American College of Radiology
ACR Appropriateness Criteria®

Renovascular Hypertension

Variant 1: High index of suspicion of renovascular hypertension. Normal renal function.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
CTA abdomen with IV contrast	Usually appropriate		☢☢☢ 1-10 mSv		8	n/a	0	0	0	0	0	0	0	0	0
MRA abdomen without and with IV contrast	Usually appropriate		O 0 mSv	O 0 mSv [ped]	8	n/a	0	0	0	0	0	0	0	0	0
US kidney retroperitoneal with duplex Doppler	Usually appropriate		O 0 mSv	O 0 mSv [ped]	7	n/a	0	0	0	0	0	0	0	0	0
Tc-99m ACE-inhibitor renography	May be appropriate		☢☢☢ 1-10 mSv		5	n/a	0	0	0	0	0	0	0	0	0
MRA abdomen without IV contrast	May be appropriate		O 0 mSv	O 0 mSv [ped]	5	n/a	0	0	0	0	0	0	0	0	0
Venography with renal vein sampling	Usually not appropriate		Varies	Varies	3	n/a	0	0	0	0	0	0	0	0	0
Arteriography kidney	Usually not appropriate		☢☢☢ 1-10 mSv		3	n/a	0	0	0	0	0	0	0	0	0

Variant 2: High index of suspicion of renovascular hypertension. Decreased renal function, eGFR <30 mL/min/1.73 m2.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US kidney retroperitoneal with duplex Doppler	Usually appropriate		O 0 mSv	O 0 mSv [ped]	9	n/a	0	0	0	0	0	0	0	0	0
MRA abdomen without IV contrast	Usually appropriate		O 0 mSv	O 0 mSv [ped]	7	n/a	0	0	0	0	0	0	0	0	0
CTA abdomen with IV contrast	May be appropriate		☢☢☢ 1-10 mSv		5	n/a	0	0	0	0	0	0	0	0	0
MRA abdomen without and with IV contrast	Usually not appropriate		O 0 mSv	O 0 mSv [ped]	3	n/a	0	0	0	0	0	0	0	0	0
Tc-99m ACE-inhibitor renography	Usually not appropriate		☢☢☢ 1-10 mSv		3	n/a	0	0	0	0	0	0	0	0	0
Venography with renal vein sampling	Usually not appropriate		Varies	Varies	3	n/a	0	0	0	0	0	0	0	0	0
Arteriography kidney	Usually not appropriate		☢☢☢ 1-10 mSv		3	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.**