

**PATIENT**

Eli Miller

**SPECIES**

Canine

**BREED**

Havanese

**SEX**

NM

**AGE**

11 years

**WEIGHT**

16 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. Kim Springman

**INVOICE**

15402

**DATE**

11/4/22

**PRESENTING CLINICAL SIGNS**

PU/PD Started tx for DM - Vetsulin 4 units Disp: Clavamox 125 mg BID, Denamarin 225mg SID  
Abnormal PE/Chem/CBC/UA Results: Glucose 535 GGT 17 ALKP >993 (too high for our in house  
Heska Chemistry) T4 1.0

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

The urinary bladder, trigone, and cystourethral junction 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 residual prostate was free of pathology.

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 pyelectasia. The left kidney measured 4.9 cm in length. The right kidney measured 5.5 cm in length.

**Adrenal Glands**

The bilateral adrenal glands exhibited borderline prominent size based on caudal pole width measurement in light of body weight with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.9 cm length x 0.65 cm width at the caudal pole. The right adrenal gland measured 2.4 cm length x 0.55 cm width at 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 borderline to mildly 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 containing mild gallbladder debris. 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. Mild retained anechoic fluid was noted 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.

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***Pancreas***

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

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***Free Abdomen***

No overt lymphadenopathy or peritoneal effusion was present.

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**ULTRASONOGRAPHIC FINDINGS**

- Benign hepatopathy - metabolic, reactive, or vacuolar (diabetic) hepatopathy likely, potential for nonobstructive cholestasis, cholangiohepatitis considered less likely
- Gallbladder debris (non-mucocele)
- Heterogeneous to mildly echogenic pancreas - patient / age-related variant, parenchymal remodeling and possible minor fibrosis owing to potential inflammatory episode, low-grade to chronic pancreatitis possible
- Mild age-related renal changes
- Borderline prominent adrenal glands - no adrenal tumors

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Potential for low-grade to chronic pancreatitis may be suspected if evidence of cranial abdominal or subxiphoid discomfort on palpation. Correlation with a Spec cPL could be considered.

Continued Denamarin +/- Ursodiol may prove beneficial. Urine C/S is suggested on a sterile urine sample if evidence of glucose urea or for screening for underlying UTI. Full adrenal workup with ACTH Stimulation test, given the potential diabetes, may be considered if diabetic dysregulation or if clinical signs suggestive of Cushing's Syndrome are present.

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For an additional charge, internal medicine consult can be utilized through Sonopath.com. You can select the internal medicine drop down at <http://spa.sonopath.com/>.

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One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. <https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services>

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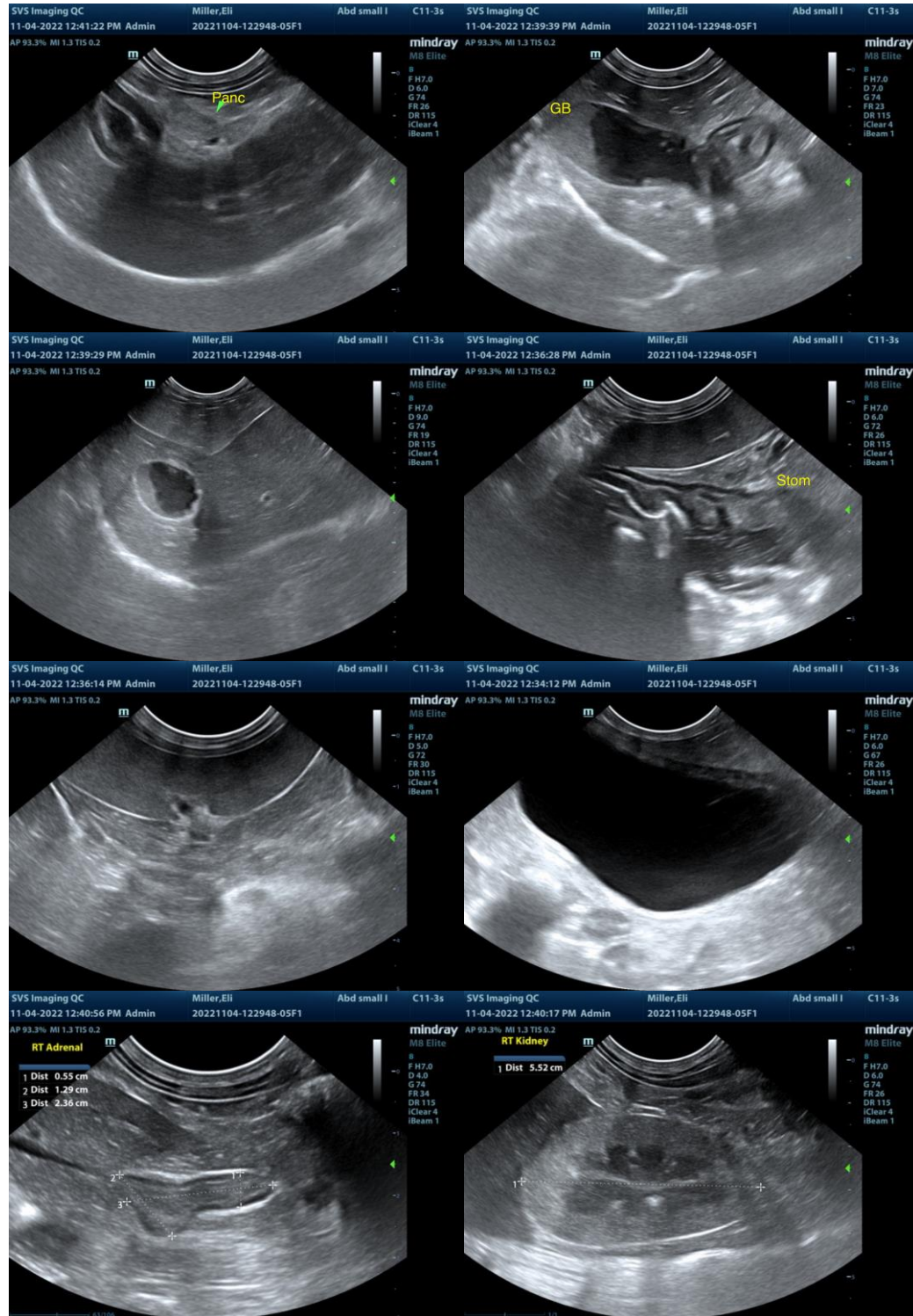
Dr. Kim Springman

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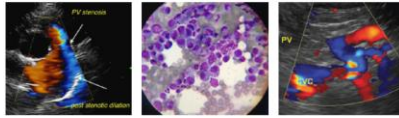
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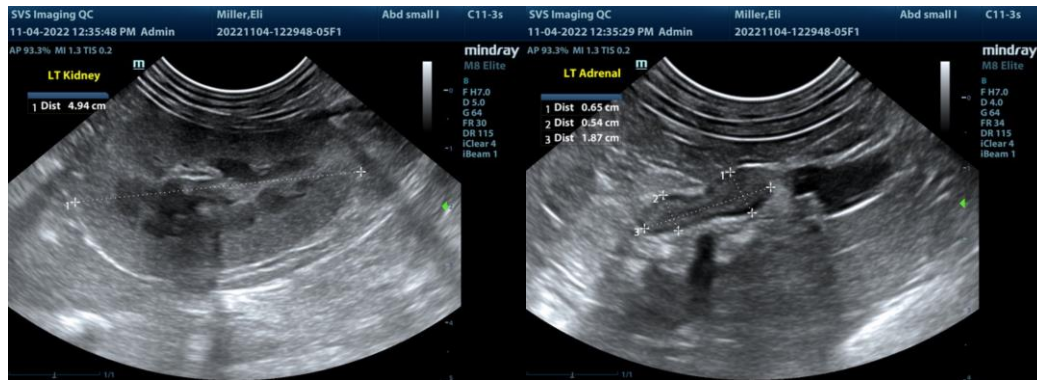
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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