# American College of Radiology
## ACR Appropriateness Criteria®

### Radiologic Management of Urinary Tract Obstruction

**Variant 1:** Urinary diversion after remote history of cystectomy for cancer. No fever, normal white blood cell (WBC) count and urine output. Loopogram shows no reflux into distal ureters. CT shows new moderate bilateral hydronephrosis.

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Variant 2: Seven-day history of right flank pain, fever, and leukocytosis. Urinalysis positive for blood and infection. CT scan shows a 10 mm calculus in the mid right ureter without hydronephrosis.

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**References**
- 34 (23017519)
- 39 (20063999)
- 35 (10468719)
- 36 (8573816)
- 37 (2667249)
- 38 (12376218)

**Study Quality**
- 4

**Variant 3:** Pregnant patient (20 weeks) with 3-day history of left flank pain, fever, and leukocytosis. Urinalysis positive for infection. Ultrasound shows new, moderate left hydronephrosis.

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- 28 (6718717)
- 42 (11257644)
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**Variant 4:** Advanced cervical carcinoma with decreased estimated glomerular filtration rate <15. Normal WBC, positive pelvic pressure, no flank pain. CT scan reveals new bilateral hydronephrosis and hydroureter that is due to local invasion by a pelvic mass.

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### Percutaneous antegrade ureteral stenting (with or without safety nephrostomy)

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Variant 5: Prolonged history of right flank pain, fever, and leukocytosis. Urinalysis positive for blood and infection. Patient appears septic and is hypotensive. CT scan shows dilated right ureter and renal pelvis with perinephric stranding. No etiology for ureteral obstruction identified with current imaging.

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### Percutaneous antegrade ureteral stenting (with or without safety nephrostomy)

- **Category**: Usually not appropriate
- **SOE**: Limited
- **Adults RRL**: N/A
- **Peds RRL**: N/A
- **Rating**: 2
- **Median**: 2
- **Final Tabulations**: 0 0 0 0 0 0 0 0 0

### PCN (includes PCNU) followed by delayed surgery

- **Category**: May be appropriate
- **SOE**: Limited
- **Adults RRL**: N/A
- **Peds RRL**: N/A
- **Rating**: 5
- **Median**: n/a
- **Final Tabulations**: 0 0 0 0 0 0 0 0 0

**Variant 6**: Urinary ascites after recent abdominal surgery. Elevated blood urea nitrogen or creatinine, moderate abdominal pain, and no peritoneal signs. CT urogram reveals contrast leak from left pelvic ureteral injury. Current therapy consists of Foley catheter in the bladder.

### Medical therapy without decompression

- **Category**: Usually not appropriate
- **SOE**: Expert Consensus
- **Adults RRL**: N/A
- **Peds RRL**: N/A
- **Rating**: 1
- **Median**: 1
- **Final Tabulations**: 0 0 0 0 0 0 0 0 0

### Retrograde ureteral stenting

- **Category**: Usually appropriate
- **SOE**: Expert Consensus
- **Adults RRL**: N/A
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- **Rating**: 7
- **Median**: 7
- **Final Tabulations**: 0 0 0 0 0 0 0 0 0

### PCN (includes PCNU)

- **Category**: Usually appropriate
- **SOE**: Limited
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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](http://www.acr.org/ac).