

**PATIENT**

Ella Bergstrand

**SPECIES**

Canine

**BREED**

Schnauzer Mix

**SEX**

SF

**AGE**

10 years

**WEIGHT**

19 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. Narske

**INVOICE**

13467

**DATE**

3/10/22

**PRESENTING CLINICAL SIGNS**

Focal seizures for 3 years, white brittle nails, IVDD, occ GI upset, Grade II murmur dx 2 years ago  
Abnormal PE/Chem/CBC/UA Results: ALP has continued to rise since 2019 when it was 272.  
3/2/22 ALP 1750, ALT 163, Chol 390. CBC: unremarkable Currently taking: Turmeric chews, 600mg,  
Curcumin 120mg, spirulina 100mg, fish oil 100mg, bioperine, Melatonin, Milkthistle, Dandelion root,  
Spark, Antinol

**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.

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 4.6 cm in length. The right kidney measured 5.2 cm in length.

**Adrenal Glands**

The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.33 cm width in the cranial pole and 0.69 cm width in the caudal pole. The right adrenal gland measured 0.65 cm width in the cranial pole and 0.63 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 presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with mild, dependent to nondependent, mildly congealed yet mobile gallbladder debris. The gallbladder was otherwise normal with no evidence of gallbladder inflammatory changes, as well as no evidence of peripheral gallbladder inflammation. The cystic and common bile ducts were normal.

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***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.

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 pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

***Free Abdomen***

No overt lymphadenopathy or peritoneal effusion was present.

**ULTRASONOGRAPHIC FINDINGS*****Primary Findings***

- Hepatopathy - subjectively benign
- Mild congealed yet mobile gallbladder debris (non-mucocele)
- Mild age-related renal changes
- Mild pancreatic remodeling

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The overall appearance of the liver was nonspecific yet consistent with benign hepatopathy. Potential considerations may include metabolic, reactive or vacuolar hepatopathy, as well as cholestasis given the ALP elevation, with potential for primary or concurrent nonspecific inflammation hepatopathy given the ALT elevation and presence of mild gallbladder debris. No overt evidence of hepatic or hepatobiliary neoplastic criteria was noted, which is considered less likely.

Further assessment may include, assuming normal clotting status, an ultrasound guided FNA of the liver for screening cytology. The addition of Ursodiol to current hepatosupportive medications may prove beneficial.

Adrenal hyper functionality is considered less likely, given the lack of reported clinical signs.

Age-related pancreatic changes are suspected while potential for low-grade to chronic pancreatitis cannot be excluded, given occasional episodes of gastrointestinal upset. No overt evidence of structural gastrointestinal disease was noted.



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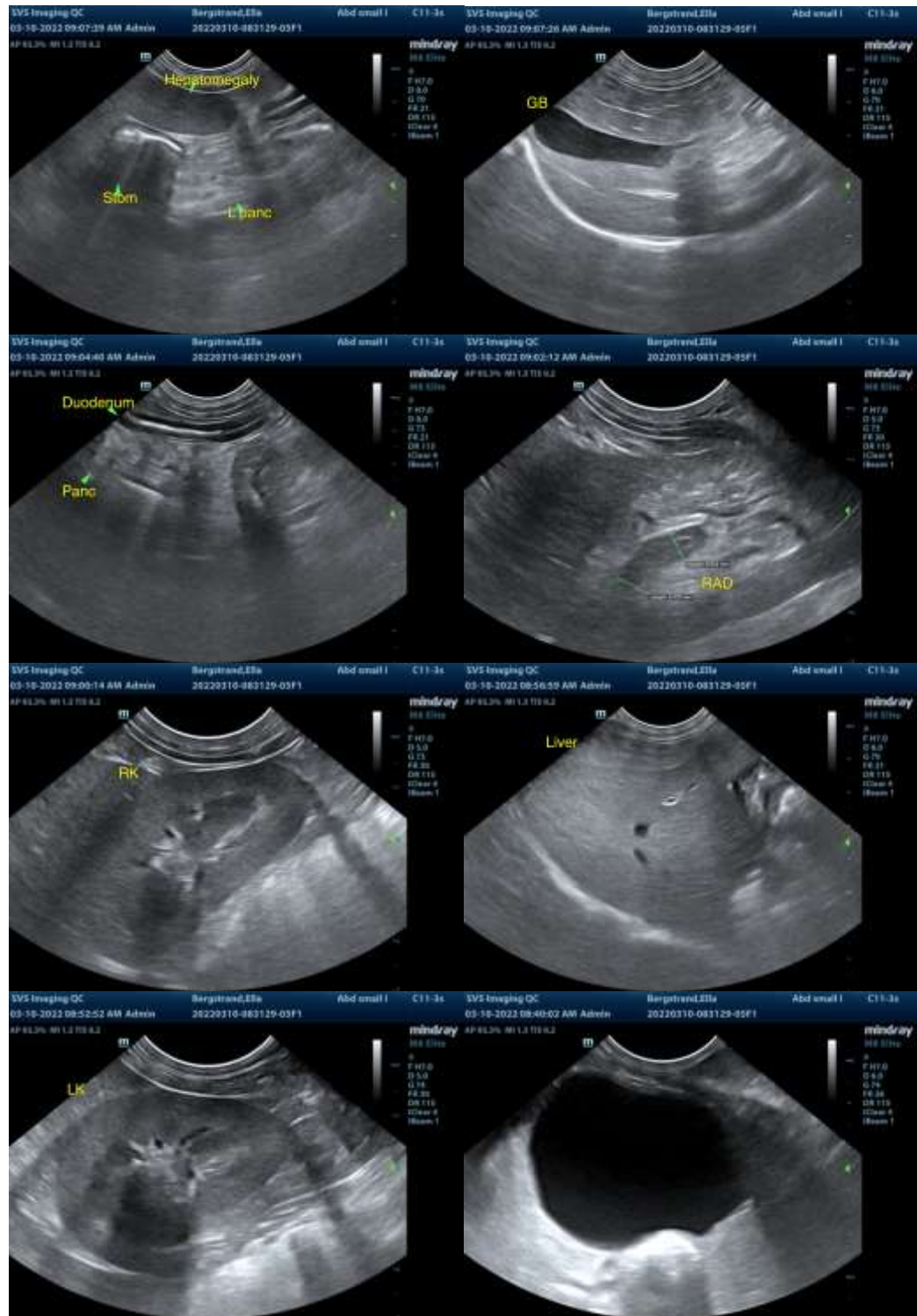
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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**