



**PATIENT**

Rizzo Neff

**PRESENTING CLINICAL SIGNS**

**SPECIES**

Canine

History: High liver values  
Abnormal PE/Chem/CBC/UA Results:

**BREED**

Lapphund

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**SEX**

Spayed Female

**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 region of the trigone and the visible portion of the proximal urethra are normal.

**AGE**

10 years

The left kidney is normal size (6.07 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 hydronephrosis. Renal vasculature is normal.

**WEIGHT**

50.2 lbs

The right kidney is normal size (6.00 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.

**INTERPRETED BY**

Andrea Nicastro,  
DVM, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**Adrenal Glands**

The left adrenal gland is normal size (0.67 cm at cranial pole) (0.55 cm at caudal pole) (2.43 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.

**IMAGING PERFORMED BY**

Sara Hansen

The right adrenal gland is normal size (1.32 cm at cranial pole) (0.62 cm at caudal pole) (2.82 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.

**HOSPITAL NAME**

Whole Pet Vet Care

**REFERRING VET**

Dr. Demarco

**Spleen**

The spleen is normal in size (1.95 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.

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**Liver**

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are

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observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is thin and smooth. A small amount of aggregated echogenic partially dependent debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

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The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

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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 pyloric outflow tract is patent. 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 disease is noted.

**AGE**

10 years

**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.

**WEIGHT**

50.2 lbs

**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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DVM, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**Other**

A brief echocardiogram reveals no evidence of pericardial effusion.

**IMAGING  
PERFORMED BY**

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**ULTRASONOGRAPHIC FINDINGS**

Diffuse hepatopathy. The liver enzyme pattern will ultimately dictate the differential list for the hepatopathy. If only the ALP is elevated, a benign hepatopathy (i.e., idiopathic vacuolar hepatopathy, regenerative nodular hyperplasia) is likely. However, if the ALT is also elevated, hepatocellular damage is likely present, which would indicate a more pathologic process, such as inflammatory disease, hepatotoxicosis, or less likely, infiltrative neoplasia.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

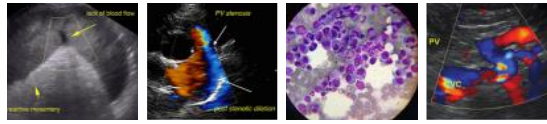
- If only the ALP is elevated, consider serial monitoring (i.e., every 3-4 months) of the patient's liver values to assess for progression. If worsening, consider a repeat abdominal ultrasound +/- hepatic tissue sampling.

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- If the ALT is also elevated, consider Leptospirosis testing as well as hepatic tissue sampling (i.e., fine-needle aspirate or surgical biopsy) along with aerobic and anaerobic bile cultures and acquisition of hepatic tissue samples for potential copper quantitation.

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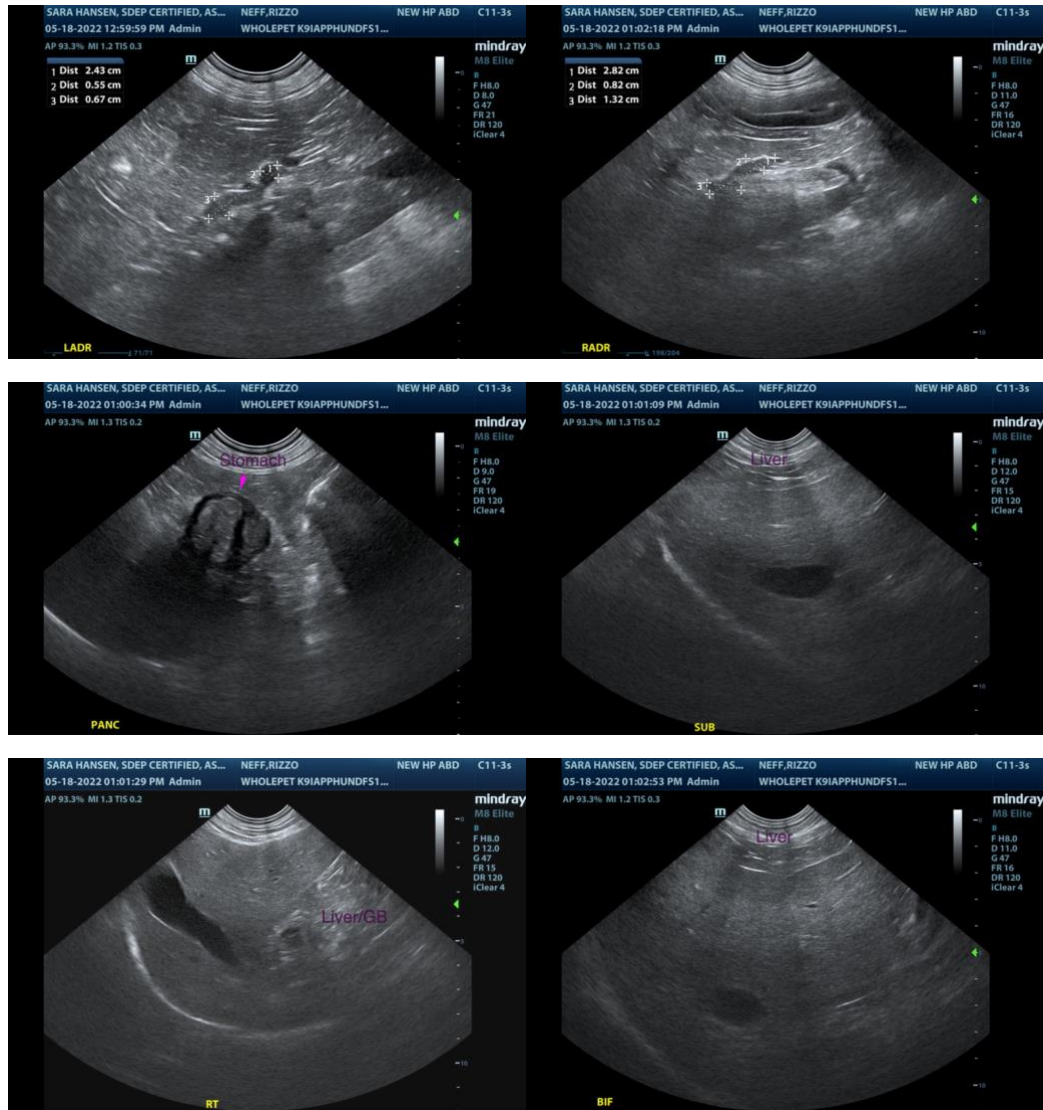
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.



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

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