

PATIENT

Puma Mayer

SPECIES

Canine

BREED

Chihuahua Mix

SEX

MN

AGE

1

WEIGHT

14.2

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Brita Kiffney

HOSPITAL NAME

Northshore VH

REFERRING VET

Dr. Brita Kiffney

INVOICE

14175

DATE

6/30/22

PRESENTING CLINICAL SIGNS

Mid May became acutely ill and was taken to the ER. ALT was >2000, all liver values elevated, jaundiced. Normal HCT. started on zeniquin, vitamin K, Amoxicillin, cerenia, IV fluids. Has improved, as have his liver values but ALT remains elevated and is climbing. Eating okay, has decreased appetite
Abnormal PE/Chem/CBC/UA Results: ALT 240, AST 76, ALP 275, (initially mid May: ALT > 2000 AST 845, ALP 2700 and bilirubin 1.7 performed liver biopsy today

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 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 residual prostate was free of overt pathology.

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 4.9 cm in length. The right kidney measured 5.0 cm in length.

Adrenal Glands

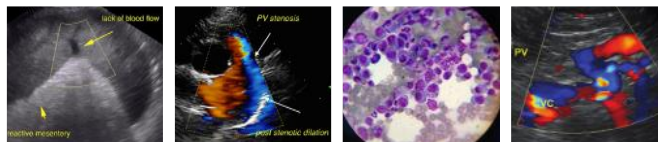
The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.37 cm width at the caudal pole and 0.30 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.38 cm width at the caudal pole.

Spleen

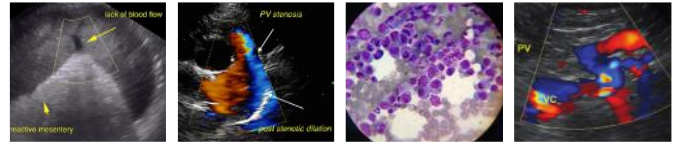
The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver/ Gallbladder

The liver was normal in size with subjective maintained capsule contour and generalized nonuniform to mildly mixed echogenic hepatic parenchyma. Subtle increased prominence of the portal vascular borders was noted. No evidence of masses or nodules was evident. The visualized portal vein appeared to be overtly normal with subjective normal branching. No overt evidence of a portosystemic shunt was noted. The liver exhibited normal vascular volume. The gallbladder was non-distended in size with mild, echogenic, nonmineralized biliary sludge. No evidence of inflammatory gallbladder or peripheral



PATIENT	gallbladder criteria was noted. The cystic duct and common bile ducts were normal without evidence of dilation.
Puma Mayer	
SPECIES	<i>Gastrointestinal</i>
Canine	The stomach presented intact yet mildly prominent wall layering. The lumen of the stomach was primarily empty with minor retained chyme. The pylorus wall width measured 0.46 cm.
BREED	The small intestine presented intact wall layering and primarily maintained a 1:3 muscularis/mucosa ratio with subjective mildly prominent upper to mid duodenum walls. The duodenum wall width measured 0.42 cm.
Chihuahua Mix	
SEX	Normal visible colon wall layers were present with apparent formed feces in lumen.
MN	<i>Pancreas</i>
AGE	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.
1	
WEIGHT	<i>Free Abdomen</i>
14.2	Intermittent mesenteric nodes were present. The lymph nodes were isoechoic, mildly prominent, and homogeneous without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). The intermittent mesenteric lymph nodes are not consistent with inflammatory or neoplastic criteria and are likely incidental.
INTERPRETED BY	ULTRASONOGRAPHIC FINDINGS
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	<ul style="list-style-type: none"> • Chronic active hepatitis liver pattern • Minor gallbladder debris (non-mucocele) - no overt evidence of cholecystitis • Suspect mild gastroduodenitis
IMAGING PERFORMED BY	INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS
Dr. Brita Kiffney	The overall hepatic presentation was nonspecific yet suggestive of acute to acute on chronic inflammatory criteria i.e., chronic active hepatitis (infectious, immune-mediated, or other), with potential for concurrent vacuolar hepatic changes, hematopoiesis, and toxic hepatopathy i.e., copper. Potential for very early fibrosis with infiltrative neoplasia is thought less likely.
HOSPITAL NAME	Correlation with pending hepatic sampling is suggested. No overt evidence of a portosystemic shunt was noted. Leptospirosis titers/PCR could be considered if endemic to the area of potential exposure. If not done, a core surgical biopsy is likely required for a definitive diagnosis and potential guidance of further therapy. Empirical hepatosupportive medications are recommended if not current instituted.
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	Hepatic functionality is likely adequate if normal BUN, glucose, albumin, and cholesterol levels are noted. Fasting and post prandial bile acid may be considered for further assessment.



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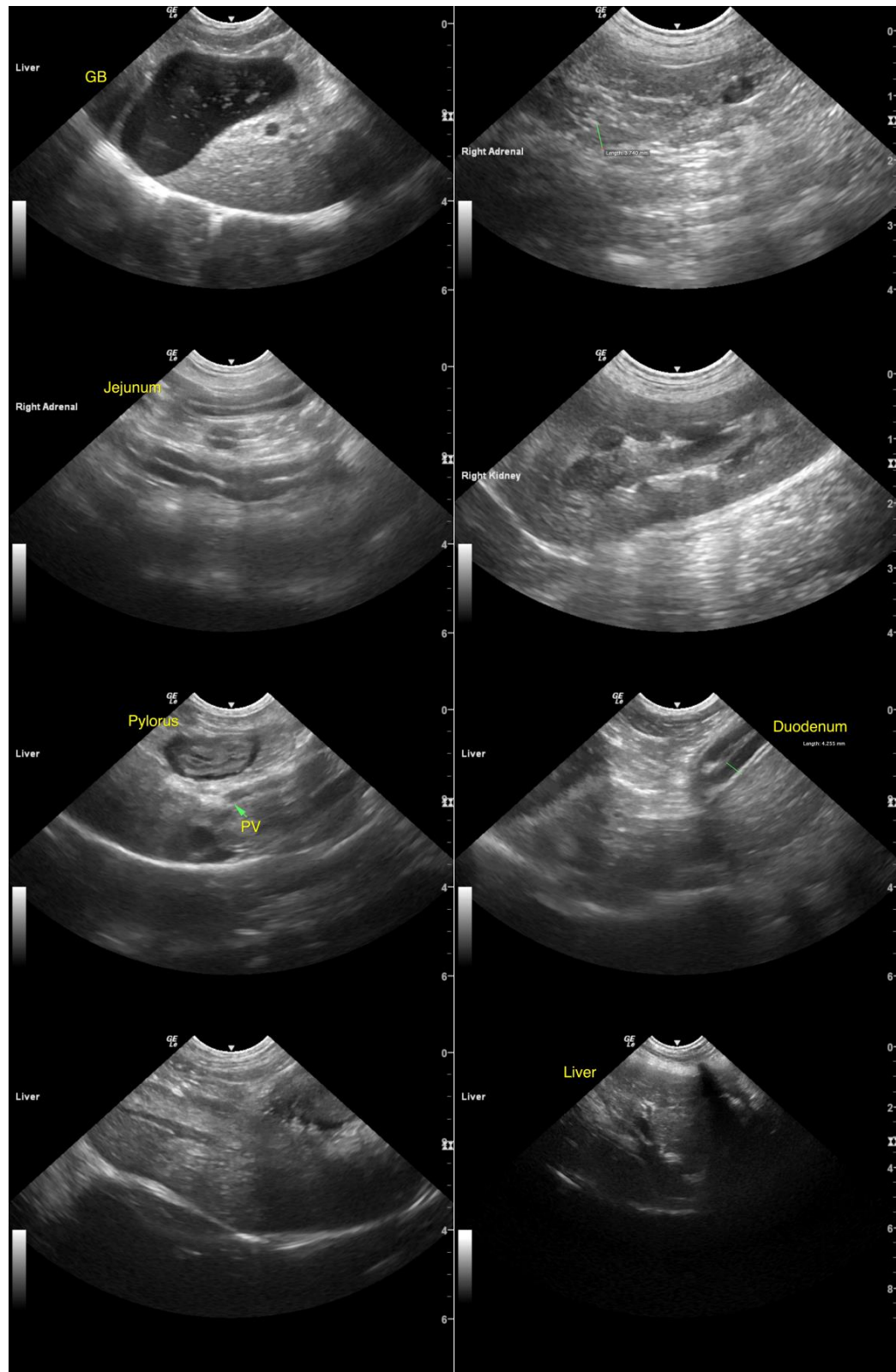
Dr. Brita Kiffney

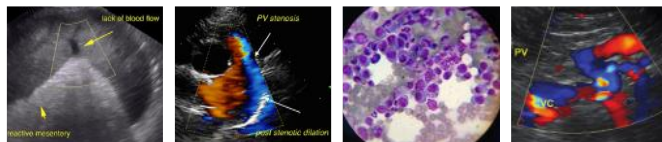
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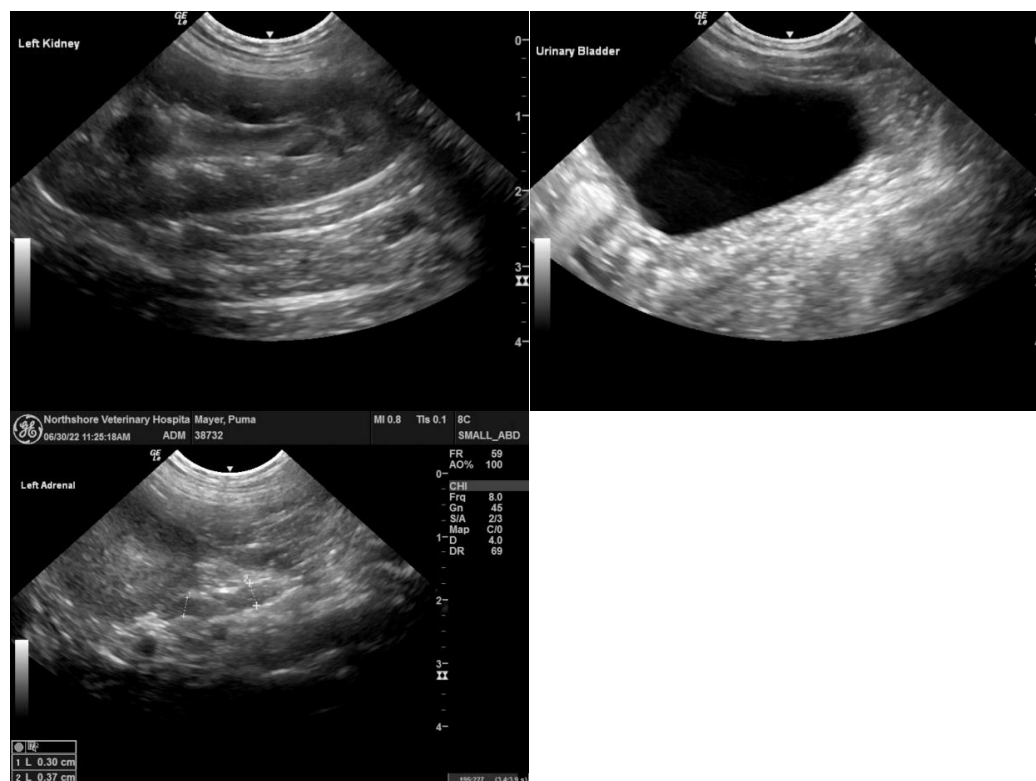
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
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