

LEVEL 1 RENAL ULTRASOUND

This is a limited Renal Ultrasound that aims to:

- 1. Ascertain the presence and degree of hydronephrosis
- 2. Recognize a simple renal cyst
- 3. Identify ureteric jets and VUJ stones where possible
- 4. Measure the bladder volume

Patient details

History Urinalysis Creatinine **Findings** Notes **Images** Right Left Views Adequate Inadequate Renal length 9-13cm Inadequate Adequate Parenchymal thickness > 10mm Length cm cm Mild hydronephrosis Absent Absent Dilatation of the collecting system with retention of cupped calyces Mild Mild Moderate hydronephrosis Hydronephrosis Increased dilatation with clubbing of the calyces Kidney Moderate Moderate Severe hydronephrosis Increased dilatation with thinning of the renal cortex Severe Severe Simple cyst Well defined thin wall Rounded anechoic cystic structure No solid components Other (eg cysts) Post cystic enhancement Sketch findings on this image Parapelvic cysts and an extrarenal pelvis can simulate Copyright Rippey and Ercleve 2009 hydronephrosis Transverse Longitudinal Jets Seen Not seen Seen Not seen Bladder with Bladder with Ureters **VUJ stones** Seen Seen Use colour doppler and wait. Ipsilateral jet presence Not seen Not seen excludes complete obstruction, however it's absence does not confirm obstruction Transverse (X) cm Depth (Y) cm Look for poor / abscent jet, hydroureter / hydronephrosis, shadowing and twinkle artifact Bladder Length (Z) cm Bladder Bladder volume = X x Y x Z x 0.52 Volume (X x Y x Z x 0.52) mL Conclusions (Note: Renal USS findings must be consistent with clinical suspicion; integrate history, examination, investigations and Renal USS findings to reach a conclusion. Seek urgent formal USS or CT if uncertainty remains)