81 y/o male with abdominal pain s/p cystoscopy

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Axial CT Cystogram
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Coronal CT Cystogram
Intra- and extraperitoneal bladder rupture
Axial CT Cystogram: At the mid pelvis, contrast is seen extravasating into the left paracolic gutter, indicating an intraperitoneal component.
Axial CT Cystogram: Lower down, perivesical contrast is seen. Foley catheter is present within the bladder.
Axial CT Cystogram: Contrast extravasation localized around the right ureterovesical junction.
Coronal CT Cystogram: Perivesical contrast around the dome of the bladder (blue arrow). Contrast is also demonstrated in the left paracolic gutter, indicating an intraperitoneal component (green arrow).
Sagittal CT Cystogram: Defect in the bladder dome (yellow arrow) with perivesical contrast.
Bladder Rupture

Imaging Features

• Intraperitoneal rupture
  – Contrast extravasates into the paracolic gutters and outlines loops of bowel.
  – Layering of contrast in dependent areas (Pouch of Douglas, Morrison’s Pouch)
  – Look for bladder dome defect

• Extraperitoneal Rupture
  – Extravasation into extraperitoneal spaces, most commonly the retropubic space of Retzius
  – May see contrast extravasation into the anterior abdominal wall, thigh, and scrotum
Bladder Rupture

General Features

- **Extraperitoneal**
  - 62% of all bladder ruptures
  - Usually secondary to pelvic fracture; fragment lacerates the base of the bladder.
  - Treatment is usually medical management with Abx and catheterization

- **Intraperitoneal**
  - 25% of bladder ruptures
  - Trauma to abdomen with full bladder
  - May mimic acute renal failure
  - Treatment requires surgery to repair bladder dome

- **Combined**
  - 12% of ruptures
  - Findings of both intraperitoneal and extraperitoneal ruptures
References
