



**PATIENT**

Copper Gillespie

**SPECIES**

Canine

**BREED**

Australian Shepherd

**SEX**

Male (N)

**AGE**

12

**WEIGHT**

46.5

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Nicole Gotfredson

**HOSPITAL NAME**

Buffalo VC

**REFERRING VET**

Dr. Emily Hake

**INVOICE**

13838

**DATE**

5/11/22

**PRESENTING CLINICAL SIGNS**

Referral: Copper presented on Thursday 5/5/22 for not eating very well for about 3 days and being lethargic, unknown if he was vomiting or having diarrhea. Dad was watching Copper while mom was out of town for 3 weeks and Copper is very attached to Mom and hasn't been away from her that long. Bloodwork revealed elevated globulins, alt (167) and alkp (+1200) and some bands on the CBC (I'll text photos of the bloodwork). We kept him Thursday for a few hours with IV fluids, cerenia, short acting buprenorphine, polyflex injection and then he went home on clavamox (Dad wasn't comfortable leaving him for true hospitalization), he brought him back Friday because he still wasn't perked up, did get his antibiotics and dad got a little food in him, so we gave more IV fluids, cerenia and buprenorphine again. His Mom was coming back on Saturday, I talked to Mom on Saturday and she said he really wasn't himself, so I had her bring him back and I rechecked radiographs - irregular liver is visible (Initial AI readings on Thursday said Pneumonia but rechecks on Saturday did not). I gave him bup s/r on saturday and another cerenia injection and owners were getting him to eat a little bit. I talked to Mom today to let them know about Ultrasound tomorrow and she says he's getting his meds but still really not himself. \*\*He had been on carprofen for his arthritis (he's had both knees repaired) so I had them discontinue the carprofen for now; I did talk about bile acids but figured he wasn't eating well enough for us to try the bile acids. \*\*

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 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 was noted.

No overt pathology was noted in the area of the residual prostate.

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 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 5.6 cm in length. The right kidney measured 5.6 cm in length.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.64 cm width at the caudal pole and 0.58 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 0.64 cm width at the caudal pole.

**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



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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.

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***Liver/ Gallbladder***

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The liver exhibited subjective mild generalized enlargement with a primarily maintained symmetrical capsule contour and mild generalized mixed echogenic hepatic parenchyma exhibiting moderate coarse echotexture and evidence of mild parenchymal remodeling. No hepatic masses or nodules were noted. The gallbladder was non-distended in size containing primarily anechoic content with very minor nonmineralized luminal debris. The gallbladder walls were sonographically normal without evidence of inflammatory criteria, as well as no evidence of peripheral gallbladder inflammation. 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 or obstruction. No evidence of retained gastric ingesta, fluid, or foreign material was noted. The ventral gastric body wall width measured 0.35 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. No evidence of mechanical / metabolic Ileus patten was noted. The small intestinal wall width measured 0.36 cm.

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

***Pancreas***

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

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***Free Abdomen***

No omental masses, lymphadenopathy or peritoneal effusion were present.

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**ULTRASONOGRAPHIC FINDINGS**

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Dr. Emily Hake

- Hepatopathy
- Very minor gallbladder debris - not consistent with mucocele, no evidence of cholecystitis
- Sonographically unremarkable gastrointestinal tract and pancreas
- Mild age-related kidneys

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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Aside from the hepatopathy, no overt evidence of significant visceral pathology was noted. The overall liver was nonspecific yet consistent with benign hepatopathy. Considerations may include vacuolar hepatopathy and nonobstructive cholestasis, given the ALP elevation, with potential for primary or concurrent nonspecific hepatitis / cholangiohepatitis, (viral, bacteria, Leptospirosis, Toxin, etc.) in light of the ALT elevation. No overt evidence of hepatic neoplastic criteria, which is considered unlikely.



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Further assessment may include, assuming normal clotting status, hepatic FNA for screening cytology +/- Leptospirosis titers/ PCR If endemic to the area or potential exposure.

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Structurally insignificant gastrointestinal disease or low-grade to chronic pancreatitis which may present as sonographically normal, cannot be definitively excluded. Assessment for evidence of cranial abdominal or subxiphoid discomfort on palpation in the area of the pancreas +/- Spec cPL, or If evidence of weight loss, a full GI panel to include PLI/TLI/Cobalamin/Folate is recommended.

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Empirically, continued gastrointestinal and hepatic support would be reasonable.

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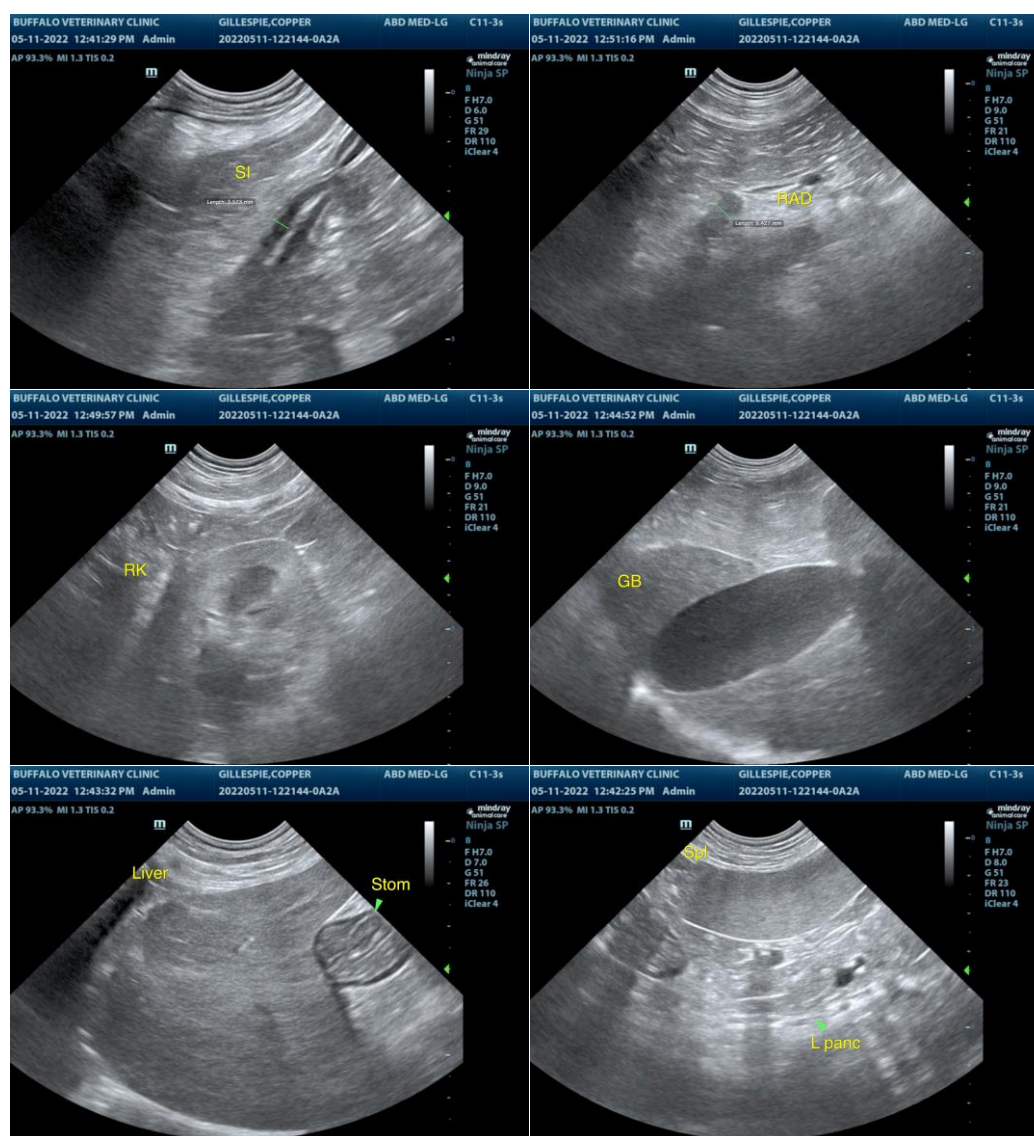
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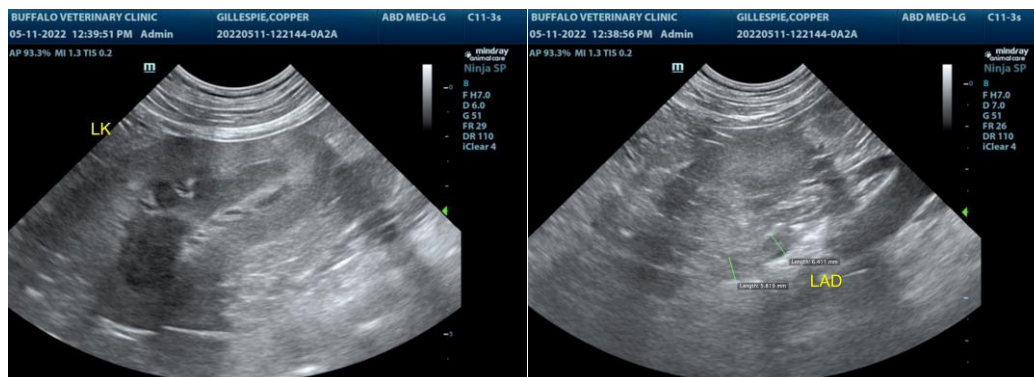
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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