

## RENAL ULTRASOUND PROTOCOL

### BILING CODES:

**URETRL – For use when only one kidney is present**

**UURINB- Post void residual of bladder only**

**PATIENT PREP: Do not void 1.5 hours prior to exam.**

**\*\*SEE SEPARATE PROTOCOL FOR NEONATAL RENAL ULTRASOUND**

### RIGHT and LEFT KIDNEYS:

- Sagittal measurement of kidney.
- Sagittal images of medial, middle, and lateral views.
- Sagittal cine clip M-L
- Sagittal image with color to evaluate for twinkling artifact for renal calculi.
- Transverse images of superior, mid, inferior kidney
- Transverse cine clip S-I
- Demonstrate hydronephrosis or pelviectasis with a color image of the renal pelvis
- **IF MASSES OR CYSTS ARE PRESENT:**
  - 2D image with and without measurements in three dimensions
  - Document with color and MFI
  - Measure the 2 largest or most worrisome masses/cysts and comment on the presence of additional if relevant.
- **IF RENAL STONES ARE PRESENT:**
  - Measure renal stones in one largest dimension.
  - Demonstrate acoustic shadowing if possible.
  - Image with color to look for twinkle artifact (can still be a stone if none)
- **IF PRIOR NEPHRECTOMY:**
  - Image should be taken of the renal fossa

### BLADDER:

- Urinary bladder in sagittal and transverse planes.
- If bladder stones/debris is seen, demonstrate mobility by rolling patient.
- Demonstrate ureteral jets within bladder if hydronephrosis or dilated ureter is seen. (Observe for up to 5 mins).
- Document any bladder mass using MFI and color flow imaging

## RENAL ULTRASOUND IMAGE LIST

IMAGE	MODE
Right Kidney Sag Mid	2D
Right Kidney Sag Mid w/ measurement	2D +
Right Kidney Sag w/ color	Color
Right Kidney Sag Med	2D
Right Kidney Sag Lat	2D
Right Kidney Sag M-L cine	Cine
Right Kidney Trans Sup	2D
Right Kidney Trans Mid	2D
Right Kidney Trans Inf	2D
Right Kidney Trans S-I cine	Cine
Left Kidney Sag Mid	2D
Left Kidney Sag Mid w/ measurement	2D +
Left Kidney Sag w/ color	Color
Left Kidney Sag Med	2D
Left Kidney Sag Lat	2D
Left Kidney Sag M-L cine	Cine
Left Kidney Trans Sup	2D
Left Kidney Trans Mid	2D
Left Kidney Trans Inf	2D
Left Kidney Trans S-I cine	Cine
Bladder Sag	2D
Bladder Trans	2D
<i>Bladder jets if hydro</i>	<i>Color</i>
<i>Post void if hydro</i>	<i>2D</i>
<i>Measure 2 largest cysts/mass</i>	<i>2d+</i>
<i>MFI and color on any bladder or kidney mass</i>	<i>Color/MFI</i>

## RENAL ULTRASOUND PROTOCOL HISTORY

	Date	Changes made	By whom
Updated	02/28/18		Becky Marion
Updated	07/8/22	Format change No protocol changes made Separate Neonatal renal protocol created	Renee Betit Fitzgerald
Added	04/15/2024	Image lists	Renee Betit Fitzgerald
Reviewed	5/23/2024	Do not void 1.5 hours prior to exam. Added cine clips in sag and trv Added MFI of bladder or kidney mass	Protocol Meeting Attendees