

Supplementary file:

Suppl. Table 1: IUS items used in other studies		
SR children (n=14) (van Wassenae et al., 2019)	SR indices adults (n=25) (Goodsall et al., 2021)	Delphi study adults (Novak et al., 2020)
BWT n= 13/14 (cut-offs: 1.5, 2, 2.5, 3, 4 mm)	BWT n= 25/26 (cut-offs: 3, 4, 5 mm)	BWT
Doppler n=9/14	Doppler n=15/25	WLS
Lymph nodes n= 6/14	Lymph nodes n=1/25	Doppler
Mesenteric fat n= 4/14	Mesenteric fat n=1/25	Mesenteric fat
WLS n=4/14	WLS= 15/25	
Colonic haustrations n=1/14	Colonic haustrations n=1	
Peristalsis n=0	Peristalsis n=1	
BWT: bowel wall thickness, IUS: intestinal ultrasound, SR: systematic review, WLS: wall layer stratification.		

Suppl. Table 2: IUS measurements	
Bowel wall thickness	Measured from the lumen/mucosa interface to the muscularis/serosa interface in a non-contracted bowel loop, next to a haustration at the most severely inflamed part of every bowel segment. BWT was measured twice in the longitudinal plane and twice in the cross-sectional plane and the mean of these four measurements was used.
Bowel wall perfusion	Colour Doppler (no /spots/ stretches/ stretches into mesentery)
Mesenteric fat proliferation	Yes or no
Visibility of colonic haustrations	Yes or no
Visibility of wall layer stratification	Yes or no
Peristalsis	Only for small bowel segments. Visible within 10 seconds? Yes or no
Presence of lymph nodes and size	Yes or no. Size measured at the short axis
Presence of complications	Abscesses, strictures, fistulas: yes or no

Suppl. Table 3: cut-off values for bowel wall thickness (BWT) based on ROC-curves <i>online only</i>		
	Sensitivity	Specificity
Cut-off 1 : low BWT		
TI: BWT> 2.0 mm	90%	45%
Colon: BWT >1.6 mm	89%	31%
Small bowel: BWT> 1.7 mm	91%	41%
Cut-off 2 : medium BWT		
TI: BWT >3.0 mm	73%	76%
Colon: BWT> 2.0 mm	72%	69%
Small bowel: BWT> 2.1 mm	73%	80%
Cut-off 3 : high BWT		
TI: BWT>3.7 mm	62%	89%

Colon: BWT> 2.7 mm	51%	89%
Small bowel BWT> 2.5 mm	46%	90%
Cut-off associated with 1) around 10% false negatives, 2) optimal sensitivity and specificity, and 3) around 10% false positives.		

Suppl. Table 4a: univariate logistic regression with IUS items for TI				
IUS item	B (SE)	OR	95%CI	p-value
BWT 2.0-3.0 mm	0.34 (0.27)	1.41	0.35-5.64	0.20
BWT 3.0-3.7 mm	1.29 (0.29)	3.65	0.37-9.49	<0.001
BWT >3.7 mm	2.44 (0.38)	11.50	2.48-44.55	<0.001
Mesenteric fat infiltration	0.91 (0.50)	2.49	0.93-6.64	0.069
Doppler				
Spots	-0.54 (0.67)	0.58	0.16-2.19	0.42
Stretches	1.03 (0.96)	2.80	0.43-18.38	0.28
Stretches into mesentery	1.44 (0.66)	4.20	1.15-15.37	0.03
Peristalsis	1.96 (0.60)	7.09	2.21-22.81	0.001
WLS-Abnormal wall layer stratification	2.0 (0.70)	7.37	1.87-29.08	0.004
BWT: bowel wall thickness, IUS: intestinal ultrasound, TI: terminal ileum, SE: standard error.				

Suppl. Table 4b: univariate ordinal regression with IUS items for colon segments				
IUS item	Estimate (SE)	OR	95%CI	p-value
BWT 1.6-2.0	0.29 (0.29)	1.34	0.77-2.35	0.30
BWT 2.0-2.7 mm	1.26 (0.30)	3.50	1.95-6.35	<0.001
BWT >2.7 mm	2.77 (0.33)	15.91	8.30-30.48	<0.001
Mesenteric fat infiltration	2.09 (0.28)	8.10	4.65-14.08	<0.001
Doppler				
Spots	0.66 (0.24)	1.95	1.21-3.12	0.006
Stretches	1.69 (0.39)	5.42	2.23-13.17	<0.001
Stretches into mesentery	1.98 (0.34)	7.24	3.10-16.89	<0.001
Abnormal colonic haustrations	1.68	5.35	2.81-10.21	<0.001
WLS-Abnormal wall layer stratification	1.84 (0.36)	6.32	3.11-12.82	<0.001
Lymph nodes	1.64 (0.34)	5.15	2.63-10.09	<0.001

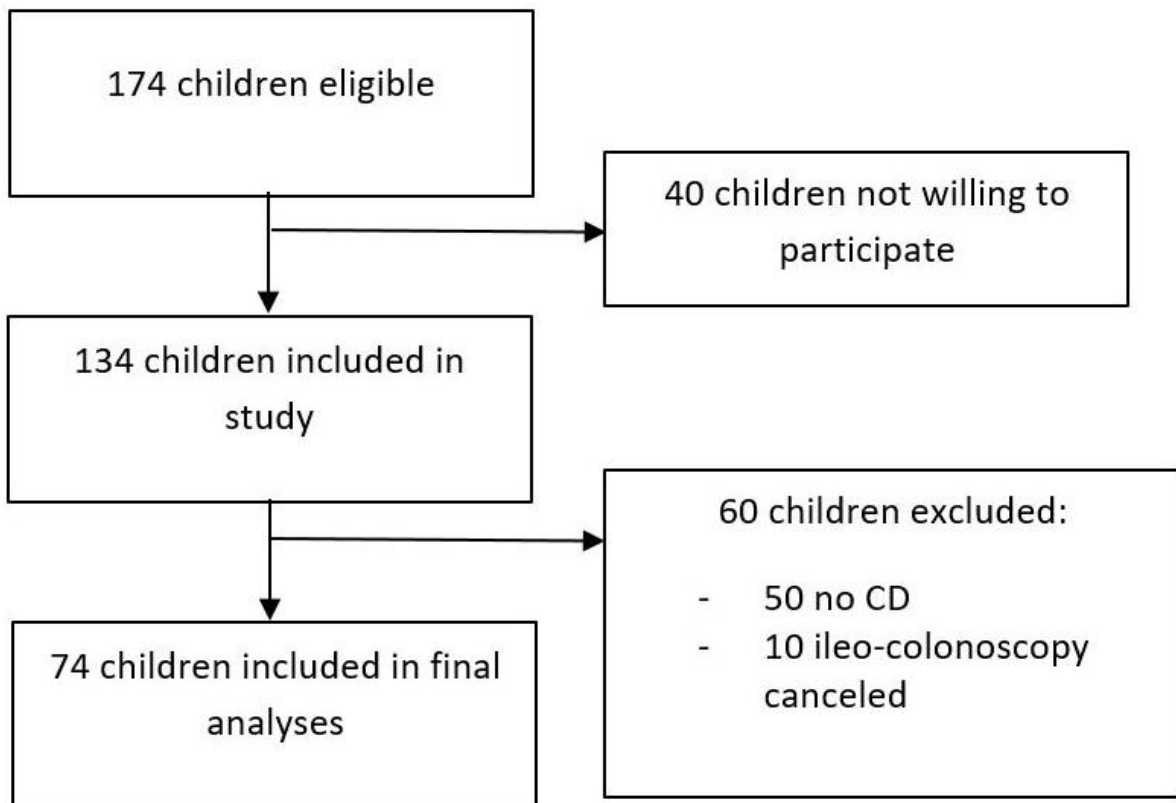
Estimate = predicted change in log odds for being in higher SES-CD category, corrected for other variables in model. BWT: bowel wall thickness, IUS: intestinal ultrasound, SE: standard error.

Suppl. Table 5a: IUS items in final model for TI segments

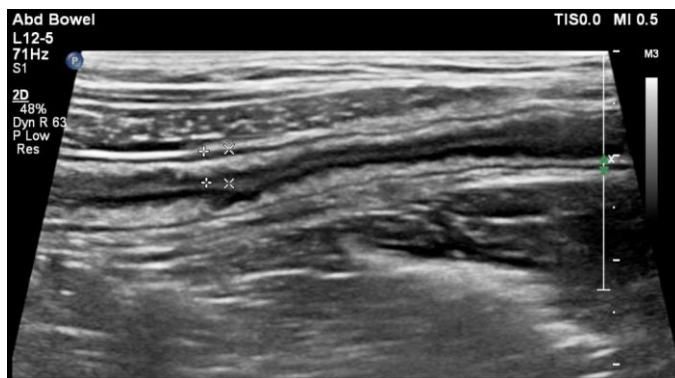
IUS item	B (SE)	95% CI*	OR	95%CI	p-value
BWT 2.0-3.0 mm	0.34 (0.27)	-0.19-0.88	1.41	0.35-5.64	0.20
BWT 3.0-3.7 mm	1.29 (0.29)	0.72-1.90	3.65	0.37-9.49	<0.001
BWT >3.7 mm	2.44 (0.38)	1.74-3.28	11.50	2.48-44.55	<0.001
Pseudo R ² : 0.15 (Cox&Snell), 0.20 (Nagelkerke). BWT: bowel wall thickness, IUS: intestinal ultrasound, TI: terminal ileum * Result from bootstrapping					

Suppl. Table 5b: IUS items in final model for colon segments

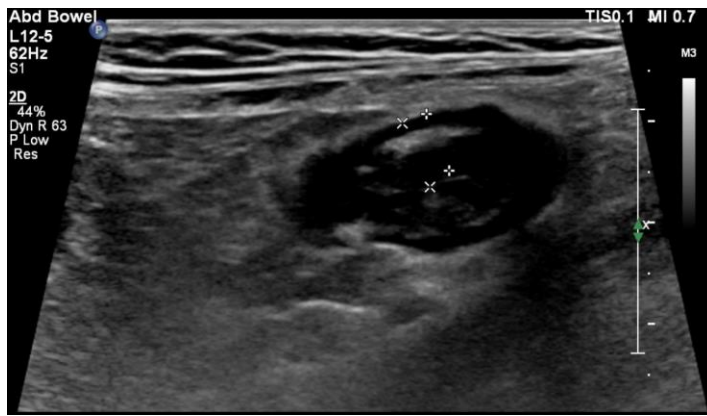
IUS item	Estimate (SE)	95% CI*	OR	95%CI	p-value
BWT 1.6-2.0	0.35 (0.29)	-0.31-0.94	1.28	0.73-2.25	0.39
BWT 2.0-2.7 mm	1.34 (0.30)	0.52-1.80	3.13	1.72-5.67	<0.001
BWT >2.7 mm	2.16 (0.37)	1.48-3.00	8.63	4.20-17.76	<0.001
Mesenteric fat infiltration	1.10 (0.33)	0.42-1.88	3.02	1.58-5.76	<0.001
Estimate = predicted change in log odds for being in higher SES-CD category, corrected for other variables in model. Model fitting information: -2Log Likelihood p-value <0.001, goodness of fit p-value >0.05, Pseudo R ² : 0.27 (Cox&Snell), 0.30 (Nagelkerke). Test of parallel lines p-value >0.05. BWT: bowel wall thickness, IUS: intestinal ultrasound * Result from bootstrapping					



Suppl. Figure 1 Flowchart of patient selection. CD: Crohn's Disease



Suppl. Figure 2: longitudinal image of bowel segment, with bowel wall thickening



Suppl. Figure 3: cross-sectional image of bowel segment, with bowel wall thickening and surrounding mesenteric fat proliferation.