

**DATE PRESENTING CLINICAL SIGNS**

5/2/23 Patient presents for routine BW and has an increased ALT- no clinical signs at home.

PATIENT Current Medications: None current.

Lab Results: See attached.

Bibi Rosa Date of Previous IntraPet Ultrasound: No previous.

Sedation: Dexdomitor/Torbugesic.

Stat Report: Not requested.

SPECIES Imaging Performed By: Stephanie Warga RDCS, RVT.

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**BREED****Urinary System**

Jindo

The urinary bladder is moderately distended with echogenic urine. The Bladder wall appears focally thickened in areas on the dorsal and ventral wall. This thickening measuring approximately 0.94 cm x 2.62 cm and 0.70 cm x 4.23 cm. Additionally, there is a small, soft shadowing, hyperechoic region, most consistent with mineralized debris measuring 0.76 cm. These changes could be consistent with severe cystitis, but there is concern for a possible neoplastic process.

AGE

The left kidney has a normal shape and size (6.25 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

5/13/16

WEIGHT

The right kidney has a normal shape and size (5.3 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

40 Pounds

INTERPRETED BY

Kathleen Sennello DVM,
MS, Diplomate ACVIM
(Small Animal Internal
Medicine)

Adrenal Glands

The left adrenal gland is normal in size measuring 0.48 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

HOSPITAL NAME

Perry Hall AH

The right adrenal gland is normal in size measuring 0.60 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

REFERRING VET

Dr. Miller

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

INVOICE

47030

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains moderate fluid, with a non-shadowing structure visualized within the stomach measuring 3.84 cm. It measures at a normal thickness of 0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. The non-shadowing material within the stomach could be consistent with ingesta, ingested foreign material, etc.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measures 0.32 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

- Irregular, thickened urinary bladder wall – Findings could be consistent with irregular cystitis, but there is concern for possible underlying neoplastic process.
- Decreased corticomedullary distinction in both kidneys – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.
- Non-shadowing material and fluid visualized within the gastric lumen – Correlate these findings with the feeding history. If the patient was adequately fasted, this could represent delayed gastric emptying with ingesta, less likely a pyloric outflow tract obstruction (none observed) or ingested foreign material. No obvious obstruction is visualized.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

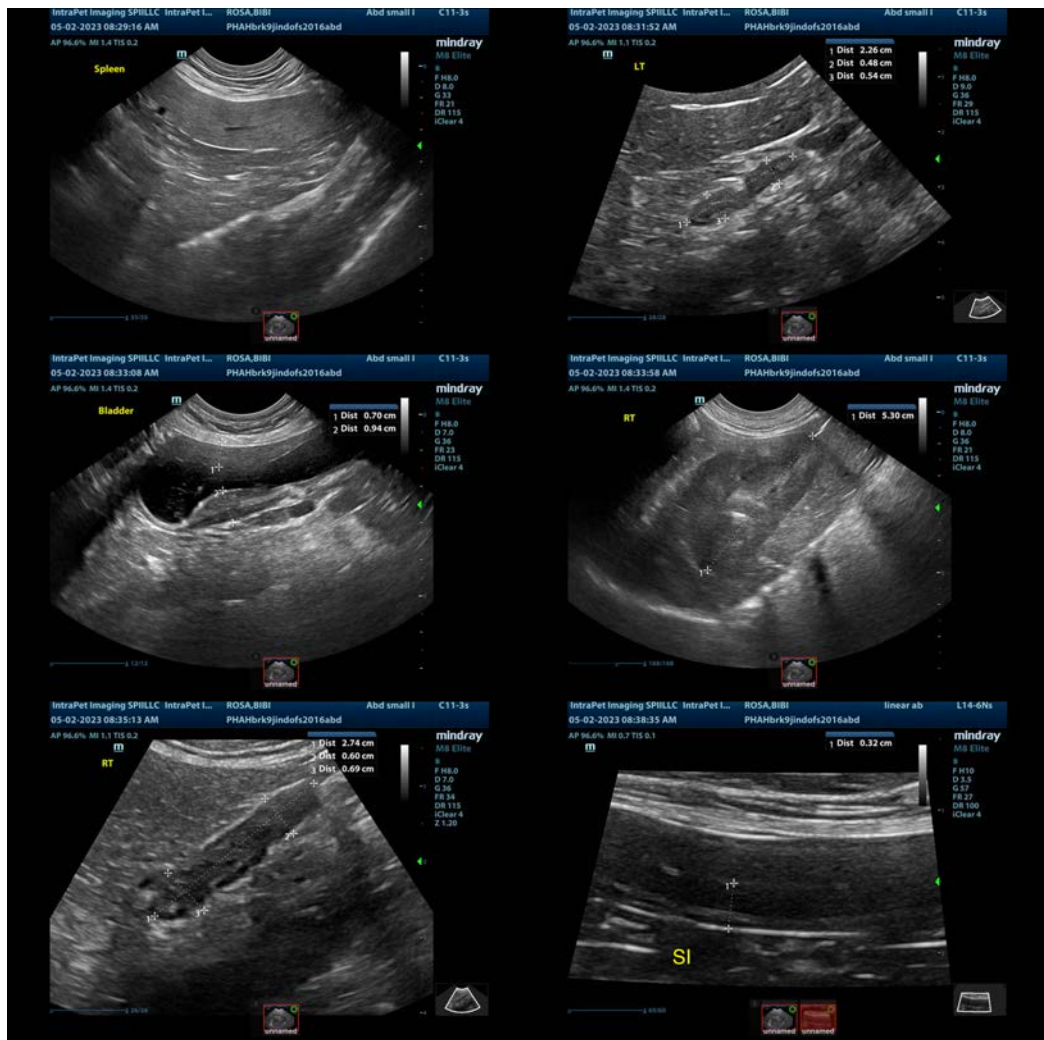
No focal lesions are visualized associated with the liver to explain the elevation in ALT reported. Unfortunately, there are many causes for an ALT elevation that cannot be diagnosed by ultrasound alone. Consider the following:

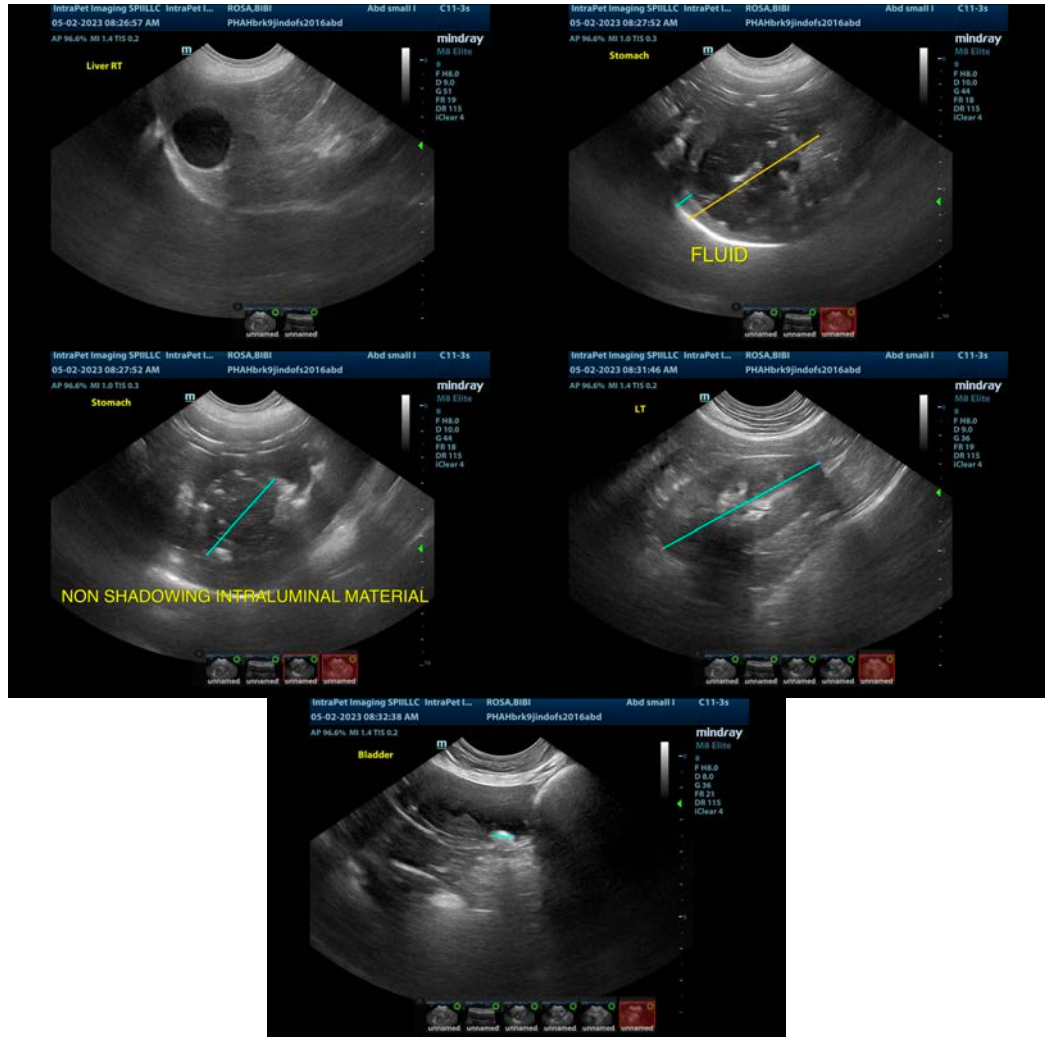
- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate liver function.

- Consider Fine needle aspirate if round cell neoplasia is on your differential list (25 g needle, normal coags)
- If no response to supportive care (Denamarin, fluids, antibiotics, +/- ursodiol etc.) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

The urinary bladder wall appears irregular. This could represent severe cystitis, but the changes are concerning for possible underlying neoplastic process. Recommend urinalysis and culture. Ideally, sampling should be through a catheter if possible due to the risk of possible seeding of neoplastic cells along the needle track. Additionally, you could consider a urine BRAF test. If this is positive, it would increase the likelihood that there is an underlying neoplastic process. A negative neoplastic process is non-diagnostic and would require additional evaluation.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.





The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)
 kathleen.sennello@sonopath.com