

PICMI - The Pediatric Inflammatory Crohn's Magnetic Resonance Enterography Index

Item	Grade	Weighting	Score	Comments
Wall thickness	Start scoring from $\geq 3\text{mm}$	(thickness) x 3	1-2 mm = 0 3 mm = 3 4 mm = 6 5 mm = 9 6 mm = 12 7 mm = 15 etc.	Measure the thickest part within the segment. Round mm to the nearest whole number.
Ulceration	None = 0 Present = 1	x 6	0 6	Mucosal indentation smaller than the full thickness of the bowel wall
Wall restricted diffusion	None = 0 Present = 1	x 9	0 9	A subjective measure of hyperintensity on highest b value trace image compared to normal bowel
Mesenteric edema	None = 0 Present = 1	x 6	0 6	T2 hyperintense signal of the mesentery adjacent to the same bowel loop assessed
Comb sign	None = 0 Present = 1	x 9	0 9	Vascular engorgement related to the bowel loop assessed

Segmental PICMI = wall thickness ($\geq 3\text{mm}$) x 3 + ulceration (0/1) x 6 + wall restricted diffusion (0/1) x 9 + mesenteric edema (0/1) x 6 + comb sign (0/1) x 9

PICMI user guide

- Segments/section: A segmental PICMI score is calculated for each of the following segments/sections, based on the worst part: jejunum, ileum, terminal ileum (within 10 cm of ileocecal valve), right colon (cecum and ascending colon), transverse colon, descending colon, sigmoid colon and rectum.

- The total PICMI score is the sum of the segmental scores for each of the involved segments.

- Small bowel scoring: If there is > 20 cm of affected bowel in the jejunum or ileum, each 20 cm length is scored as a separate segment. For example, 18 cm is one segment, 25 cm or 36cm are two segments, but 44 cm is already three separate segments (20 + 20 + 4), each receiving its own segmental score as above.

- Continuous disease versus skip lesions: If the distance between two segments of affected small bowel is ≤ 20 cm, the unaffected bowel is included in the length measurement and considered part of *continuous* disease; if the unaffected bowel between two affected segments is >20 cm, the unaffected bowel is not included in the length measurement, and the two affected segments are considered *skip* lesions, and scored separately as two different segments.

- Cutoff values in the total PICMI score to determine severity of transmural inflammation:

≤ 10	Remission
11-55	Mild inflammation
56-120	Moderate inflammation
>120	Severe inflammation

A score change in the PICMI of >20 points defines response (i.e. minimally important difference of the PICMI)