



**PATIENT PRESENTING CLINICAL SIGNS**

Lola Gross Collapsing trachea, intermittent GI symptoms, elevated liver values  
 Abnormal PE/Chem/CBC/UA Results: ALP 708 ALT 550 AST 104 GGT 19 BUN 39

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Canine

**Urinary System**

**BREED**

West Highland White

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.

**SEX**

FS

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 loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 3.8 cm in length. The right kidney measured 4.0 cm in length.

**AGE**

2008

The area of the aortic trifurcation was free of pathology.

**Adrenal Glands**

**WEIGHT**

17.6

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.56 cm width at the caudal pole and 1.6 cm length.

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.50 cm width at the caudal pole and 1.6 cm length.

**INTERPRETED BY**

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

**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 was smooth and regular without apparent expansion. 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.

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT  
 ARDMS/RVT

**Liver/Gallbladder**

**HOSPITAL NAME**

Brodheads ville VC

The liver was subjectively borderline enlarged with mildly rounded capsule contour and generalized non-homogenous to remodeled parenchyma exhibiting discrete nodular changes. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

**REFERRING VET**

McAleer

**Gastrointestinal**

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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild to moderate variably shadowing ingesta and gas with no signs of ileus, obstruction or foreign material.

**DATE**  
 03/16/2023

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine contained segmental non-shadowing ingesta/chyme with no signs of ileus, obstruction or foreign material.



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

Lola Gross **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.

**SPECIES**

Canine **Free Abdomen**

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

**BREED**

**ULTRASONOGRAPHIC FINDINGS**

West Highland White

- Hepatopathy exhibiting non-homogenous nodular parenchyma-vacuolar hepatopathy, inflammatory/immune mediated disease, toxin (copper), hematopoiesis, hyperplasia, fibrosis or other hepatopathy possible. Neoplastic criteria considered less likely.
- Sonographically normal gallbladder.
- Heterogenous pancreas- patient/ age related variant, remodeling owing to previous inflammatory episode or mild to chronic pancreatitis possible.
- Sonographically unremarkable GI tract with gastric and segmental intestinal ingesta.
- Mild chronic renal changes.

**SEX**

FS

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**WEIGHT**

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Assuming normal clotting status and using a 25g needle, a hepatic FNA for screening cytology could be considered. Hepatosupportive medications such as Denamarin and Ursodiol may prove beneficial. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered if clinically indicated. Dietary intolerance / food hypersensitivity, occult parasitism, dysbiosis, mild structurally insignificant inflammatory gastroenteropathy or low grade to chronic pancreatitis both of which may appear sonographically normal are all potentials. Empirically, a limited antigen or hydrolyzed diet trial with potential long term dietary therapy and high colony count probiotic (Provable or Visbiome) if evidence of diarrhea is suggested. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended if persistent GI signs.

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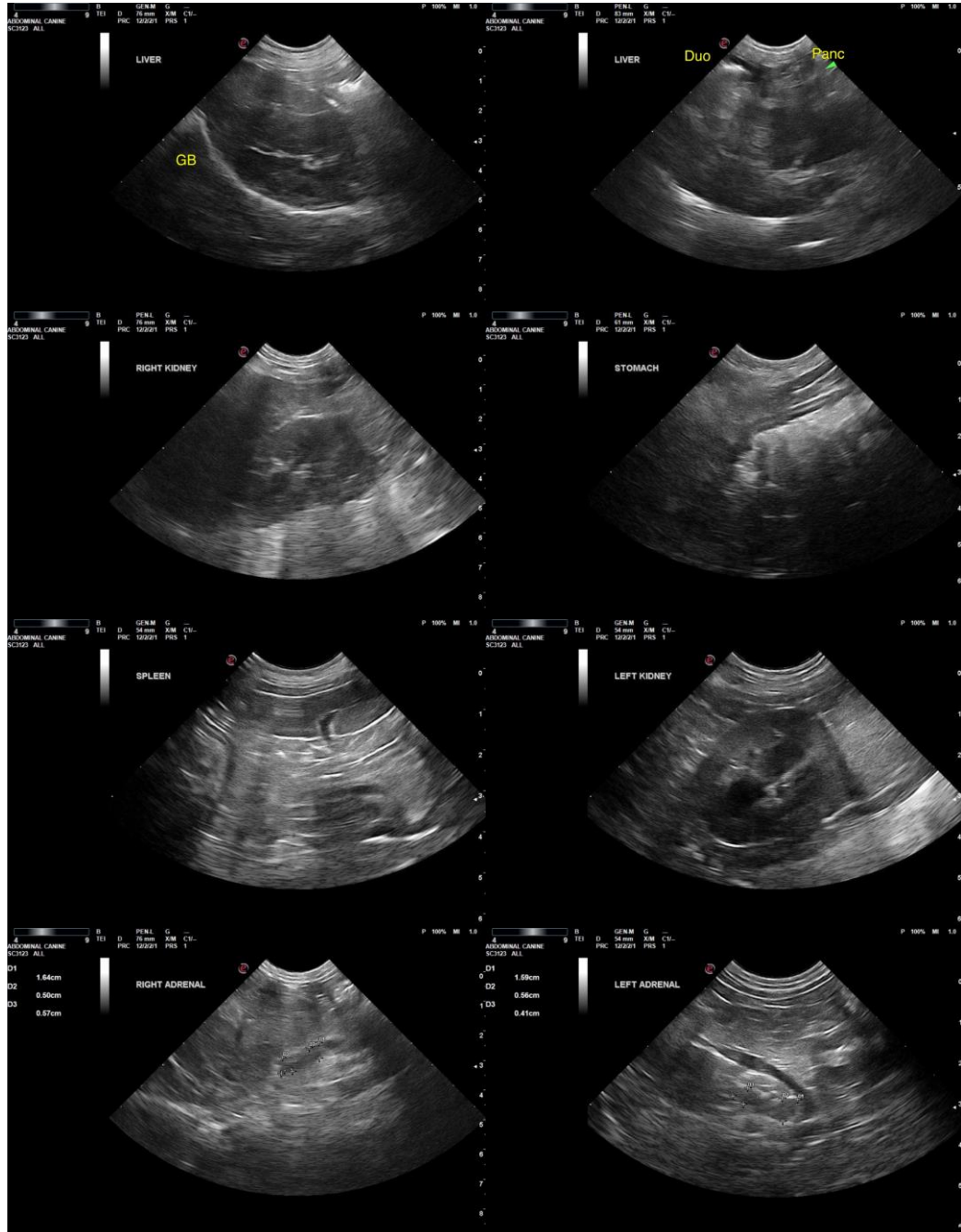
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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