

Standardized Assessment Tools for Pediatric IBD Patients February 2023

Use these reference tools to classify the disease type and extent and with measuring disease activity in the pediatric patient with inflammatory bowel disease.

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Reviewed by the Crohn's & Colitis Foundation's Nurse & Advanced Practice Committee.

Paris Criteria

Paris Criteria—A modification of the Montreal Criteria used in defining disease location and behavior. The Paris Criteria considers: (a) age of diagnosis, (b) extent (location) of disease, (c) phenotype/severity of disease, (d) perianal phenotype (Crohn's disease), and (e) effect on growth.

Age of diagnosis is categorized as:

Birth to 10 years of age (A1a)	10 up to 17 years of age (A1b)	17–40 years of age (A2)	Greater than 40 years of age (A3)
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	Crohn's disease or indeterminant colitis	Ulcerative colitis
Extent	<p>The extent of disease is based on:</p> <ul style="list-style-type: none"> • Macroscopic findings of ulcerations or erosions seen on endoscopic evaluation and/or evidence of small bowel disease found on video capsule, radiographic and/or nuclear medicine studies. • Distal 1/3 of Ileum (TI) +/- limited cecal disease (L1) • Colonic (L2) • Ileocolonic (L3) • Small bowel disease proximal to ligament of Treitz and proximal to TI (L4a) • Small bowel disease distal to ligament of Treitz and proximal to TI (L4b) <p><i>*The extent of disease is always the worst that was ever documented.</i></p>	<p>The extent of disease is based</p> <ul style="list-style-type: none"> • Macroscopic findings of ulcerations or erosions seen on endoscopic evaluation • Ulcerative proctitis (E1) • Left-sided disease (distal to splenic flexure) (E2) • Extensive disease (distal to hepatic flexure) (E3) • Pancolitis (proximal to hepatic flexure) (E4) <p><i>*The extent of disease is always the worst that was ever documented.</i></p>
Phenotype	<ul style="list-style-type: none"> • The phenotype for Crohn's disease or indeterminate colitis describes the behavior of the disease. It is documented as • Inflammatory (B1) • Stricturing (B2) • Penetrating (B3) • Both penetrating and stricturing disease (B2B3). • The presence or absence of perianal involvement (p) 	<ul style="list-style-type: none"> • The phenotype (severity) of ulcerative colitis is based on PUCAI score. It is documented as • Never severe (S0) • Severe (S1) PUCAI >65
Growth	<ul style="list-style-type: none"> • No evidence of growth delay (Go) • Evidence of growth delay (G1) 	

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Full article

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Physicians Global Assessment

Physicians Global Assessment is a classification system created by Improve Care Now used for identifying disease activity status in children and adolescents with IBD. It uses a 7-day recall of symptoms thought to be secondary to IBD, physical findings, impact of function and available laboratory values to classify disease status

- Abdominal pain: presence/absence of abdominal pain and its severity
- Diarrhea: presence/absence of diarrhea and severity
- Blood in stool: presence/absence of blood in stool and volume of blood
- Activity: presence/absence of limitations on daily functioning
- Fatigue: presence/absence of fatigue and its severity
- Fistula: presence/absence of fistula or perianal disease and associated symptoms
- Weight loss: presence/absence of weight loss and severity
- Abdominal mass/tenderness: presence/absence of abdominal pain with or without mass
- Toxic appearance: presence/absence of toxic appearance
- Laboratory results: presence/absence of anemia, increased inflammatory markers and/or hypoalbuminemia categorized by severity

Based on these findings, the disease activity is categorized as

- Quiescent
- Mild disease
- Moderate disease
- Severe disease

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Pediatric Crohn's Disease Activity Index (PCDAI)

Pediatric Crohn's Disease Activity Index (PCDAI): Validated instrument for measuring disease activity in children and adolescents with Crohn's disease. Used in clinical and research application. Based on 7-day recall of clinical symptoms, weight and growth parameters, physical findings, laboratory result and general functioning. Disease activity is determined as a numerical score (0-100) based on evaluation of:

- Abdominal pain: presence/absence of abdominal pain and severity
- Stools per day: number of liquid stools and/or the presence/absence and volume of blood in stool
- Weight: stability of weight and/or degree of weight loss
- Linear growth: stability of height and/or degree of height velocity changes
- Physical findings
 - Abdominal pain: presence/absence of and severity of abdominal pain on physical exam
 - Perianal disease: presence/absence of perianal disease (including skin tags, fissure, fistula, and abscess)
 - Extra-intestinal manifestations: presence/absence of
 - Fever > 38.5 x 3 days in week
 - Arthritis
 - Uveitis
 - Erythema nodosum
 - Pyoderma gangrenosum
- Laboratory studies: the documentation of laboratory values based on the norm and variations from the norm for:
 - Hemoglobin/Hematocrit
 - ESR
 - Albumin
- Functioning and general well-being: description of general well-being and presence/absence of limitations on daily functioning (Based on a 1-week recall).
- Score ranges from 0 to 100
 - 0-10 Inactive disease
 - 10-30 Mild disease
 - >30 Moderate to severe disease

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Short Pediatric Crohn's Disease Activity Index

Short Pediatric Crohn's Disease Activity Index: Validated instrument for measuring disease activity in children and adolescents with Crohn's disease. It is a shortened version of the Pediatric Crohn's Disease Activity Index and does not include laboratory assessment. **Used in retrospective research studies when all variables may not be available.** Includes clinical findings of:

- Abdominal pain: presence/absence and severity of abdominal pain by patient report
- Stools: number of liquid stools per day and the presence/absence of visible blood
- Weight: presence/absence of weight loss. If present, the degree of weight loss
- Physical findings
 - Abdominal pain: presence/absence and severity of abdominal pain on physical exam
 - Extra-intestinal manifestations: presence/absence of
 - Fever > 38.5 x 3 days in week
 - Arthritis
 - Uveitis
 - Erythema nodosum
 - Pyoderma gangrenosum
- Functioning and general well-being: description of general well-being and presence/absence of limitations on daily functioning.
- Scores range from
 - <15 Inactive or mild disease
 - >30 Moderate–severe disease

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Modified Pediatric Crohn's Disease Activity Index

Modified Pediatric Crohn's Disease Activity Index (mod-PCDAI): Validated instrument for measuring disease activity in children and adolescents with Crohn's disease. It is a shortened version of the Pediatric Crohn's Disease Activity Index that excludes objective data. It includes laboratory assessment only. Used in clinical studies and is thought to provide an objective assessment of inflammation. Correlates with physicians global assessment and CRP. Shown to correlate with degree of mucosal healing.

- Laboratory studies: the documentation of laboratory values based on the norm and variations from the norm for:
 - Hemoglobin/Hematocrit
 - ESR
 - Albumin
 - CRP
- Scoring
 - 7.5 Remission
 - 7.5–10 Mild
 - 12.5–17.5 Moderate
 - >17.5 Severe

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Abbreviated Pediatric Crohn's Disease Activity Index

Abbreviated Pediatric Crohn's Disease Activity Index (mod-PCDAI): Validated instrument for measuring disease activity in children and adolescents with Crohn's disease. It is a shortened version of the Pediatric Crohn's Disease Activity Index and excludes height and laboratory assessment. Based on 7-day recall of clinical findings of:

- Abdominal pain: presence/absence and severity of abdominal pain by patient report
- Stools: number of liquid stools per day and the presence/absence of visible blood
- Weight: presence/absence of weight loss. If present, the degree of weight loss
- Physical findings
 - Abdominal pain: presence/absence and severity of abdominal pain on physical exam
 - Perianal disease: presence/absence and severity of perianal disease on physical exam
- Functioning and general well-being: description of general well-being and presence/absence of limitations on daily functioning (Based on a 1-week recall).
- Scoring range from
 - 0-70

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Harvey Bradshaw Score

Harvey Bradshaw Score is a validated instrument for measuring disease activity in children and adolescents with Crohn's disease. It is a simplified version of the PCDAI. Based on clinical symptoms and physical examination findings. Disease activity is determined by a numerical score based on:

- Overall well-being: ranging from very well to terrible (as reported by patient)
- Abdominal pain: presence/absence of and severity of abdominal pain (as reported by patient)
- Number of liquid stools (as reported by patient)
- Abdominal mass: presence/absence of and character of abdominal mass (as assessed by provider)
- Complications: presence/absence of extraintestinal manifestations or complications on physical examination.
 - Arthralgia
 - Uveitis
 - Erythema Nodosum
 - Aphthous ulcer
 - Pyoderma gangrenosum
 - Anal Fissure
 - New Fistula
 - Abscess
- Total scores range from
 - <5 Remission
 - 6–15 Mild disease
 - 8–16 Moderate disease
 - >16 Severe disease

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Pediatric Ulcerative Colitis Activity Index (PUCAI)

Pediatric Ulcerative Colitis Activity Index (PUCAI)—Validated instrument for measuring disease activity in children and adolescents with Ulcerative Colitis. Disease activity is determined as a numerical score based on evaluation of:

- Abdominal pain: presence/absence of and severity of abdominal pain
 - Number of stools per day
 - Stool consistency
 - Amount of blood in stools: presence/absence of blood and severity of bleeding
 - Nocturnal stooling: presence/absence of nocturnal stooling
 - Activity level: presence/absence of limitations and degree of limitations on daily functioning.
- Score ranges from 0 to >85
- 0–9 Inactive disease
 - 10–4 Mild disease
 - 35–64 Moderate disease
 - 65–85 Severe disease

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[http://www.gastrojournal.org/article/S0016-5085\(07\)01011-6/pdf](http://www.gastrojournal.org/article/S0016-5085(07)01011-6/pdf)

Appendix:

https://download.lww.com/wolterskluwer_vitalstream_com/PermaLink/MPG/A/MPG_2011_04_25_LEE_201708_SDC1.pdf

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Mayo (Clinical) score

Mayo Score is an index usually used in adult practices that evaluates endoscopic and non-endoscopic components. It includes evaluation of:

- Stool frequency (as reported by patient)
- Rectal bleeding: presence/absence of blood and degree of bleeding (as reported by patient)
- Endoscopic findings
 - Quiescent disease with normal mucosa
 - Mild activity with decreased vascular patterns, erythema, and congestion
 - Moderate activity with friability, erosions, absence of vascular patterns,
 - Severe activity with large ulcerations and spontaneous bleeding
- Physicians Global Assessment (as assessed by provider) acknowledges the sub-scores listed above (stool frequency and rectal bleeding) and
 - daily report of abdominal discomfort: presence/absence of and severity of abdominal pain
 - functional assessment
 - physical findings
 - performance status
- Total Scores range from
 - 0–2 Remission
 - 3–5 Mild disease
 - 6–10 Moderate disease
 - >10 Severe disease

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Partial Mayo (Clinical) score

Partial Mayo Score is an index usually used in adult practices that evaluates non-endoscopic components of the Mayo score (which includes endoscopic findings). It includes evaluation of:

- Stool frequency (as reported by patient)
- Rectal bleeding: presence/absence of blood and degree of bleeding (as reported by patient)
- Physicians Global Assessment (as assessed by provider) acknowledges the sub-scores listed above (stool frequency and rectal bleeding) and
 - daily report of abdominal discomfort: presence/absence of and severity of abdominal pain
 - functional assessment
 - physical findings
 - performance status
- Total Scores range from
 - 0–1 Remission
 - 2–4 Mild disease
 - 5–6 Moderate disease
 - 7–9 Severe disease

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