**PATIENT**

Benji Betts

**SPECIES**

Canine

**BREED**

Lhasa Apso

**SEX**

Neutered Male

**AGE**

9 Years

**WEIGHT**

20 Lbs.

**INTERPRETED BY**R. McKenzie Daniel, DVM,  
DABVP (Canine and Feline)**IMAGING PERFORMED BY**

Sarah Pender, CVT

**HOSPITAL NAME**

SVS Imaging QC

**REFERRING VET**

Dr. Molly Bies

**INVOICE**

14126

**DATE**

2/28/22

**PRESENTING CLINICAL SIGNS**

History: Started out being extremely anxious, progressed to not eating, vomiting bile 3-5 times a day. Abnormal PE/Chem/CBC/UA Results: Comp panel showed elevations in ALT (780 U/L), ALKP (336 U/L), GGT (27 U/L), and Tbili (4.1 mg/dL). Serum and urine were both dark yellow/orange. 4+ bilirubin in urine.

**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 were noted.

The residual prostate was symmetrically normal in size with uniform parenchyma and slight coarse echotexture measuring 0.93 cm in diameter.

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 and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. Pinpoint areas of medullary mineral were present in both kidneys. The left kidney measured 4.8 cm in length. The right kidney measured 4.7 cm in length. A focal caudal cortical cyst was present in the right kidney.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.52 cm width at the caudal pole and 0.35 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.59 cm width at the caudal pole and 0.52 cm width at the cranial pole.

**Spleen**

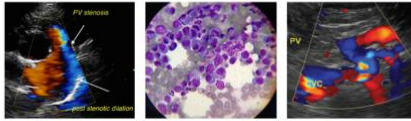
The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute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

**Liver**

The liver was normal in size and contour with subtle subjective uniform increased hepatic parenchyma echogenicity compared to falciform fat and spleen. No hepatic masses or nodules were present.

The gallbladder was non-distended containing primarily anechoic content with very mild particulate luminal debris. No evidence of gallbladder inflammation or peripheral gallbladder inflammation. The common bile duct was dilated and tortuous without overt post hepatic obstruction. The common bile duct measured 0.37 cm diameter. Overt evidence of ductal mucus or calculi was not evident. Subjectively, the degree of both common bile duct dilation in conjunction with non-distended gallbladder was not suggestive of posthepatic obstruction in this study.

**Gastrointestinal**

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The stomach presented wall thickening secondary to echogenic mucosa hypertrophy. Intact yet mildly prominent wall layering was present owing to mildly prominent mucosa. The gastric body wall measured 0.45 cm – 0.48 cm. Mild gastric distension with primarily anechoic fluid was present.

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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. The duodenum wall measured 0.42 cm.

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

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***Pancreas***

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia. No evidence of peripancreatic reactive mesentery noted.

***Free Abdomen***

No free fluid present.

**AGE**

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**ULTRASONOGRAPHIC FINDINGS****WEIGHT**

20 Lbs.

- Nonspecific hepatopathy- suspect nonspecific inflammatory hepatopathy/hepatitis, given the primarily elevated ALT (viral, bacterial, leptospirosis, toxin) with potential for primary or concurrent vacuolar hepatic changes and nonobstructive cholestasis, given the ALP/GGT combination and elevated total bilirubin
- Nondistended gallbladder containing mild particulate sediment (non-mucocele), mild subjectively nonobstructive proximal common bile duct dilation. The common bile duct dilation in conjunction with elevated liver enzymes may suggest some degree of mild cholangitis.
- Mild gastritis

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Further assessment of the liver may include (assuming normal clotting status) ultrasound guided FNA for screening cytology, primarily to assess for evidence of inflammatory cells as well as leptospirosis titers/PCR.

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Empirically, as needed gastrointestinal support and medical therapy for hepatitis/cholangiohepatitis would be reasonable with monitoring of renal parameters and clinical response. Recheck sonogram recommended if persistent/progressive hepatic enzyme elevations and/or evidence of cholestasis.

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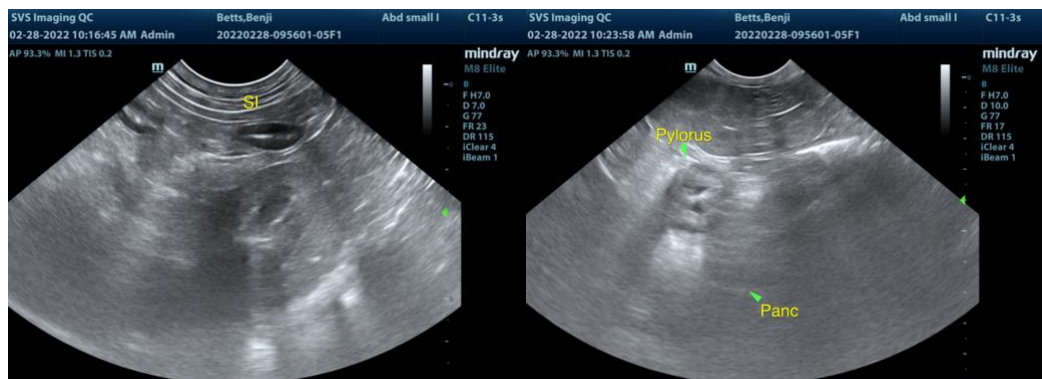
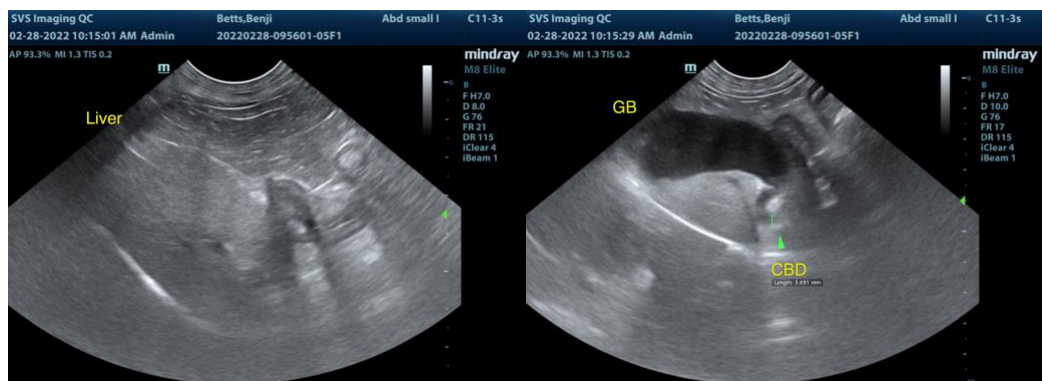
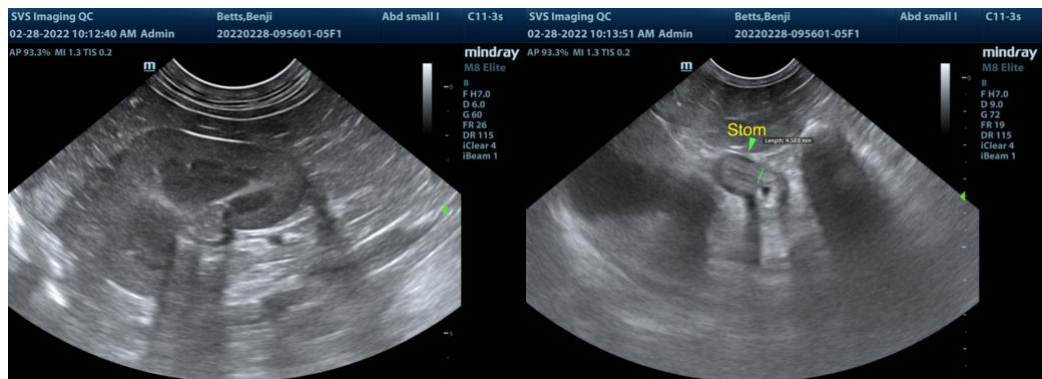
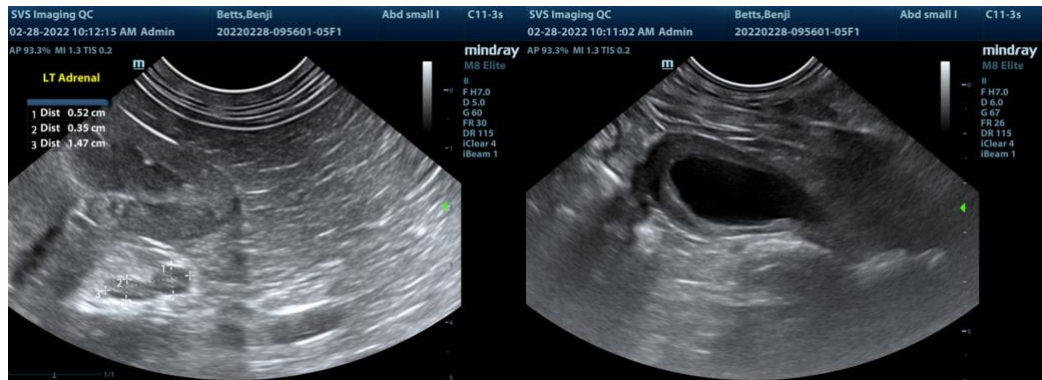
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IMAGING PERFORMED BY

svsimaging.net 309-737-3070



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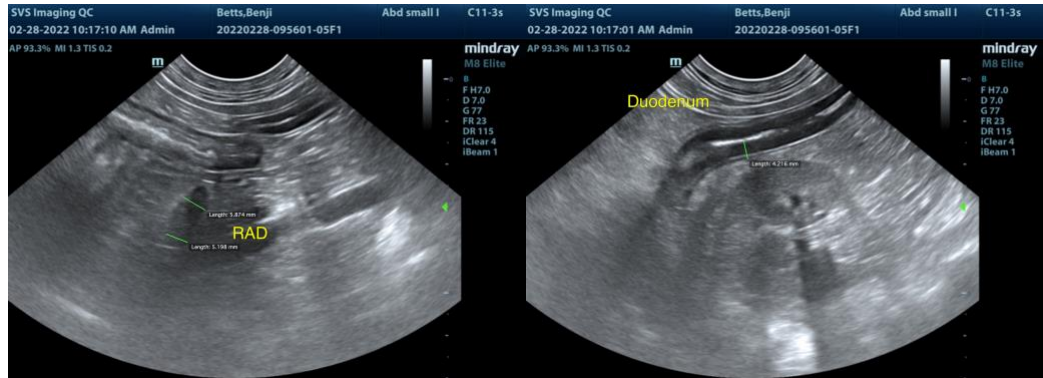
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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