



**PATIENT**

Bunker Marzano

**PRESENTING CLINICAL SIGNS**

Decreased appetite, weight loss. Increased ALT and ALKP

**SPECIES**

Feline

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED**

DSH

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Mild, particulate, nondependent sediment was present without evidence of calculus formation. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes were noted.

**SEX**

MN

The area of the aortic trifurcation was free of pathology.

**AGE**

5 years 8 months

Normal renal size with asymmetrical margination were present in both kidneys. The renal cortex presented uniformly increased in echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Mild loss of corticomodullary distinction was also present. The renal medullary volume was subjectively reduced. The left kidney measured 4.1 cm in length. The right kidney measured 5.0 cm in length.

**WEIGHT**

10.5 lbs.

**Adrenal Glands**

**INTERPRETED BY**

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

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.39 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.41 cm.

**IMAGING PERFORMED BY**

**Spleen**

Rachel Runnells, RVT

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.

**HOSPITAL NAME**

SVS Imaging KC

**Liver/ Gallbladder**

**REFERRING VET**

Dr. Jeania Beachner

The liver was mildly enlarged in size, including mild subjective right lateral to caudate lobar swelling. This lobar swelling exhibited Isoechoic echogenicity compared to adjacent hepatic parenchyma. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. No overt suggestion of neoplastic criteria was noted. The gallbladder was non-distended in size with mild gallbladder debris. The gallbladder walls were sonographically unremarkable, without evidence of inflammation. The cystic and common bile ducts were normal.

**INVOICE**

12692

**DATE**

12/1/21



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***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. The gastric body wall width measured 0.25 cm.

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 jejunum wall width measured 0.24 cm. The ileocolic wall width measured 0.33 cm.

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.

***Free Abdomen***

No omental masses, lymphadenopathy or peritoneal effusion were present.

**ULTRASONOGRAPHIC FINDINGS**

***Primary Findings***

- Hepatopathy with mild right lateral to caudate lobar swelling
- Mild gallbladder debris
- Suspect mild active to chronic active pancreatitis
- Bilateral interstitial nephrosis renal pattern
- Mild particulate urinary bladder sediment

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The urinary bladder sediment may suggest cellular / crystalline debris or mucus. Cystocentesis for UA +/- C/S if evidence of inflammatory cells is recommended.

The overall appearance of the liver was nonspecific yet most suggestive of benign hepatopathy. If primarily elevated ALT, consideration for inflammatory hepatic parenchymal or hepatobiliary process such as feline cholangitis syndrome / cholangiohepatitis, in light of the presence of concurrent gallbladder debris, may be considered. Vacuolar hepatic changes and nonclinical cholestasis are also possible.

Assuming normal clotting status, ultrasound-guided FNA of the liver using a 25-gauge needle is warranted for screening cytology, specifically in the area of the right lateral to caudate liver lobe to potentially identify inflammatory cell type if present and to rule out the unlikely potential for neoplasia.



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Although no evidence of structural gastrointestinal pathology, yet given the patient's weight loss In combination with elevated liver enzymes, the potential for Triad Disease may be possible in this patient. Further assessment may include a GI panel to include PLI/TLI/Cobalamin/Folate.

Empirically, cholangiohepatitis / Triaditis protocol with as-needed gastrointestinal support may prove beneficial. Ultimately, hepatic small intestine +/- pancreatic biopsies may be required for a definitive diagnosis.





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The information and recommendations provided are based on the images presented by the referring veterinarian. 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