



**PATIENT**

Georgie Eaton

**SPECIES**

Canine

**BREED**

Akita Mix

**SEX**

FS

**AGE**

8yr

**WEIGHT**

62lb

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jasmine Palacios

**HOSPITAL NAME**

Rivers Edge Pet  
Medical Center

**REFERRING VET**

Dr. Hayes

**INVOICE**

13247ag

**DATE**

03/21/2023

**PRESENTING CLINICAL SIGNS**

Hx of mammary cancer, completely removed 12/2020. Hx of chronic liver disease, had US 11/2022. Adrenal function testing for HAC was normal. Has been vomiting food but not water x 2 weeks. Good appetite, normal stools. Lost 8# Physical unremarkable except for being somewhat thin and having stiff hips. P ate a little this AM and has not vomited P currently on Denamarin and Bravecto

Abnormal PE/Chem/CBC/UA Results: See attached labs: Somewhat improved liver enzymes, extremely high pancreatic enzymes. ALP 1284 GGT 19 TBIL 0.1 AMYL >2500 LIP 4585 BUN 5 Na:K 39 WBC 16.7 PLT 499

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 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.

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 6.7 cm in length. The right kidney measured 6.9 cm in length.

The area of the aortic trifurcation was free of pathology.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.70 cm width at the caudal pole and 3.2 cm length. The right adrenal gland was not definitively visualized.

**Spleen**

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. The capsule exhibited areas of asymmetry. No masses or nodules visualized. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age related remodeling with minor potential for inflammatory or neoplastic disease.

**Liver/Gallbladder**

The liver was mild to moderately enlarged with symmetrical capsule contour and moderate coarse architecture. The liver parenchyma was uniform and hypoechoic to the spleen with minor parenchyma remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. No visualized masses or nodules. The gallbladder was mildly distended in size with thin walls and mild to moderate non-dependent to inspissated hyperechoic debris. The cystic and common bile ducts were normal.

**Gastrointestinal**



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The stomach presented indistinct mild to moderate variable thickening with potential decreased mural echogenicity and indistinct wall layer detail. Thickened gastric body wall measured up to 1.2 cm in width.

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The intestinal walls demonstrated intact wall layering and maintained 1:3 muscularis / mucosa ratio. The mucosa exhibited mild decreased echogenicity with occasional mucosal speckling. A segmental to diffuse jejunal ileus pattern consisting of mild fluid accumulation in the intestinal lumen was present without obstruction or foreign material.

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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.

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**Free Abdomen**

No overt lymphadenopathy or peritoneal effusion was present.

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Cranial abdominal mildly non-uniform to hyperechoic omentum noted around the liver surrounding the stomach and the area of the pancreas.

**ULTRASONOGRAPHIC FINDINGS**

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- Non-specific hepatopathy-subjectively chronic to possible acute on chronic. The overall appearance of the liver was non-specific with considerations including suspected vacuolar hepatopathy or cholestasis. Potential for inflammatory hepatopathy or hepatobiliary process i.e., cholangiohepatitis given the presence of gallbladder debris is possible.
- Mild to moderate gallbladder debris-potential early mucocele criteria.
- Heterogenous pancreas-mild chronic or chronic active pancreatitis possible. No overt evidence of significant active pancreatitis or overt neoplastic criteria.
- Regionally thickened stomach with possible mild gastric hypomotility-gastritis, potential for infiltrative gastric neoplasia.
- Segmental enteritis.
- Cranial abdominal mild uniform hyperechoic omentum.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Assuming normal clotting status a hepatic FNA for screening cytology is warranted for further assessment. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended. Three view chest radiographs are recommended if not done to assess for occult thoracic pathology. Hepatic, gastric wall +/- pancreatic biopsies likely required for a definitive diagnosis. Empirical therapy for gastritis, pancreatitis +/- coverage for helicobacter with sonographic monitoring of the stomach would be a more conservative approach.



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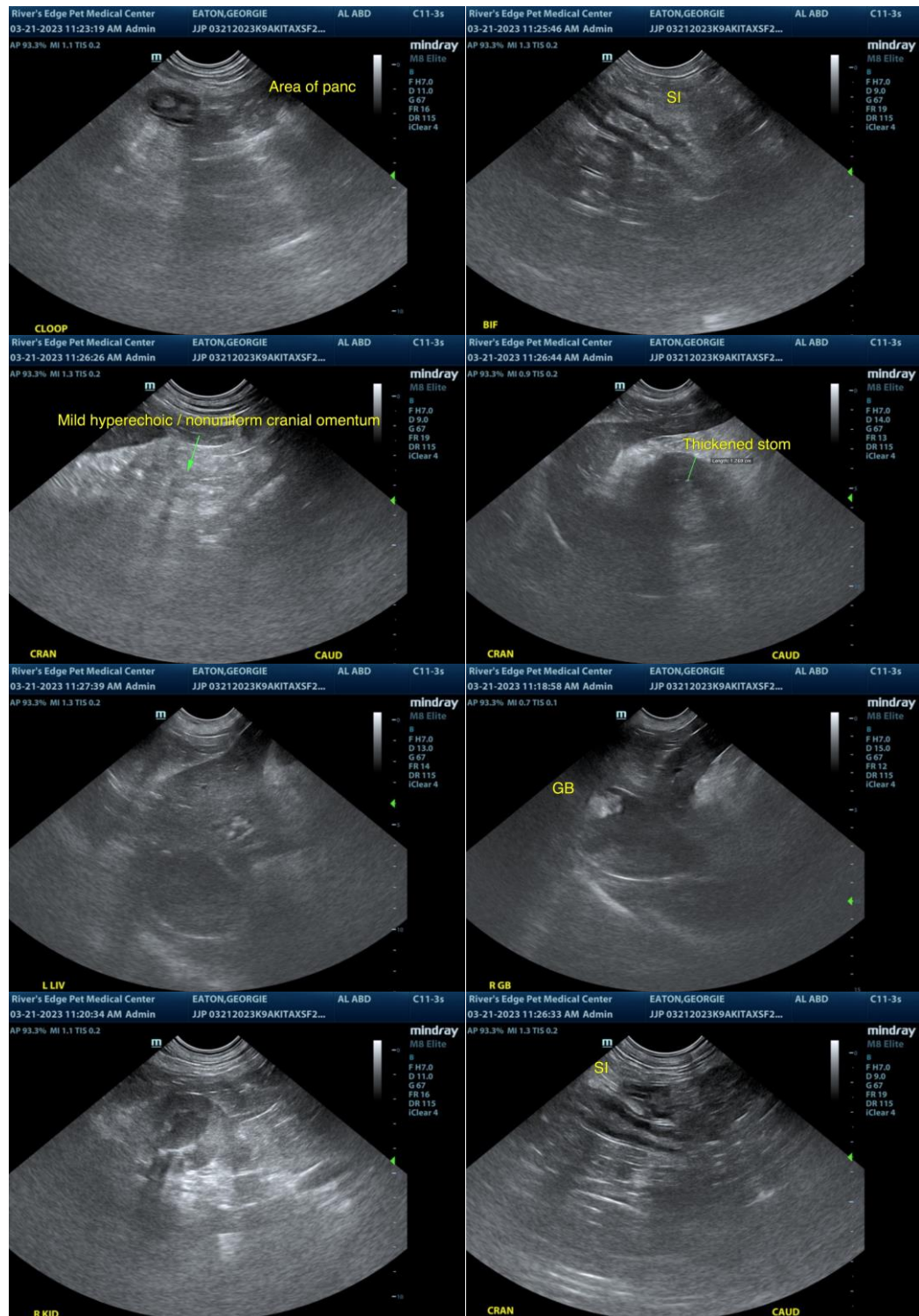
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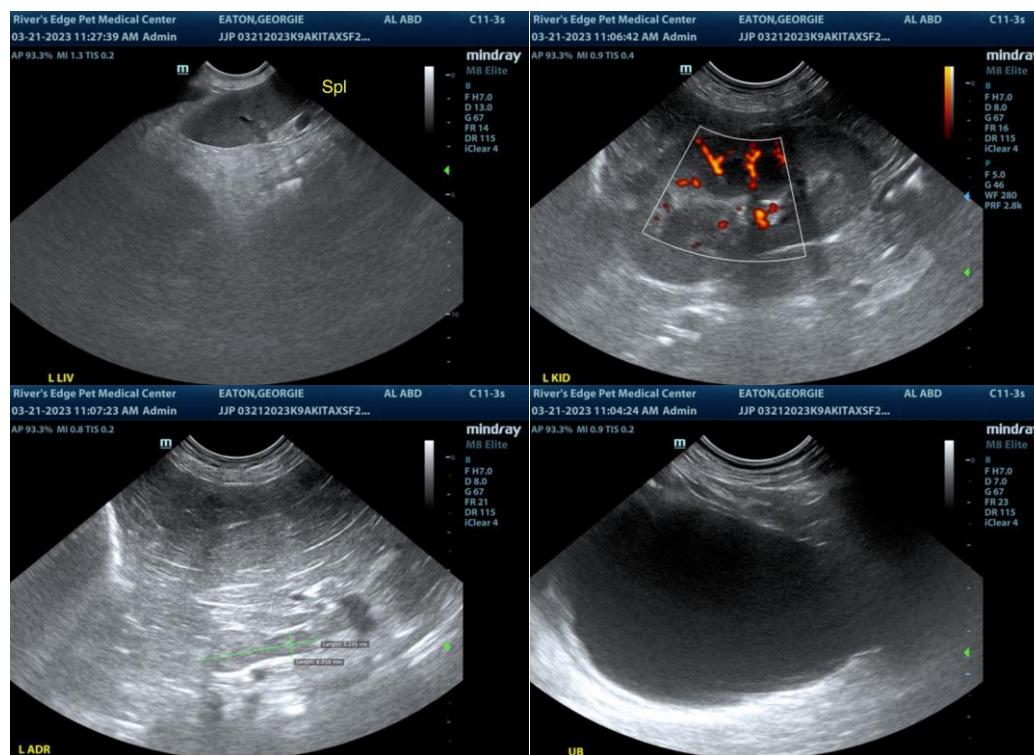
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)  
[mac.daniel@sonopath.com](mailto:mac.daniel@sonopath.com)