

- Dog food can mimic abnormalities
- Distended bladder can help in organ visualization. Thus water could be given 30 minutes before procedure.

Patient positioning

Left or right lateral

Ventrodorsal in a trough or standing.

Imaging windows

Transcutaneous in dogs and cats

Transrectal in ruminants and horses

Approach

Image in both transverse and longitudinal planes

Use a high frequency transducer

Use intraluminal transducer if available

Imaging order

Prepare a mental list

Have a written list

Be complete and flexible

Imaging approach

Make your list of organs

Use vessels as road signs

N.B vessels don't come labeled with their names but are consistent in location.

Standard Organs Imaged On the Left

1. Left mesenteric lymph node
2. Left adrenal gland
3. Left kidney/ ureter
4. Spleen
5. Left /central liver lobe
6. Bladder/urethra
7. Reproductive tract
8. Stomach/colon/small intestine.

Standard Organs Imaged On the Right

Right mesenteric lymph node

Right kidney /ureter.

Right/left adrenal glands

Pancreas

Right/central liver lobe

Biliary tract

Stomach/pylorus/duodenum/jejunum/ileum/colon

Bladder/urethra

Reproductive organs

Echo anatomy of abdominal structures

A. Kidney: cortex – medium level echogenicity

- Medulla-hypoechoic
- Pelvis-hyperechoic

B. Liver: medium level echogenicity isoechoic or hyperechoic to the kidney cortex.

- Beware of mirror image
- Vessels are anechoic

C. spleen: medium level echogenicity, hyper echoic to the kidney

D. GIT: layered echo pattern

- Human anechoic
- Mucosal surface- hyperechoic
- Serosal hyperechoic

E. Bladder: layered echo pattern

- Lumen-anechoic
- Mucosal surface-hyperechoic
- Serosal-hyperechoic

F. Prostate gland: hypoechoic, homogenous and lobulated

G. Female Reproductive Tract.

- Uterine body and cervix dorsal to the urinary bladder.
- The reproductive tract has a central hypoechoic region.
- The serosa is slightly hyper echoic with no apparent lumen.

Both the uterine myometrium and endometrium are hypoechoic

1. Gastric Ulcers

- Can be due to drugs, metabolic disorders, neoplasia, stress or bacteria.
- c/s-vomiting, hematemesis, melena, weight loss, anaemia
- Local thickening of wall
- Loss of 5 – layered wall appearance
- Wall defect “crater”

- Persistent small echoes in crater.
- Diminished motility
- A crater with a mass is often associated with neoplasia

Omentum adhered to serosa with free air and fluid

2. Renal leptospirosis

Renomegaly

Pyeloectasia

Increased cortical echogenicity

Perinephric effusion

Hyperechoic medullary band

With band had perinephric fluid

3. Renal or ureteral calculi

Hyperechoic with acoustic shadowing

Best seen perpendicular to incident beam

Use high frequency transducer

Check for surrounding pelvic or ureteral fluid. Helps distinguish from dystrophic mineralization.

Check where dilation stops.