61-year-old male presents with bilateral flank pain.

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Acute pyelonephritis (in setting of prior cystectomy with RLQ ileal conduit)
Wedge-shaped area of parenchymal hypoenhancement with ill-defined margins
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Absence of urinary bladder s/p cystectomy
RLQ ileal conduit
Acute pyelonephritis

Acute infection of renal parenchyma

- Clinical presentation:
  - Fever, flank pain, CVA tenderness, nausea, vomiting, dysuria.
- Imaging is insensitive, but fairly specific in the appropriate clinical context.
  - On CT, can see wedge-shaped or rounded areas of parenchymal hypoenhancement with perinephric stranding/inflammation. “Striated nephrogram”.
    - Best appreciated on nephrographic or excretory phase.
- DDx:
  - Renal infarction
    - Sharply defined wedge-shaped area of absent enhancement
    - May see cortical rim sign (enhancement along periphery from capsular arterial supply)
  - Renal cell carcinoma
  - Renal lymphoma
  - Vasculitis
- Complications:
  - Renal abscess, perirenal abscess, renal scarring, end-stage renal disease
Cystectomy with ileal conduit

Increased risk for UTI and pyelonephritis

• Results in increased urinary stasis allowing for bacterial growth and easier ascension of colonized urine.

• Atypical bacteria more common in this setting.
  – Urine culture in this case grew Klebsiella pneumoniae (<20% frequency) and Morganella morganii (rare, gram-negative rod).
References


3. Statdx.com