American College of Radiology
ACR Appropriateness Criteria®

Nonvariceal Upper Gastrointestinal Bleeding

Variant 1: Endoscopy reveals nonvariceal upper gastrointestinal arterial bleeding source.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Arteriography visceral	Usually appropriate	Expert Consensus	☢☢☢ 1-10 mSv		9	n/a	0	0	0	0	0	0	0	0	0
CTA abdomen with IV contrast	Usually appropriate	Expert Consensus	☢☢☢ 1-10 mSv		7	n/a	0	0	0	0	0	0	0	0	0
CT enterography	May be appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	5	n/a	0	0	0	0	0	0	0	0	0
CT abdomen without IV contrast	May be appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	4	n/a	0	0	0	0	0	0	0	0	0
CT abdomen without and with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0
CT abdomen with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0
Tc-99m labeled RBC scan abdomen	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		2	n/a	0	0	0	0	0	0	0	0	0
Fluoroscopy upper GI series	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	1	n/a	0	0	0	0	0	0	0	0	0

Variant 2: Endoscopy confirms nonvariceal upper gastrointestinal bleeding without a clear source.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Arteriography visceral	Usually appropriate	Expert Consensus	☢☢☢ 1-10 mSv		9	n/a	0	0	0	0	0	0	0	0	0
CTA abdomen with IV contrast	Usually appropriate	Expert Consensus	☢☢☢ 1-10 mSv		8	n/a	0	0	0	0	0	0	0	0	0
CT enterography	May be appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	5	n/a	0	0	0	0	0	0	0	0	0
Tc-99m labeled RBC scan abdomen	May be appropriate	Expert Consensus	☢☢☢ 1-10 mSv		5	n/a	0	0	0	0	0	0	0	0	0
CT abdomen without IV contrast	May be appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	4	n/a	0	0	0	0	0	0	0	0	0
CT abdomen without and with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	3	n/a	0	0	0	0	0	0	0	0	0
CT abdomen with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	3	n/a	0	0	0	0	0	0	0	0	0
Fluoroscopy upper GI series	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	1	n/a	0	0	0	0	0	0	0	0	0

Variant 3: Nonvariceal upper gastrointestinal bleeding; negative endoscopy.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Arteriography visceral	Usually	Expert	☢☢☢ 1-10		8	n/a	0	0	0	0	0	0	0	0	0

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
	appropriate	Consensus	mSv												
CTA abdomen with IV contrast	Usually appropriate	Expert Consensus	☢☢☢ 1-10 mSv		8	n/a	0	0	0	0	0	0	0	0	0
CT enterography	Usually appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	7	n/a	0	0	0	0	0	0	0	0	0
CT abdomen without IV contrast	May be appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	4	n/a	0	0	0	0	0	0	0	0	0
Tc-99m labeled RBC scan abdomen	May be appropriate	Expert Consensus	☢☢☢ 1-10 mSv		4	n/a	0	0	0	0	0	0	0	0	0
CT abdomen without and with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	3	n/a	0	0	0	0	0	0	0	0	0
CT abdomen with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	3	n/a	0	0	0	0	0	0	0	0	0
Fluoroscopy upper GI series	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	1	n/a	0	0	0	0	0	0	0	0	0

Variant 4: Postsurgical and traumatic causes of nonvariceal upper gastrointestinal bleeding; endoscopy contraindicated.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
Arteriography visceral	Usually appropriate	Expert Consensus	☢☢☢ 1-10 mSv		9	n/a	0	0	0	0	0	0	0	0	0
CTA abdomen with IV contrast	Usually appropriate	Expert Consensus	☢☢☢ 1-10 mSv		8	n/a	0	0	0	0	0	0	0	0	0

CT abdomen with IV contrast	Usually appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	7	n/a	0	0	0	0	0	0	0	0	0
CT enterography	May be appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢ 3-10 mSv [ped]	5	n/a	0	0	0	0	0	0	0	0	0
CT abdomen without IV contrast	May be appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	4	n/a	0	0	0	0	0	0	0	0	0
CT abdomen without and with IV contrast	Usually not appropriate	Expert Consensus	☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 mSv [ped]	3	n/a	0	0	0	0	0	0	0	0	0
Tc-99m labeled RBC scan abdomen	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv		2	n/a	0	0	0	0	0	0	0	0	0
Fluoroscopy upper GI series	Usually not appropriate	Expert Consensus	☢☢☢ 1-10 mSv	☢☢☢ 0.3-3 mSv [ped]	1	n/a	0	0	0	0	0	0	0	0	0

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.**