Ultrasound for Renal Colic
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No Disclosures
Ultrasound for Renal Colic
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**Pro’s**
- Quick
- Easy to learn
- Cost effective
- Safe
- Pretty good accuracy
Ultrasound for Renal Colic: The Pro’s

• Quick
Ultrasound for Renal Colic: The Pro’s

• Easy to learn

5th graders learning ultrasound
Ultrasound for Renal Colic: The Pro’s

- Easy to learn

Free fluid in Morison’s pouch
Ultrasound for Renal Colic: The Pro’s

- Easy to learn

Moderate hydronephrosis
Ultrasound for Renal Colic: The Pro’s

Cost effective

$99 vs $306
Ultrasound for Renal Colic: The Pro’s

• Safe
Ultrasound for Renal Colic: The Pro’s

- Unlike CT, no radiation

Brenner et al. NEJM 2007
Ultrasound for Renal Colic: The Pro’s

- Good sensitivity for presence of stone
  - 72%-87%
- Very good sensitivity for stones > 5 mm
  - 90%-91%
Ultrasound for Renal Colic: The Pro’s

- Stone visualization

Mid-pole renal calculus
Ultrasound for Renal Colic: The Pro’s

- Ureteral jets
Better accuracy ≠ better outcomes.

- **N = 2759 patients**
- **No difference in**
  - complications
  - serious adverse events
  - pain scores
  - return ED visits
  - hospitalizations

Smith-Bindman et al. 2014
“The clinical diagnosis should be supported by an appropriate imaging procedure. Ultrasonography should be used as the primary procedure. It is a safe (no risk of radiation), reproducible and inexpensive method of urinary stone detection.”

2011 guidelines
Avoid ordering CT in young, otherwise healthy ED patients with known Hx of ureterolithiasis presenting with sx consistent with uncomplicated kidney stones.

ACEP, 2014
I rest my case

• U/S for Renal Colic
  – Quick
  – Easy to learn
  – Cost effective
  – Safe
  – Good enough accuracy
References

- Goertz J, Lotterman S. Can the degree of hydronephrosis on ultrasound predict kidney stone size? *AJEM* 2010; 28:813-816.