American College of Radiology
ACR Appropriateness Criteria®

Urinary Tract Infection–Child

Variant 1: Age <2 months, first febrile urinary tract infection.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US kidneys and bladder	Usually appropriate		O 0 mSv	O 0 mSv [ped]	9	n/a	0	0	0	0	0	0	0	0	0
Fluoroscopy voiding cystourethrography	May be appropriate		☢☢ 0.1-1mSv	☢☢ 0.03-0.3 mSv [ped]	6	n/a	0	0	0	0	0	0	0	0	0
Tc-99m pertechnetate radionuclide cystography	May be appropriate		TBD TBD	☢☢ 0.03-0.3 mSv [ped]	5	n/a	0	0	0	0	0	0	0	0	0
Tc-99m DMSA renal cortical scintigraphy	Usually not appropriate		TBD TBD	☢☢☢ 0.3-3 mSv [ped]	3	n/a	0	0	0	0	0	0	0	0	0

Variant 2: Age >2 months and 6 years, first febrile urinary tract infection with good response to treatment.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US kidneys and bladder	Usually appropriate		O 0 mSv	O 0 mSv [ped]	7	n/a	0	0	0	0	0	0	0	0	0
Tc-99m pertechnetate radionuclide cystography	May be appropriate		TBD TBD	☢☢ 0.03-0.3 mSv [ped]	4	n/a	0	0	0	0	0	0	0	0	0

Fluoroscopy voiding cystourethrography	May be appropriate		☢☢ 0.1-1mSv	☢☢ 0.03-0.3 mSv [ped]	4	n/a	0	0	0	0	0	0	0	0	0
Tc-99m DMSA renal cortical scintigraphy	Usually not appropriate		TBD TBD	☢☢☢ 0.3-3 mSv [ped]	3	n/a	0	0	0	0	0	0	0	0	0

Variant 3: Age >6 years, first febrile urinary tract infection with good response to treatment.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US kidneys and bladder	May be appropriate		O 0 mSv	O 0 mSv [ped]	5	n/a	0	0	0	0	0	0	0	0	0
Tc-99m pertechnetate radionuclide cystography	Usually not appropriate		TBD TBD	☢☢ 0.03-0.3 mSv [ped]	3	n/a	0	0	0	0	0	0	0	0	0
Fluoroscopy voiding cystourethrography	Usually not appropriate		☢☢ 0.1-1mSv	☢☢ 0.03-0.3 mSv [ped]	3	n/a	0	0	0	0	0	0	0	0	0
Tc-99m DMSA renal cortical scintigraphy	Usually not appropriate		TBD TBD	☢☢☢ 0.3-3 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0

Variant 4: Child. Atypical (poor response to antibiotics within 48 hours, sepsis, poor urine stream, raised creatinine, or non–E coli UTI) or recurrent febrile urinary tract infection.

Procedure	Appropriateness Category	SOE	Adults RRL	Peds RRL	Rating	Median	Final Tabulations								
							1	2	3	4	5	6	7	8	9
US kidneys and bladder	Usually appropriate		O 0 mSv	O 0 mSv [ped]	9	n/a	0	0	0	0	0	0	0	0	0
Tc-99m pertechnetate radionuclide cystography	Usually appropriate		TBD TBD	☢☢ 0.03-0.3 mSv [ped]	7	n/a	0	0	0	0	0	0	0	0	0

Fluoroscopy voiding cystourethrography	Usually appropriate		☢☢ 0.1-1mSv	☢☢ 0.03-0.3 mSv [ped]	7	n/a	0	0	0	0	0	0	0	0	0
Tc-99m DMSA renal cortical scintigraphy	May be appropriate		TBD TBD	☢☢☢ 0.3-3 mSv [ped]	6	n/a	0	0	0	0	0	0	0	0	0
CT abdomen and pelvis with IV contrast	May be appropriate		☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	4	n/a	0	0	0	0	0	0	0	0	0
CT abdomen and pelvis without IV contrast	Usually not appropriate		☢☢☢ 1-10 mSv	☢☢☢☢ 3-10 mSv [ped]	2	n/a	0	0	0	0	0	0	0	0	0
CT abdomen and pelvis without and with IV contrast	Usually not appropriate		☢☢☢☢ 10-30 mSv	☢☢☢☢☢ 10-30 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.**