# American College of Radiology
# ACR Appropriateness Criteria®

## Blunt Abdominal Trauma

**Variant 1: Unstable patient.**

| Procedure | Appropriateness Category | SOE | Adults RRL | Peds RRL | Rating | Median | Final Tabulations | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| US FAST scan chest abdomen and pelvis | Usually appropriate | | O 0 mSv | O 0 mSv [ped] | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Radiography abdomen and pelvis (KUB) | Usually appropriate | | ☢☢ 0.1-1mSv | ☢☢ 0.03-0.3 mSv [ped] | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Radiography chest | Usually appropriate | | ☢ <0.1 mSv | ☢ <0.03 mSv [ped] | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arteriography with possible embolization abdomen and pelvis | May be appropriate | | Varies | Varies | 5 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT chest with IV contrast | Usually not appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 3 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT chest without IV contrast | Usually not appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 3 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT chest without and with IV contrast | Usually not appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 3 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT abdomen and pelvis with IV contrast | Usually not appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 3 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CT abdomen and pelvis without IV contrast | Usually not appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 3 | 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] | 3 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| US abdomen and pelvis | Usually not appropriate | | O 0 mSv | O 0 mSv [ped] | 2 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Variant 2: Stable patient.**

| Procedure | Appropriateness Category | SOE | Adults RRL | Peds RRL | Rating | Median | Final Tabulations | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| CT abdomen and pelvis with IV contrast | Usually appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 9 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT chest with IV contrast | Usually appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT abdomen and pelvis without and with IV contrast | Usually appropriate | | ☢☢☢☢ 10-30 mSv | ☢☢☢☢☢ 10-30 mSv [ped] | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT chest without and with IV contrast | Usually appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Radiography chest | Usually appropriate | | ☢ <0.1 mSv | ☢ <0.03 mSv [ped] | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT abdomen and pelvis without IV contrast | May be appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 6 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT chest without IV contrast | May be appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 6 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| US FAST scan chest abdomen and pelvis | May be appropriate | | O 0 mSv | O 0 mSv [ped] | 5 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Radiography abdomen and pelvis (KUB) | May be appropriate | | ☢☢ 0.1-1mSv | ☢☢ 0.03-0.3 mSv [ped] | 5 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arteriography with possible embolization abdomen and pelvis | May be appropriate | | Varies | Varies | 4 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| US abdomen and pelvis | Usually not appropriate | | O 0 mSv | O 0 mSv [ped] | 2 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Variant 3: Hematuria >35 RBC/hpf (stable).**

| Procedure | Appropriateness Category | SOE | Adults RRL | Peds RRL | Rating | Median | Final Tabulations | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| CT abdomen and pelvis with IV contrast | Usually appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 9 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT chest with IV contrast | Usually appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Radiography chest | Usually appropriate | | ☢ <0.1 mSv | ☢ <0.03 mSv [ped] | 8 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT abdomen and pelvis without and with IV contrast | Usually appropriate | | ☢☢☢☢ 10-30 mSv | ☢☢☢☢☢ 10-30 mSv [ped] | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT chest without and with IV contrast | Usually appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 7 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT abdomen and pelvis without IV contrast | May be appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 6 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CT chest without IV contrast | May be appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢☢ 3-10 mSv [ped] | 6 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fluoroscopy retrograde urethrography | May be appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢ 0.3-3 mSv [ped] | 6 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT pelvis with bladder contrast (CT cystography) | May be appropriate | | ☢☢☢☢ 10-30 mSv | ☢☢☢☢ 3-10 mSv [ped] | 6 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fluoroscopy cystography | May be appropriate | | ☢☢☢ 1-10 mSv | | 5 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Radiography abdomen and pelvis (KUB) | May be appropriate | | ☢☢ 0.1-1mSv | ☢☢ 0.03-0.3 mSv [ped] | 5 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arteriography with possible embolization kidney | May be appropriate | | Varies | Varies | 4 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Radiography intravenous urography | Usually not appropriate | | ☢☢☢ 1-10 mSv | ☢☢☢ 0.3-3 mSv [ped] | 3 | n/a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| US abdomen and pelvis | Usually not appropriate | | O 0 mSv | O 0 mSv [ped] | 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.**