

RADIOLOGY CHECKLIST FOR RENAL INSUFFICIENCY

US findings	CT findings	Cause
Narrowed or occluded renal artery; elevated PSV at or near stenosis; increased RI in kidneys	Narrowed or occluded renal artery	Renovascular obstruction
Elevated RI	Persistent nephrograms	Acute tubular necrosis AKA acute kidney injury
Wedge shaped area of abnormal echogenicity and decreased flow on color Doppler imaging	Wedge shaped area of abnormal enhancement	Acute cortical necrosis
Echogenic renal papillae +/- surrounding fluid; dilatation above level of obstruction caused by sloughed papilla	Blunted calyx; filling defect and dilatation above the level of a sloughed papilla	Acute papillary necrosis
Swelling; blurred corticomedullary junction	Swollen kidneys; patchy or striated nephrogram; delayed irregular enhancement	Acute pyelonephritis
Swelling; hyperemia on color Doppler	Irregular enhancement; abnormal vascular tree	Vasculitis
Dilatation above level of obstruction; visualization of stone or mass in ureter causing the obstruction	Dilatation above level of obstruction; visualization of stone or mass in ureter causing the obstruction	Ureteral obstruction
Dilatation above the level of the obstruction; visualization of prostate enlargement or other cause of the obstruction	Dilatation above the level of the obstruction; visualization of prostate enlargement or other cause of the obstruction	Bladder obstruction
Enlarged prostate; dilated bladder (see bladder obstruction)	Enlarged prostate; dilated bladder (see bladder obstruction)	Prostate hypertrophy or cancer
Echogenic focus in the kidney, ureter, or bladder	Hyperdense lesion in the kidney, ureter, or bladder	Calculi
Dilatation above the fibrosis; mass at the level of the fibrosis	Dilatation above the fibrosis; mass at the level of the fibrosis	Retroperitoneal fibrosis
Dilatation above the obstruction; detection of a stone or mass at the level of obstruction	Dilatation above the obstruction; detection of a stone or mass at the level of obstruction	Urethral obstruction
Dilated bladder and upper system	Dilated bladder and upper system	Neurogenic bladder

DICTIONARY TEMPLATE WITH PROMPTS FOR ULTRASOUND PERFORMED FOR RENAL INSUFFICIENCY

ULTRASOUND EXAMINATION OF THE KIDNEYS

INDICATION: Acute renal failure. [Review chart/questionnaire for temperature, elevated WBC, BUN/creatinine and eGFR.]

COMPARISON: [Check priors to see if following a known lesion.]

TECHNIQUE: []

Right kidney: [Swelling (extensive renal necrosis/infarction, pyelonephritis, vasculitis). Echogenic papillae (papillary necrosis). Segmental area of abnormal echogenicity showing decreased/absent flow on color Doppler (infarct). Elevation of resistive index (renal artery stenosis/occlusion or acute kidney injury). Distension of the collecting system (stone, mass, sloughed papillae, blood clot.)

Left kidney: [Swelling (extensive renal necrosis/infarction, pyelonephritis, vasculitis). Echogenic papillae (papillary necrosis). Segmental area of abnormal echogenicity showing decreased/absent flow on color Doppler (infarct). Elevation of resistive index (renal artery stenosis/occlusion or acute kidney injury). Distension of the collecting system (stone, mass, sloughed papillae, blood clot.)

Peritoneal cavity: [Retroperitoneal mass (retroperitoneal fibrosis or lymphadenopathy engulfing ureters).]

Bladder: [Distension (stone, blood clot, bladder mass, prostate lesion, urethral mass). Indentation by an enlarged prostate gland (prostatitis, benign prostatic hypertrophy, prostate cancer).]

IMPRESSION: []