

**DATE PRESENTING CLINICAL SIGNS**

4/11/22

Recent history of elevated liver values.

PATIENT

Lilly Southall

Current Medications: 90mg Denamarin SID started 3/22.
 Lab Results: 2/17/22- ALT 163. 3/22/22- ALT 184; fasted bile acids 55.7, post prandial bile acids 44.5. All other blood work NSF.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Sedation declined.

Stat Report: Not requested.

SPECIES

Canine

Imaging Performed By: Andi Parkinson, RDMS.

BREED

Bichon Frise

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

*The left adrenal gland and portal hilus could not be adequately visualized due to patient discomfort during the scan. To complete the study, sedation would be necessary.

SEX

Female, spayed

Urinary System

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended. A small to moderate amount of suspended echogenic debris is observed within the lumen. 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.

AGE

9/17/2018

The left kidney is normal size (3.88 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 hydroureter.

WEIGHT

9.6 lbs.

The right kidney is normal size (3.36 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 hydroureter.

INTERPRETED BY

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

Adrenal Glands

The left adrenal gland is not definitively visualized due to patient discomfort.

HOSPITAL NAME

Banfield Timonium

The right adrenal gland is normal size (0.49 cm at cranial pole) (0.47 cm at caudal pole) (1.51 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. Borrison

Spleen

The spleen is normal in size (1.22 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

13179

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.

Gastrointestinal

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.

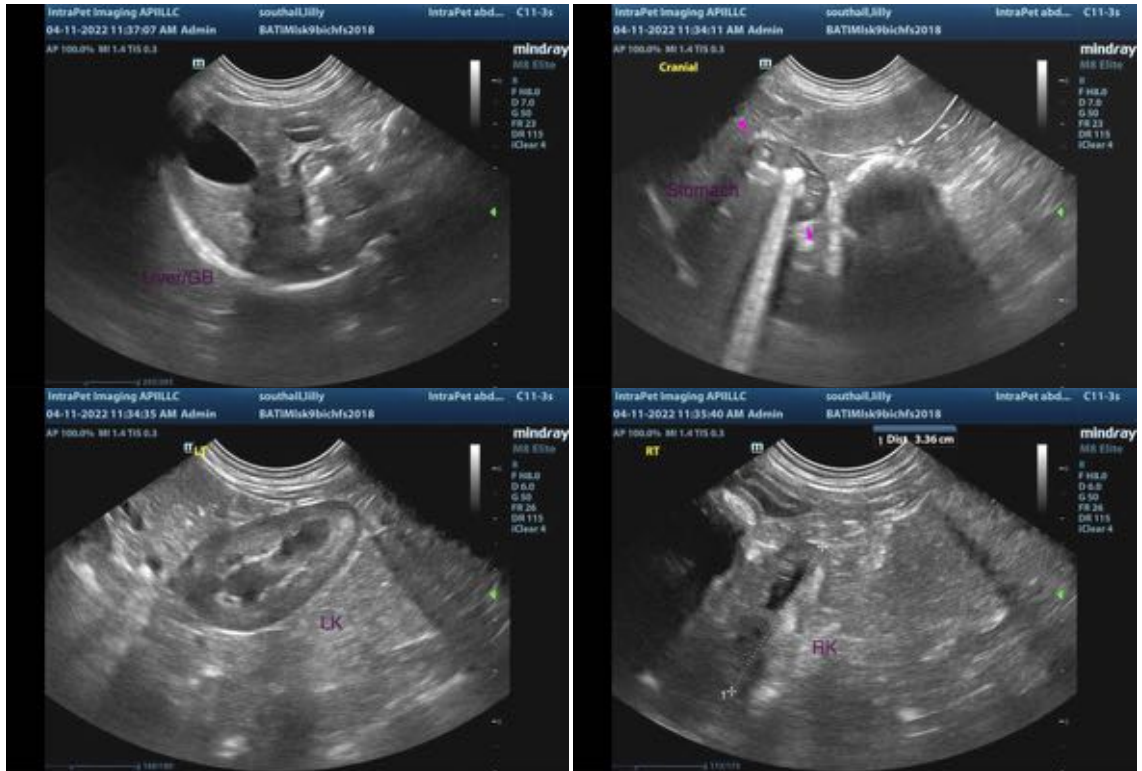
ULTRASONOGRAPHIC FINDINGS

- Unremarkable abdomen. An obvious cause for the patient's elevated liver values is not identified in this study. Given the normal liver size, a congenital extrahepatic portosystemic shunt is considered unlikely. However, given that the portal hilus could not be fully evaluated, this differential cannot be completely excluded. Other considerations include microvascular dysplasia, inflammatory hepatopathy (i.e., chronic active hepatitis, bacterial cholangiohepatitis), Leptospirosis, hepatotoxicosis (i.e., copper), other.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Pre- and post-prandial serum bile acids.
- Leptospirosis testing (i.e., blood and urine PCR, serology).
- A contrast abdominal CT scan would be useful in ruling out a congenital portosystemic shunt.
- Ultimately, surgical liver biopsies with aerobic and anaerobic bile cultures and copper quantitation on a hepatic tissue sample may be necessary to get a definitive diagnosis.





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.

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