American College of Radiology
ACR Appropriateness Criteria®

Radiologic Management of Lower Gastrointestinal Tract Bleeding

Variant 1: Lower gastrointestinal tract bleeding. Active bleeding clinically observed as hematochezia or melena in a hemodynamically stable patient. Next step.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CTA abdomen and pelvis without and with IV contrast	Usually appropriate	Strong	☢☢☢☢ 10-30 mSv		8	8	0	1	1	0	0	2	3	7	4

References	Study Quality
30 (28189213)	4
42 (25992504)	4
37 (25023179)	3
32 (22084211)	2
34 (22064550)	3
29 (12954894)	4
31 (20400333)	3
33 (20093615)	2
35 (16484350)	3
39 (20377709)	4
40 (18806152)	2
36 (28668429)	Inadequate
38 (28278445)	4
41 (23836115)	3

Diagnostic/therapeutic colonoscopy	Usually appropriate	Strong	N/A	N/A	8	8	1	0	0	0	2	3	0	5	7

References	Study Quality

		45 (26631877)	4												
		47 (25812518)	3												
		46 (25786443)	3												
		48 (20648004)	2												
		43 (16279891)	1												
		44 (22468081)	4												
RBC scan abdomen and pelvis	Usually appropriate	Limited	☢☢☢ 1-10 mSv		7	7	0	0	0	0	0	3	10	6	0
		References	Study Quality												
		53 (26956784)	4												
		55 (23407907)	3												
		54 (21757912)	4												
		56 (26646804)	2												
		52 (3494826)	4												
		57 (30526506)	3												
Transcatheter arteriography/embolization	May be appropriate	Limited	N/A	N/A	5	5	1	0	0	2	11	3	0	2	0
		References	Study Quality												
		59 (27101433)	4												
		24 (23574847)	4												
		58 (104564)	4												
		7 (19568467)	4												
MRA abdomen and pelvis without and with IV contrast	Usually not appropriate	Limited	O 0 mSv	O 0 mSv [ped]	2	2	7	4	5	1	1	0	1	0	0
		References	Study Quality												
		49 (26355018)	4												
Surgery	Usually not appropriate	Limited	N/A	N/A	2	2	7	4	6	0	1	0	0	0	0
		References	Study Quality												
		50 (18636299)	4												
		51 (-3149670)	4												

Variant 2: Lower gastrointestinal tract bleeding. Active bleeding in a hemodynamically unstable patient or a patient who has required more than 5 units of blood within 24 hours. Next step.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CTA abdomen and pelvis without and with IV contrast	Usually appropriate	Limited	☢☢☢☢ 10-30 mSv		8	8	0	0	0	0	0	0	6	11	2
References	Study Quality														
42 (25992504)	4														
39 (20377709)	4														
Transcatheter arteriography/embolization	Usually appropriate	Limited	N/A	N/A	8	8	1	0	0	1	0	2	2	9	3
References	Study Quality														
42 (25992504)	4														
63 (16336385)	4														
7 (19568467)	4														
Diagnostic/therapeutic colonoscopy	May be appropriate (Disagreement)	Expert Opinion	N/A	N/A	5	5	0	0	2	1	0	1	3	11	1
References	Study Quality														
60 (28174123)	Good														
Surgery	May be appropriate	Limited	N/A	N/A	5	5	2	0	0	0	13	4	0	0	0
References	Study Quality														
61 (24267497)	4														
62 (22677611)	2														
50 (18636299)	4														
51 (-3149670)	4														
MRA abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	1	1	10	5	3	1	0	0	0	0	0

RBC scan abdomen and pelvis	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		3	3	3	4	7	1	2	1	0	1	0

Variant 3: Lower gastrointestinal tract bleeding. Colonoscopy localized the bleeding site and treatment was attempted. Ongoing or recurrent bleeding. Next procedure or intervention.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Transcatheter arteriography/embolization	Usually appropriate	Expert Consensus	N/A	N/A	8	8	0	0	1	0	0	0	3	6	8
CTA abdomen and pelvis without and with IV contrast	May be appropriate (Disagreement)	Expert Opinion	☢☢☢☢ 10-30 mSv		5	5	0	3	0	8	3	3	1	1	0
Diagnostic/therapeutic colonoscopy	May be appropriate (Disagreement)	Expert Opinion	N/A	N/A	5	5	1	3	0	1	10	2	1	0	1
Surgery	May be appropriate	Expert Consensus	N/A	N/A	6	6	0	0	0	1	7	9	2	0	0
MRA abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	9	4	4	2	0	0	0	0	0
RBC scan abdomen and pelvis	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		2	2	5	7	3	0	2	1	0	0	0

Variant 4: Lower gastrointestinal tract bleeding. Transcatheter arteriography localized the bleeding site and treatment was attempted. Ongoing or recurrent bleeding. No other prior radiological or endoscopic investigations. Next procedure or intervention.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Diagnostic/therapeutic colonoscopy	Usually appropriate	Limited	N/A	N/A	7	7	0	0	0	1	1	2	7	7	1

References	Study Quality

		46 (25786443)		3												
CTA abdomen and pelvis without and with IV contrast	May be appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv		6	6	0	2	0	0	5	5	4	3	0
Surgery	May be appropriate	Expert Consensus	N/A	N/A	6	6	0	0	0	1	5	8	2	3	0
Transcatheter arteriography/embolization	May be appropriate	Expert Consensus	N/A	N/A	6	6	0	1	1	0	3	6	5	3	0
MRA abdomen and pelvis without and with IV contrast	Usually not appropriate	Expert Consensus	O 0 mSv	O 0 mSv [ped]	2	2	8	7	2	1	1	0	0	0	0
RBC scan abdomen and pelvis	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		2	2	4	6	7	0	1	1	0	0	0

Variant 5: Lower gastrointestinal tract bleeding. Obscure (nonlocalized) recurrent bleeding in a hemodynamically stable patient (assumes a prior negative adequate colonoscopy and upper gastrointestinal endoscopy). Next procedure or intervention.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Capsule endoscopy	Usually appropriate	Limited	N/A	N/A	8	8	1	0	0	0	1	2	5	6	3
		References		Study Quality											
		64 (16279893)		M											
CT enterography abdomen and pelvis with IV contrast	Usually appropriate	Limited	N/A	N/A	7	7	0	0	0	1	3	0	7	6	1
		References		Study Quality											
		65 (17619098)		4											
		66 (21642417)		2											
		67 (23721134)		M											
		68 (21460027)		3											
		69 (22270143)		3											

MR enterography	May be appropriate	Strong	O 0 mSv	O 0 mSv [ped]	4	4	0	1	2	8	6	1	0	0	0
	References	Study Quality													
	72 (20132082)	3													
	73 (22528671)	2													
	71 (28668417)	2													
Push enteroscopy	May be appropriate	Limited	N/A	N/A	5	5	0	0	0	2	12	0	3	1	0
	References	Study Quality													
	74 (17324401)	1													
RBC scan abdomen and pelvis	May be appropriate	Expert Consensus	☢☢☢ 1-10 mSv		6	6	0	0	2	0	3	6	1	6	0
RBC scan with SPECT or SPECT/CT abdomen and pelvis	May be appropriate	Expert Consensus	☢☢☢ 1-10 mSv		6	6	0	0	0	0	1	9	7	2	0
Transcatheter arteriography/embolization	May be appropriate (Disagreement)	Expert Opinion	N/A	N/A	5	5	0	0	4	5	6	1	2	0	0
Fluoroscopy small bowel follow-through	Usually not appropriate	Limited	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	2	5	6	3	0	2	1	0	0	1
	References	Study Quality													
	70 (20138043)	1													
Surgery	Usually not appropriate	Limited	N/A	N/A	3	3	3	4	8	1	1	0	1	0	0
	References	Study Quality													
	51 (-3149670)	4													

Appendix Key

A more complete discussion of the items presented below can be found by accessing the supporting documents at the designated hyperlinks.

Appropriateness Category: The panel's recommendation for a procedure based on the assessment of the risks and benefits of performing the procedure for the specified clinical scenario.

SOE: Strength of Evidence. The assessment of the amount and quality of evidence found in the peer reviewed medical literature for an appropriateness recommendation.

- **References:** The citation number and PMID for the reference(s) associated with the recommendation.
- **Study Quality**: The assessment of the quality of an individual reference based on the number of study quality elements described in the reference.

RRL: Relative Radiation Level. A population based assessment of the amount of radiation a typical patient may be exposed to during the specified procedure.

Rating: The final rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

Median: The median rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

Final tabulations: A histogram showing the number of panel members who rated the procedure as noted in the column heading (ie, 1, 2, 3, etc.).

Additional supporting documents about the AC methodology and processes can be found at **www.acr.org/ac.**