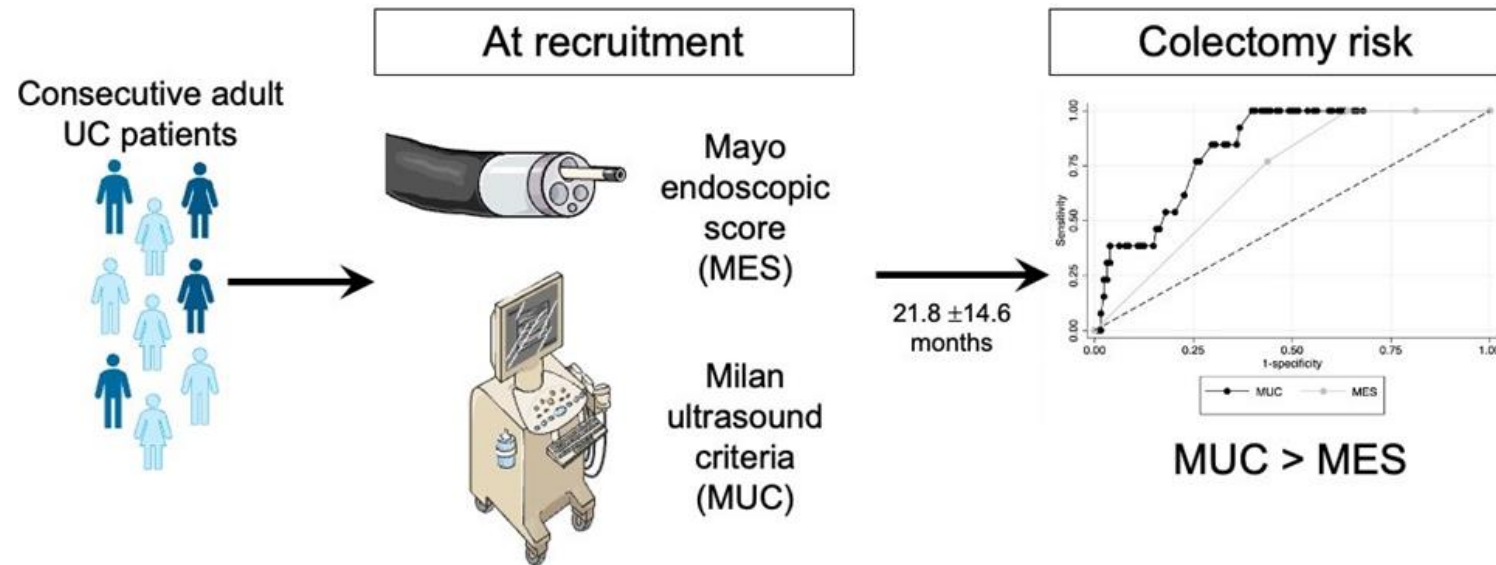
Milan ultrasound criteria are accurate in assessing disease activity in UC: external validation

M. Allocca et al United European Gastroenterol Journal 2021 Feb 16;9(4) 438-442



Predicting colectomy with ultrasound parameters?

MUC ≤ 6.2 vs > 6.2



New validation for IBUS-SAS for UC as well



IBUS
HYBRID
module 1

- **Fischer, Sarah; Fischmann, David; Wilde, Judith; Vetter, Marcel; Wolf, Laurin; Geppert, Carol et al. (2025):**

IBUS-SAS Is a Highly Accurate Intestinal Ultrasound Score for Predicting Endoscopic Disease Activity in Ulcerative Colitis. In: United European gastroenterology journal DOI: 10.1002/ueg2.70053.

- **Innocenti, Tommaso; Rocco, Carmen; Balena, Eleonora; Petrucci, Giulia; Lynch, Erica Nicola; Bagnoli, Siro et al. (2025):**
- The use of International Bowel Ultrasound Segmental Activity Score (IBUS-SAS) in patients with ulcerative colitis: applicability and comparison with other ultrasound scores. In: Journal of Crohn's and Colitis DOI: 10.1093/ecco-jcc/jjaf050

“IBUS-SAS has an optimal performance in the assessment of UC endoscopic activity, despite having been initially developed for CD. Therefore, it might be adopted as a reference score both for CD and UC activity”



Unmet needs for the future

Quantification of ifat?

Standardisation of vascularisation ranking

Use of new vascularization tools?

Better identification of loss of stratification

Field of KI?



**IBUS
HYBRID**
module 1



Any scoring for trials in standardised triple-loop recording

Every segment cross
longitudinal
color doppler



IBUS
HYBRID
module 1





IUS Report - 24y old man with ulcerative colitis

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

Point of care examination. No technical limitation. Normal body status

Fasting period: 6h

Examination quality: good

Diagnostic confidence: high confidence

Image storage location: cine loops and images stored in PACS

Examiner: Torsten Kucharzik

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

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)

Additional findings: Pseudopolyps, loss of haustration in left colon, free fluid, mesenteric lymph nodes

Activity Score: HUC Activity Score (1.4 x CWT (mm) + 2 x CWF): 1.4x5.4+2=9.56

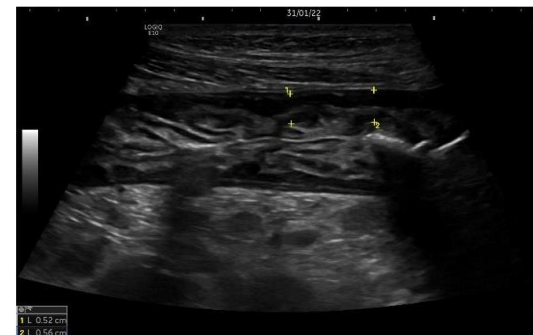
Complications of disease: None

DESCRIPTION: Markedly increased BWT in the left sided colon until right transverse colon with increased 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

IMAGES:





IUS Report - 22y old man with Crohn's ileitis

IUS REPORT

INDICATIONS and DISEASE CHARACTERISTICS

22y old man, Crohn's disease L1B1 since 2017, steroid-refractory, azathioprine-failure.

3-4 stools, abdominal cramps right lower quadrant, temp 37.9°C;

lab results: Hb 10.2 mg/dl, CRP 67 mg/dl, fCalpro: >800 mg/kg.

INTRA-PROCEDURE FEATURES

Point of care examination. No technical limitation. Normal body status

Fasting period: 4h

Examination quality: good

Diagnostic confidence: high confidence

Image storage location: cine loops and images stored in PACS

Examiner: Torsten Kucharzik

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

RESULTS

BWT: sigmoid colon 2.5 mm, descending colon 2.5 mm, transverse colon 2.2 mm, ascending colon 2.0 mm, TI 9.2 mm

Vascularisation (IBUS CDS Score) : rectum: NA, sigmoid colon: 1, descending colon: 1, transverse colon: 1, ascending colon: 1; TI: 3, ileum: 3, jejunum: 0; duodenum: 0

Echostratification: TI: completely abrogated; ileum: partially abrogated; colon: present

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

Extension: TI/ileum: 18 cm length

Additional findings: free fluid, mesenteric lymph nodes; **CEUS:** (2.5 ml SonoVue) phlegmone, blind ending fistula, no abscess

Complications: blind ending fistula TI, sinus tracks TI, no abscess, no stenosis

Activity Score: IBUS – SAS CD Score (0–100) = $4 \cdot \text{BWT} + 15 \cdot \text{i-fat} + 7 \cdot \text{CDS} + 4 \cdot \text{BWS}$;

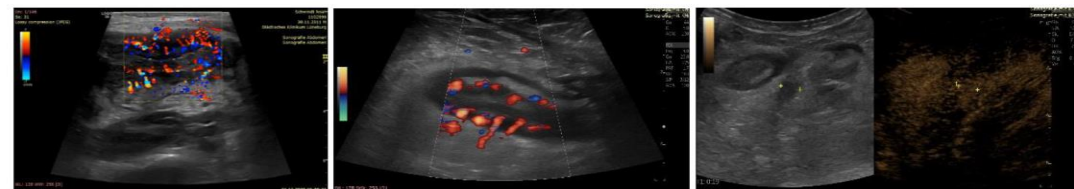
$4 \times 9.2 + 15 \times 2 + 7 \times 3 + 4 \times 3 = 99,8$

DESCRIPTION: Markedly increased BWT in the terminal ileum, with markedly increased vascularisation, abrogated echostratification, increased mesenteric fat, abrogated motility, mesenteric lymphadenopathy, phlegmonre, sinus tracks, blind ending fistula and free fluid

IUS DIAGOSIS: Highly active penetrating Crohn's disease L1B3 with blind ending fistula and sinus tracks in the TI

RECOMMENDATIONS: Suggested IUS follow up in 4 weeks

IMAGES





international bowel
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IBUS HYBRID module 1

7-8TH
NOVEMBER, 2025
MILAN, ITALY

Thank you



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The Luneburg IBUS Team

