

**DATE**

11/15/21

PRESENTING CLINICAL SIGNS

History: Rising ALT, no outward clinical signs of illness. Exocrine Pancreatic Insufficiency diagnosed in 2019.

PATIENT

Gimli Dubois

Current Medications: Long term: Pancreas Powder 1 tsp with meals, Fluoxetine 40 mg po SID. Just started 11/8/21: Amoxicillin 1-gram po BID, Denamarin Advanced 1.5 po SID.

Lab Results: ALT 232.

Date of Previous IntraPet Ultrasound: 7-1-2019.

Sedation: Gabapentin.

Stat Report: Not requested.

SPECIES

Canine

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

Pitbull Terrier Mix

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

SEX

Male, neutered

The prostate is normal in size (1.52 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

AGE

11/26/2017

The left kidney is normal size (6.82 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. Renal vasculature is normal.

WEIGHT

92.7 lbs.

The right kidney is normal size (6.48 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. Renal vasculature is normal.

Adrenal Glands**INTERPRETED BY**

Andrea Nicastro, DVM,
Diplomate ACVIM
(Small Animal Internal
Medicine)

The left adrenal gland is normal size (0.52 cm at cranial pole) (0.71 cm at caudal pole) (2.74 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 (0.87 cm at cranial pole) (0.75 cm at caudal pole) (4.17 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.

IMAGING PERFORMED BY

Rachel Brillhart RDMS

Spleen

The spleen is normal in size (2.65 cm in width at the level of the hilus) with a normal capsular contour. The parenchyma is subtly mottled in appearance. No focal lesions are observed. Splenic vasculature is normal.

HOSPITAL NAME

Eastern AH

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 gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

REFERRING VET

Dr. Warner-Jones

Gastrointestinal**INVOICE**
12524

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. 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 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. The abdominal lymph nodes are normal/not visible.

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) should be considered.

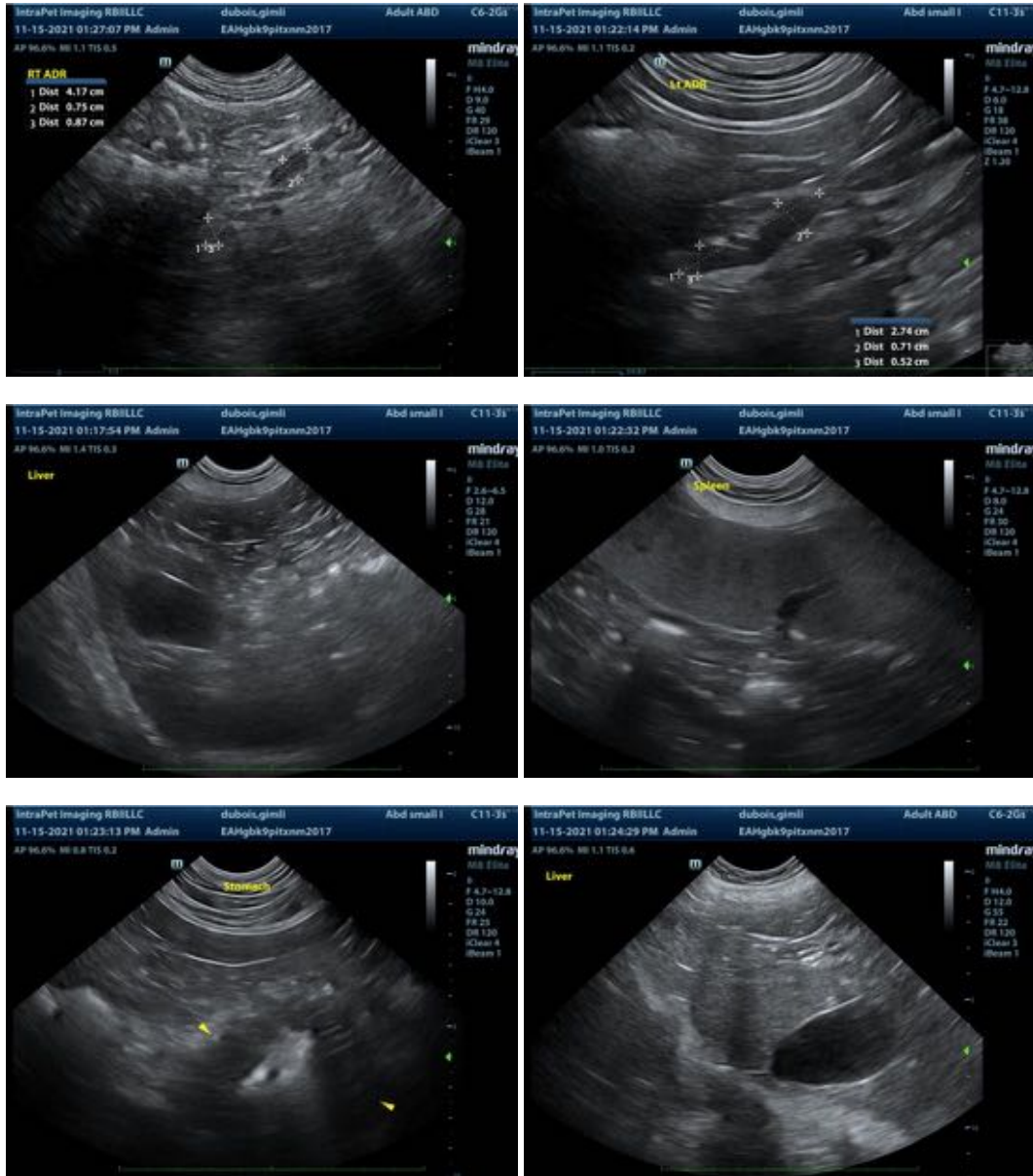
Secondary Findings:

- The splenic parenchyma changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis or splenitis with a low possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia).

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Pre- and post-prandial serum bile acids are recommended to assess hepatic function.
- Ideally a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation would be performed to get a definitive diagnosis. If a more conservative approach is desired, a fine needle aspirate of the liver could be considered if clotting status is normal. A 25-gauge needle should be used. However, cytology results may not be representative of true underlying hepatic pathology.
- Leptospirosis testing can also be considered. However, if the liver enzyme elevations are chronic, this differential is considered less likely.





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 ACVIM (*Small Animal Internal Medicine*)
 Andrea.nicastro@sonopath.com