IUS in CD – state of evidence in 2025

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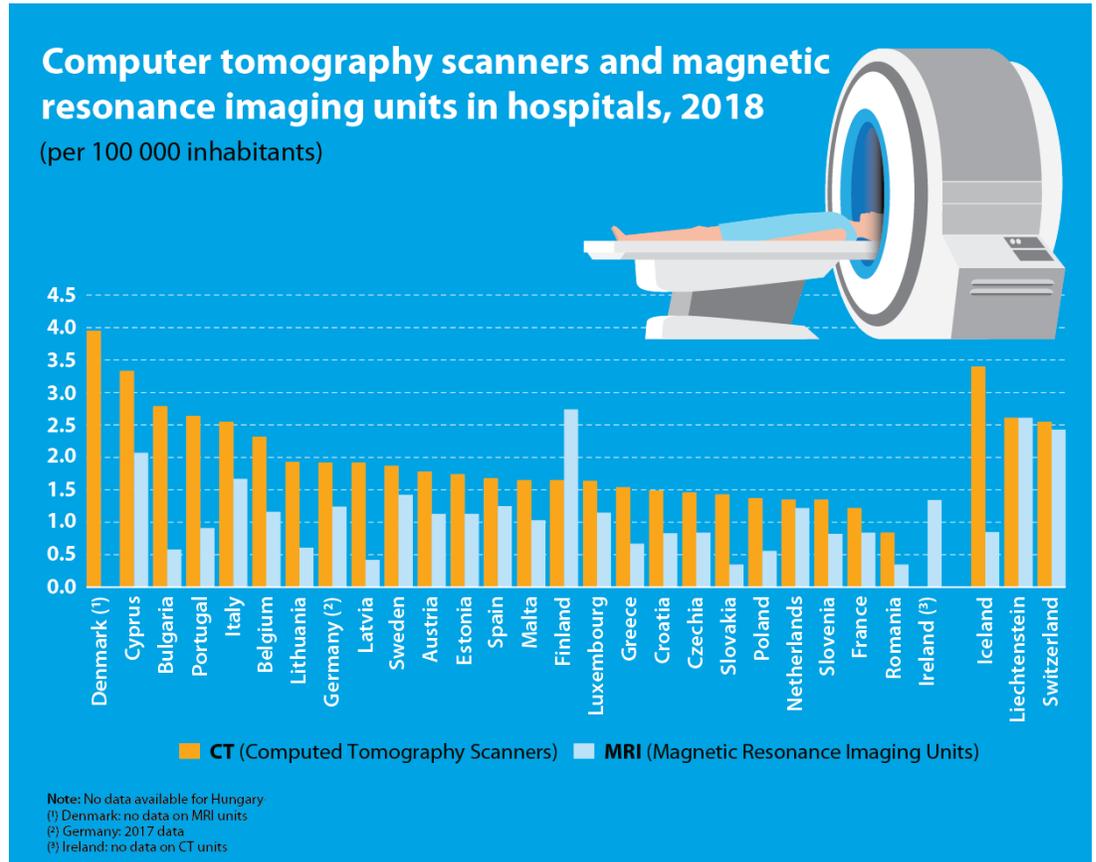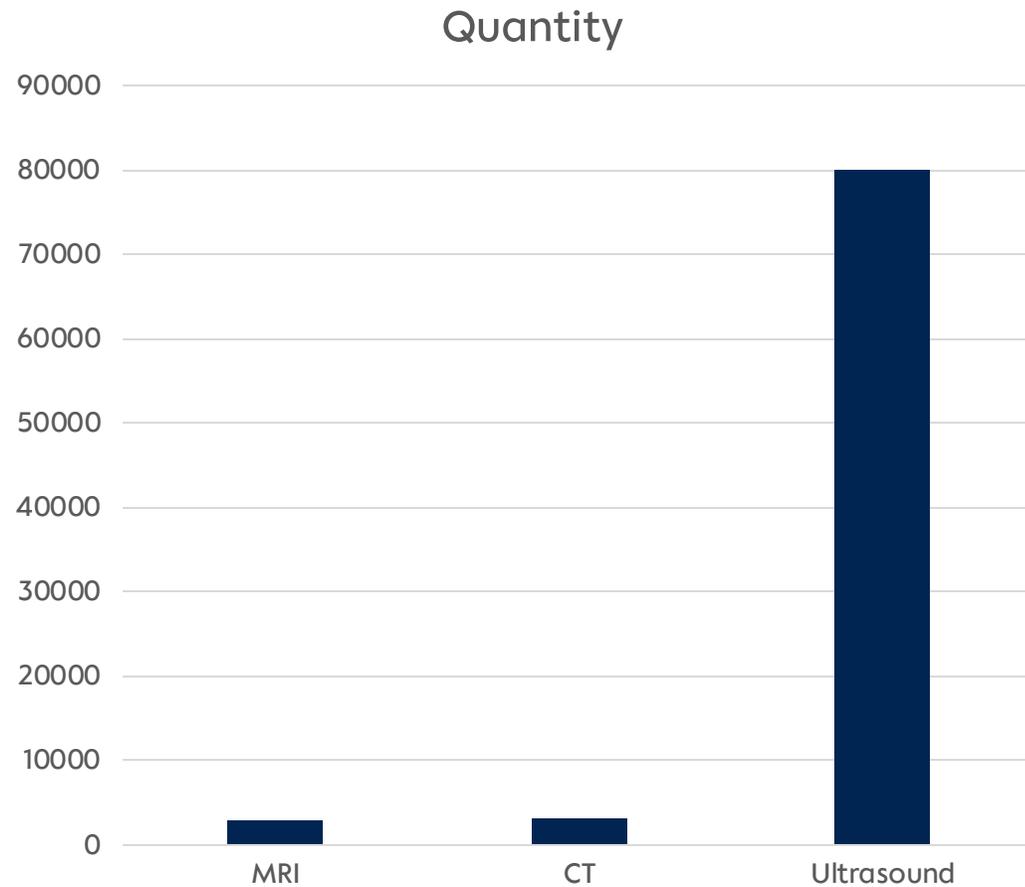
Berlin, DE – October 2nd – 3rd, 2025

Agenda

1. Why IUS
2. How IUS
3. Training IUS
4. IUS for activity
5. IUS for complications
6. Takehome IUS

1

Why IUS

Ultrasound is better available than other diagnostic tools

Assumption

Quantity

Computer tomography scanners and magnetic resonance imaging units in hospitals, 2018

(per 100 000 inhabitants)

CT (Computed Tomography Scanners)   MRI (Magnetic Resonance Imaging Units)

Note: No data available for Hungary.
(¹) Denmark: no data on MRI units
(²) Germany: 2017 data
(³) Ireland: no data on CT units

ec.europa.eu/eurostat

IUS is climate friendly and reduces costs

Retrospective

1 DESIGN

Investigation whether IUS is diagnostic alone or if additionally MRI or colonoscopy was needed

Retrospective analysis of IUS for patients with Crohn`s disease, tertiary referral hospital, single-center, Singapore, 10/2023 to 06/2024, 11 IUS-trained physicians, patients demographics plus estimates for costs, energy consumption and carbon emissions (Literature)

2 RESULTS

26 patients (16 males, 10 females) with CD underwent 34 IUS examinations

IUS > MRE avoidance in 27 cases (n = 27/34; 79.4 %), cost saving of US$29,619, reduction in energy consumption 304.83 kWh, equivalent to 458.19 kg of CO2e.

IUS > colonoscopy avoidance in 20 cases (n = 20/34; 58.8 %), cost saving was US$25,940, reduction in energy consumption 3181.0 kWh, equivalent to 557.40 kg of CO2e

3 CONCLUSION

IUS is a cost efficient and environmentally friendly alternative to other standard diagnostics

	MRE	IUS	Endoscopy
Cost (USD)	1279	182	1479
Energy (kWh)	11.8	0.51	160
Carbon emission (kgCO2e)	17.5	0.53	28.4

CHARITÉ | Reference: 2025-Cai-Intestinal ultrasound for Crohn's disease: A single-centre experience in cost and carbon emissions reduction through transdisciplinary collaboration, 1kgCO2 = 1Tag Kühlschrank, 1 kWH = 1 Waschgang

Ultrasound is a bedside and therefore fast diagnostic tool

Prospective

1   **DESIGN**

Evaluation of impact if IUS for IBD-therapy

Cohort study, routine outpatients with IBD allocated to IUS or not (clinicians decision). Patients questionnaires at study entry, immediately after their consultation, and after 4 and 16 weeks later, Clinicians reported disease activity status, therapeutic decisions and clinical management.
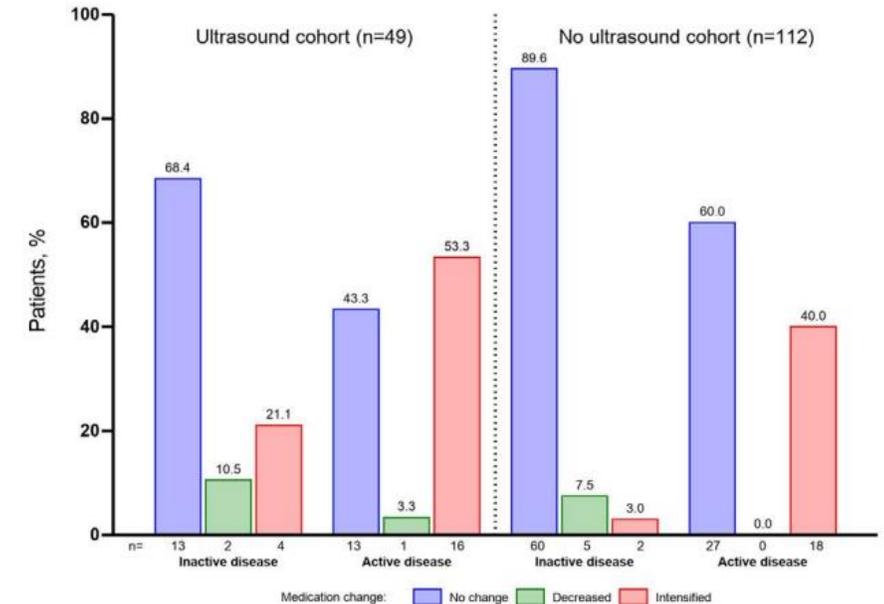
2   **RESULTS**

259 participants underwent ultrasound

Ultrasound-group patients: significant better disease understanding, ability to make informed decisions (all $P < 0.05$). Trend to better medication adherence.

Ultrasound changed the clinicians assessment of disease activity in 22%, management was altered in 56% with anti-inflammatory therapy escalated in 33%. MC with IUS had significantly more often a change in therapy 47% vs 22%.

3   **CONCLUSION**

IUS has the potential to enhance the clinical management IBD (clinician decision-making and education of patients)
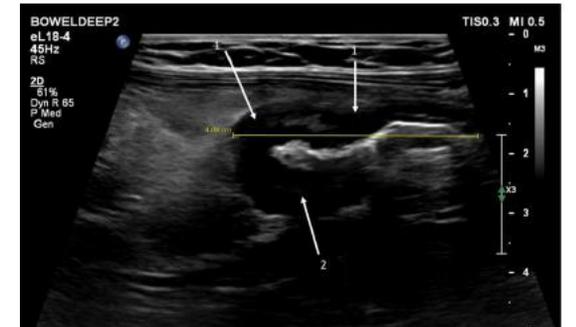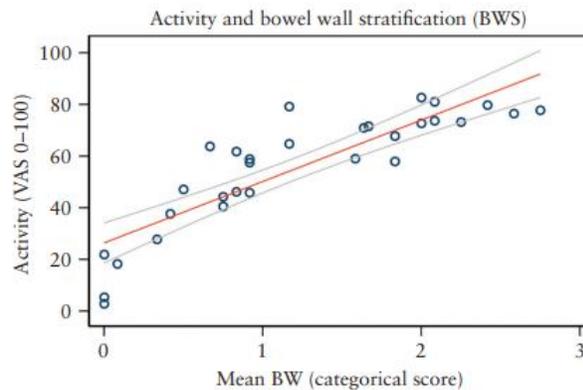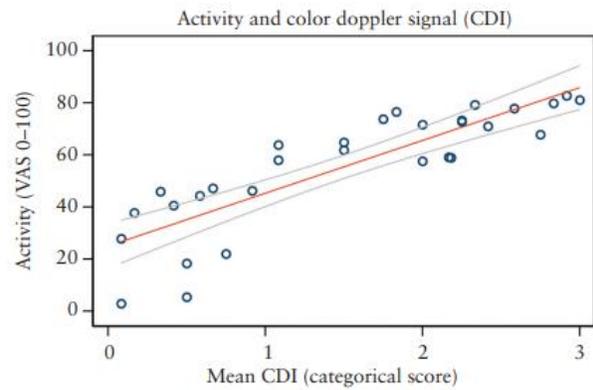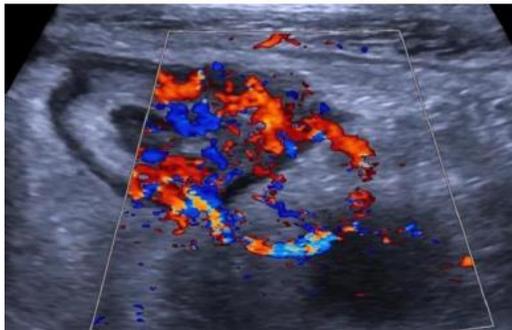

Reference: 2021- Friedmann - Effect of point-of-care gastrointestinal ultrasound on decision-making and management in inflammatory bowel disease

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2

How IUS

Charité – Centrum 13 - Medizinische Klinik mit Schwerpunkt - Gastroenterologie, Infektiologie, Rheumatologie - Direktorin: Prof. Dr. med. Britta Siegmund
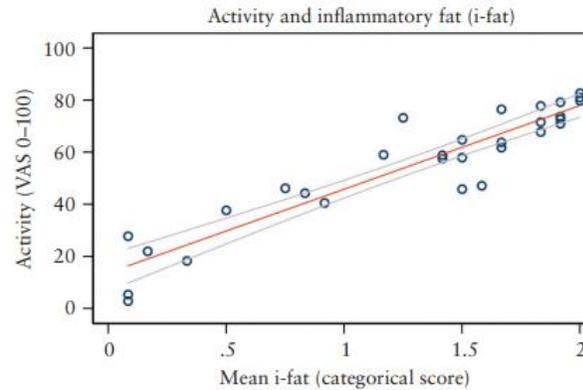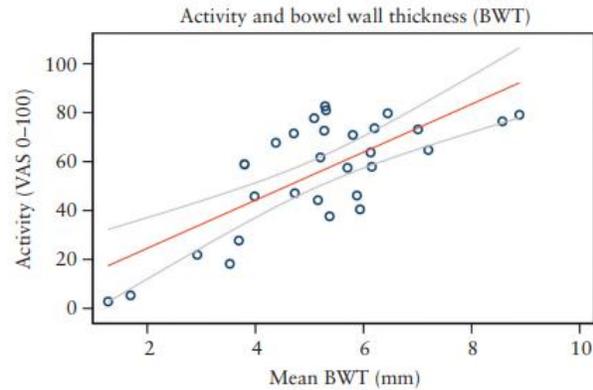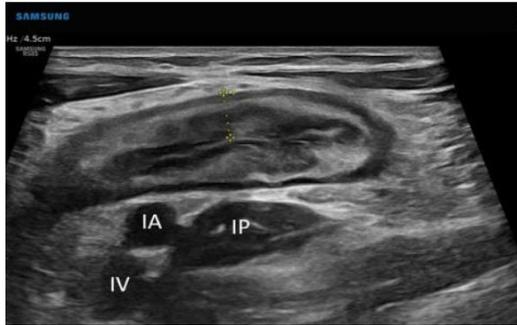
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What and how to measure

Consensus
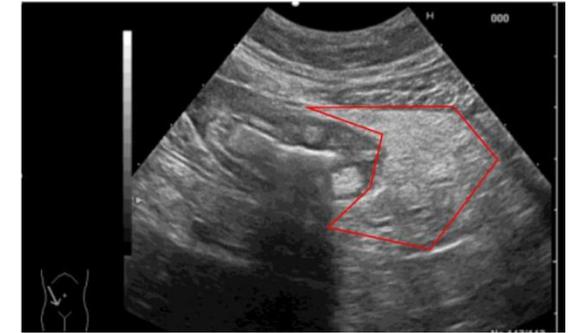
Figure 3. The association between physician global disease activity assessment and individual intestinal ultrasound parameters. Associations between A] mean activity and bowel wall thickness [top left], B] mean activity and inflammatory fat [top right], C] mean activity and colour Doppler imaging [bottom left], and D] mean activity and bowel wall stratification.

Reference: 2021-Novak-Expert Consensus on Optimal Acquisition and Development of the International Bowel Ultrasound Segmental Activity Score [IBUSSAS]: A Reliability and Inter-rater Variability Study on Intestinal Ultrasonography in Crohn's Disease

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Objective and semi-objective parameters

Consensus

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.

> 1 cm
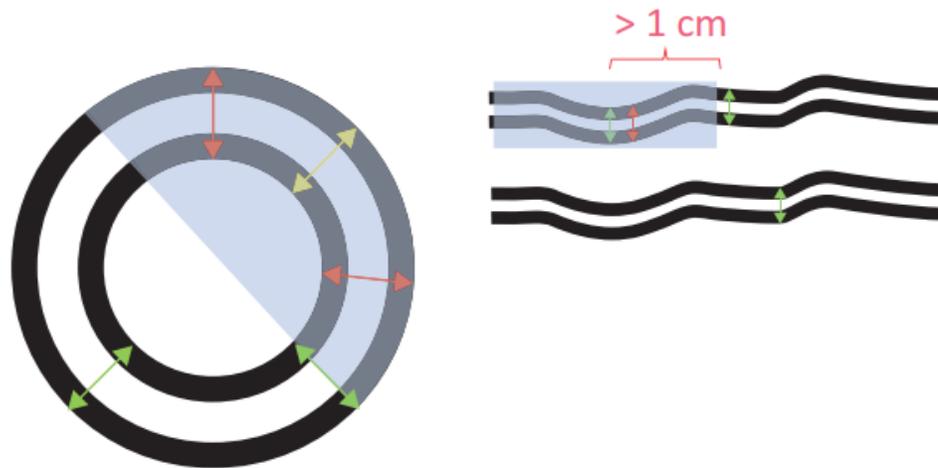
Figure 1. Measurement of bowel wall thickness. Measures of the bowel wall occur in two orientations: cross-section and longitudinal. The calipers are placed perpendicular to the wall, with two individual measures taken in each orientation, at least 1 cm apart in longitudinal and more than 90° in cross section, in the segment of bowel most affected by disease. The caliper placement occurs from the interface of the mucosa and muscularis mucosae, to the serosa [interface between the serosa and muscularis propria]. All four measures are averaged. Yellow double-headed arrow is the first measurement. Green double-headed arrows are valid second measurements, where red double-headed arrows are invalid caliper placements.

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Intraindividuel Parameters

Consensus

Response Rate

3.3.2.1. Response rate detected by intestinal ultrasound is comparable with:
3.3.2.1.1. rate of improvement in luminal inflammation, assessed by endoscopy; [InA. 0, Unc. 3, App. 14]
3.3.2.1.2. rate of magnetic resonance enterography improvement. [InA. 0, Unc. 0, App. 17]

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].

3.3.2.5. Response rate, in general, is different for:
3.3.2.5.1. strictures than luminal disease; [InA. 0, Unc. 2, App. 15]
3.3.2.5.2. phlegmons than luminal disease; [InA. 0, Unc. 3, App. 14]
3.3.2.5.3. abscesses than luminal disease. [InA. 0, Unc. 2, App. 15]

Length of disease

3.3.3.1. Length in both Crohn's disease and ulcerative colitis should be reported using involved colonic segment[s] [sigmoid colon, descending colon, transverse colon, ascending colon, cecum]. [InA. 0, Unc. 0, App. 18]
3.3.3.2. For the terminal ileum, the length should be reported as distance in cm and distance from the ileocaecal valve [if possible] or as proximal small bowel. [InA. 0, Unc. 0, App. 18]

Measuring BWT

3.3.4.1. Response depends on baseline thickness and should be reported in:
3.3.4.1.1. absolute [mm] and relative [%] change from baseline; [InA. 2, Unc. 1, App. 14]
3.3.4.1.2. continuous measurements, preferred over categories; [InA. 0, Unc. 1, App. 15]
3.3.4.1.3. continuous measurements within 1 decimal for increased precision; [InA. 0, Unc. 1, App. 16]
3.3.4.1.4. continuous measurements, as a mean of two measures in cross-section and two measures in longitudinal orientation. [InA. 1, Unc. 1, App. 15]

Worst Segment

3.3.5.1. The worst segment in both Crohn's disease and ulcerative colitis is defined by the most pathological bowel wall thickness; however, if two segments have the same bowel wall thickness, the order of secondary parameters for defining the worst segment should be the grading of colour Doppler signals, bowel wall stratification, and then inflammatory mesenteric fat, respectively. [InA. 0, Unc. 1, App. 17]

Disease activity

3.3.6.1. If a score is used, the score should summarise measures of all individual segments. [InA. 0, Unc. 3, App. 14]
3.3.6.2. Treatment response could be a combined change in one or more activity parameters, specified as a point reduction from an activity score [present or in the future], bowel wall thickness [continuous] and/or colour Doppler signals [ordinal], and/or bowel wall stratification [ordinal] and/or inflammatory mesenteric fat [ordinal]. [InA. 0, Unc. 3, App. 14]

Remission and Timing

3.4.2.1. Transmural remission of the small and large bowel is defined by bowel wall thickness ≤3 mm with normal/0 colour Doppler signal. [InA. 0, Unc. 1, App. 17]
3.4.2.2. In some patients, sigmoid colon may contain an enlarged muscularis propria [outer hypoechoic layer typical in diverticular disease], allowing for bowel wall thickness up to 4 mm without resembling active inflammation. [InA. 3, Unc. 1, App. 13]
3.4.2.3. Transmural remission should be assessed after treatment initiation [regardless of treatment] between 26 and 52 weeks. [InA. 0, Unc. 3, App. 14]
3.4.2.4. Transmural remission may occur already at Week 12 but with increasing likelihood up to 1 year [maybe 2 years]. [InA. 0, Unc. 0, App. 17]

Response and Timing

3.4.1.1. Treatment response is identified by reduction of bowel wall thickness [continuous measurements] [>25%] or [>2.0 mm] or [>1.0 mm and one colour Doppler signal reduction]. [InA. 0, Unc. 3, App. 15]
3.4.1.2. Intestinal ultrasound complications that should be assessed for response:
3.4.1.2.1. strictures; [InA. 0, Unc. 2, App. 15]
3.4.1.2.2. phlegmons; [InA. 0, Unc. 3, App. 14]
3.4.1.2.3. Abscesses. [InA. 1, Unc. 3, App. 13]
3.4.1.3. Response should initially be assessed in the small and large bowel after treatment initiation [regardless of treatment] at 14 ± 2 weeks. However, in a subset of patients, response after steroids or biologics may occur already after 4 weeks. Early intestinal ultrasound assessment may, in certain situations, be beneficial between weeks 4 and 8. [InA. 0, Unc. 0, App. 17]
3.4.1.4. Ideal assessment of intestinal ultrasound response within the first year of treatment initiation/escalation/change is at baseline, week 14 ± 2, AND between week 26–52 + IUS depending on elevated f-Calprotectin OR symptoms OR clinical suspicion of flare. [InA. 1, Unc. 1, App. 15].

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Reference: 2022 Ilvemark Defining Transabdominal Intestinal Ultrasound Treatment Response and Remission in Inflammatory Bowel Disease: Systematic Review and Expert Consensus Statement

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3

Training IUS

IUS-Training improves diagnostic accuracy

Prospective

1 DESIGN

Examination of the diagnostic accuracy of trainee-performed IUS in patients with suspected CD, control ileocolonoscopy.

Patients recruited to a prospective trial (Evaluation of magnetic resonance enterocolonography (MREC)) in patients with clinically suspected CD) underwent IUS performed by trainees, 1st/2nd period.

2 RESULTS

129 patients included complete IUS and IC
IUS detected signs of CD in 49 cases (small bowel 31, colon 15, small bowel, and colon 3).

The sensitivity and specificity for detection of ileocolonic CD by trainee performed IUS improved during the first to the second half of the study period from 57.1% to 73.1% and 76.5% to 89.7% (CI 72.6-97.8).

There was no difference in diagnostic performance between IUS and MREC for the detection of CD.

3 CONCLUSION

Trainees improved during the study, and IUS performance in disease detection corresponded to expert-evaluated MREC.

	First half (n=55)	Second half (n=55)
Terminal ileum + colon		
Prevalence	38%	47%
Sensitivity	57.1	73.1
	(34.0 – 78.2)	(52.2 – 88.4)
Specificity	76.5	89.7
	(58.8 – 89.3)	(72.6 – 97.8)
PPV	60.0	86.4
	(36.1 – 80.9)	(65.1 – 97.1)
NPV	74.3	78.8
	(56.7 – 87.5)	(61.1 – 91.0)
ROC	0.67	0.81
	(0.54 – 0.80)	(0.71 – 0.92)
Terminal ileum		
Prevalence	35%	27%
Sensitivity	57.9	66.7
	(33.5 – 79.7)	(38.4 – 88.2)
Specificity	86.1	92.5
	(70.5 – 95.3)	(79.6 – 98.4)
PPV	68.8	76.9
	(41.3 – 89.0)	(46.2 – 95.0)
NPV	79.5	88.1
	(63.5 – 90.7)	(74.4 – 96.0)
ROC	0.72	0.77
	(0.59 – 0.85)	(0.64 – 0.91)
Colon		
Prevalence	18%	33%
Sensitivity	20.0	50.0
	(2.5 – 55.6)	(26.0 – 74.0)
Specificity	93.3	94.6
	(81.7 – 98.6)	(81.8 – 99.3)
PPV	40.0	81.8
	(5.3 – 85.3)	(48.2 – 97.7)
NPV	84.0	79.5
	(70.9 – 92.8)	(64.7 – 90.2)
ROC	0.57	0.72
	(0.43 – 0.70)	(0.60 – 0.85)

Approximately 100 investigations are needed for advanced IUS-competence

Prospective

1 DESIGN

Evaluation of the "learning curve" of IUS

2 trainees with limited experience (< 50 exams), 2 two with extensive experience (> 500 exams), each performed 99 examinations and reported four IUS findings. An expert sonographer repeated the exam, and concordance (k) was assessed in three consecutive testing periods of 33 exams each.

2 RESULTS

A progressive improvement for all IUS findings from Period 1 to Period 3; those with experience in abdominal ultrasound had faster learning curves.

The minimum number of examinations required to achieve concordance with the expert operator for detecting increased bowel wall thickness was 84 and detecting bowel dilatation was 79. However, a minimum of 97 examinations was necessary to achieve concordance for detecting intra-abdominal complications,

3 CONCLUSION

Basic competence in IUS can be acquired with relatively few examinations, while advanced competence requires more extensive training, particularly for gastroenterologists without abdominal ultrasound experience
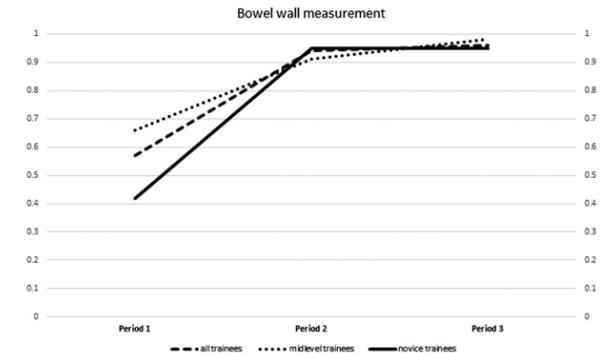
Fig. 1. Maximum bowel wall thickness measured using intestinal ultrasonography. (A) Learning curve for four trainees who each completed 99 exams in three periods. (B) Frequencies of bowel wall thickness measurements recorded by the trainees, according to the true thickness measured by the expert sonographer.
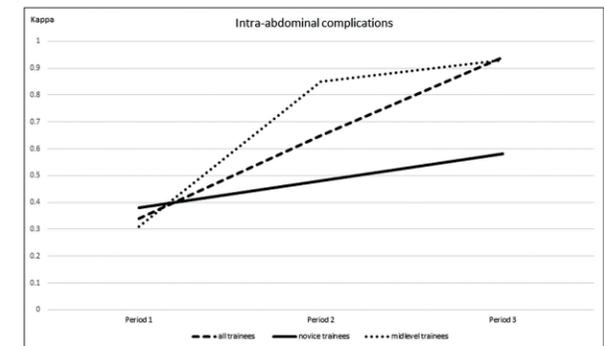
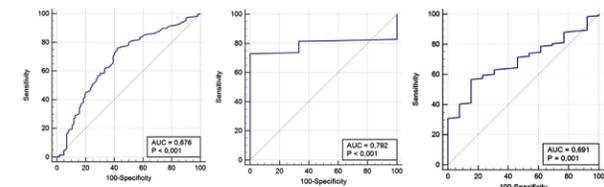Fig. 2. Learning curve for detecting intra-abdominal complications.

Fig. 3. ROC curves for determining the minimum number of exams required for a trainee to obtain the exact same result as the expert sonographer. (A) Maximum bowel wall thickness. (B) Detection of bowel dilatation. (C) Detection of intra-abdominal complications.

4

IUS for activity

IUS Acitivity Scores correlate with endoscopy and symptoms

Prospective

1 DESIGN

Evaluation of correlation of endoscopy and ultrasound activity

CD patients undergoing ileocolonoscopy at our Unit between 09/2021 and 02/2023 were included; Endoscopic activity was defined as SES-CD ≥ 3 or Rutgeerts score ≥ i2b for operated patients

IBUS-SAS	$4*BWT + 15*i\text{-}fat + 7*CDS + 4*BWS$
SUS-CD	$BWT + CDS$
BUSS	$0.75*BWT + 1.65*CDS$
Simple-US	$BWT + CDS$

2 RESULTS

IUS was performed within 6 weeks of endoscopy and scored with IBUS-SAS, BUSS, Simple-US and SUS-CD scores.

All IUS scores showed a significant positive correlation with endoscopy [$p < 0.0001$], with IBUS-SAS ranking the highest [$\rho = 0.87$].

IBUS-SAS was the most highly correlated with clinical activity [$\rho = 0.58$] and was statistically superior to all the other scores in detecting severe endoscopic activity [SES-CD ≥ 9 or Rutgeerts i4].

3 CONCLUSION

All IUS scores provided solid correlation with endoscopy and clinical symptoms, IBUS-SAS outperformed the others due to a more granular description that might help in stratifying different levels of disease activity.

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Reference: 2023 Dragoni **Correlation of Ultrasound Scores with Endoscopic Activity in Crohn's Disease: A Prospective Exploratory Study**

IUS for early detection of treatment response

RCT

1 DESIGN

Evaluation of IUS-response, transmural remission, bowel wall thickness (BWT), blood flow, bowel wall stratification, and inflammatory fat (centrally read, parameter-blinded).

Multicenter RCT, STARDUST-substudy (ustekinumab-treated CD patients), 77 patients

2 RESULTS

IUS response could be determined 4 weeks after treatment initiation, with progressive improvement through week 48.

IUS response more pronounced in the colon and biologic-naive patients.

IUS response absence at week 4 was associated with no endoscopic response (based on the simplified endoscopic score for Crohn's disease terminal ileum subscore) at week 48 (negative predictive value 73%).

3 CONCLUSION

IUS as an early therapy control (from 4 weeks on)
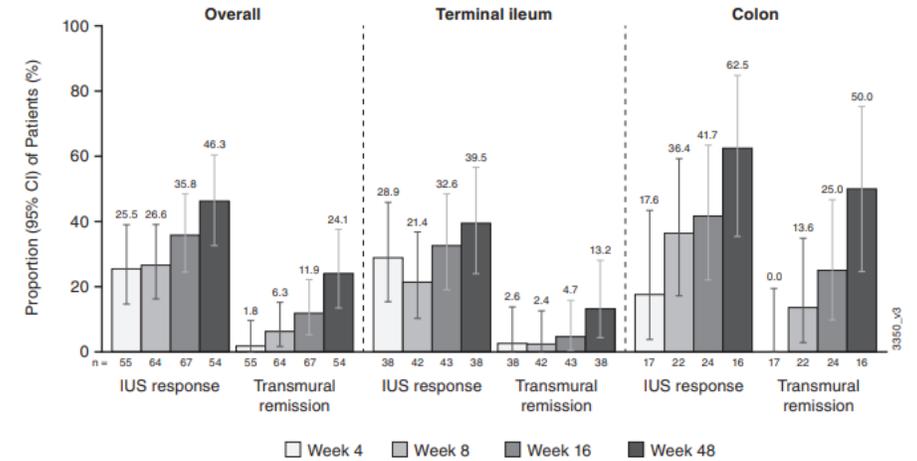
Figure 2. As observed analyses over time at week 48 of IUS response and transmural remission for all patients in the IUS substudy overall and by most affected bowel segment. NOTE. Only patients with non-missing baseline value and at least one non-missing post-baseline value during the main treatment period are included in the analysis. N at baseline and through week 48. IUS response was defined as reduction of ≥25% from baseline in BWT. Transmural remission was defined as normalization of BWT, blood flow (color Doppler signal), bowel wall stratification, and inflammatory mesenteric fat. The most affected (most thickened) bowel segment at baseline was used for IUS response/remission evaluation in the follow-up scans. If 3 of the 4 IUS parameters were normalized and the fourth is 'Not assessed/Not assessable', transmural remission is considered 'Yes'. BWT, bowel wall thickness; CI, confidence interval; IUS, intestinal ultrasound.

IUS response: BWT reduction >=25%
Transmural remission: Normalisation of BWT, iFat, CDS and BWS

Transmural remission is an achievable outcome

Prospective

1 DESIGN

Prognostic value of intestinal ultrasound during the early stage of adult Crohns disease

05/2021 – 04/2023, recruitement of 201 patients, prospectively followed with IUS and with symptomatic, biochemical, and endoscopic evaluations.

2 RESULTS

Transmural remission (achieved in 38%) was significantly associated with steroid-free clinical remission and a lower risk of treatment escalation during follow-up of 12 months (26% vs 53%; P = .003).

Biochemical remission plus concurrent transmural remission > significantly higher rates of steroid-free clinical, transmural, and complete remission at 12M.

3 CONCLUSION

Transmural remission is an achievable outcome and is associated with a favorable clinical outcome, including sustained steroid-free clinical remission. Further, intestinal ultrasound findings at diagnosis predict future ileocecal resection.
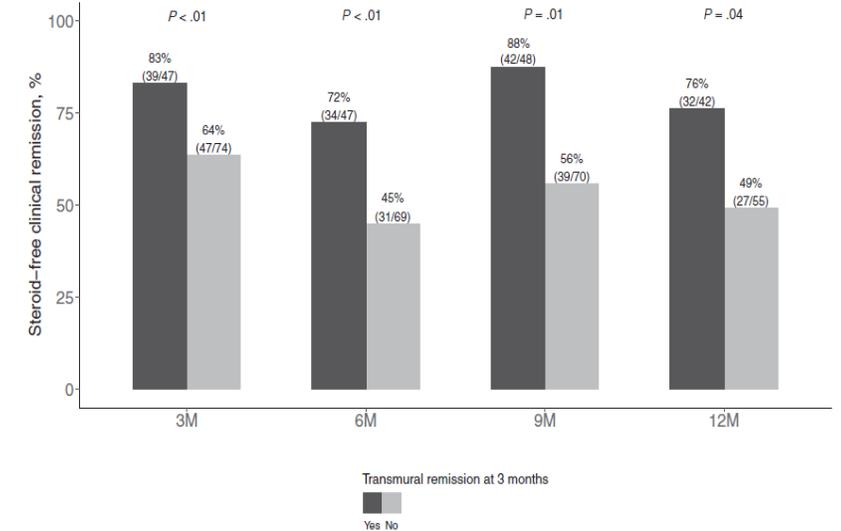
Figure 2. Steroid-free clinical remission rates stratified by transmural remission 3 months after diagnosis.

5

IUS for complications

Defining small bowel stricturing Crohn`s disese

Consensus
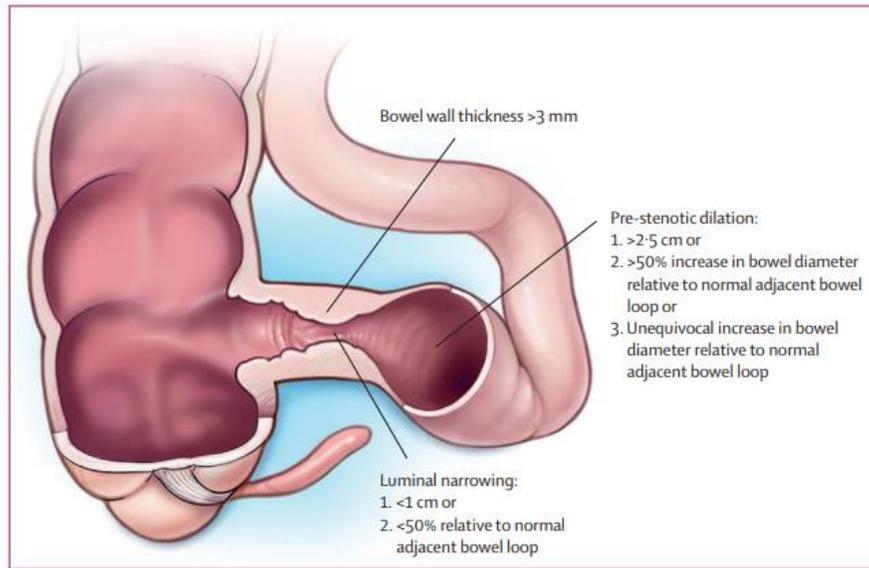
Figure 1: Anastomotic and naive small bowel Crohn's disease strictures on intestinal ultrasound defined by the combination of bowel wall, luminal narrowing, and pre-stenotic dilation

Items defining motility abnormalities are described in the Results and the appendix (p 7).

RAND–UCLA Appropriateness Method (evidence-based, modified Delphi technique), at least 2 voting rounds, statement generation (systematic review, 6 categories, 12 gastroenterologists, 7 radiologists, 2 patients; Australia, Canada, Denmark, Germany, Italy, UK, and USA)
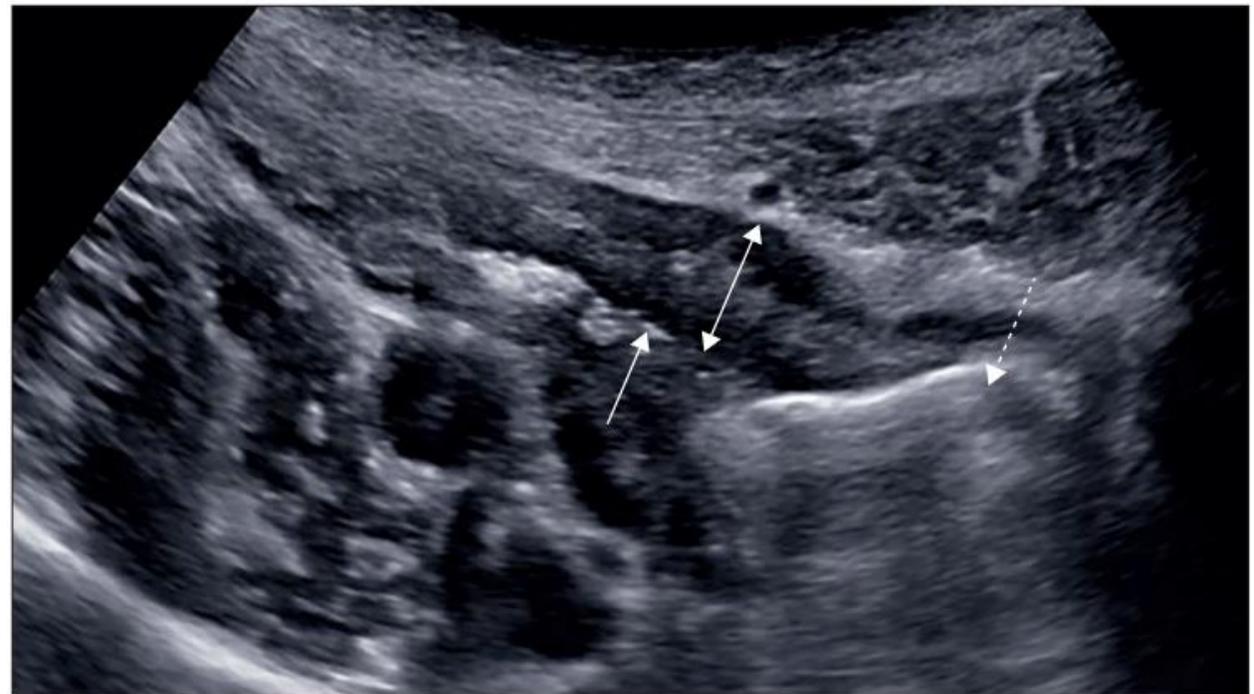
Figure 2: Longitudinal view of terminal ileal stricture with bowel wall thickness at 9·3 mm (double-headed solid arrow), luminal apposition at 1·3 mm (solid arrow), and pre-stenotic dilation (dashed arrow)

Antiinflammatory   Antifibrotic   Re-stenosis

Differentiating fibrotic and inflammatory stenosis can still be challenging

Metaanalysis

1 **DESIGN**

Evaluation of the differentiability of fibrotic and inflammatory stenoses

Assessment of different IUS parameters, literature recherche, pooled accuracy of IUS for distinguishing fibrosis

2 **RESULTS**

19 studies, 14 were included [511 subjects, 635 bowel segments].

fibrotic stenosis was:

- Thicker than inflammatory: pooled WMDs for BWT were 1.30 mm

- Harder than inflammatory: pooled SMDs for strain value and strain ratio were 0.80 and 1.08

- Less enhancing than inflammatory: percentage of maximal enhancement was lower

3 **CONCLUSION**

IUS (B-IUS, CEUS, and sonoelastography) a promising tool to differentiate fibrotic or inflammatory stenosis in CD patients, but cutoffs are missing

Reference: 2022 XU Intestinal Ultrasound for Differentiating Fibrotic or Inflammatory Stenosis in Crohn's Disease: A Systematic Review and Meta-analysis

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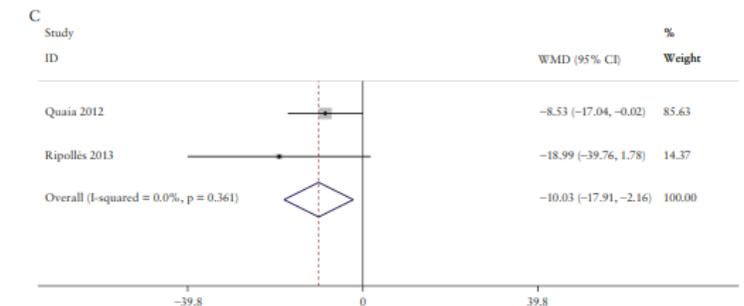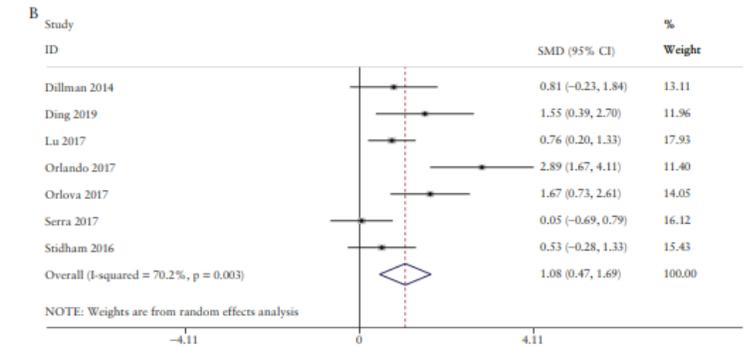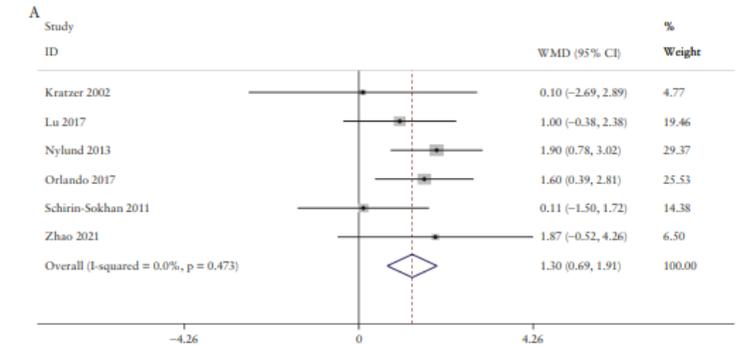
Identifying B-Mode signs for fibrosis (Spiculates)

Prospective

1 DESIGN

Assessment of relationship of ultrasound parameters and Histopathology,

17 consecutive adult CD patients for bowel resection (involvement of the terminal ileum or the sigmoid colon), IUS 30 days prior to surgery, correlated with histopathologic specimen (surgery)

2 RESULTS

Presence of hyperechogenic spiculates was statistically significantly associated with collagen content (P = .012)

Presence of vascular signals (Limberg score 3 or 4) was significantly associated with active inflammation (P = .037).

There was a strong correlation between IUS and histological measurements of the wall thickness (P = .01)

3 CONCLUSION

Hyperechogenic spiculates was associated with the presence of fibrosis

(vascular signals ~ inflammation, BWT ~ histological measurement)

Total Collagen Parameters	Univariable		
	b	95% CI	P
Stricture	6.11	−1.10, 13.33	.09
Upstream dilatation	0.32	−5.35, 5.98	.906
Fistula	2.38	−2.83, 7.59	.345
Abscess	4.44	−0.17, 9.04	.058
Lymph nodes	−3.20	−9.43, 3.03	.282
Spiculates	7.29	1.88, 12.69	.012
BWT, per 1-mm increase	−0.09	−1.85, 1.67	.916
BWS_1	−4.29	−10.59, 2.01	.167
BWS_2	4.60	−0.13, 9.34	.056
BWS_3	−1.72	−6.77, 3.34	.48
Strain values (mean)	−0.03	−1.21, 0.07	.541

IUS is accurate for detection of intraabdominal complications

Metaanalysis

1 DESIGN

Evaluation of diagnostic accuracy of IUS in the detection of intra-abdominal complications in CD

Literature search 01/1970-10/2022, 1498 studies we identified, 68 were included, 23 studies used, compared to endoscopy, cross-sectional imaging, surgery, and pathology

2 RESULTS

Definition for stricture: Increase in BWT (≥3 or ≥4 mm), narrowed lumen (not further specified or <10 mm), and pre-stenotic or proximal dilation (≥25 or ≥30 mm) mentioned in 82%, 93%, and 95% of the studies.

Pooled high sensitivities and specificities for strictures, inflammatory masses, and fistulas by B-Mode and SICUS.

3 CONCLUSION

IUS is accurate for the diagnosis of intra-abdominal complications in CD.
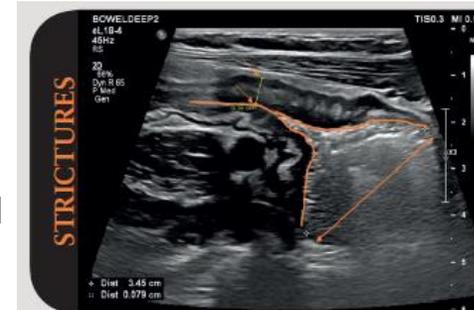
Stricture	B-mode	SICUS
Sensitivity	81%	94%
Specificity	90%	95%
Accuracy	86%	94%

I-mass	B-mode	SICUS
Sensitivity	87%	91%
Specificity	95%	97%
Accuracy	91%	94%

Fistula	B-mode	SICUS
Sensitivity	67%	90%
Specificity	97%	94%
Accuracy	82%	92%

Reference: 2024 Pruijt Diagnostic Accuracy of Intestinal Ultrasound in the Detection of Intra-Abdominal Complications in Crohn's Disease: A Systematic Review and Meta-Analysis
SICUS – small intestinal contrast ultrasound

22

CHARITÉ

Deep learning might help in the future

Retrospective

1 **DESIGN**

Development of a a deep learning model based on baseline intestinal ultrasound (IUS) images and clinical information to predict mucosal healing (endoscopy).

190 consecutive CD patients who underwent pretreatment IUS were retrospectively recruited at a tertiary hospital, 09/2015 and 02/2022

2 **RESULTS**

1548 IUS images (longitudinal diseased bowel segments), training and a test cohort, CNN, Validation with five-fold internal cross-validation and further tested in the test cohort.

1038 IUS images of mucosal healing and 510 images of no mucosal healing; Heat maps showing the deep-learning decision-making process revealed that information from the bowel wall, serous surface, and surrounding mesentery was mainly considered by the model.

3 **CONCLUSION**

This deep-learning model using pretreatment ultrasound images and clinical information was generated to predict mucosal healing with an AUC of 0.73.

		AUC	Accuracy (%)	Sensitivity (%)	Specificity (%)
Deep-learning model	Fold 1	0.74	72.0	72.7	70.8
	Fold 2	0.73	67.7	67.5	68.2
	Fold 3	0.72	67.4	65.8	70.3
	Fold 4	0.73	69.0	68.1	70.8
	Fold 5	0.74	66.4	66.1	67.2
	Mean	0.73	68.9	68.1	69.5
IBUS-SAS	/	0.67	62.8	72.6	57.8

IUS is not yet used widely

Prospective

1 **DESIGN** Large, global survey among IBD experts (ECCO Stockholm 2024) to identify current practices in management, 16-item electronic web-based survey
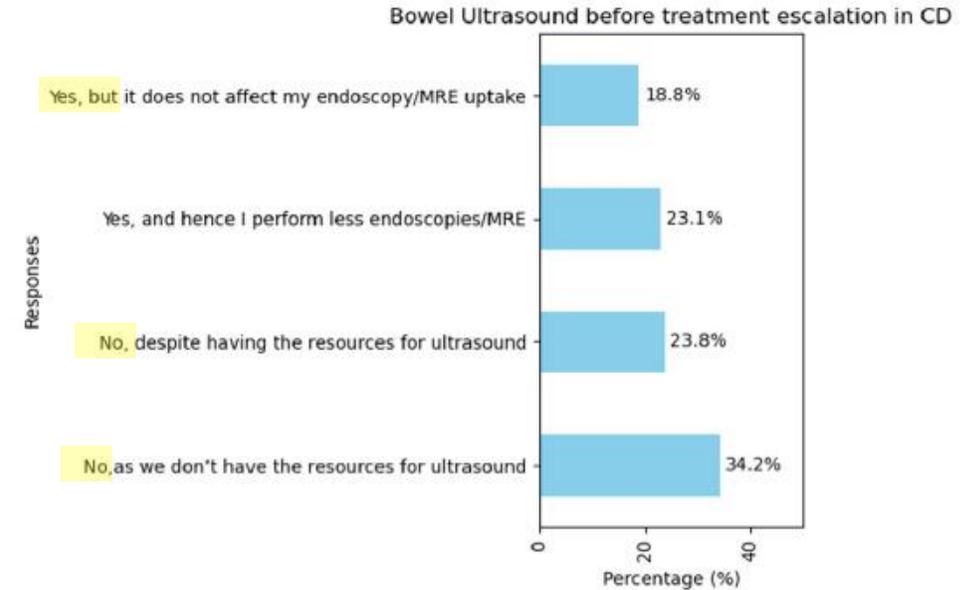
2 **RESULTS** 261 respondents from 88 countries participated in the survey, with the majority (253/261) physicians, also IBD-nurses

132 (51%) reported that they do not routinely undertake IUS to guide treatment decisions (CD)

3 **CONCLUSION** Considerable variation in IBD management across different countries and interpretation of the T2T approach.

Bowel Ultrasound before treatment escalation in CD

Yes, but it does not affect my endoscopy/MRE uptake — 18.8%

Yes, and hence I perform less endoscopies/MRE — 23.1%

No, despite having the resources for ultrasound — 23.8%

No, as we don't have the resources for ultrasound — 34.2%

Responses / Percentage (%)

Takehome

1. Use IUS
2. Know IUS-Parameters
3. Get trained and Train IUS

Backup

Defiying small bowel stricturing Crohn`s disease

	Median rating (IQR)	Appropriateness
Bowel wall thickness should be scored as a continuous measurement (in mm within 1 decimal place)	8·5 (8–9)	Appropriate
Bowel wall thickness should be scored as a continuous measurement using the mean of two measures in cross-sectional orientation and two measures in longitudinal orientation	8 (7–9)	Appropriate
Bowel wall thickness should be scored as absent, mild, moderate, or severe	4 (2–7)	Uncertain
Bowel wall thickness should be scored using the following cutoffs*		
Absent: <3·0 mm; mild: 3·1–6·0 mm; moderate: 3·1–6·0 mm; severe: >6·0 mm	4·5 (1–6)	Uncertain
Absent: <3·9 mm; mild: 4·0–6·0 mm; moderate: 6·1–8·0 mm; severe: >8·1 mm	4 (2–5)	Uncertain
Absent: <3·0 mm; mild: 3·1–5·0 mm; moderate: 5·1–8·0 mm; severe: >8·0 mm	7 (5–8)	Appropriate
None of the above	5 (1–7)	Uncertain
Bowel wall thickening should be defined as a measurement in the maximally thickened area of		
>2·0 mm	3 (2–5)	Inappropriate
>3·0 mm	8·5 (8–9)	Appropriate
>4·0 mm	5 (3–7)	Uncertain
>5·0 mm	4 (2–7)	Uncertain
Bowel wall thickening should be defined as an increase in wall thickness (in the maximally thickened area, relative to a normal adjacent bowel loop) of		
>25%	4·5 (3–6)	Uncertain
>50%	5 (3–7)	Uncertain
>75%	3 (2–7)	Inappropriate
100%	3 (2–5)	Inappropriate
The same definition of bowel wall thickening can be used for both naive and anastomotic small bowel strictures	8 (7–9)	Appropriate
Luminal narrowing should be defined as a luminal diameter (in the narrowest area, relative to a normal adjacent bowel loop) of		
<25%	5 (3–5)	Uncertain
<50%	7 (5–8)	Appropriate
<75%	5 (3–7)	Uncertain
100%	3 (2–6)	Inappropriate

	Median rating (IQR)	Appropriateness
Luminal narrowing should be defined as a luminal diameter of		
<2·0 cm	3 (2–5)	Inappropriate
<1·5 cm	4 (2–6)	Uncertain
<1·0 cm	6·5 (5–8)	Appropriate
<0·5 cm	6 (5–8)	Uncertain
Complete obstruction	3 (2–7)	Inappropriate
The same definition of luminal narrowing can be used for both naive and anastomotic small bowel strictures	8 (7–9)	Appropriate
Luminal narrowing should be scored as absent (luminal diameter equivalent to the luminal diameter of a normal adjacent bowel loop); mild (luminal diameter reduction >25% of luminal diameter of a normal adjacent bowel loop); moderate (luminal diameter reduction >50% of luminal diameter of a normal adjacent bowel loop); or severe (luminal diameter reduction >75% of luminal diameter of a normal adjacent bowel loop)	6·5 (3–8)	Appropriate
Pre-stenotic dilation should be defined as an unequivocal increase in bowel diameter relative to a normal adjacent bowel loop with bowel wall thickness <3 mm*	7 (6–8)	Appropriate
Pre-stenotic dilation should be defined as an increase in bowel diameter (in the maximally dilated area, relative to a normal adjacent bowel loop) of		
>25%	4 (2–6)	Uncertain
>50%	6·5 (2–8)	Appropriate
>75%	5 (2–6)	Uncertain
100%	5 (2–7)	Uncertain
Pre-stenotic dilation should be defined as a bowel diameter of		
>2·0 cm	3 (2–5)	Inappropriate
>2·5 cm	7 (4–8)	Appropriate
>3·0 cm	8 (6–8)	Appropriate
>3·5 cm	4 (3–7)	Uncertain
>4·0 cm	3·5 (2–6)	Inappropriate
The same definition of pre-stenotic dilation can be used for both naive and anastomotic small bowel strictures	8 (8–9)	Appropriate
Pre-stenotic dilation should be scored as a continuous measurement (in cm within 1 decimal place)	8 (7–8)	Appropriate
Pre-stenotic dilation should be scored as absent, mild, moderate, severe, or unclear (due to bowel gas shadowing of the posterior wall)	6 (2–8)	Uncertain

CHARITÉ

Geräteeinstellungen

1 TIEFE
- Depht
- Ziel: Struktur komplett abgebildet, inkl. 1-2cm darunter für Schallverstärkung/-abschwächung

2 FOKUS
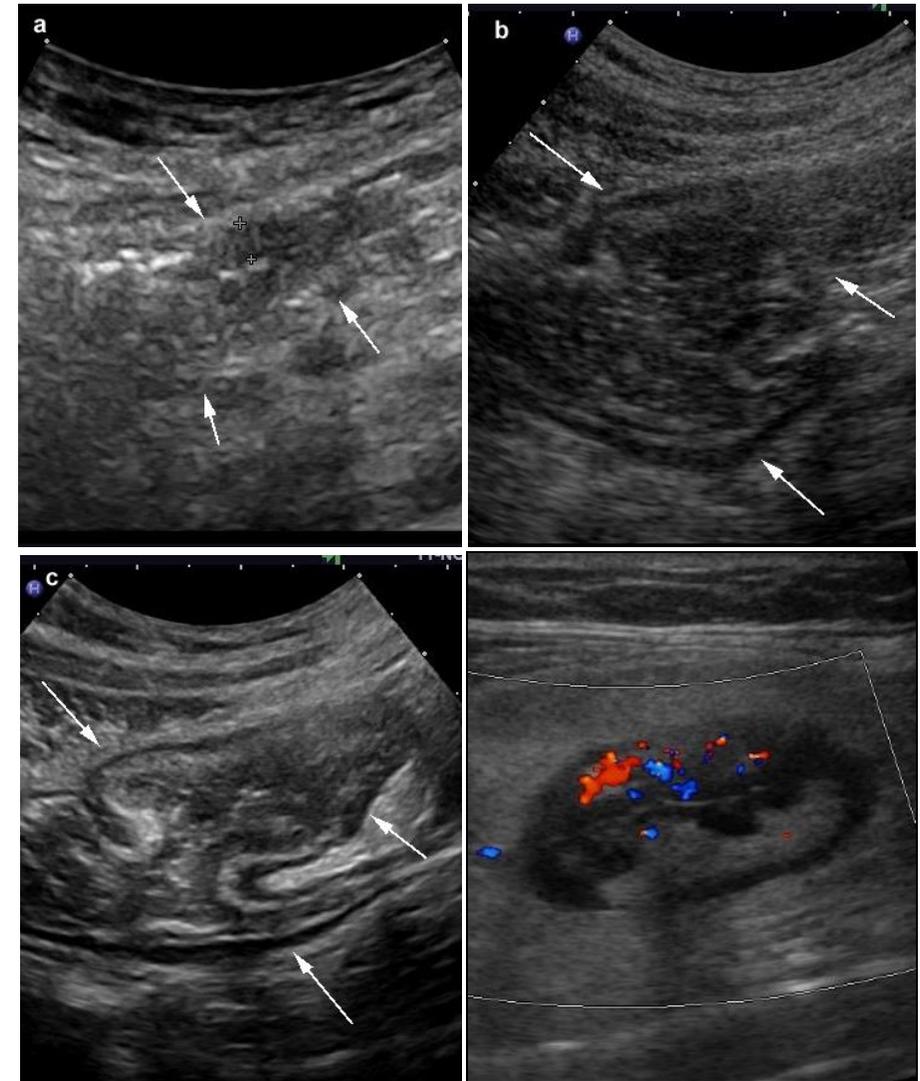- Fokus auf Höhe der Zielstruktur oder knapp darunter

3 GAIN
- Overall-Gain – meist Drehregler, Ziel „natürliche Helligkeit: Flüssigkeit Schwanz, Knochen weiss
- Tiefen-Gain – meist Schieberegler, Ziel gleichmäßig helles Bild)

4 COLOUR
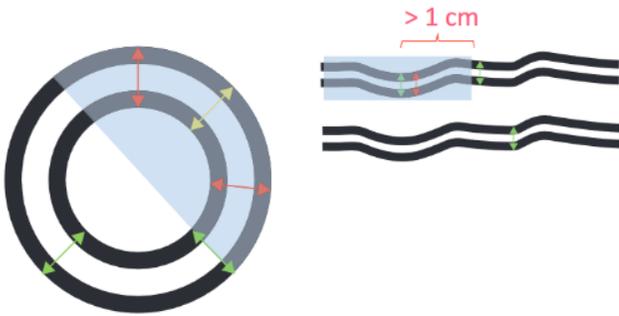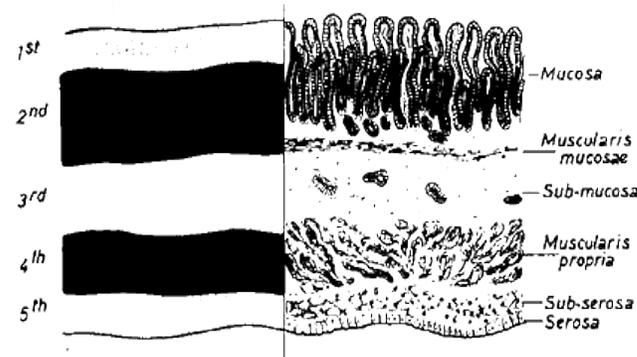- Niedrige PRF, Alliasing vermeiden
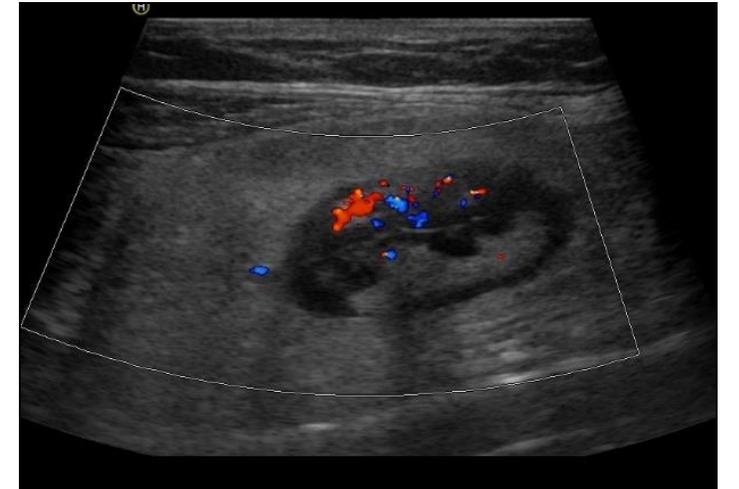
Messparameter

Die großen 3

1 DARMWANDDICKE

2 SCHICHTUNG
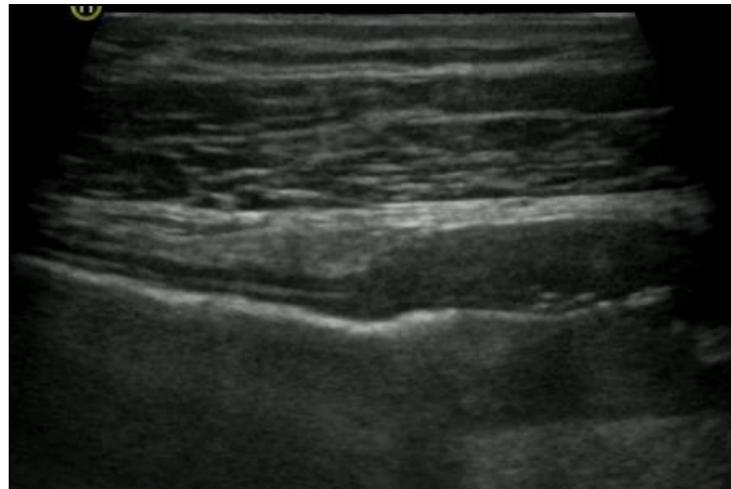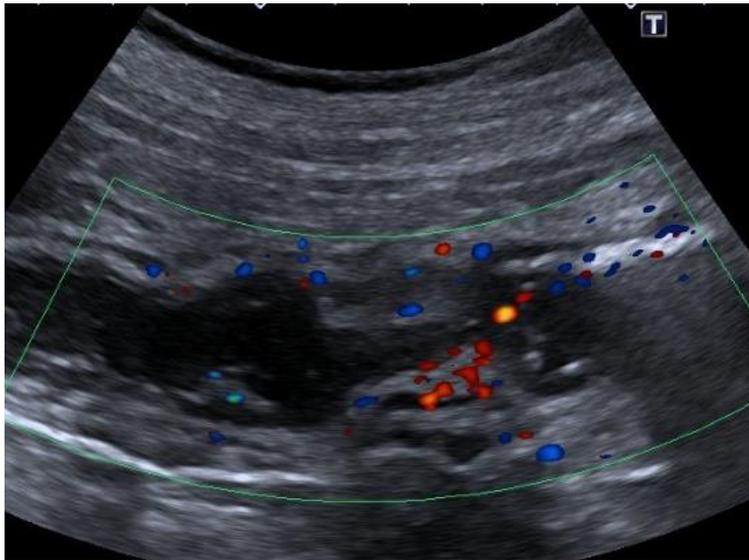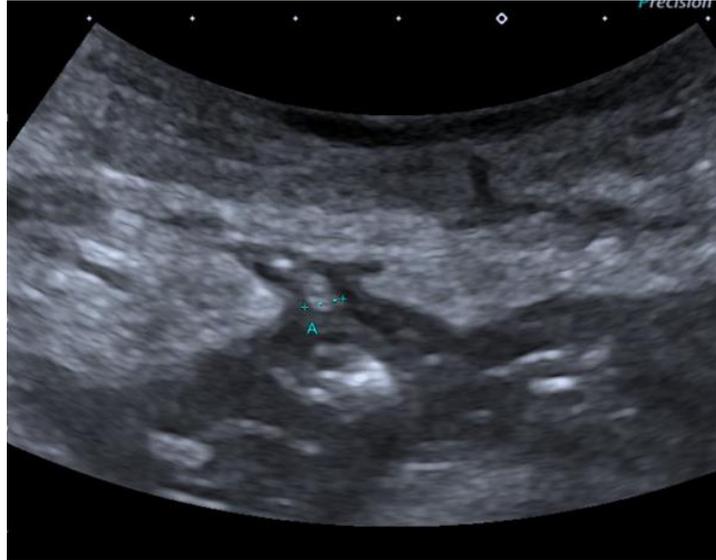
3 VASKULARISATION

Messparameter

Add on

1 STENOSE/DILATATION

2 FISTEL/ABSZESS/MESENTERITIS

3 LK/FLÜSSIGKEIT