



**PATIENT**

Kitty Boyd

**SPECIES**

Feline

**BREED**

Bengal X

**SEX**

Female

**AGE**

7 months

**WEIGHT**

3.1 kg

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Dr. Sarah Barthelemy

**HOSPITAL NAME**

Britannia Kingsland  
Vet Clinic

**REFERRING VET**

Dr. Hamill

**INVOICE**

15852

**DATE**

1/17/23

**PRESENTING CLINICAL SIGNS**

Clinically normal, good energy, no wt loss. Labs show leukocytosis at 28.5 with lymphocytosis and mild monocytosis and liver enzyme changes.

Abnormal PE/Chem/CBC/UA Results: ALT elevated 509, AST mild AST. Leukocytosis with mild lymphocytosis and monocytosis.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 1.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no sediment, and no evidence of mineral, 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 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. The left kidney measured 3.4 cm in length. The right kidney measured 3.7 cm in length. No evidence of renomegaly or mineralization.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.26 cm width. The area of the right adrenal gland was free of pathology.

**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. The spleen exhibited borderline enlargement, likely incidental, potentially indicative of minor incidental hyperplasia, hematopoiesis, or similar. No evidence of splenic infiltrative neoplastic criteria.

**Liver/ Gallbladder**

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. Subjective adequate to normal hepatic vascular volume was present. The visualized portal vein appeared to be sonographically normal. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.



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***Gastrointestinal***

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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 gastric body wall width measured 0.23 cm.

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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 0.23 cm width. The jejunum wall measured 0.21 cm width. The ileocolic wall measured 0.24 cm width.

**SEX**

Female

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

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***Pancreas***

The left pancreatic limb exhibited normal size with minor capsule asymmetry exhibiting subtle hypoechoic parenchyma compared to adjacent nonreactive omentum. Suspect normal patient pancreatic variant, given the lack of clinical signs suggestive of pancreatitis.

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***Free Abdomen***

Intermittent mesenteric lymph nodes were present. The lymph nodes were essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). An example lymph node measured 0.8 cm diameter. No evidence of peritoneal effusion was noted.

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**ULTRASONOGRAPHIC FINDINGS**

**IMAGING PERFORMED BY**

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***Primary Findings***

- Nonspecific hepatopathy, subjective normal / adequate hepatic vascular volume
- Sonographically normal gallbladder
- Mild hypoechoic left pancreas - likely incidental
- Sonographically normal gastrointestinal tract
- Intermittent minor benign / reactive mesenteric lymphadenopathy - likely immunologic immaturity, minor lymphoid hyperplasia, or similar

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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The significant ALT elevation combined with mild AST elevation may suggest nonspecific hepatic parenchymal or hepatobiliary inflammatory process. Ideally, additional assessment may include bile acids to assess hepatic functionality and rule out the unlikely potential for a portosystemic shunt, as well as hepatic sampling via initial ultrasound-guided FNA for cytology and potential identification of inflammatory cell type if present. CBC pathology review is also warranted if possible.



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Empirically, hepatosupportive medications such as Denamarin, as well as novel protein or hydrolyzed diet, given the potential for secondary hepatic anagenic stimulation and assessment of hepatic enzyme response, would be reasonable.

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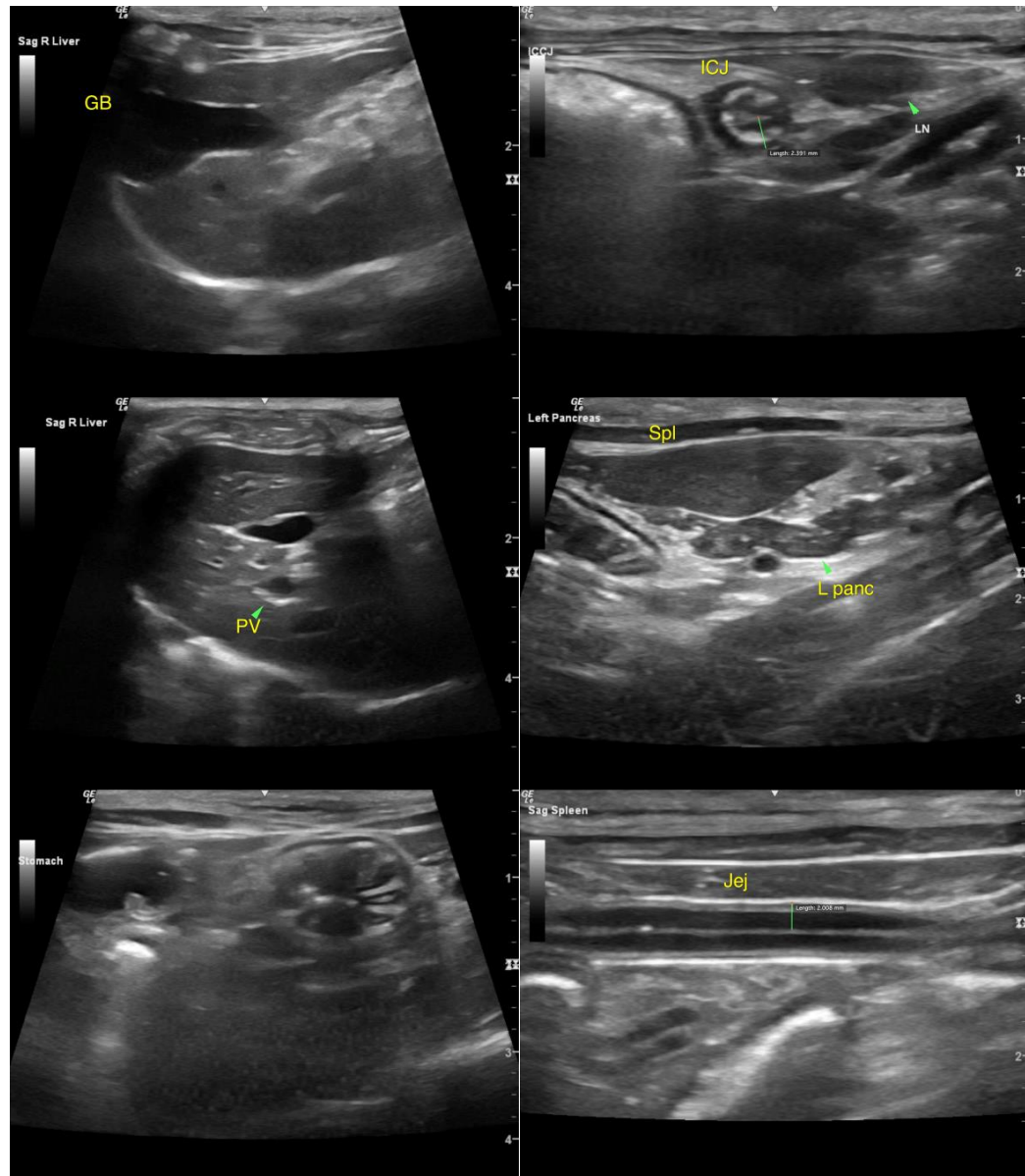
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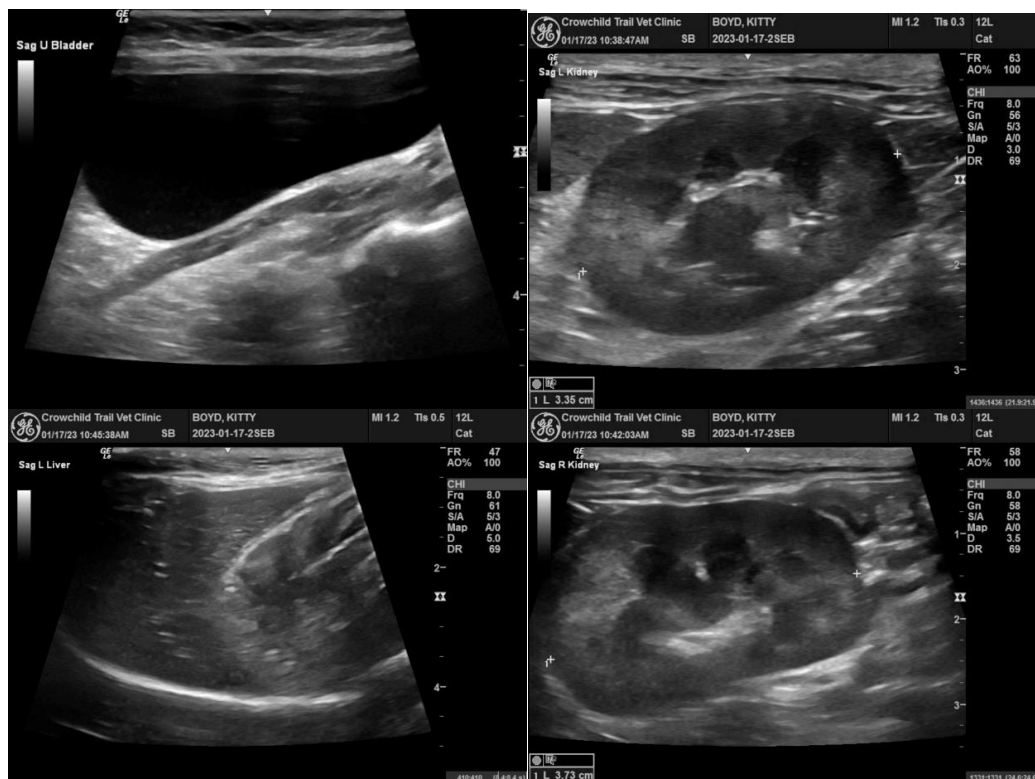
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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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**