



**PATIENT**

Prince Ng

**SPECIES**

Canine

**BREED**

Golden Retriever

**SEX**

MN

**AGE**

13yr

**WEIGHT**

27.8kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr Sarah Barthelemy

**HOSPITAL NAME**

Healing Traditions  
Vet Clinic

**REFERRING VET**

Dr Gerrow

**INVOICE**

13740ag

**DATE**

05/08/2023

**PRESENTING CLINICAL SIGNS**

Hx over a few months of slow ALP elevation. Other liver enzymes normal. Has an episode in Jan of vomiting and diarrhea and another one in Feb of vomiting and lethargy. Otherwise appears in good health aside from dental disease. Planning dental procedure in future.

Abnormal PE/Chem/CBC/UA Results: ALP 418.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 5 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 was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 6.3 cm in length. The right kidney measured 6.6 cm in length.

The area of the aortic trifurcation was free of pathology.

The area of the residual prostate appeared normal and 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 0.63 cm width at the caudal pole and 0.48 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.58 cm width at the caudal pole and 0.71 cm width at the cranial pole.

**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.

**Liver/Gallbladder**

The liver was subjectively normal in size, structure, and contour. Possible reduced parenchyma echogenicity exhibiting mild coarse echotexture was present. Normal vascular volume. Mild increased yet indistinct prominence of the portal vascular borders was noted. No masses or nodules noted.

The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

**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.

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, likely consistent with age related changes and considered incidental. No signs of active inflammation or neoplasia.

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**Free Abdomen**

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

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MN

**ULTRASONOGRAPHIC FINDINGS**

- Hepatopathy.
- Sonographically unremarkable gallbladder.
- Minor heterogenous spleen-subjectively benign.
- Mild chronic renal changes.

**AGE**

13yr

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Overall, the liver was non-specific yet sonographically consistent with benign hepatopathy. Primary concern for mildly progressive vacuolar changes given the sole ALP elevation. Potential for non-specific low grade inflammatory hepatopathy possible without evidence of hepatobiliary or intra-abdominal neoplastic criteria.

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Given relatively low grade solitary ALP elevation without concurrent enzyme elevation or clinical signs, hepatosupportive medications such as Denamarin and Ursodiol and continued monitoring would be reasonable. Recheck sonogram +/- hepatic sampling suggested if progressive hepatic enzyme elevations are noted. No overt anesthetic contraindications assuming evidence of normal hepatic function i.e., normal ALB, BUN, CHOL and GLU.

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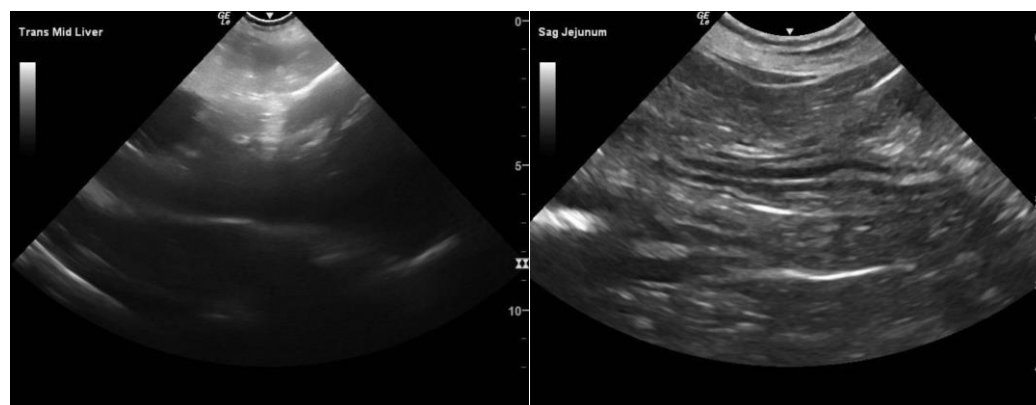
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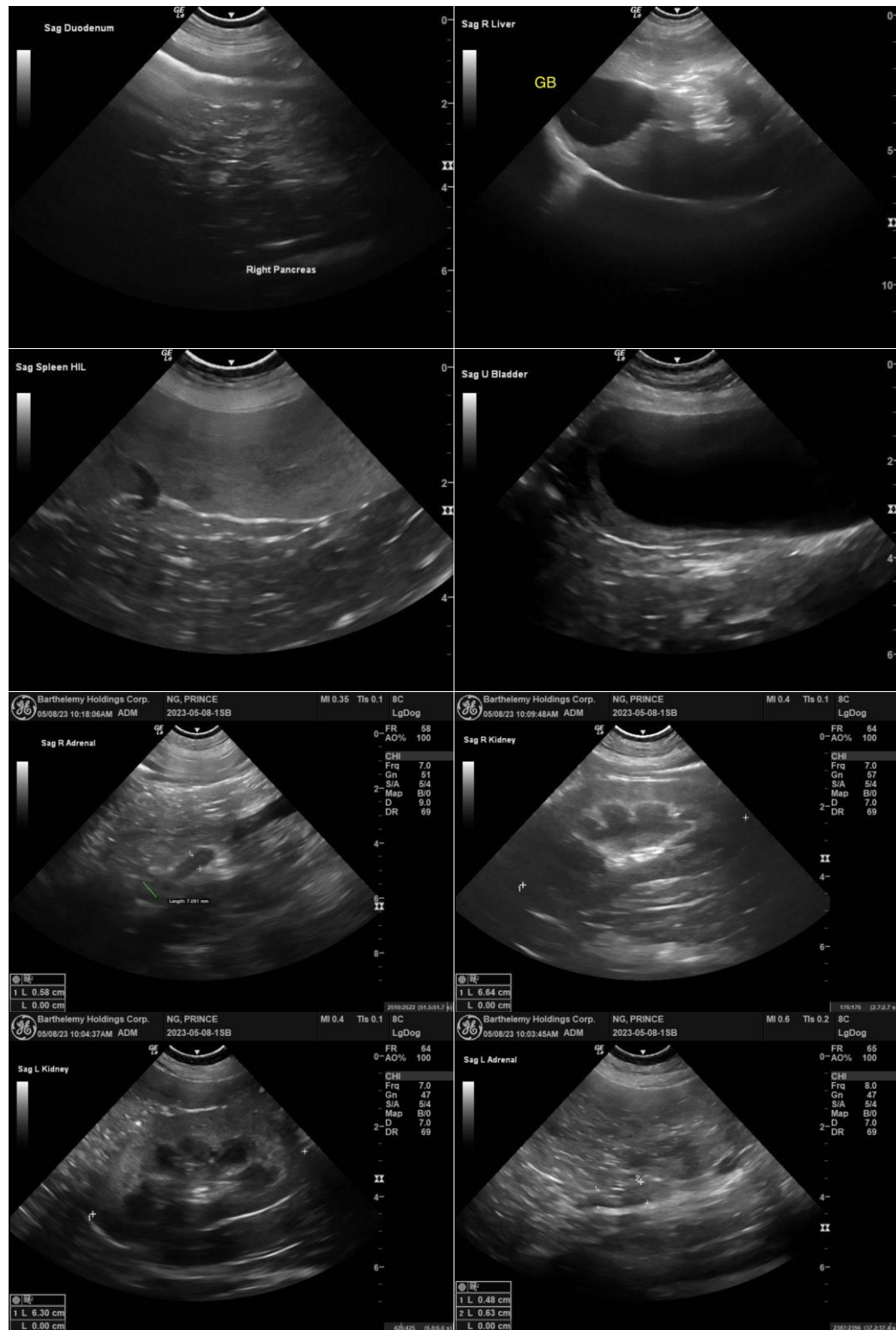
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.



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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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