



PATIENT

Barley Chen

SPECIES

Canine

BREED

Goldendoodle

SEX

MN

AGE

9 years

WEIGHT

97.9 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Jessica Miller

HOSPITAL NAME

Whippany VH

REFERRING VET

Dr. Lee

INVOICE

13522

DATE

3/22/22

PRESENTING CLINICAL SIGNS

Progressive liver enzyme elevations

Abnormal PE/Chem/CBC/UA Results: ALT 226, Alk Phos 657 (February 2022: ALT 188, Alk Phos 363)

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, sediment, or calculi. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

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 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 7.8 cm in length. The right kidney measured 8.1 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 3.7 cm length x 0.78 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.4 cm length x 0.62 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 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.

Liver/ Gallbladder

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size containing primarily anechoic content with mild, nondependent, nonmineralized luminal debris. The gallbladder was otherwise normal. No evidence of inflammatory gallbladder changes, as well as no evidence of peripheral gallbladder inflammation, was noted. 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.

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

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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 overt lymphadenopathy or peritoneal effusion was present.

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ULTRASONOGRAPHIC FINDINGS

- Hepatopathy - subjective benign
- Mild gallbladder debris (non-mucocele) - likely incidental potentially secondary to fasting or nonclinical cholestasis

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

INTERPRETED BY

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

The overall appearance of the liver was nonspecific yet consistent with benign hepatopathy. Potential considerations may include; idiopathic vacuolar hepatopathy, inflammatory / immune-mediated / infectious hepatopathy, toxic hepatopathy i.e., copper hepatopathy or other hepatopathy without evidence of neoplastic criteria which is considered an unlikely differential diagnosis. Assuming normal clotting status, hepatic FNA using a 25-gauge needle could be considered for initial screening cytology primarily to assess for or possibly identify inflammatory cells if present. Likely, hepatic core surgical biopsy is required for a definitive diagnosis via histopathology +/- copper staining or quantification if clinically indicated. Leptospirosis titers / PCR could be considered if potential exposure.

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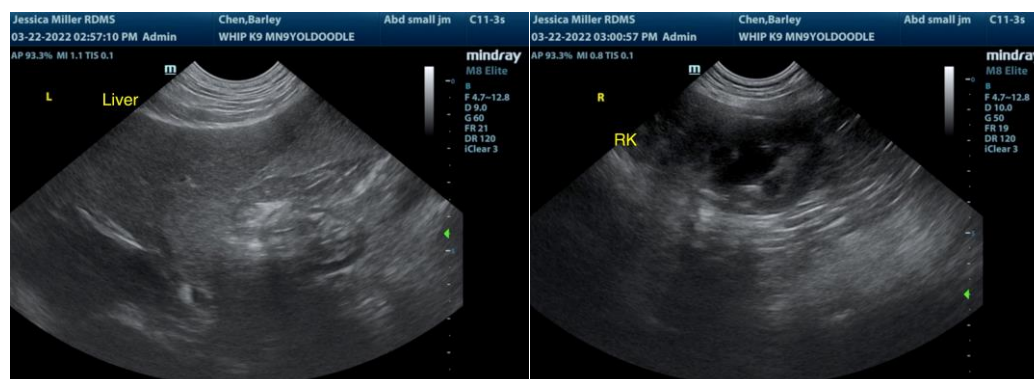
Empirically, hepatosupportive medications including Denamarin and Ursodiol may prove beneficial. Hepatic functionality is assumed to be normal if normal BUN, glucose, albumin, and cholesterol levels are noted. Continued monitoring of liver enzymes on hepatosupportive medications would be a more conservative approach.

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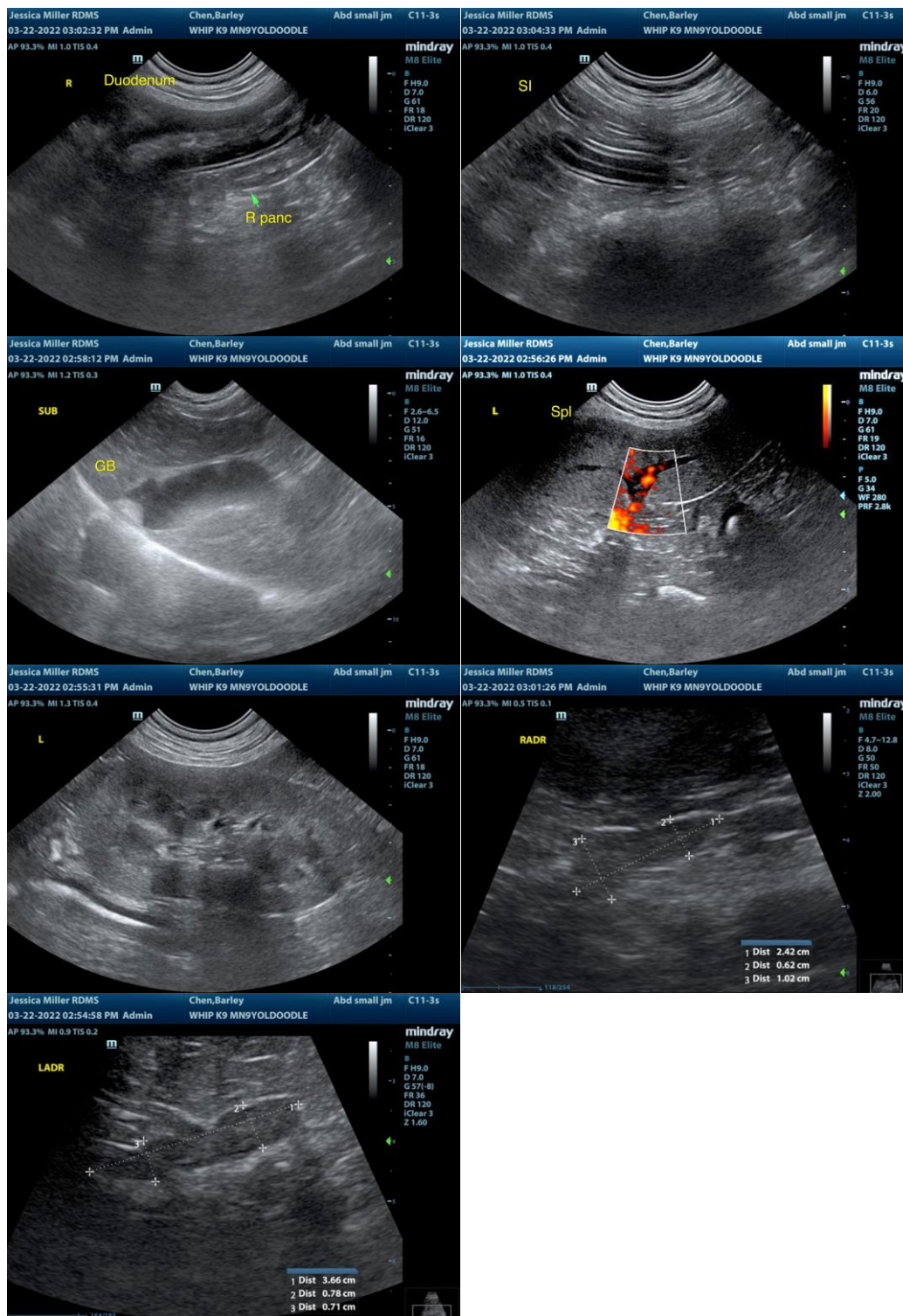
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.



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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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info@SonoPath.com

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