



PATIENT

Chuck Kolar

SPECIES

Canine

BREED

Scottish Terrier

SEX

Neutered Male

AGE

7 Years

WEIGHT

34 Lbs.

INTERPRETED BY

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

**IMAGING
PERFORMED BY**

Shari Reffi, CVT

HOSPITAL NAME

Newton Vet

REFERRING VET

Dr. Bladek

INVOICE

12877

DATE

12/9/21

PRESENTING CLINICAL SIGNS

History: Progressive liver enzyme elevation. Asymptomatic. Has had 2 prior LDDS both normal. Current meds: Denamarin

Abnormal PE/Chem/CBC/UA Results: ALT 622, ALK~2,000.

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 2.00 cm, are normal.

The prostate is normal in size (0.94 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 (5.37 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney presented normal size (6.08 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal size (0.44 cm at cranial pole) (0.51 cm at caudal pole) (2.16 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 (0.79 cm at cranial pole) (0.53 cm at caudal pole) (2.39 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 (1.66 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 and also heterogeneous in appearance. 1-2 irregular hyperechoic nodules are observed deep mid to right liver. In addition, a few hypoechoic areas and one nodule are seen, the largest measuring 1.43 cm (on the left side). Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.



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The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate amount of partially dependent echogenic debris is observed within the lumen. The cystic and common bile ducts are normal.

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Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are 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 right limb of the pancreas is visible/prominent with slightly irregular peripheral contours. The parenchyma is subtly hypoechoic relative to surrounding omental fat. No distinct focal lesions are observed. The parenchyma is slightly mottled in appearance. The pancreatic duct is not overtly dilated. There is no evidence of peripancreatic 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.

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ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Non-specific diffuse hepatopathy. Scottish terriers can develop a breed specific vacuolar hepatopathy, which may be occurring in this patient. However, in these dogs, the ALP elevation alone is typical. Given this patients' concurrent ALT elevation, there is concern that a different or concurrent hepatopathy (i.e., inflammatory/immune mediated disease, hepatotoxicosis (i.e., copper) or infiltrative neoplasia) may be present. Age-related change (i.e., regenerative nodular hyperplasia, remodeling) may also be present.

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Secondary Findings

- The pancreatic changes may be a normal variant for this patient or could be consistent with mild, chronic pancreatitis. Correlation with clinical findings is recommended.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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- Ideally, a surgical liver biopsy, aerobic and anaerobic bile cultures, and acquisition of additional hepatic tissue samples for copper quantitation should be considered to get a definitive diagnosis. If possible, hepatic tissue samples should be sent to Cornell University for evaluation. Clotting times and three view thoracic radiographs should be performed prior to any hepatic tissue sampling.

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- Pre- and postprandial serum bile acids are also recommended to assess hepatic function.



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- Leptospirosis testing can also be considered. However, if the liver enzyme elevations are chronic, this differential is considered less likely.

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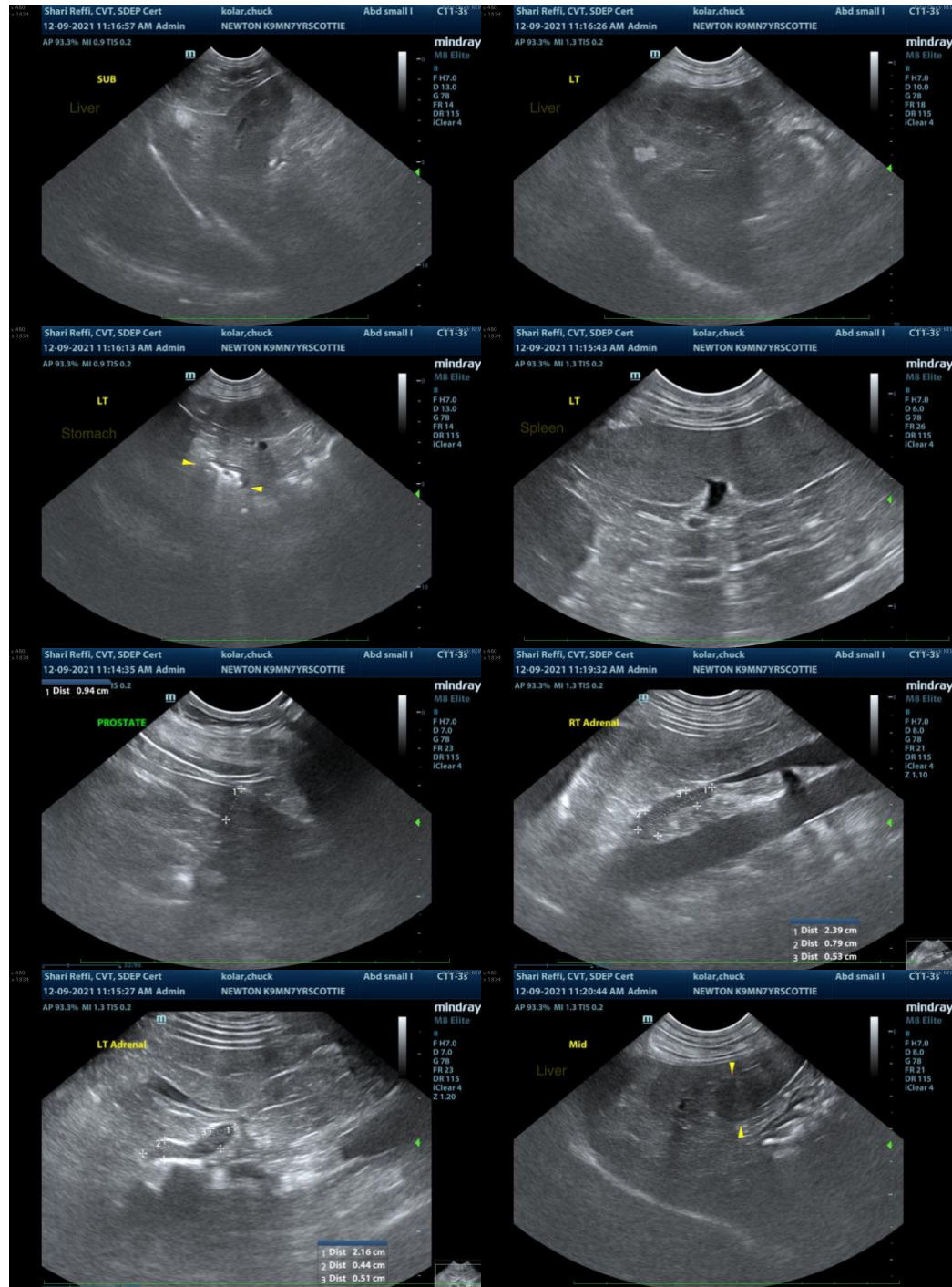
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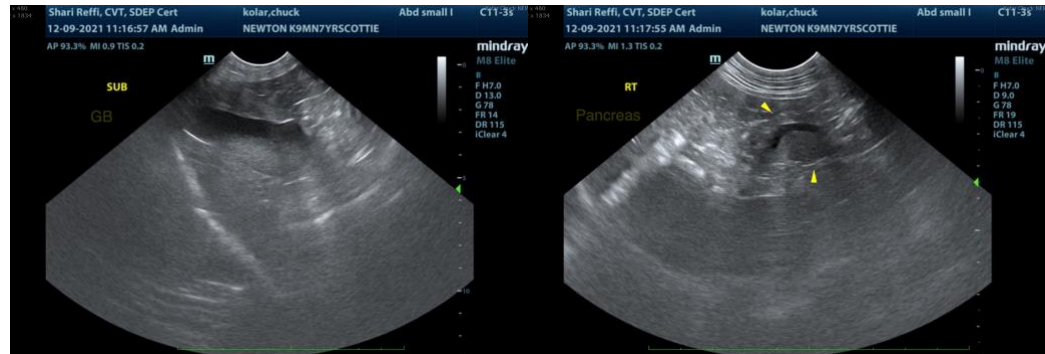
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
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