**DATE PRESENTING CLINICAL SIGNS**

2/10/2022 History: O adopted P from shelter on 1/5 where P was spayed. P presented for an annual exam to assess overall health. P has hx of potential partial CCL tear and chalazion on right eye. Concern for PU/PD prompted BW and UA. BW revealed elevated liver enzymes and hyperglobulinemia.

PATIENT

Cirilla Adams

Lab Results: TP- 7.5; Globulins- 4.3; ALT- 968; ALP- 438; GGT- 27.

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

SPECIES

Canine

Imaging Performed By: Andi Parkinson, RDMS.

BREED

Labrador Retriever

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder is mildly distended. The wall is thickened (up to 0.56 cm), and irregular. The region of the visible portion of the proximal urethra are normal.

SEX

Female Spayed

The left kidney is normal size (7.00 cm in length); with a slightly irregular shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

AGE

Mix

The right kidney is normal size (7.00 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

1-26-2017

Adrenal Glands

The left adrenal gland is normal size (0.70 cm at cranial pole) (0.58 cm at caudal pole) (2.80 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (0.85 cm at cranial pole) (0.74 cm at caudal pole) (2.69 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

INTERPRETED BY

Andrea Nicastro, DMV,
Diplomate DACVIM
(Small Animal
Internal Medicine)

HOSPITAL NAME

Eastern Animal
Hospital

REFERRING VET

Dr. Frere

Spleen

The spleen is normal in size (1.51 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

INVOICE

10312

The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly fluid distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileocecolic junction and colonic wall are normal. There is no evidence of an obstructive pattern.

Pancreas

The pancreas is normal in size with normal peripheral contours. The pancreatic duct is normal. The base and limbs of the pancreas are isoechoic to surrounding omental fat. No focal lesions are observed. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

Trace free fluid is observed in the caudal abdomen. The abdominal lymph nodes are normal/not visible.

Other

In the region of the uterine stump, a 2.69 x 1.74 cm area of hypoechoic irregular tissue surrounded by hyperechoic mesentery/tissue is observed. Trace free fluid is present in this region.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

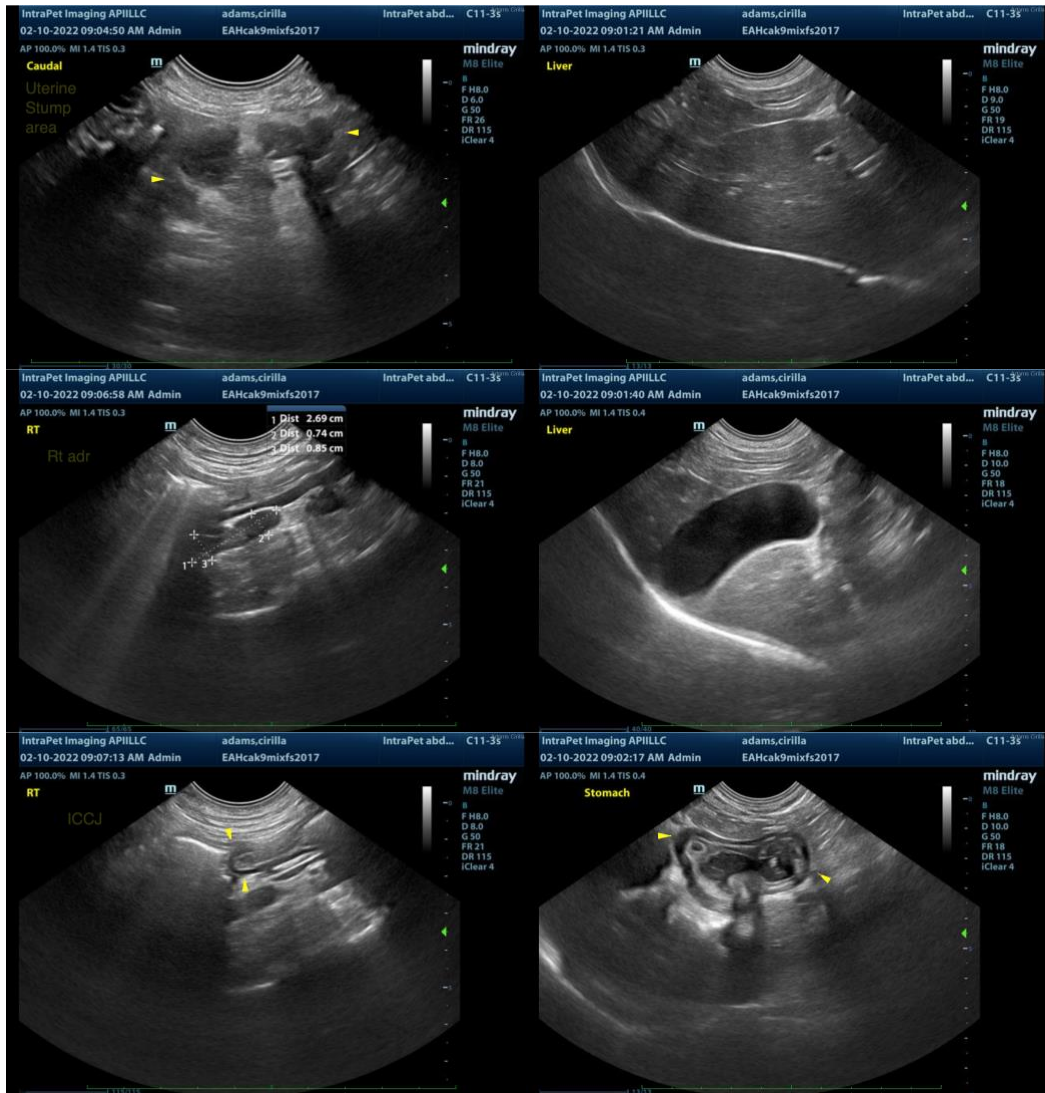
- An obvious cause for the elevated liver enzymes is not identified in the study. However, a microscopic hepatopathy (i.e., bacterial cholangiohepatitis, Leptospirosis, chronic active hepatitis, copper-associated hepatotoxicity, infiltrative neoplasia (less likely)) cannot be excluded.
- The inflamed tissue in the region of the uterine stump may represent normal post-operative changes. However, a stump pyometra cannot be completely excluded.

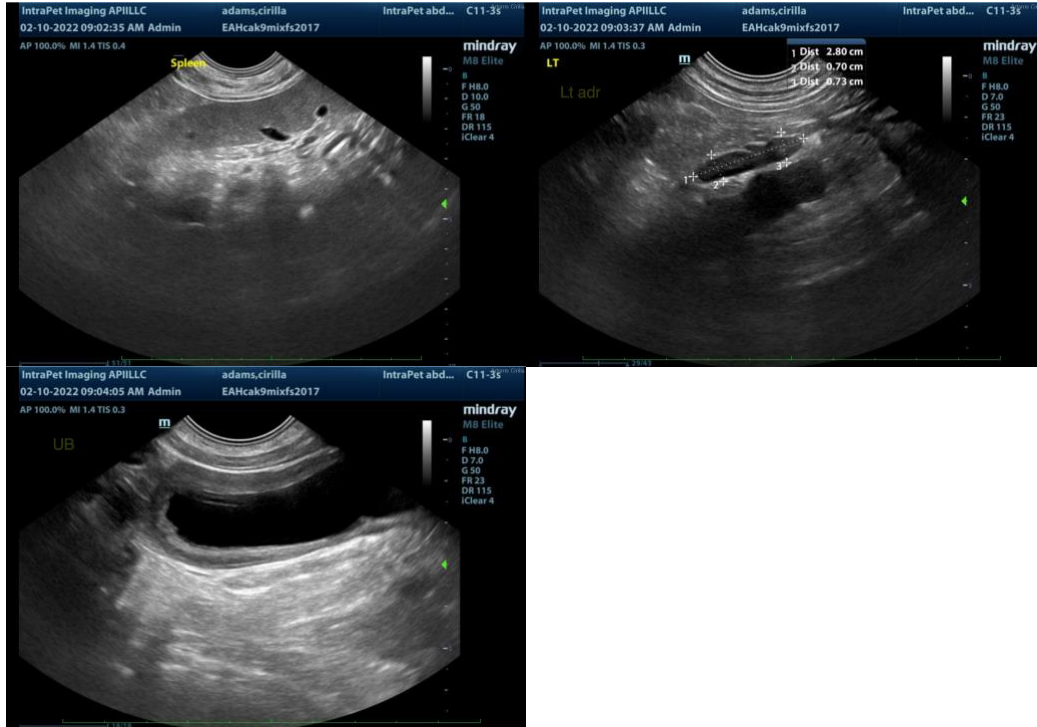
Secondary Findings

- Bilateral degenerative renal changes. The urinary bladder wall thickening may be secondary to cystitis or artifactual due to lack of full repletion. Correlation with clinical findings is recommended.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Regarding the elevated liver values, consider pre-and postprandial serum bile acids, Leptospirosis testing (i.e., blood and urine PCR, serology), +/- hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy). If surgical biopsies are pursued, aerobic and anaerobic bile cultures as well as acquisition of additional hepatic tissue samples for copper quantitation should be obtained.
- If a more conservative approach is desired, consider empirical treatment for cholangiohepatitis/Leptospirosis with broad-spectrum antibiotic and hepatic antioxidants. If no improvement in the liver values is seen within 5-7 days of initiating therapy, antibiotics should be discontinued, and hepatic tissue sampling revisited.
- Regarding the uterine stump changes, a repeat ultrasound is recommended. Consider vaginal cytology to further assess for stump pyometra. Also consider a repeat ultrasound in 2-4 weeks to reassess the region.





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.

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