

Ultrasound Protocol: Abdomen Limited - Right Upper Quadrant

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Last Reviewed: 10/8/2024 Link to: [General Imaging Requirements and Pathology Protocol PDF](#)

List of Required Images

Pancreas

- **Transverse** - Complete documentation in transverse (long axis of organ). At least three gray scale images to include:
 - Head
 - Body
 - Tail

Liver

- **Left Lobe**
 - **Sagittal** - At least three gray scale images of the left lobe to include:
 - Medial to include IVC
 - Mid
 - Lateral
 - **Transverse** - At least three gray scale images of the left lobe to include:
 - Level of HV
 - Level of PV
 - Inferior to include caudate lobe
- **Right Lobe**
 - **Sagittal** - At least four gray scale images of the right lobe to include
 - Far lateral
 - Lateral to include renal parenchyma
 - Mid with and without length measurement
 - Medial to include porta hepatis
 - **Transverse** - At least four gray scale images of the right lobe to include:
 - Dome
 - Level of HV
 - Level of MPV
 - Inferior
- **Portal and Hepatic Veins**
 - Portal Vein: Color and Spectral Doppler image
 - Hepatic Veins: Provide best gray scale image of the 3 hepatic veins at IVC in a single image

Gallbladder

- **Sagittal and transverse** - Complete documentation
 - GB imaging should be imaged both supine and LLD
 - With and without measurement AP GB wall
- Assess for sonographic Murphy sign, if unable to assess, document reason.

Biliary Duct

- Extrahepatic duct with and without measurement. Document as much of the duct as possible.

Right Kidney (if indication is right upper quadrant pain)

- **Sagittal** - Complete documentation with at least three gray scale images to include:
 - Lateral
 - Mid with and without length measurement
 - Medial
- **Transverse** - Complete documentation with at least three gray scale images to include:
 - Superior
 - Mid with and without color Doppler
 - Inferior

Right Kidney - (if indication is anything other than pain)

- **Sagittal** right kidney mid/right liver image (mark this as a limited kidney in SonoReview)

For general pathology, see the [Imaging Requirements and Pathology Protocol Document PDF](#).

Additional Images for Anatomy-Specific Pathology

- **Liver: Cirrhosis, Hepatitis, or nodularity** is suspected by tech: Right and left liver capsule images using a linear transducer and CINE clip(s) through entire liver
- **Gallbladder**
 - Document mobility of stones and lack of mobility of polyps
 - Color over sludge and polyps; provide Spectral Doppler if color is real. Please comment on worksheet if color appears artifactual in real-time (i.e., related to motion)
 - CINE through polyps and sludge
 - Do NOT need to CINE through empty gallbladder or GB with obvious stones
- **Bile Ducts:** For intrahepatic bile ductal dilatation, provide images with color to show differences between vessels and adjacent dilated bile ducts; include CINE with color.
- **Renal:**
 - Cysts: When there are multiple simple cysts measure only the largest 1 on each side; if there is any complexity to a cyst evaluate completely per [Pathology Protocol](#).
 - Hydronephrosis:
 - Measure renal pelvis AP diameter
 - Add bladder image (do not need to do volume; show jet *only if readily seen*)
 - Evaluate distal ureters at bladder.
 - If full bladder, the patient should void. Then re-check for hydro.
 - Hematuria: If indication is for hematuria, transverse and longitudinal CINE through both kidneys (even if kidneys appear normal)
 - Stents: Attempt to visualize proximal and distal coils.
- **Fluid:** Document Images only where fluid is present when evaluating all 4 quadrants and midline pelvis.

Common Indications for Abdomen Limited Right Upper Quadrant Ultrasound

- Right upper quadrant pain
- Gallstones
- Abnormal liver function test
- Liver lesion