



**PATIENT**

Rex Khait

**SPECIES**

Canine

**BREED**

Cairn Terrier

**SEX**

Male

**AGE**

11 years 9 months

**WEIGHT**

20.7

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Amy Priest

**HOSPITAL NAME**

Long Valley AH

**REFERRING VET**

Dr. Stephanie Welch

**INVOICE**

15221

**DATE**

10/13/22

**PRESENTING CLINICAL SIGNS**

Hx of allergies, and elevated liver enzymes Medications: Apoquel, Cyclosporine Ophthalmic Drops  
Abnormal PE/Chem/CBC/UA Results: 7-29-22: ALT: 190 ALK Phos: 430 9-15-22 ALT: 126 ALK Phos: 402

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

No overt pathology was noted in the area of the prostate.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 5.0 cm in length. The right kidney measured 5.1 cm in length.

**Adrenal Glands**

Mild parenchyma heterogeneity and mild capsule asymmetry were present in the bilateral adrenal glands without suspicion for overt neoplasia. The left adrenal gland exhibited borderline enlargement based on caudal pole width measurement and in light of body weight measuring 0.62 cm width in the cranial pole and 0.80 cm width in the caudal pole. The right adrenal gland was normal in size measuring 0.6 cm width in the cranial pole and 0.48 cm width in the caudal pole.

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

**Liver/ Gallbladder**

The liver exhibited subjective borderline to mild enlargement with normal hepatic parenchyma echogenicity and mild parenchymal remodeling. No evidence of masses or nodules. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

**Gastrointestinal**

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.



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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

**Pancreas**

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

**Free Abdomen**

No overt lymphadenopathy or peritoneal effusion was present.

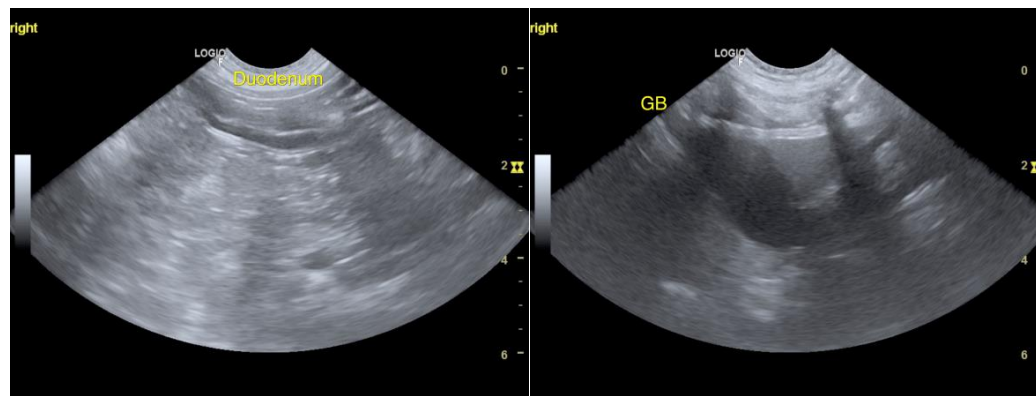
**ULTRASONOGRAPHIC FINDINGS**

- Nonspecific benign hepatopathy
- Sonographically unremarkable gallbladder
- Mild chronic renal changes
- Overtly normal bilateral adrenal glands - no evidence of overt adrenomegaly or neoplastic criteria

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Considerations for the liver may include metabolic, reactive, vacuolar hepatopathy, and hepatic cholestasis given the ALP elevation, with potential for primary or concurrent nonspecific hepatic inflammation given the ALT elevation. No evidence of hepatic neoplastic criteria was noted. Further assessment may include, assuming normal clotting status, hepatic FNA cytology.

Hepatosupportive medications including Denamarin and Ursodiol may prove beneficial. No overt suspicion for underlying primary adrenal disease, given the lack of reported clinical signs i.e., PU/PD, polyphagia, etc.





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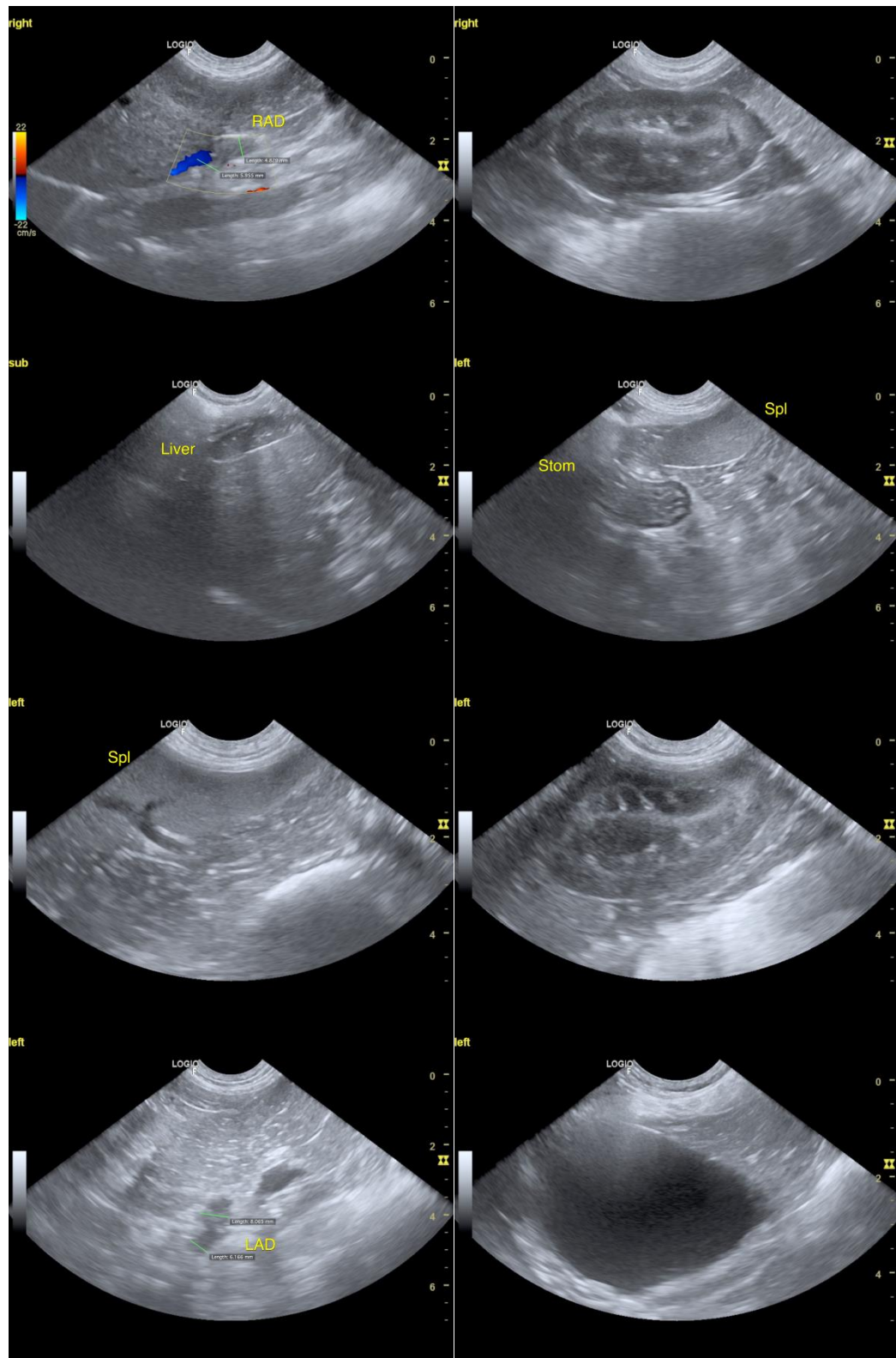
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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**  
**info@SonoPath.com**