



PATIENT

Leo Plummer

SPECIES

Canine

BREED

Great Pyrenees

SEX

Neutered Male

AGE

8 Years 11 Months

WEIGHT

144 Lbs.

INTERPRETED BY

Andrea Nicastro, DMV,
Diplomate DACVIM
(Small Animal
Internal Medicine)

**IMAGING
PERFORMED BY**

Shari Reffi, CVT

HOSPITAL NAME

Shohola

REFERRING VET

Dr. DeMeo

INVOICE

13967

DATE

2/17/22

PRESENTING CLINICAL SIGNS

History: Increasing liver values, ADR, diarrhea. Current meds: Metronidazole, Amoxi/Clav.
Abnormal PE/Chem/CBC/UA Results: Alt 409, AST 91, AKLP 1086, GGT 36, U/A-Pending

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is normal in size (1.03 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney presented normal size (8.02 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney presented normal size (7.93 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal size (0.45 cm at cranial pole) (0.57 cm at caudal pole) (2.01 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (1.23 cm at cranial pole) (0.74 cm at caudal pole) (2.78 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (2.37 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic, relative to the spleen and subtly mottled in appearance. A 0.93 cm hypoechoic nodule is observed on the left side. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are



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anechoic. The cystic and common bile ducts are normal.

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Gastrointestinal

The gastric lumen is mildly to moderately distended with ingesta. The gastric wall is normal in thickness with a normal layering pattern. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive or overt infiltrative disease is noted.

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Pancreas

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

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Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

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Other

A brief echocardiogram reveals no evidence of pericardial effusion.

ULTRASONOGRAPHIC FINDINGS

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Primary Findings

- Nonspecific diffuse hepatopathy. Differentials include inflammatory/immune mediated disease (i.e., bacterial cholangiohepatitis, chronic active hepatitis), Leptospirosis, hepatotoxicity (i.e., copper) or other hepatopathy. Infiltrative neoplasia is possible but considered unlikely given the sonographic changes. The hypoechoic hepatic nodule trends toward the benign with a lower possibility of emerging neoplasia.

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Secondary Findings

- Minor age-related renal changes

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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- Leptospirosis testing (i.e., blood and urine PCR, serology) is recommended. Also consider pre- and postprandial serum bile acids to assess hepatic function.
- Ultimately, hepatic tissue sampling (i.e., fine needle aspirate or surgical biopsy) will likely be necessary to get a definitive diagnosis. Surgical biopsies would be ideal, as cytology samples may not be representative of global organ pathology. If surgery is pursued, aerobic and anaerobic bile cultures, as well as acquisition of additional hepatic tissue samples, for potential copper quantitation are recommended.

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- While awaiting test results, consider empirical treatment for bacterial cholangiohepatitis/Leptospirosis (i.e., broad spectrum antibiotic therapy (i.e., amoxicillin clavulanic acid +/- metronidazole) and hepatic antioxidants). It should be noted that the metronidazole dose should be reduced (i.e., 7.5 mg/kg every 12 hours) in patients with hepatic disease).

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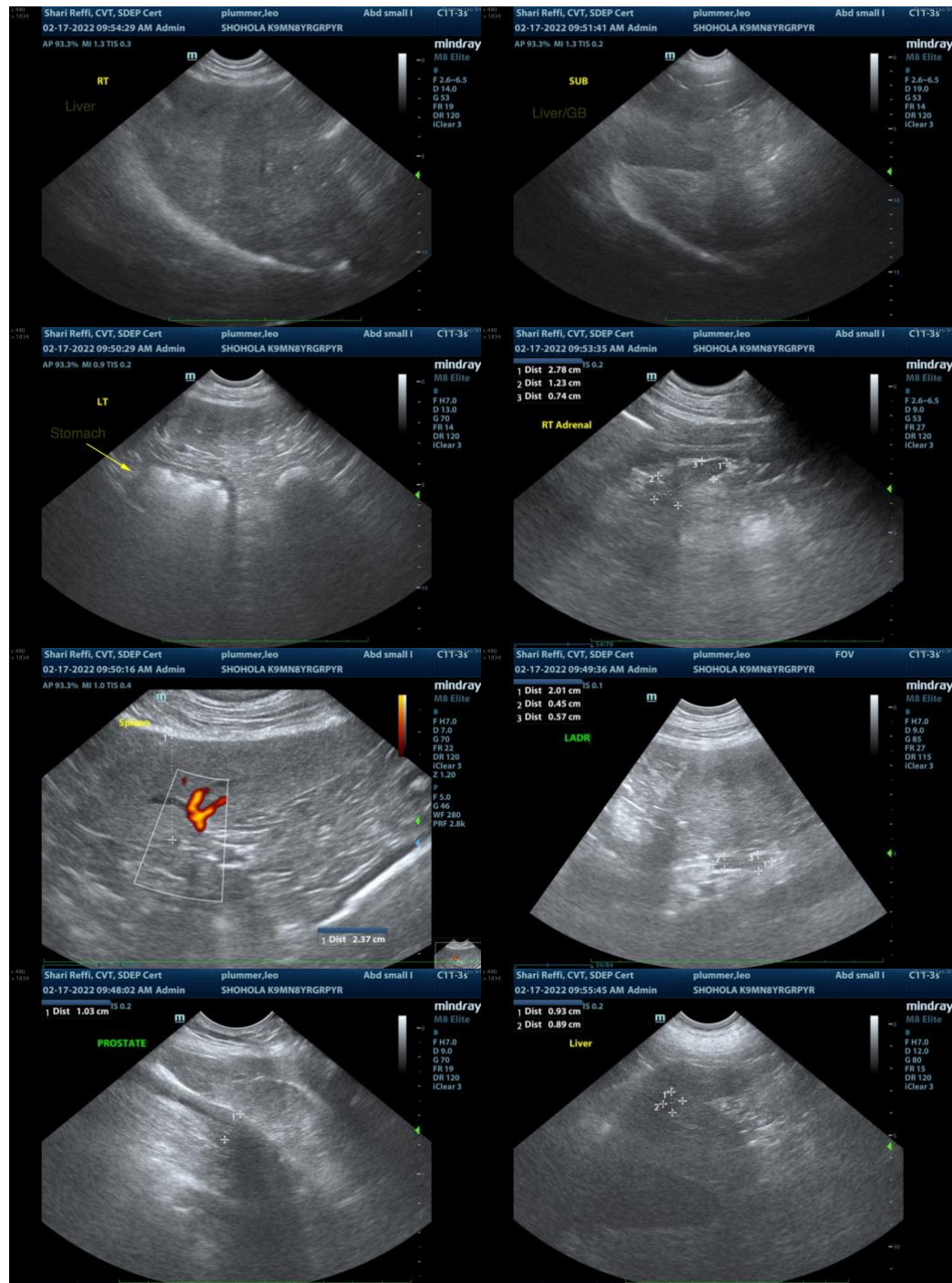
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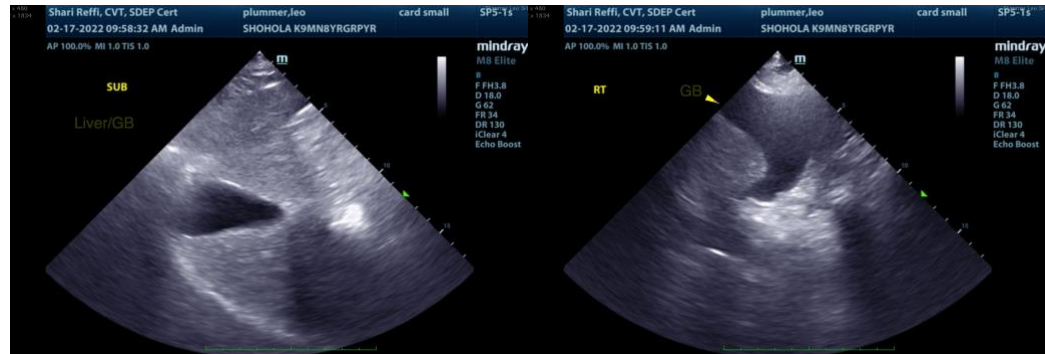
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
info@SonoPath.com