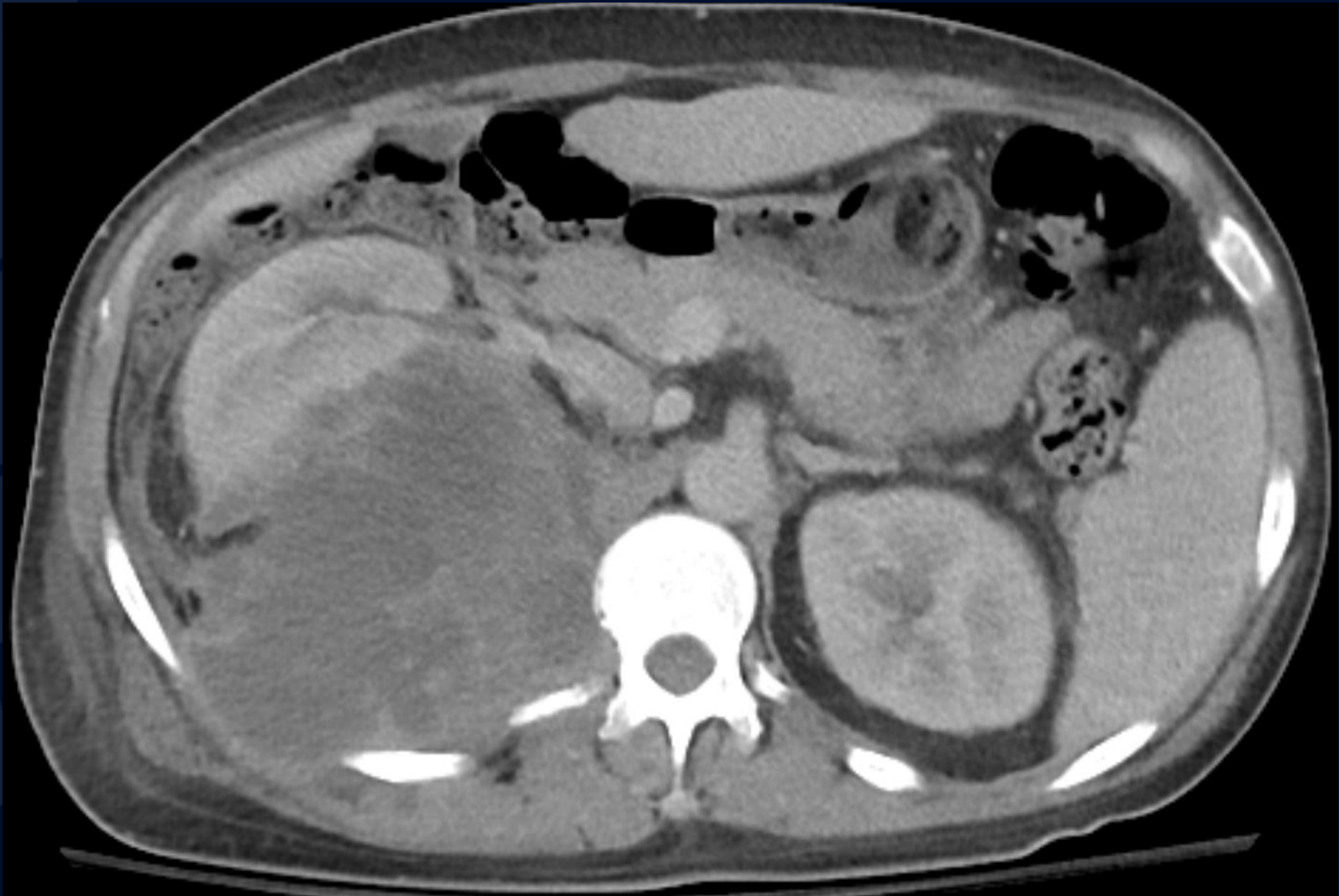
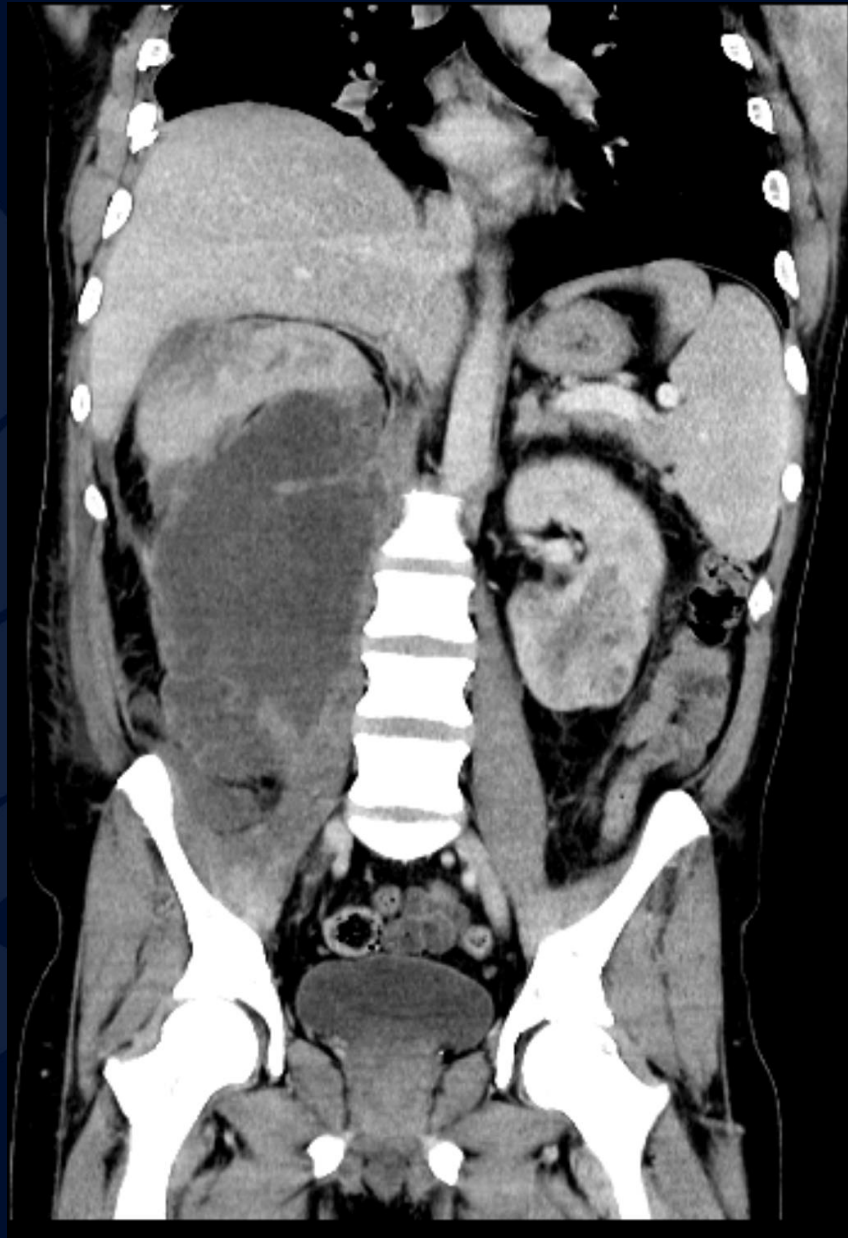


**36-year-old male with past medical history of untreated hepatitis C and poly-substance abuse presented with right-sided flank and back pain, fevers and leukocytosis.**

Elena G. Violari MD.

Swapnil Bagade, MD.



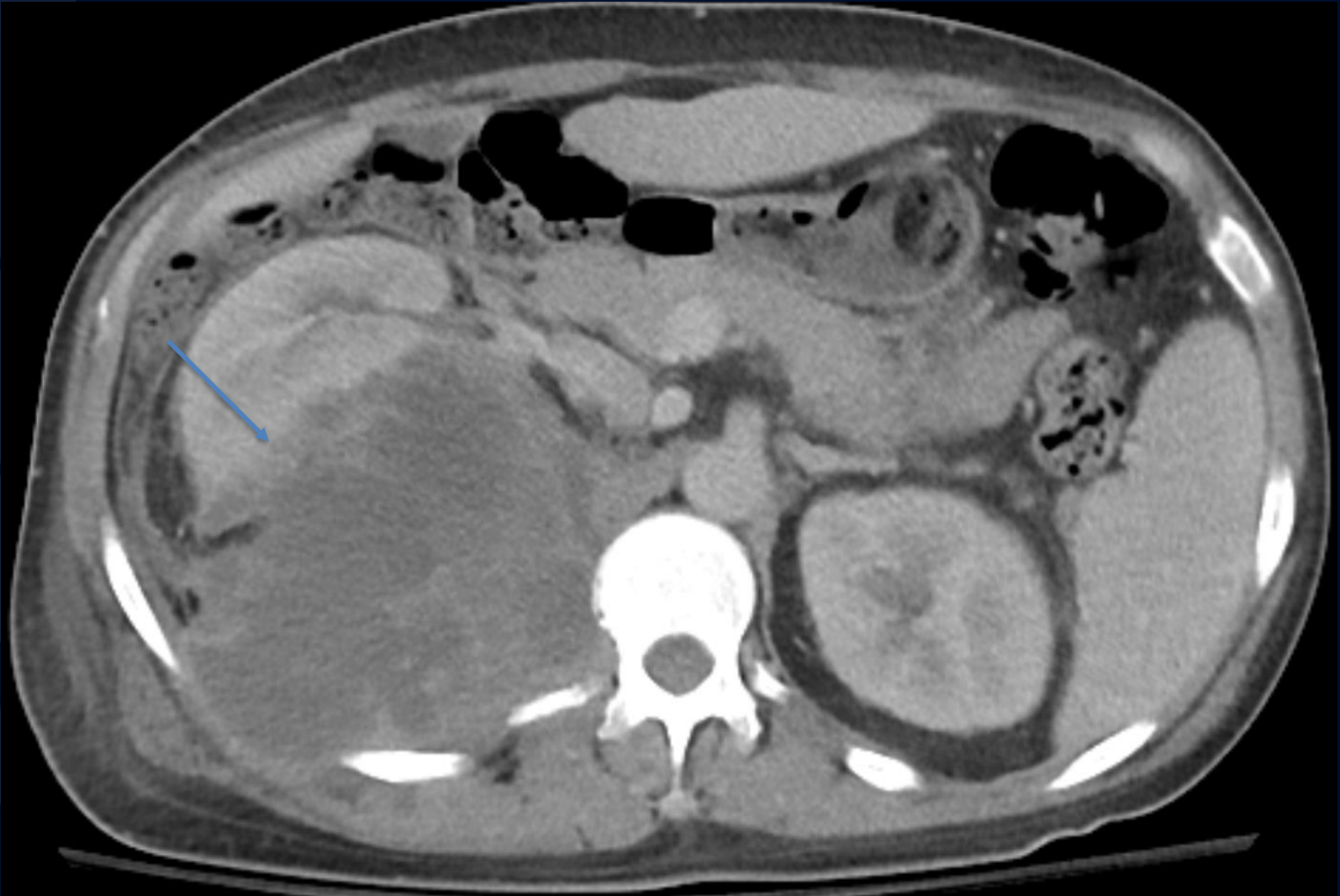




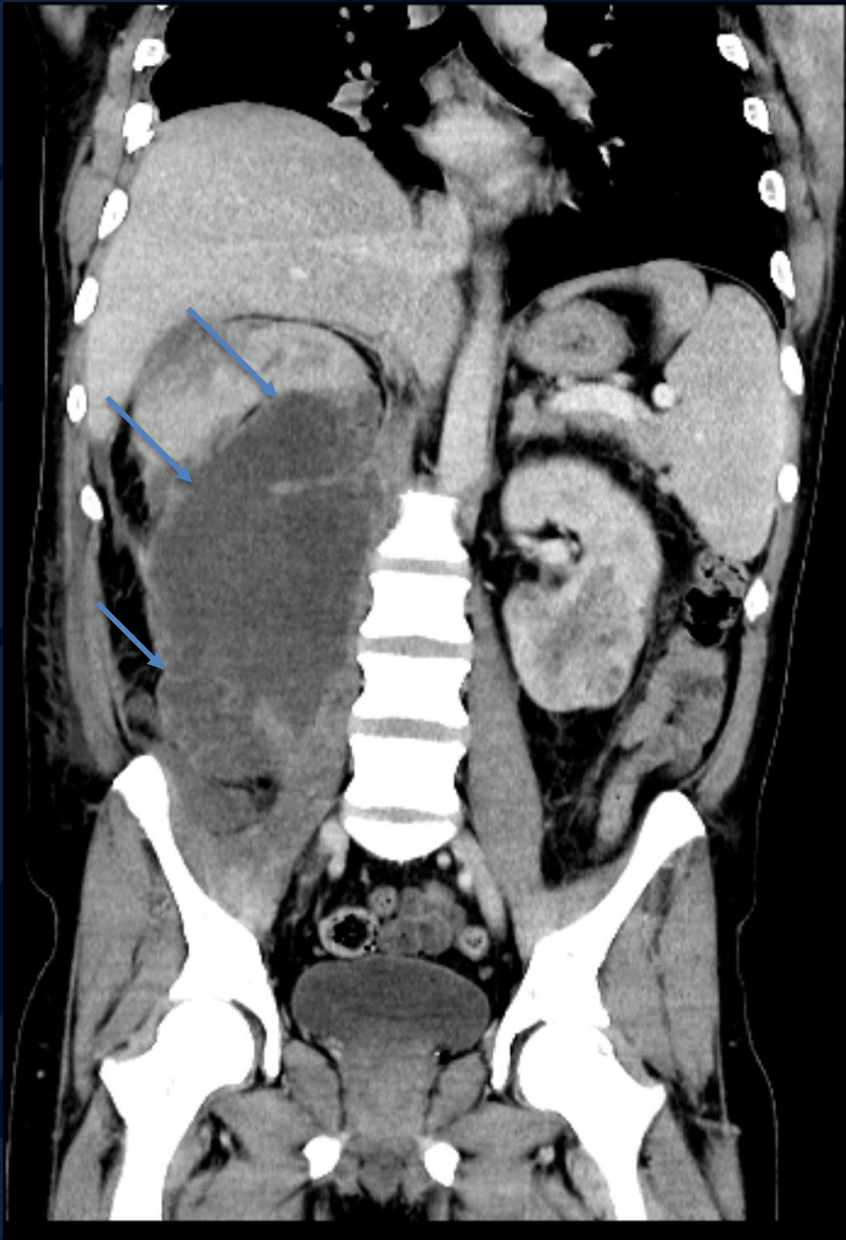


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# Perinephric abscess





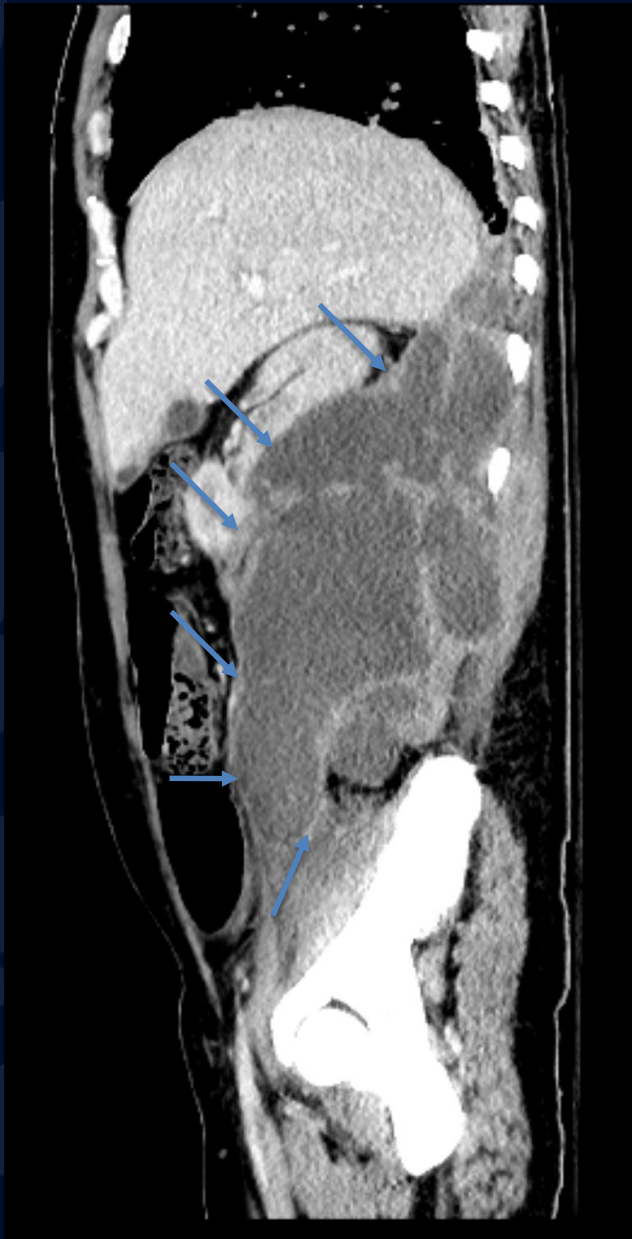


Large complex fluid collection with peripheral enhancement extending from the right perirenal space through the posterior pararenal space and into the right psoas and right paraspinal musculature.

The collection approaches several neuroforamina of the lumbar spine without evidence of epidural extension.

The right kidney is displaced anteriorly and also demonstrates several focal wedge-like regions on the upper and mid pole which demonstrate reduced enhancement, consistent with acute pyelonephritis. Ill-defined density adjacent to the mid pole of the left kidney may represent phlegmonous change, though no well-defined abscess is seen at this time.





Bilateral pyelonephritis with large perirenal and pararenal abscess on the right extending into the right psoas muscle and right paraspinal musculature.

# Perinephric abscess

- Uncommon, but potentially lethal complications of urinary tract infection.
- Sequela of acute pyelonephritis, where severe vasospasm and inflammation may occasionally result in liquefactive necrosis and abscess formation.
- Any inflammatory process outside the Gerota's fascia may also result in perinephric abscess.
- More common in diabetic patients with calculi and in patients with septic emboli.
- The mortality rates approached 39% to 50%, despite aggressive drainage.
- Characteristically vague symptoms and the inherent difficulty in identifying retroperitoneal disease by physical examination contributed to disappointing therapeutic outcomes in the past.
- Currently are typically treated with imaged guided percutaneous drainage with significant improvement in morbidity and mortality.
  - US-guided percutaneous abscess drainage.
  - CT guided percutaneous abscess drainage.

# Perinephric abscess

## Radiographic features

- **Ultrasound:**

- First imaging modality for assessment of a renal parenchyma for focal hypoechogenicity, hydronephrosis or perinephric collection.
- Usually hypoechoic or mixed echogenicity, depending on the content.
- Echogenic shadowing calculi may be seen.

- **CT:**

- Areas of soft-tissue or fluid attenuation within the perirenal space.
- Peripheral enhancement on post-contrast images.
- Air foci in the collection. Hydronephrosis/Pyonephrosis may be seen.
- Renal parenchyma may show striated nephrogram in pyelonephritis.

# References

1. Coelho RF, Schneider-Monteiro ED, Mesquita JL et-al. Renal and perinephric abscesses: analysis of 65 consecutive cases. *World J Surg.* 2007
2. Meng MV, Mario LA, McAninch JW. Current treatment and outcomes of perinephric abscesses. *J. Urol.* 2002