



**PATIENT**

Sophie Goldthorpe

**SPECIES**

Canine

**BREED**

Spaniel, Cavalier  
King Charles

**SEX**

FS

**AGE**

9 yrs, 1 mo

**WEIGHT**

10.9 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Stan Gira, Sabadilla

**HOSPITAL NAME**

Resolution Veterinary  
Ultrasound LTD

**REFERRING VET**

Stan Gira, Sabadilla  
Animal Clinic

**INVOICE**

15855

**DATE**

1/17/23

**PRESENTING CLINICAL SIGNS**

Significant elevation of liver enzymes. Patient with history of seizures and currently on Stilbestrol tabs 0.5mg, 1 tbl SID Keppra 250mg, 1 tabl orally q8 hrs Gabapentin 100mg orally q12-24 hrs

Abnormal PE/Chem/CBC/UA Results: ALP >2,000, ALT 311 10 - 125 U/L, LIP 4,643 200 - 1,800 U/L UA done 5 days ago , USG 1.020, rest unremarkable .

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited overtly normal structure and tone. Anechoic urine was present in the lumen with no sediment or calculi. 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 moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Pinpoint minor medullary mineral and intermittent cortical cysts were noted in both kidneys. The left kidney measured 5.4 cm in length. The right kidney measured 5.5 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 and no adrenal tumors. The left adrenal gland measured 0.55 cm width in the cranial pole and 0.64 cm width in the caudal pole. The right adrenal gland measured 0.54 cm width in the cranial pole and 0.58 cm width in the caudal pole.

**Spleen**

The spleen was normal in size and contour with mild parenchyma heterogeneity. A solitary, discrete, well-demarcated, nondisruptive hypoechoic nodule was noted in the caudal spleen measuring 0.54 diameter.

**Liver/ Gallbladder**

The liver exhibited generalized enlargement with symmetrical to rounded hepatic capsule contour and nonhomogeneous to mildly irregular hepatic parenchyma exhibiting discrete areas of variably echogenic parenchyma echogenicity. No distinct hepatic masses or nodules were visualized. Subjective normal hepatic vascular volume was noted. The visualized portal vein appeared to exhibit normal volume without overt evidence of extrahepatic or intrahepatic shunt. The gallbladder was non-distended in size with echogenic, nonmineralized, non-dependent biliary sludge. The biliary sludge was non-organized with a hypoechoic to anechoic, irregular to interrupted rim visible between the



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nondependent sludge and inner wall. No signs 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.

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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.

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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.

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**Free Abdomen**

No overt lymphadenopathy or peritoneal effusion was present.

**ULTRASONOGRAPHIC FINDINGS**

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- Hepatopathy exhibiting nonhomogeneous mildly irregular variably echogenic parenchyma - nonspecific, vacuolar hepatopathy, inflammatory / immune-mediated disease, hyperplasia, hematopoiesis, areas of mild parenchymal fibrosis, nonobstructive cholestasis or other hepatopathy with infiltrative hepatic neoplasia considered less likely
- Partial / emerging gallbladder mucocele - noninflamed
- Nonspecific yet suspect benign splenic nodule - suspect focal discrete hyperplasia, hematopoiesis, small hematoma, or similar
- Pancreatic remodeling - patient / age-related variant, benign remodeling owing to previous inflammation, potential chronic pancreatitis
- Moderate chronic renal changes with pinpoint minor medullary and cortical cysts

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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No evidence of intraabdominal tumors or overt neoplastic criteria.

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Further assessment of the liver may include, assuming normal clotting status and using a 25-gauge needle, screening parenchyma cytology to assess for evidence of inflammatory cells and rule out the unlikely potential for hepatic neoplastic criteria.

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Bile acid testing is suggested, given patient seizures, especially if evidence of hepatic dysfunction i.e., subnormal BUN, glucose, albumin, and cholesterol levels. Hepatosupportive medications including Denamarin and Ursodiol may prove beneficial. Sonographic reassessment of the gallbladder is suggested if progressive cholestasis, icterus, or evidence of cranial abdominal / subxiphoid discomfort.



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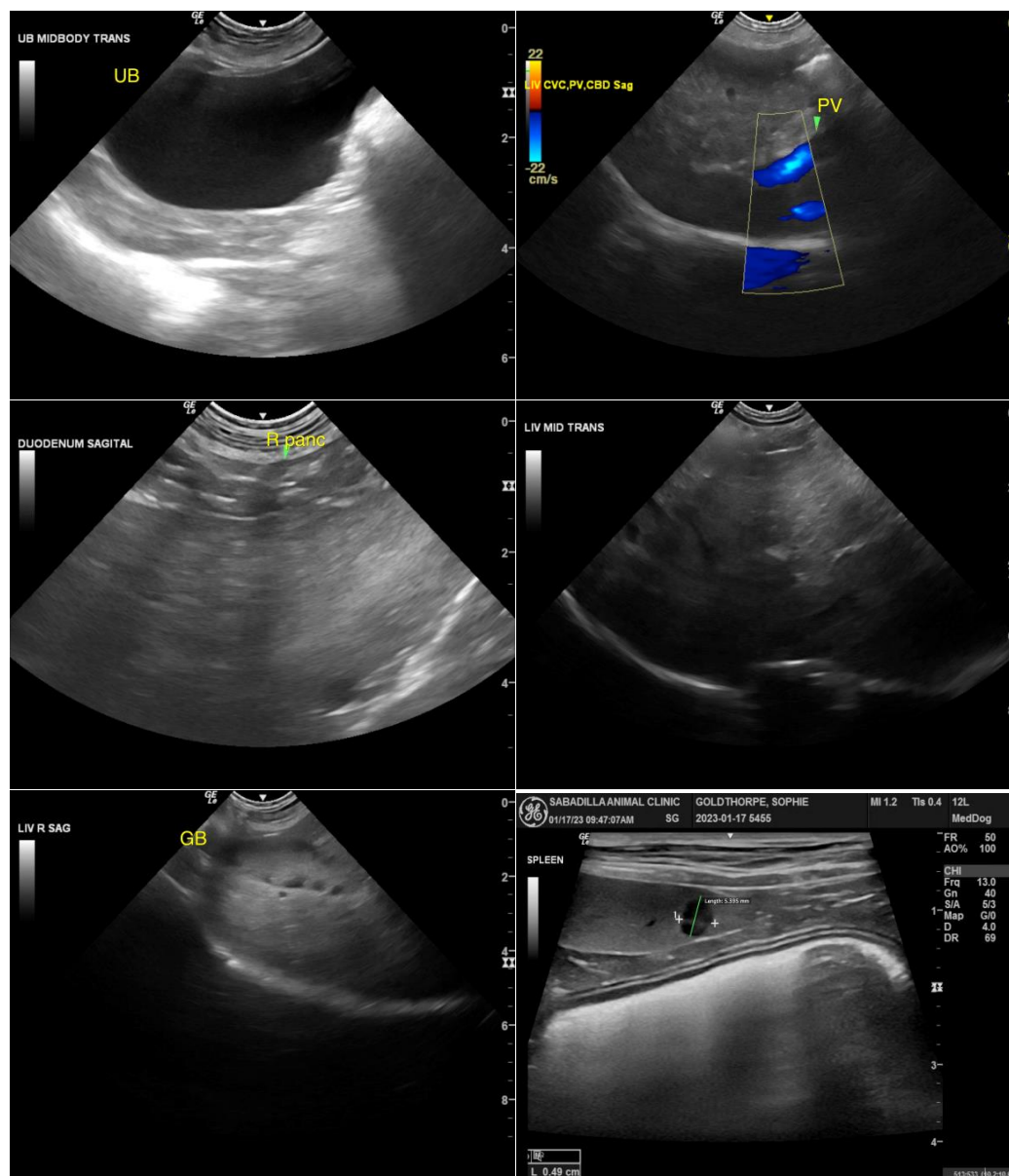
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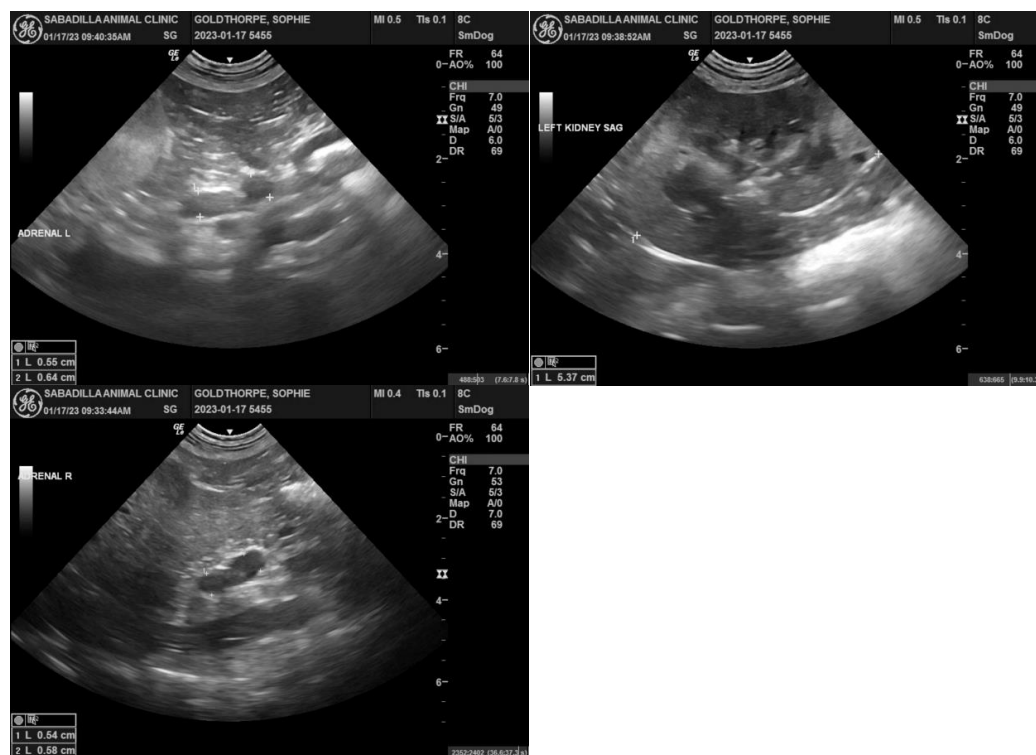
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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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