



**PATIENT**

Raiya Koleszar

**SPECIES**

Canine

**BREED**

Leonberger

**SEX**

Female

**AGE**

1 Yr.

**WEIGHT**

44.3 kg.

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Dr. Brian Barnes

**HOSPITAL NAME**

Westview VH

**REFERRING VET**

Dr. Brian Barnes

**INVOICE**

13135

**DATE**  
3/15/22

**PRESENTING CLINICAL SIGNS**

History: Was too be spayed today but preoperative blood had increased ALT. Previous history of ALT when had a bout of Gastrointestinal disease in Dec 2021 (vomiting, diarrhea, blood in stool) ALT 188 Dec 2021 Dog is acting normal, delayed OVH, AUS screen

Abnormal PE/Chem/CBC/UA Results: CBC normal, Chem all normal except ALT 476, 481 (N 10-125)

**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 left kidney is normal size (8.42 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 is normal size (9.07 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 (0.45 cm at cranial pole) (0.42 cm at caudal pole) (2.66 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 (0.54 cm at cranial pole) (0.51 cm at caudal pole) (2.64 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 (2.70 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 isoechoic relative to the spleen and exhibits subtle heterogeneity. No distinct focal lesions are 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 gravity-dependent echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

*Gastrointestinal*



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The gastric lumen is mildly distended with ingesta. The gastric wall is normal in thickness with a normal layering pattern. The small intestinal lumen is segmentally dilated with chyme. 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.

**SPECIES**

Canine

**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.

**BREED**

Leonberger

**Free Abdomen**

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. A few prominent mesenteric lymph nodes are visualized, the largest measuring 2.70 cm in length.

**SEX**

Female

**Other**

The uterine body is visible and is normal in size (1.04 cm in width). No obvious pathology is seen.

**AGE**

1 Yr.

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings:**

- Non-specific diffuse hepatopathy. Differentials include inflammatory disease (i.e., bacterial cholangiohepatitis), hepatotoxicosis (i.e., copper), infiltrative neoplasia (less likely), other hepatopathy. Although there is some potential for congenital disease (i.e., portosystemic shunt), the normal liver size does not support this possibility.

**Secondary Findings:**

- The abdominal lymphadenopathy may be secondary to immunologic immaturity and/or reactive change.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- In order to get a definitive diagnosis, a surgical biopsy would be ideal, as it is more likely to represent global organ pathology than a fine needle aspirate. A contrast abdominal CT would be useful in determining if any gross congenital lesions are present prior to surgery. If a more conservative approach is desired, consider empirical treatment for bacterial cholangiohepatitis (i.e., amoxicillin clavulanic acid +/- metronidazole, Denamarin). If no improvement in the ALT is seen within 5-7 days of initiating therapy, antibiotics should be discontinued and hepatic tissue sampling revisited.
- Also consider pre and post prandial serum bile acids to assess hepatic function.
- Leptospirosis testing (i.e., blood and urine PCR, serology) can also be considered. However, given the chronicity of the ALT elevation, this differential is considered less likely.

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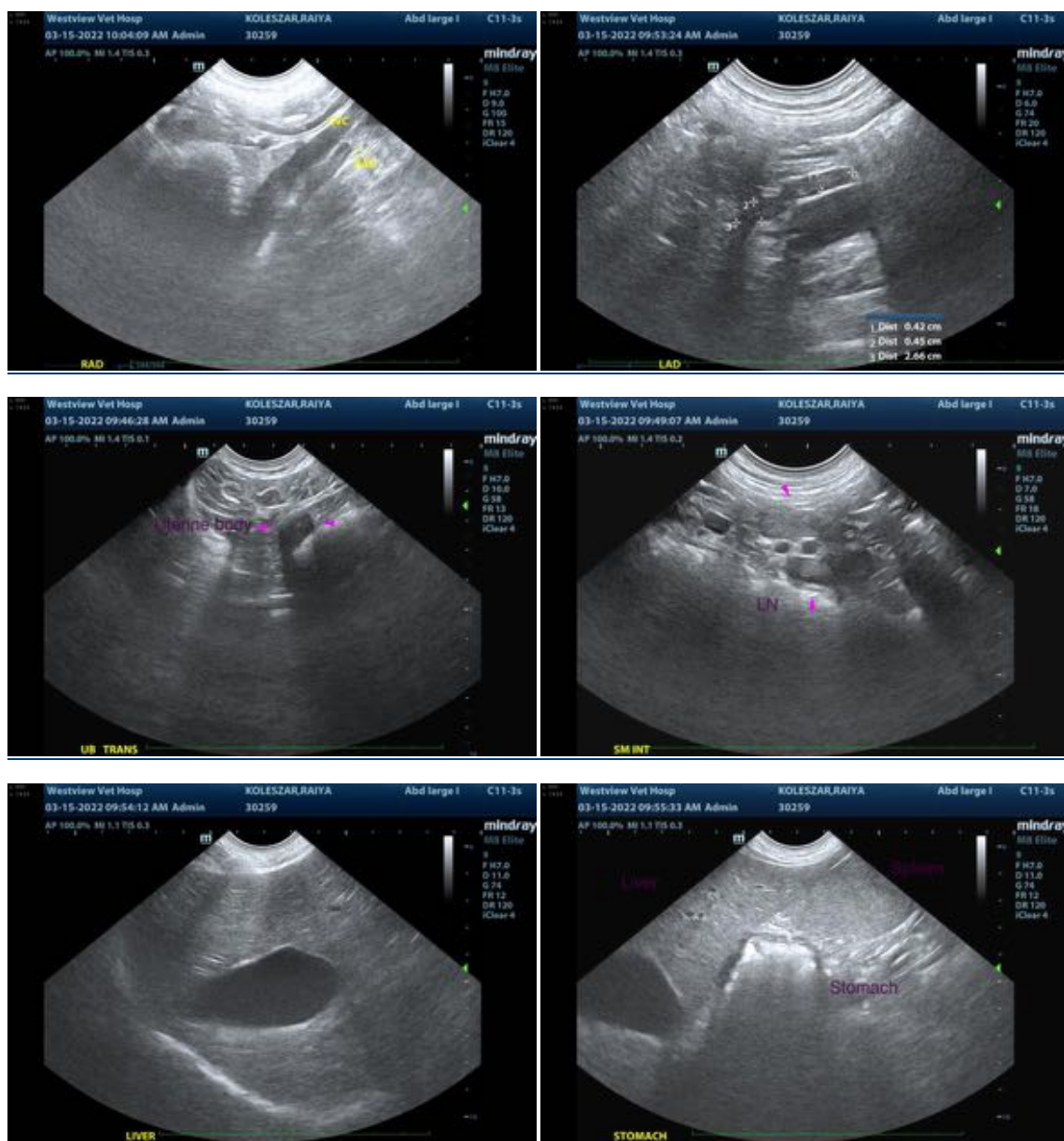
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

Andrea.nicastro@sonopath.com