

URINARY BLADDER US PROTOCOL

PURPOSE:

- To evaluate the volume of the bladder and assess for any pathology.

INDICATIONS:

- Evaluation of urinary tract infection or urinary incontinence/retention.
- Determination of bladder volumes.
- Pelvic pain or signs/symptoms referable to these areas (e.g. hematuria).
- Palpable abnormalities.
- Abnormal laboratory values or abnormal findings on other imaging examinations.
- Follow-up of known or suspected abnormalities.
- Evaluation of suspected congenital abnormalities.
- Pelvic trauma.

EQUIPMENT:

- 3-5 MHz linear or curved probe

PATIENT PREPARATION & ASSESSMENT:

- Introduce yourself to the patient.
- Verify patient identity via two patient identifiers (name and date of birth) per hospital policy.
- Explain the examination, its purpose and how long it will take.
- Answer any questions the patient may have regarding the examination.
- Obtain patient history including symptoms, signs, risk factors and other relevant history.

GENERAL GUIDELINES:

- Send the measurements screenshot page if your machine is capable.
- For focal lesions (masses, cysts, nodules, lymph nodes, fibroids) obtain split-screen images of the lesion without calipers, with calipers and with Color Doppler.
- Any deviations from the standard protocol and any limitations to the examination should be documented on the technologist worksheet for future reference and for repeatability in follow-up studies.
- Report preliminary critical findings to the referring clinician when appropriate (i.e. immediate medical attention may be warranted) and according to hospital policy.

DOCUMENTATION:

Bladder

- Obtain longitudinal and transverse grayscale images throughout the bladder.
- Obtain grayscale image measuring bladder wall at its thickest point.
 - Normal wall thickness is <3 mm when distended or <5 mm when nondistended.
- Obtain select longitudinal and transverse color Doppler images throughout the bladder.
- Note ureteral jets if they are seen during the exam.
- Calculate pre-void and post-void bladder volumes.
 - Normal volume of a distended bladder is 300-400 mL.
 - Normal post-void residual is <50 mL (<50-100 mL in elderly patients).
- Note any stone, mass or diverticulum.
- For non-stone pathology (mass-like debris, masses, nodules) obtain color and spectral Doppler images of the pathology. Debris will not have blood flow. Masses will have blood flow.

Prostate

- Measure the prostate dimensions in male patients.
 - Normal dimensions are 2.1-3.4 cm AP, 3.9-5.3 cm TR and 2-4 cm CC.
 - Normal volume is <40 mL (formula volume = AP x TR x CC x 0.52).
- Obtain transverse color Doppler image of the prostate.