

International Veterinary Ultrasound Society (IVUSS)
Consensus Statement
Imaging Protocol for Standard Abdominal Ultrasound Exam

A combination of still images (25-40) +/- video clips (3+) may be made to include the organs below. Measurements should be included as still images. The images/clips should have patient identification (name +/- patient number), date of the examination and facility name embedded. Each image/clip should be labeled to identify the organ being examined (eg. left kidney, left kid or LK). Where applicable, it should be labeled whether the organ is in sagittal (eg. sag) or transverse (eg. trv).

Images may be archived in jpeg (with appropriate measurements included), DICOM, or manufacturer's native format. Jpeg format with measurements is preferred for referring cases to another hospital.

The sonographer should scan each organ in its entirety in sagittal and transverse planes, even though only certain sections will be captured as still images or cine loops. In addition, the entire abdominal cavity should be scanned in a transverse "mowing the lawn" pattern to ensure no masses or pathology not associated with any particular organ are present. Abnormalities should be measured and imaged in at least two planes.

Deviations from the recommended images listed below are allowed due to anatomic variations or abnormalities.

Organs to be scanned with number of images captured:

Liver/gb—3+, including at least 1 intercostal image, sagittal and transverse images, and portal hilus

Common Bile duct (cystic, proximal and distal if seen)

Duodenal Papilla (if seen)

Hepatic LN's (if seen)

Measure: Gall Bladder Wall thickness if thickened

Common Bile Duct diameter if dilated

Bile Duct Wall thickness if thickened

Hepatic LN thickness

PV/CVC/Ao diameter if warranted

R Kidney—2 , including one transverse at the level of the renal pelvis

Measure: Kidney sagittal length at level of the renal pelvis

Renal Pelvis if dilated in transverse, not to include proximal ureter

Ureter diameter, if dilated

R Adrenal—1

Measure: Caudal pole thickness, +/- cranial pole thickness

Duodenum—1

Measure: Wall thickness serosa to luminal side of mucosa

Pancreas—1-3, left and right limb, body

Measure: Thickness of left and right limb
Pancreatic duct if it appears dilated

Stomach—2-3, body/fundus, pylorus, pyloro-duodenal outflow (PDJ) if seen

Measure: Wall thickness at inter-rugal fold

Spleen—2-4, at least one of which shows venous colorflow

Measure in cats: Thickness in sagittal at level of the splenic hilus

L Kidney—2, including one transverse at the level of the renal pelvis

Measure: Kidney saggital length at level of the renal pelvis
Renal Pelvis if dilated in transverse, not to include proximal ureter
Ureter diameter, if dilated

L Adrenal—1

Measure: Caudal pole thickness, +/- cranial pole thickness

Colon – 1-3, ascending/ICC junction, transverse, descending

Measure: Wall thickness serosa to luminal side of mucosa

Right Colic Nodes—1

Measure if abnormal

Jejunum—3+

Measure: Wall thickness serosa to luminal side of mucosa

Jejunal nodes--1

Measure: Thickness/diameter capsule to capsule

Medial and internal ilac nodes/caudal vena cava/aorta at level of trifurcation—1+

Measure: LN thickness capsule to capsule

Urinary Bladder—2, including trigone, and including one transverse

Measure: Wall thickness if thickened

Urethra—1, may be included with prostate

Prostate—2,

Measure: length, width, and height if abnormal

Uterus—1-3, including body and each horn

Ovaries—2

Testicles—2

The ultrasonographer should be adaptive to the case in front of them, and the following should be imaged if warranted:

- Penis—proximal and distal to the os penis

- Sternal lymph node

- Pericardial sac

- Right or left atrium and auricle

- Lung—1-2 views to demonstrate if peripheral pulmonary nodules or pleural effusion are present

- Heart—1 view to determine if pericardial effusion is present, subjectively assess left atrial size, LV contractility, and cardiac volume. Full cardiac assessment, including echocardiogram, should be recommended if cardiac abnormalities are suspected.