international bowel
ULTRASOUND GROUP

Pregnancy TPUS

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IBUS Advanced Ultrasound Workshop – Module 3
DDW, Chicago, IL, May 4th, 2026

Workshop organised in collaboration with

Disclosures

Consultancy

Abbvie, AlphaSigma, Amgen, Biogen, Boehringer, Bristol Myers Squibb, Celltrion, Celgene, Hospira, MSD Sharp & Dome GmbH, Mundipharma, Dr. Falk Pharma GmbH, Galapagos, Gilead, Janssen, Lilly, MSD Sharp & Dome GmbH, Novartis, Takeda Pharma GmbH

Speakers honoraria

Abbvie, Amgen, Bristol Myers Squibb, Celltrion, Celgene, Dr. Falk Pharma GmbH, Ferring Arzneimittel GmbH, Galapagos, Janssen, Lilly, MSD Sharp & Dome GmbH, Pfizer, Roche, Takeda Pharma GmbH, Vifor

IUS during pregnancy

Recommendation 44

In pregnant women with features of active IBD we suggest intestinal ultrasound or MRE (without the use of gadolinium) to evaluate the bowel. [EL3] Endoscopy should be reserved for situations where IUS or MRE are insufficient to make a therapeutic decision. [EL5]
AGREEMENT 100 %

ECCO-ESGAR-ESP-IBUS Diagnostic Guideline *JCC* 2025

Feasibility of IUS during pregnancy

Feasibility of IUS usually changes between first and third trimester in the following segments :

a. Rectum
b. Sigmoid colon
c. Descending colon
d. Transverse colon
e. Ascending colon
f. Terminal ileum

Which answer is correct?

1. In all segments
2. In no segment
3. Terminal ileum and sigmoid colon
4. Descending colon, transverse colon, ascending colon
5. Rectum

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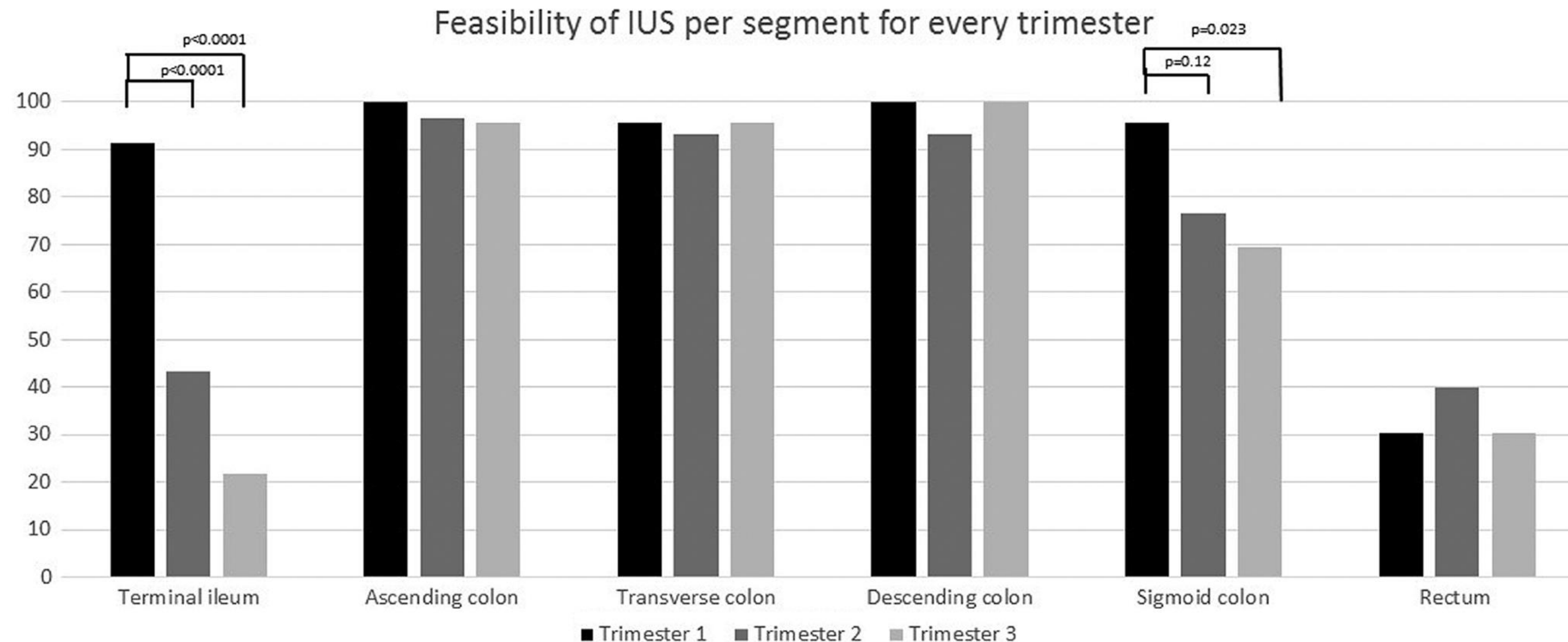
Feasibility of IUS per segment per trimester



De Voogt F et al. *JCC* 2022

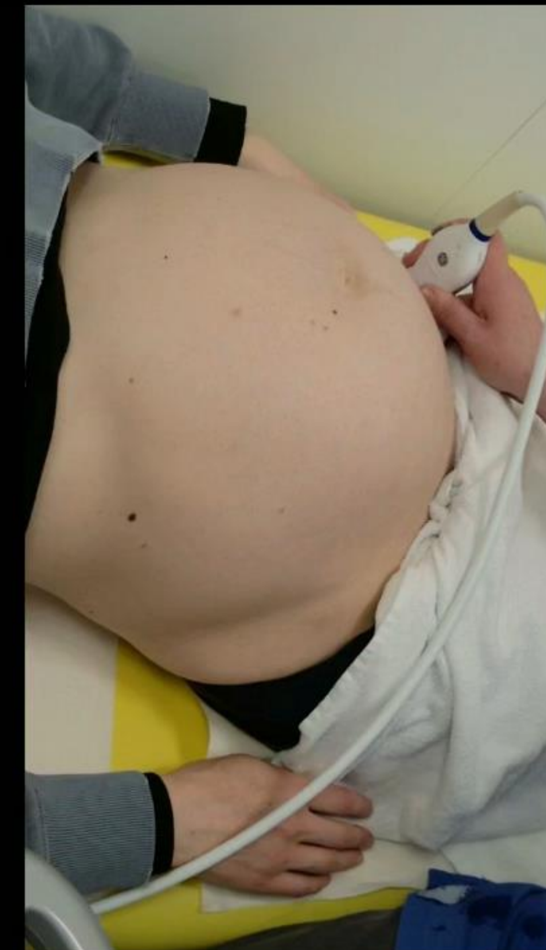
Feasibility of IUS per segment per trimester

Statement 2

As pregnancy progresses, particularly towards the end of the 2nd and in the 3rd trimester, visualisation of the terminal ileum, sigmoid and, to a lesser extent, the transverse colon may be challenging due to the gravid uterus. Given the safety and non-invasive nature of IUS, this should not detract from attempting to perform IUS, where it is available.

Fraquelli M; Topical Review on IUS during pregnancy ECCO 2026 P550

Klinikum Lüneburg/Gastroenterologie d, s
23/03/26 20:10:37 ADM
MI 1.4 TIs 0.6
C1-6
Abdomen
LOGIQ
E10
FR 52
CHI X
Frq 4.5
Gn 50
S/A 4/3
Sk. B/0
D 8.0
DR 78
AO% 100



IUS during third trimester – supine position

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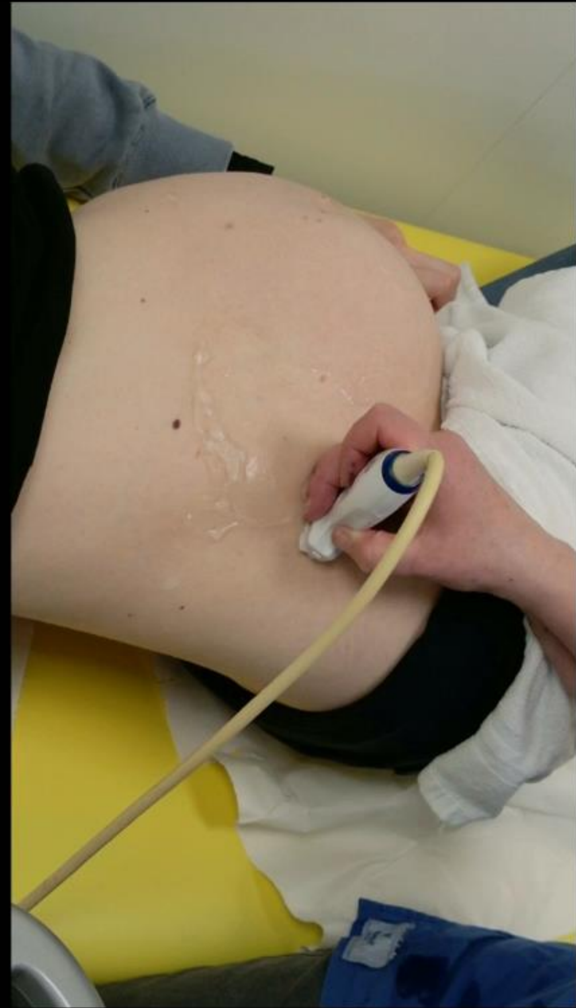
23/03/26 20:15:08 ADM
MI 1.4 TIs 0.5 L2-9
Abdomen
FR 43
LOGIQ
E10
CHI X
Frq 9.0
Gn 44
S/A 4/2
Sk. B/0
D 5.0
DR 72
AO% 100



IUS during third trimester – left lateral position

IUS to determine disease activity during pregnancy

Statement 6

Combining IUS (with BWT cut-off of 3.0 mm) and FCP (with a cut-off of 100 ug/g) is an accurate approach to distinguish active disease from quiescent disease in pregnant IBD patients, regardless of clinical disease activity state.

Fraquelli M; Topical Review on IUS during pregnancy ECCO 2026 P550

IUS to determine disease activity during pregnancy

<u>Statement 4</u>

Where IUS is deemed adequate, a BWT>3.0 mm is highly accurate in determining active disease throughout pregnancy but accuracy decreases in third trimester

Fraquelli M; Topical Review on IUS during pregnancy ECCO 2026 P550

Perianal CD, perianal pain, fecal vaginal discharge
Pregnancy third trimester

6585

2

4

6

WL: 128 WW: 256 [D]

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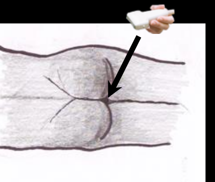


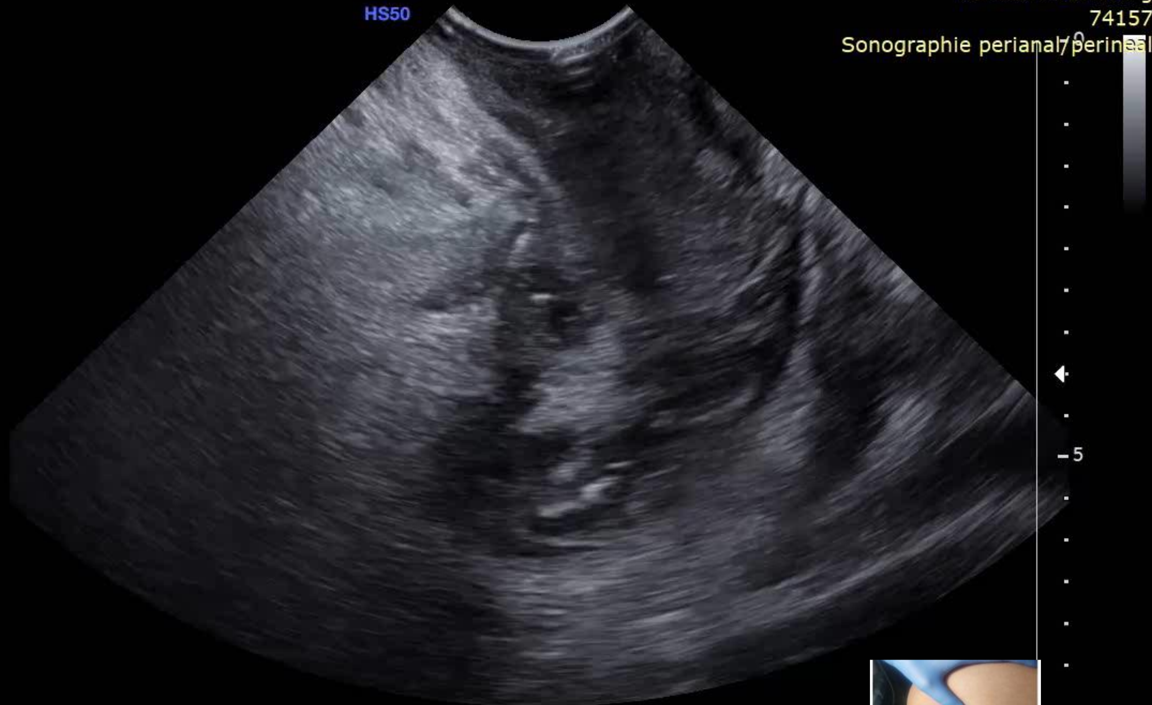
TPUS during pregnancy

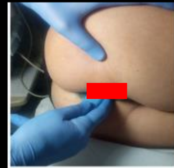
Statement 3

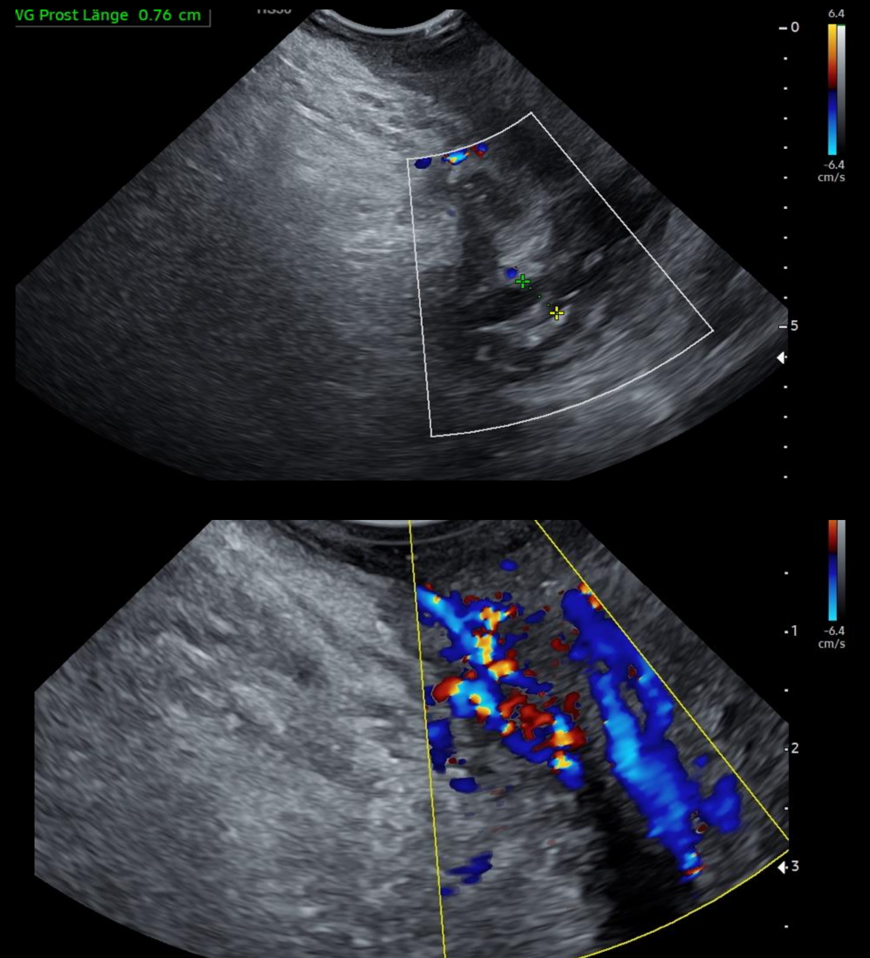
Normal parameters for TP-IUS in healthy pregnant patients and pregnant patients with IBD in remission need to be defined before it can be routinely recommended for assessment of proctitis in pregnancy.

Fraquelli M; Topical Review on IUS during pregnancy ECCO 2026 P550
Greeve T et al. *JGH Open* 2024

Michael 43 years old: CD L3B3p
ileal, rectal and perianal CD, perianal pain







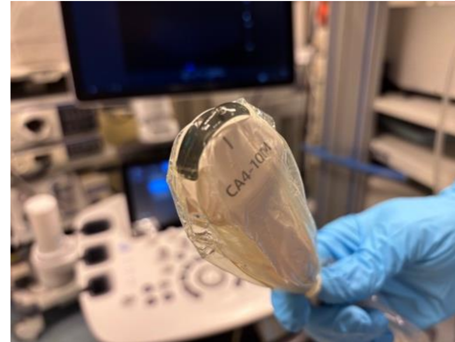
Transperineal Ultrasound (TPUS)

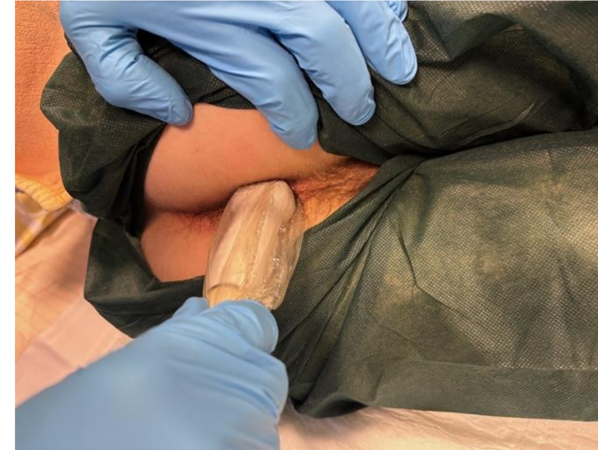
Micro-convex probe

~ 4-9 MHz

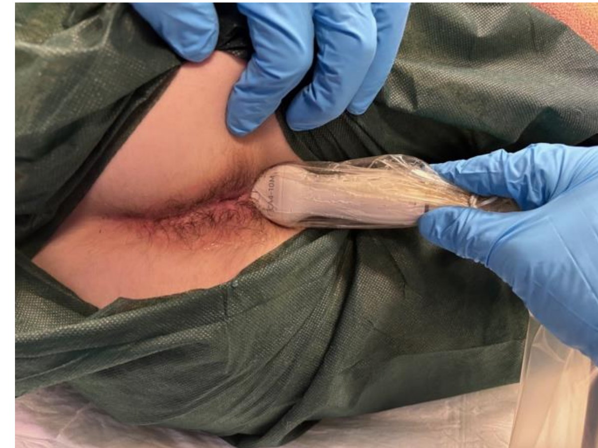
High frequency linear probe

~ 7-18 MHz





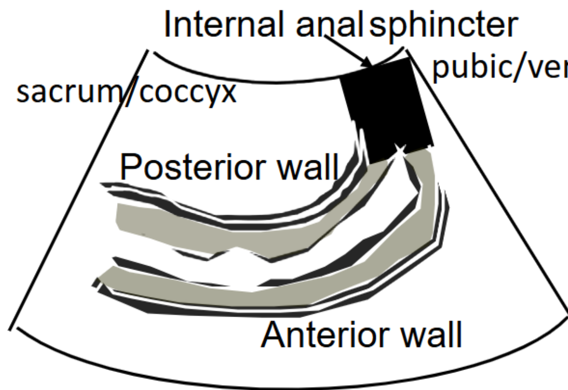
Saggital view

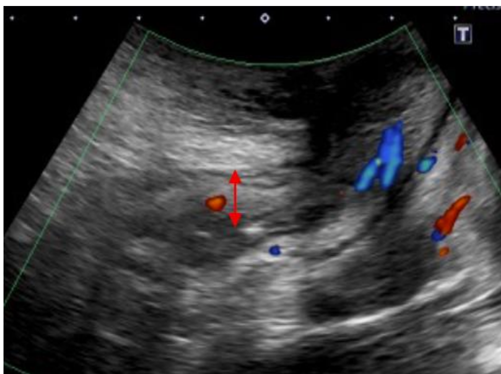


Axial view

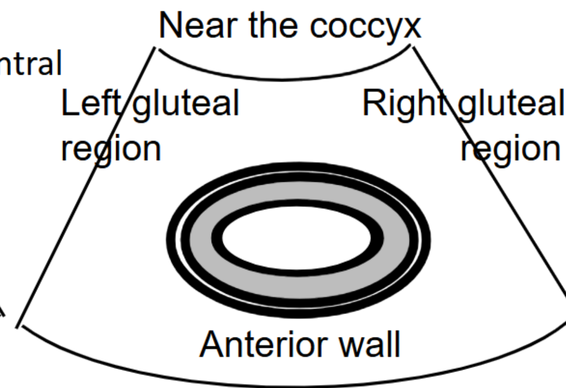
TPUS – Use of standardized protocols

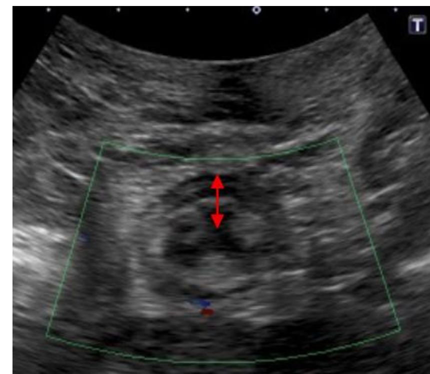
a) Sagittal (long-axis) view



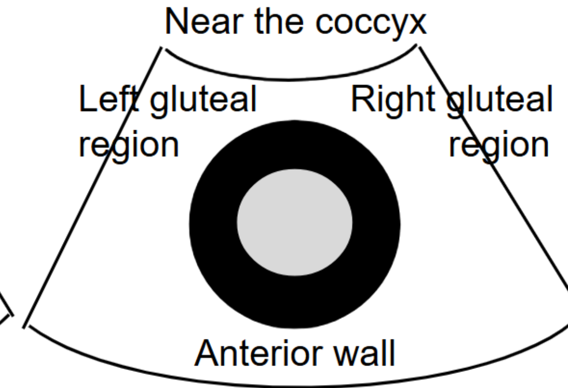


a) Coronal (short-axis) view from the posterior side

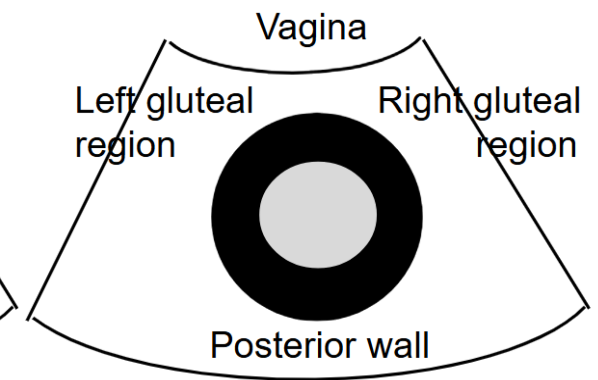


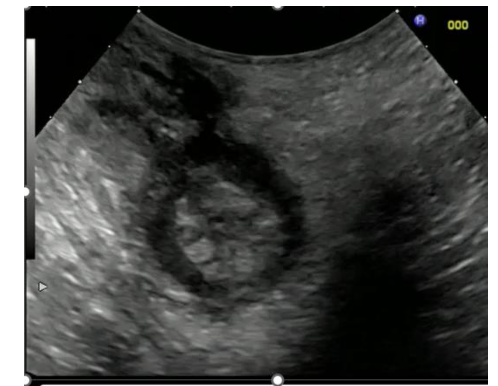


c) Axial (short-axis) view from the posterior side



d) Axial (short-axis) view from the anterior side (or vagina) *optional





Sagami S; Topical Review on TPUS in IBD; ECCO 2026 DOP10

What are relevant parameters that should be included in a TPUS report?
Which answer is wrong?

1. Confidence of findings
2. Angle of defect of internal anal sphincter
3. Rectal wall CDS score
4. Internal fistula opening and distance from anal verge
5. None of these parameters need to be included

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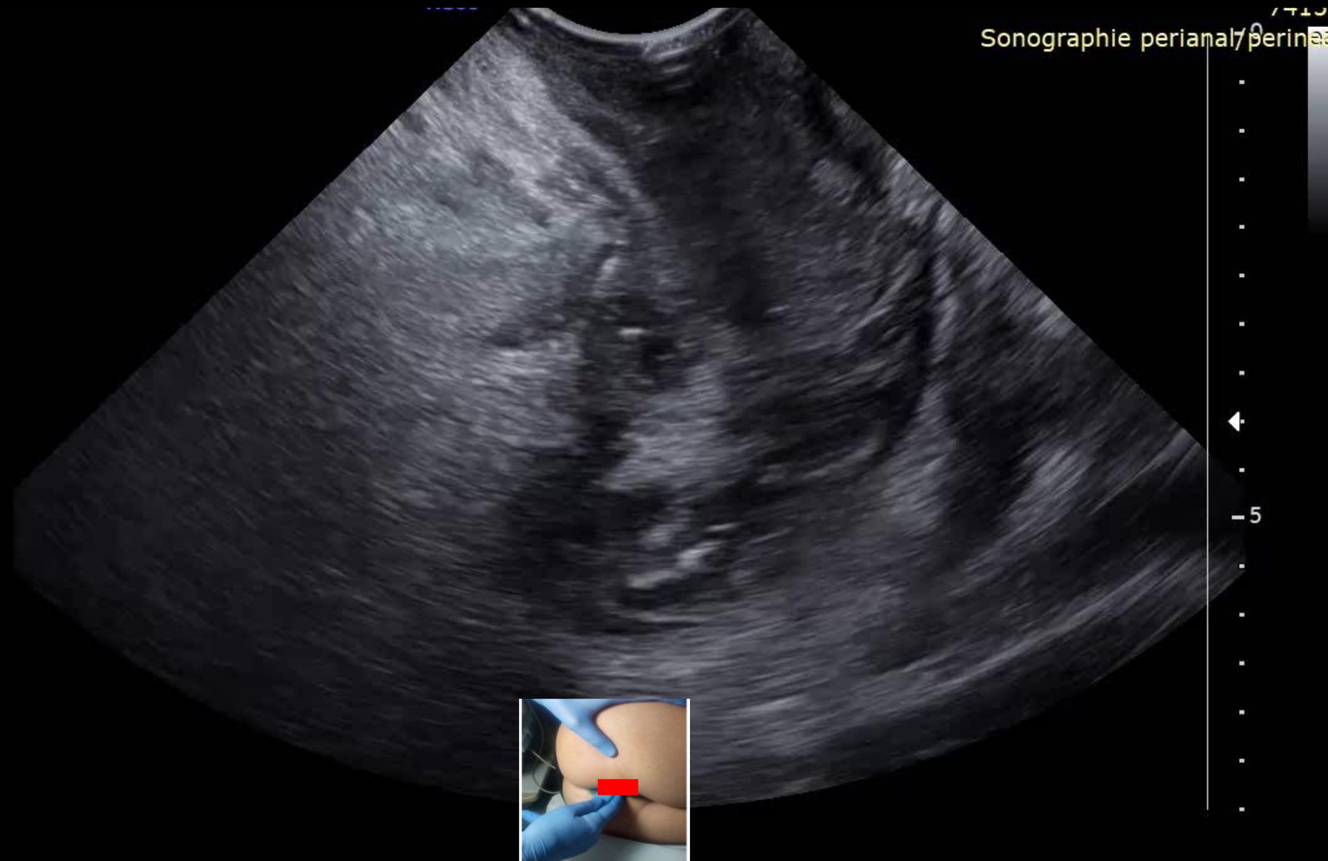
Michael 43 years old: CD L3B3p
ileal, rectal and perianal CD, perianal pain

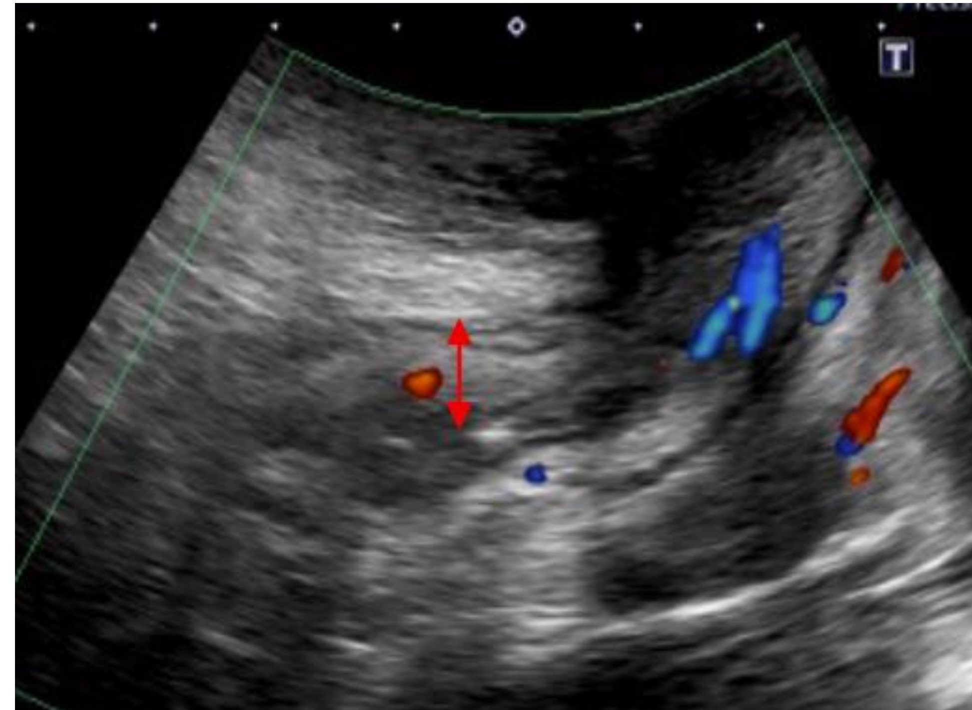
High trans-sphincteric Fistula with extensions



TPUS – Measurement BWT

Statement 6

Measure rectal BWT on the anti-dependent **posterior rectal wall** (or anterior wall if necessary) approximately 1–3 cm proximal to the anal verge. Position the focal zone at the rectal wall; use minimal steady compression within patient comfort. BWT should include at least the **inner five sonographic layers (mucosa, submucosa, inner circular muscle, intermuscular plane, outer longitudinal muscle).**



Sagami S; Topical Review on TPUS in IBD; ECCO 2026 DOP10

Perianal CD – Classification by TPUS

Number of fistulae/sinuses/abscesses

Parks classification of each fistula

Description of all complex fistula features

Assessment of sphincter integrity

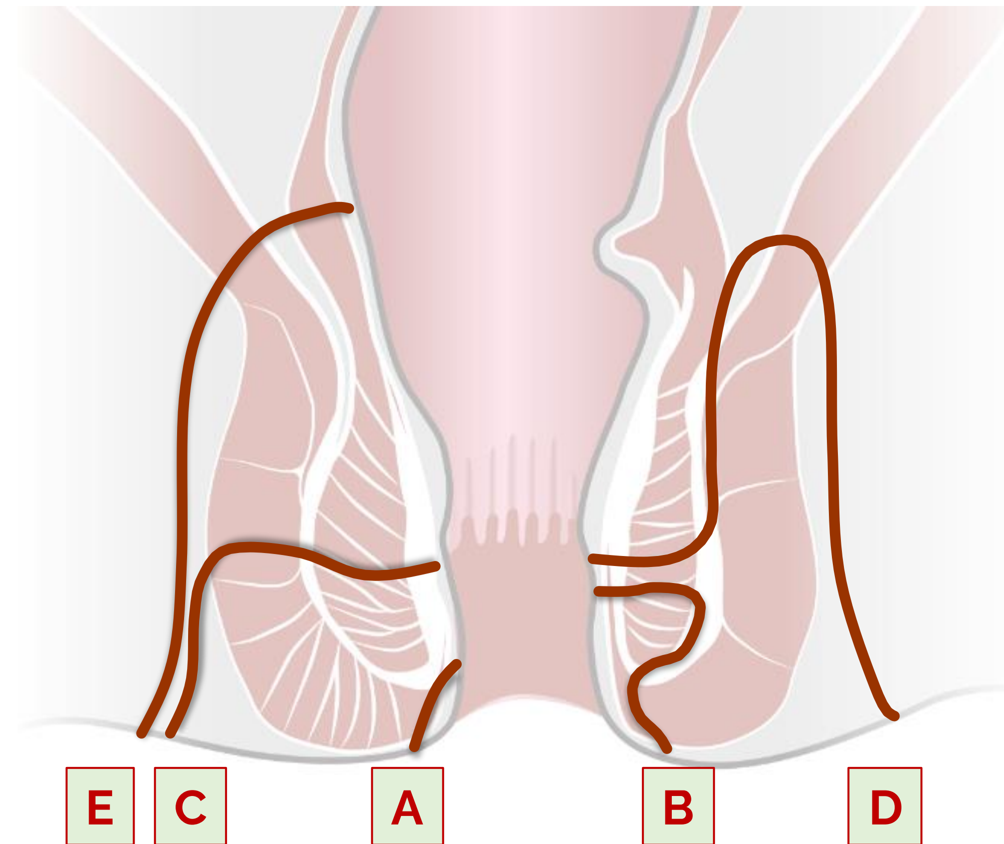
Statement 10

Classify fistulas anatomically by Parks (intersphincteric, trans-, supra-, extrasphincteric) and add a simple vs complex designation for therapeutic planning. Report internal openings, extensions, and associated collections.

Sagami S; Topical Review on TPUS in IBD; ECCO 2026 DOP10; Kucharzik T et al JCC 2022

Parks Classification of Perianal Fistula

A. superficial
B. Inter-sphincteric
C. Trans-sphincteric
D. Supra-sphincteric
E. Extra-sphincteric



1 Parks AG. et al. *Br J Surg.* 1976;63:1-12. 2 Sandborn WJ. et al. *Gastroenterology* 2003;125:1508-30.

Baseline imaging reporting template (Case Michael)

Fistula reporting descriptors:
Number of separate fistulae present:
Complexity: simple/**complex**
For each fistula:

Fistula type:	superficial/intersphincteric/**high transphincteric**/suprasphincteric/ extrasphincteric
Seton visible:	**no**/yes
Internal opening:	[clock face position—relative to anal canal] _**6**_ **o'clock**
Internal opening:	distance from anal verge [**1.0 cm**] * OR **anal canal** lower third/**mid-third**/upper third/**lower rectum**
External opening:	[clock face position—relative to anal verge] **6 o'clock**/not applicable [blind ending]
External opening:	distance from anal verge [**2 cm**]
External opening position:	**perineum**/gluteal/vagina/labia/scrotum/penis/other/blind ending
Extension:	none/single, unbranched/single, branched/**multiple**
Additional	fistula descriptors: **presacral space, rectal**

Baseline imaging reporting template (Case Michael)

For each extension:	
Extension form:	**blind ending**/to skin/to other organ, **and into the rectum**
Extension:	linear intersphincteric/horseshoe-shaped intersphincteric/infralevator/supralevator/ transphincteric
Extension position:	[clock face—relative to anal canal or rectum] **6 o'clock**
Extension end position:	perineum/ischioanal fossa/levator/mesorectum/ **presacral space**/gluteal/vagina/labia/scrotum/ penis/other
Abscess/collection present [≥10 mm]:	**no**/yes: ___ mm
Additional extension descriptors:	[free text]
For each abscess:	
Abscess/collection position:	[clock face—relative to anal canal or rectum] __ o'clock
Abscess/collection position:	horseshoe intersphincteric/infralevator/supralevator perineum/blind ending/gluteal/vagina/labia/ scrotum/penis
Additional abscess descriptors:	[free text]

Baseline imaging reporting template (case Michael)

***Other disease complications present**:* yes/**no**

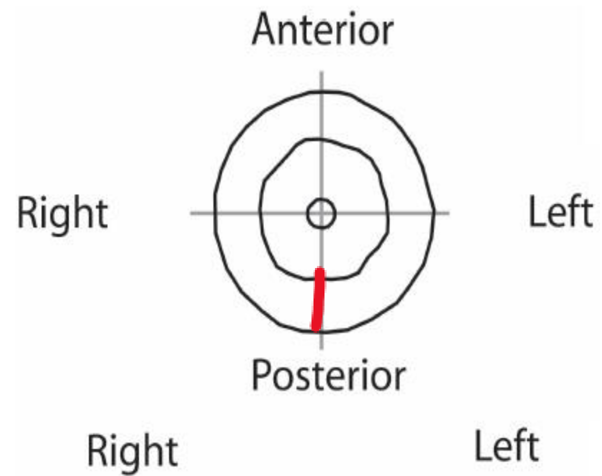
- **Rectal wall/pouch wall thickening:** **no**/yes
- **Proposed diagnosis:** proctitis/pouch complication/hidradenitis suppurativa/suspicion of malignancy
- **Additional complication descriptors:** [free text]

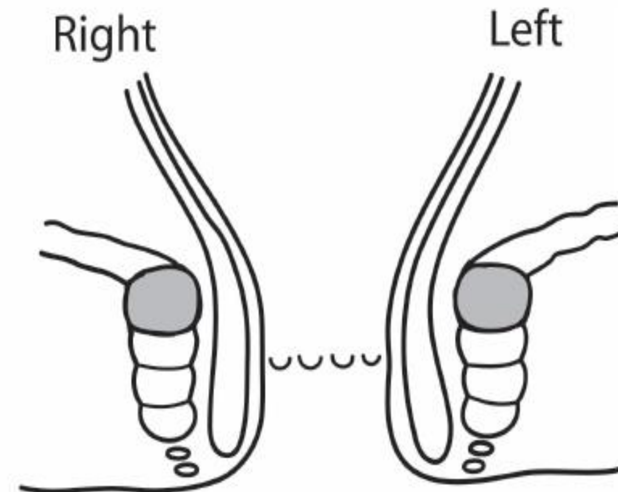
Anal sphincter integrity and scarring:

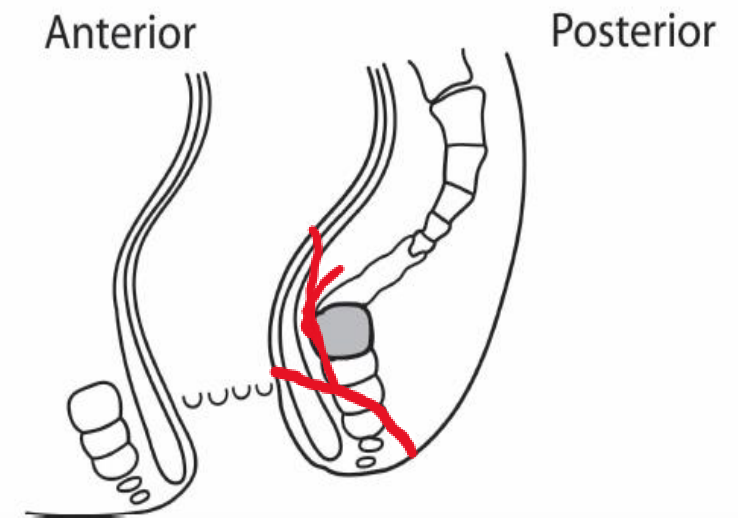
- **Internal sphincter intact:** no/**yes**
- **Angle of defect:** _____ position of defect: _____
- **External sphincter intact:** no/**yes**
- **Angle of defect:** _____ position of defect: _____
- **Puborectalis intact:** no/**yes**
- **Angle of defect:** _____ position of defect: _____
- **Description of sphincter abnormalities present:** [free text]

Conclusion and recommendations: [free text]

Documentation of Perianal CD

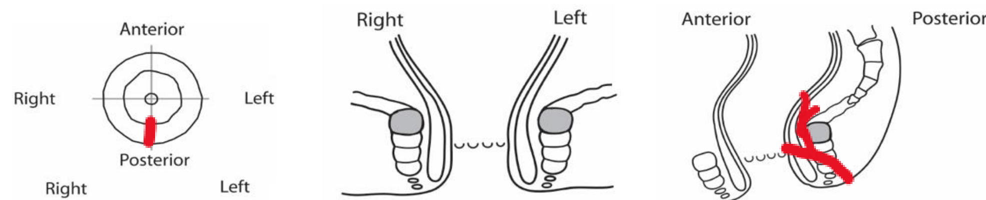


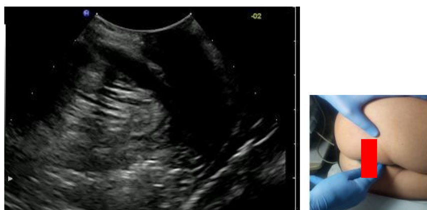




Transperineal Ultrasound (PUS-) REPORT

NAME: Anna
INDICATIONS and DISEASE CHARACTERISTICS
40y old woman. Ileal and Perianal Crohn's disease (L3B3p) since 2013.
Currently: Perianal fistula with secreting porus posterior
INTRA-PROCEDURE FEATURES
No technical limitation. Normal body status
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: Miniprobe 2-5 MHz, Linear probe 2-9 MHz





RESULTS
Fistula reporting descriptors:
- **Number of separate fistulae present: 1**
- **Complexity: complex**
- **For each fistula:**
- **Fistula type: high transsphincteric**
- **Seton visible: no**
- **Internal opening: distance from anal verge [1.0; 2.5 cm]**
- **External opening: [clock face position—relative to anal verge] 6 o'clock**
- **External opening: distance from anal verge [2 cm]**
- **External opening position: perineum**
- **Extension: presacral space and into the rectum**
- **Abscess/collection present [≥10 mm]: no**

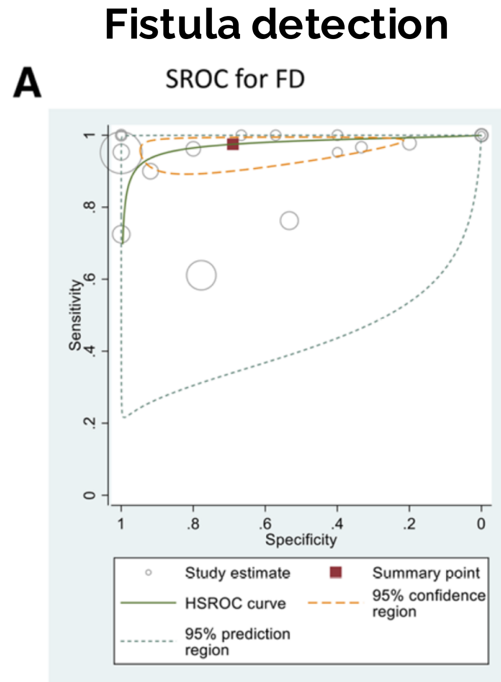
***Other disease complications present:* no**
- **Rectal wall/pouch wall thickening: no**

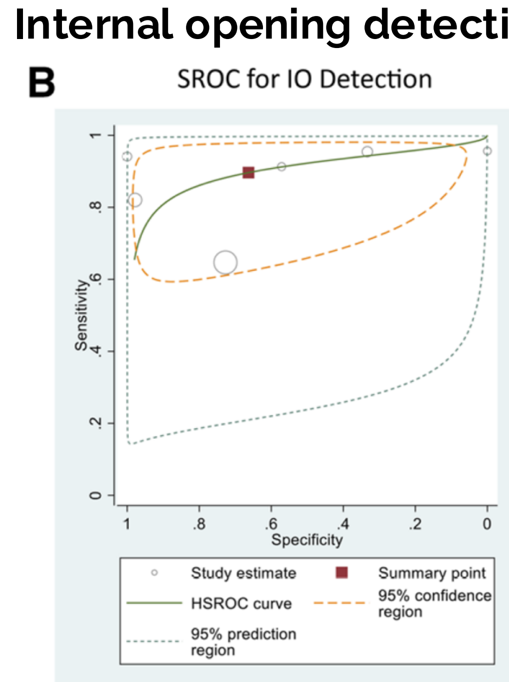
Anal sphincter integrity and scarring:
- **Internal sphincter intact: yes**

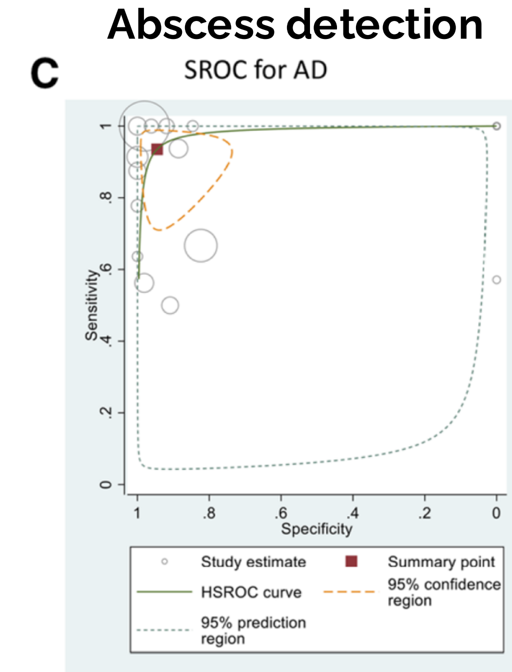
DESCRIPTION/DIAGNOSIS:
Perianal Crohn's disease with high transsphincteric fistula posterior without proctitis

RECOMMENDATION: Complete Ileocolonoscopy. Seton drainage. Treatment with Infliximab

TPUS in detecting perianal disease: Meta-analysis







	Fistula detection	Internal opening detection	Abscess detection
Pooled Sensitivity.:	**97%**	**89%**	**93%**
Pooled Specificity:	**69%**	**66%**	**95%**
Accuracy	**88%**	**78%**	**92%**

N= 29 studies, 1474 patients

Lim TC et al JCC 2026

Take Home

- IUS in pregnancy is feasible. Visualization of TI and sigmoid colon may be challenging in the 2nd/3rd trimester
- TPUS can be performed during pregnancy and is feasible and well tolerated across trimesters
- TPUS is a feasible, well-tolerated bedside modality for assessing perianal complications in CD as well as distal rectal inflammation in UC/pouchitis
- TPUS: Correct classification of disease as well as reporting and documentation is crucial

Thank You!!!