**DATE PRESENTING CLINICAL SIGNS**

1/20/2022 History: Doing well at home. Presented for pre-surgical bloodwork for neuter and dental scaling. Mild ALT elevation noted to be mildly progressive on repeat BW.

PATIENT

Vinny Donovan

Current Medications: Denamarin started 1/13/22.
 Lab Results: 12/31/21 - ALT 156, 1/11/22 - ALT 211, normal 10- 125 U/L. Attached separately.
 Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
 Sedation: Patient sedated with Dexdomitor.
 Stat Report: Not requested.

SPECIES

Canine

Imaging Performed By: Andi Parkinson, RDMS.

BREED

Bichon

SEX

Male Intact

AGE

7-5-2016

WEIGHT

17.1 lbs

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

One video clip is available for interpretation. In the visualized portion of the urinary bladder, it appears moderately distended with a normal wall thickness and a smooth mucosal surface. Luminal contents are anechoic. No cystic calculi are observed.

The prostate is enlarged (3.54 cm in width) with a slightly irregular shape. The parenchyma is hyperechoic to slightly heterogenous in appearance. No distinct focal lesions are observed. The prostatic urethra is not overtly dilated.

The left kidney presented normal size (5.02 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis.

The right kidney presented normal size (4.54 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis.

INTERPRETED BY

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

Adrenal Glands

The left adrenal gland is normal size contour (0.36 cm at cranial pole) (0.43 cm at caudal pole) (1.87 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.

HOSPITAL NAME

Eastern Animal
 Hospital

The right adrenal gland is normal in length, with a flattened contour (0.30 cm at cranial pole) (0.29 cm at caudal pole) (1.65 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.

REFERRING VET

Dr. Michelotti

Spleen

The spleen is normal in size (1.41 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.

INVOICE

10166

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. The portal vein to caudal vena cava ratio is approximately normal 1: 1.

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 gastric lumen is moderately distended with fluid and ingesta. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. 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 colonic wall is normal. No obstructive or overt infiltrative disease is noted.

Pancreas

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. A 1.16 cm midabdominal lymph node is visualized. The node is normal in shape and echogenicity.

Other

The testicles are subjectively normal in size and symmetrical, with homogenous parenchyma. No focal lesions are observed.

ULTRASONOGRAPHIC FINDINGS

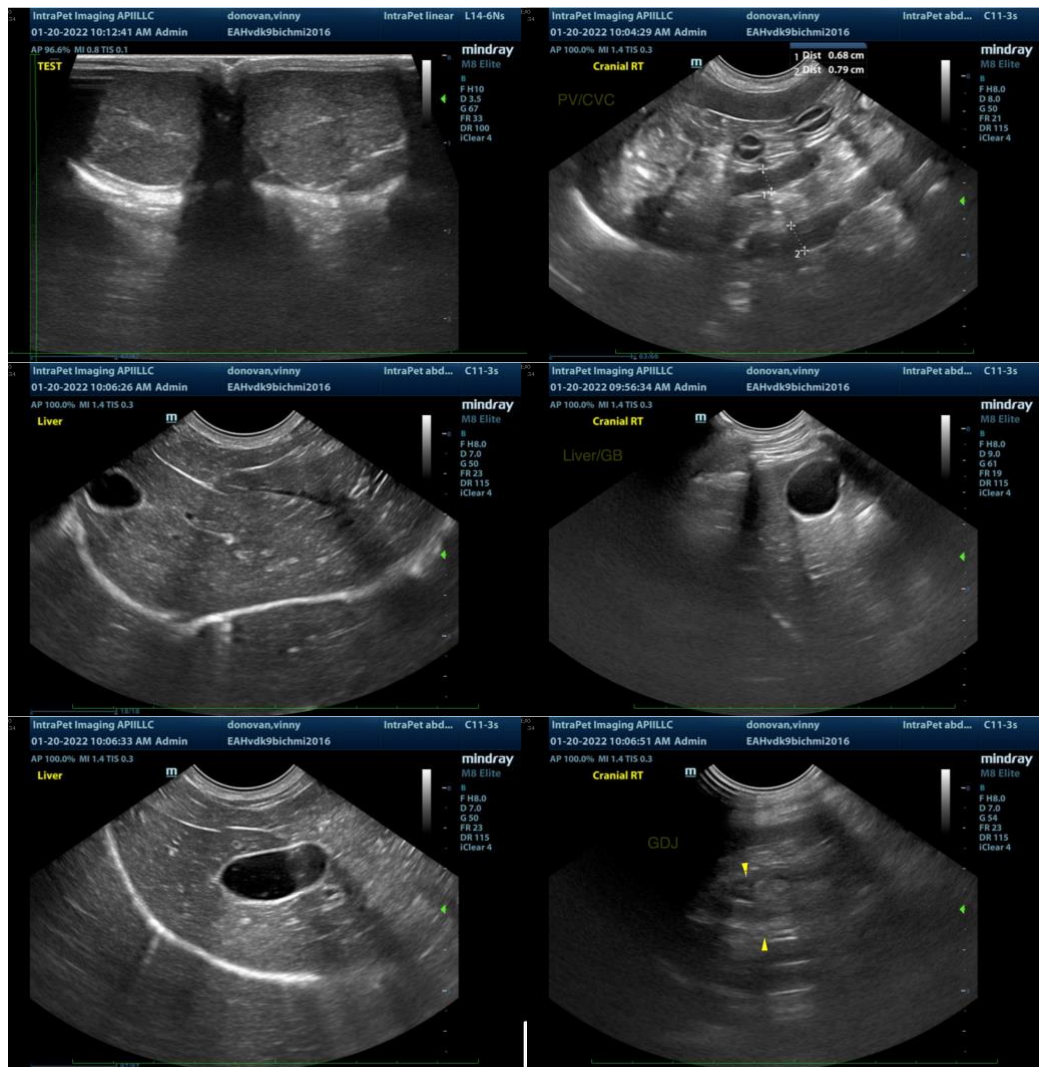
Primary Findings

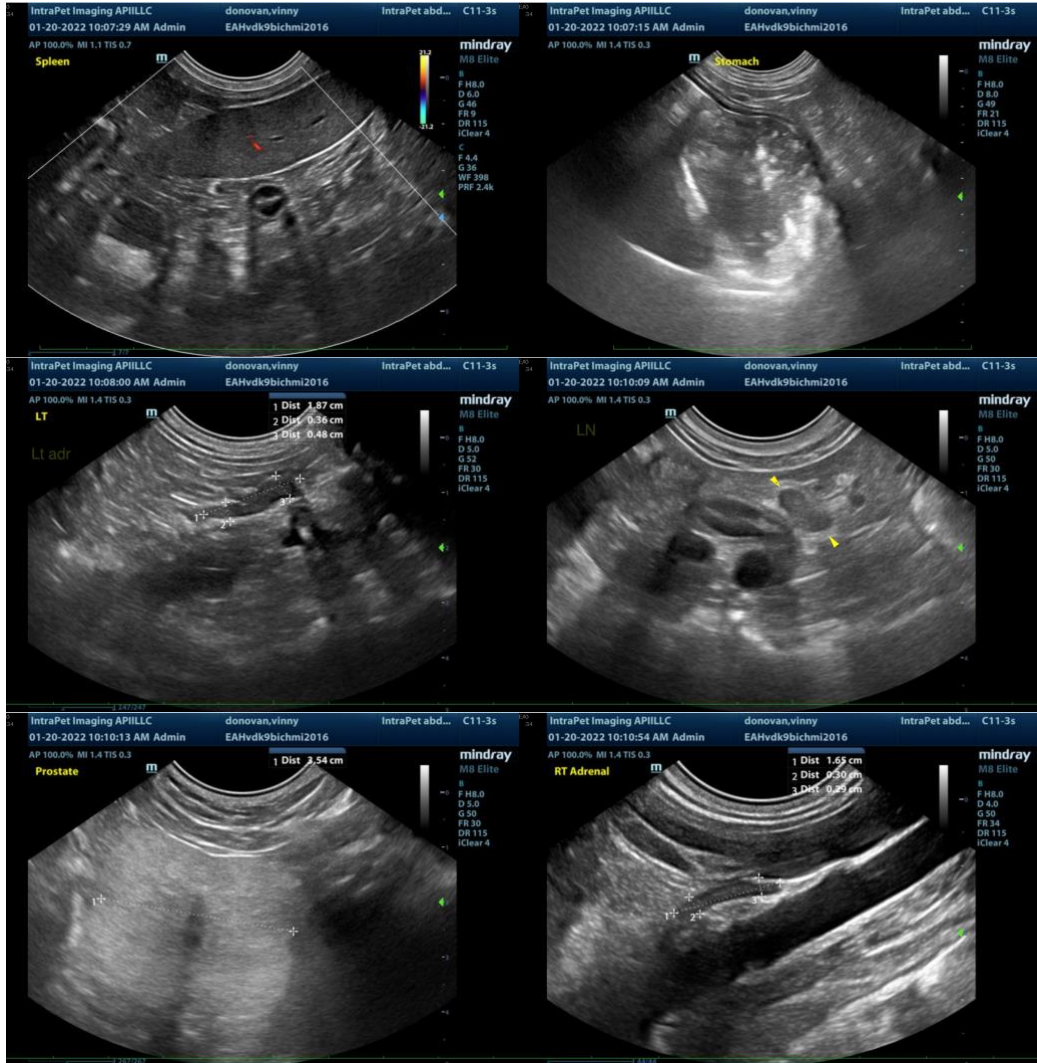
- An obvious cause for the elevated liver enzymes is not identified in the study. However, a microscopic hepatopathy (i.e., bacterial cholangiohepatitis, Leptospirosis, chronic active hepatitis, copper-associated hepatotoxicity, reactive hepatopathy, infiltrative neoplasia (less likely) cannot be excluded. There is no obvious evidence of an extrahepatic congenital portosystemic shunt.
- The prostate changes are most consistent with benign prostatic hyperplasia. Bacterial prostatitis is also a differential but considered unlikely in the absence of lower urinary tract signs.
- The prominent mid-abdominal lymph node is likely reactive.
- The flattened right adrenal gland may be a normal variant for this patient, or may be secondary to early atrophy (i.e., secondary to hypoadrenocorticism).
- The gastric distention may represent recent water/food ingestion. Alternatively gastric ileus may be present. Correlation with clinical findings is recommended.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Given the elevated ALT, consider the following diagnostics:
 1. Pre-and postprandial serum bile acids

2. Leptospirosis testing (i.e., blood/urine PCR, serology)
3. +/- hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy). If biopsies are pursued, aerobic and anaerobic bile cultures and acquisition of additional hepatic tissues for copper quantitation are recommended. Castration can also be performed at the time of surgery.
4. If a more conservative approach is desired at this time, consider empirical treatment for bacterial cholangiohepatitis (i.e., broad-spectrum antibiotics, Denamarin). If there is no improvement in the ALT within 7-10 days of initiating therapy, antibiotics should be discontinued, and further workup should be considered.





The information and recommendations provided are based on the images presented by the referring veterinarian. 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.

Andrea Nicastro, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
 info@SonoPath.com