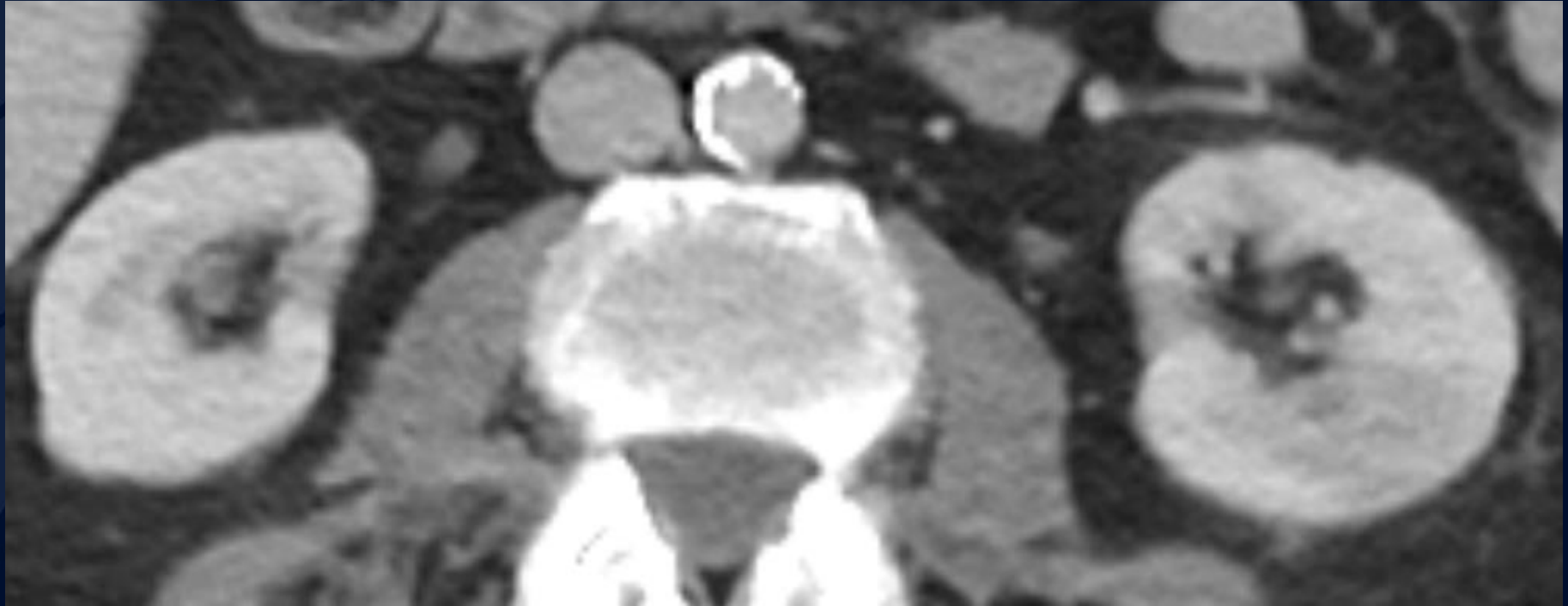


61-year-old male presents with bilateral flank pain.

Ryan Joyce, MD
Swapnil Bagade, MD











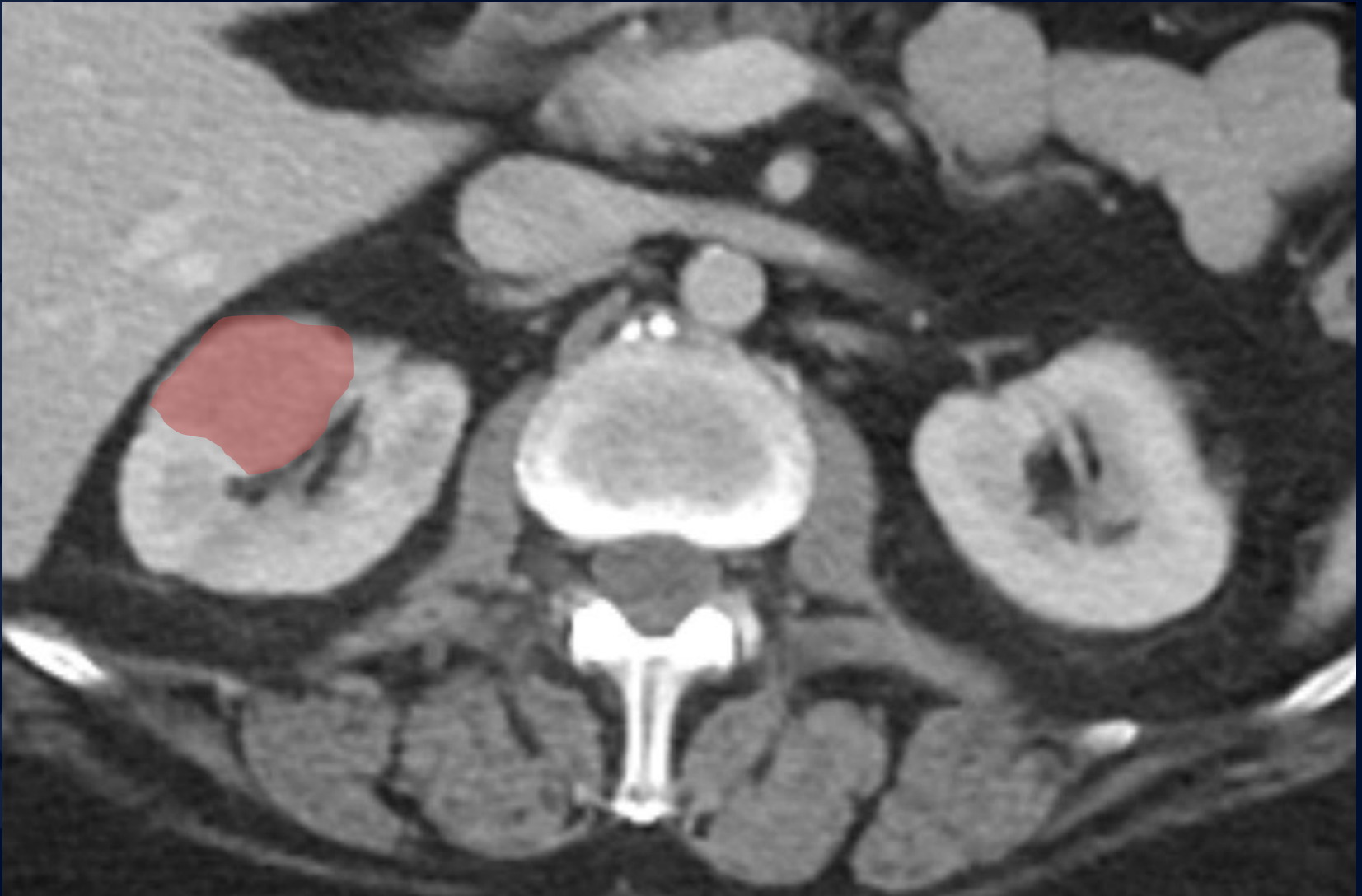


A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. It features detailed vein patterns and a lobed edge.

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Acute pyelonephritis (in setting of prior cystectomy with RLQ ileal conduit)



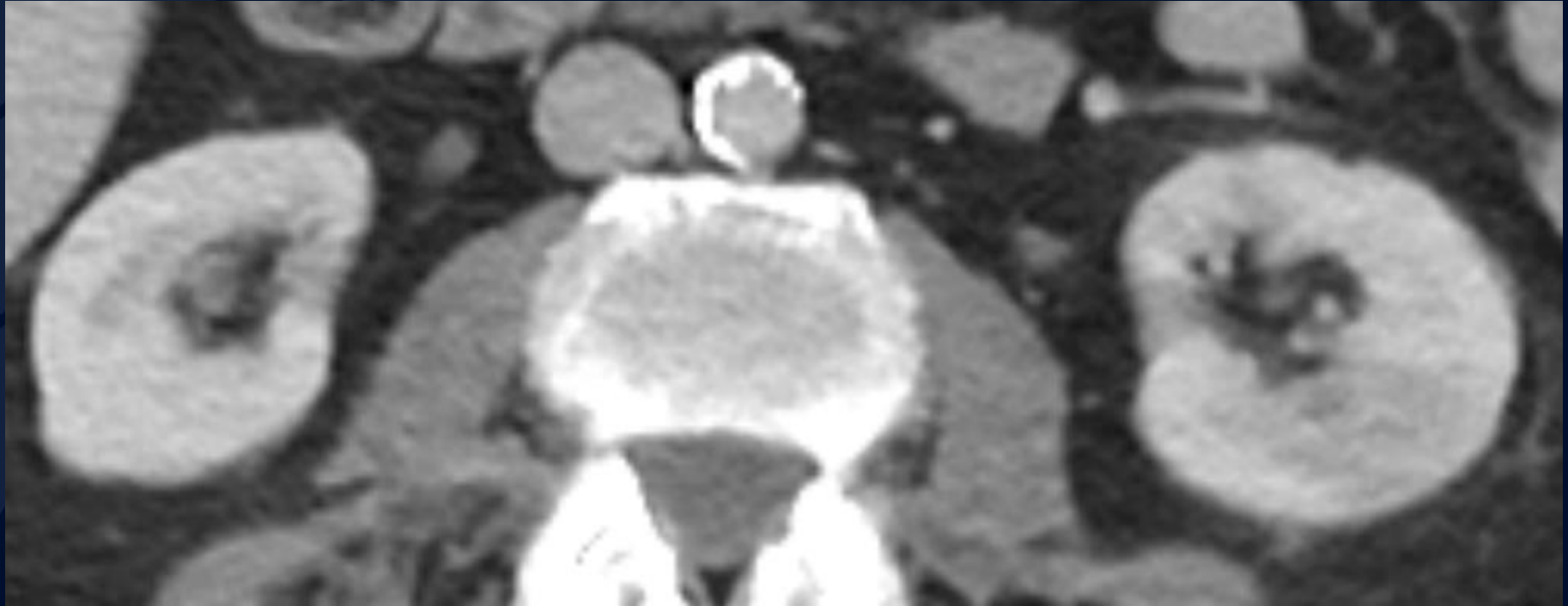


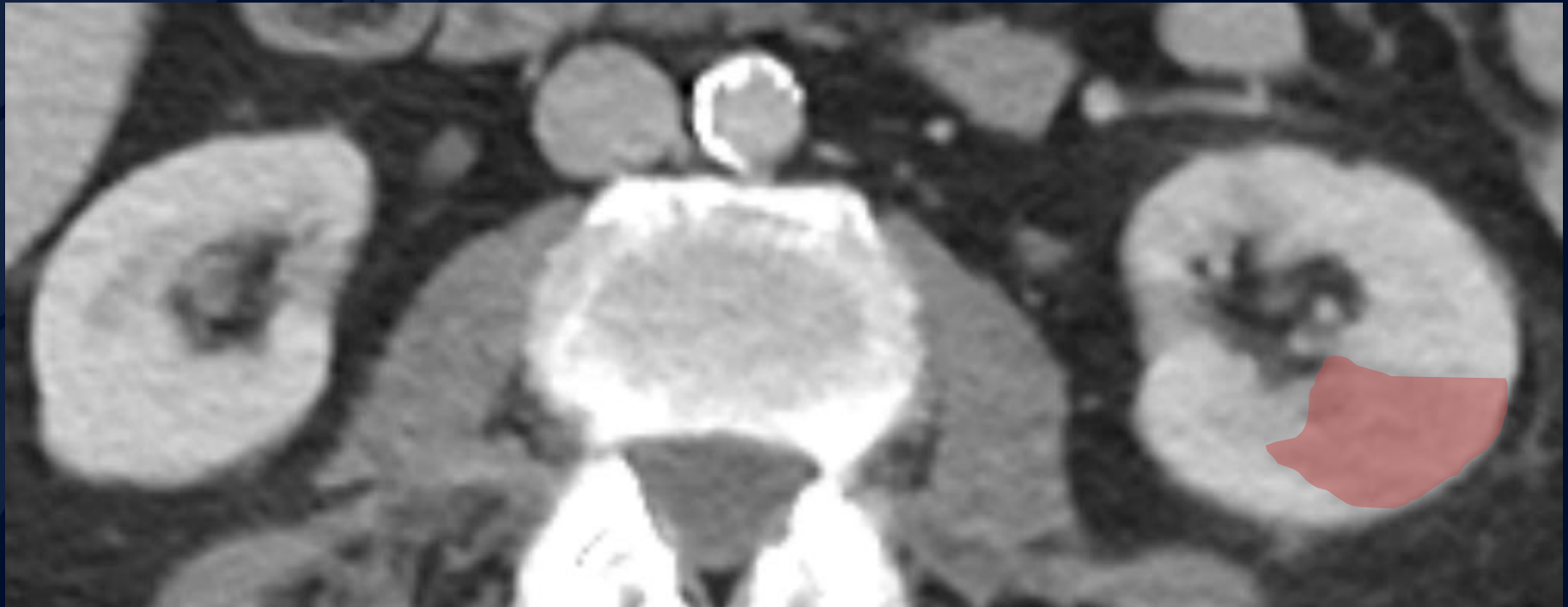
Wedge-shaped area of parenchymal hypoenhancement with ill-defined margins





Wedge-shaped area of parenchymal hypoenhancement with ill-defined margins





Wedge-shaped area of parenchymal hypoenhancement
with ill-defined margins





Wedge-shaped area of parenchymal hypoenhancement with ill-defined margins





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

1. Craig WD et al: Pyelonephritis: radiologic-pathologic review. Radiographics. 28(1):255-77; quiz 327-8, 2008
2. Stunell H et al: Imaging of acute pyelonephritis in the adult. Eur Radiol. 17(7):1820-8, 2007
3. Statdx.com