

**PATIENT**

Kota Kazanjian

**SPECIES**

Canine

**BREED**

Mixed

**SEX**

Male Neutered

**AGE**

10 years

**WEIGHT**

67lb

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Dr. Scott

**HOSPITAL NAME**

Ho Ho Kus Veterinary  
Hospital

**REFERRING VET**

Dr. Eisenberg

**INVOICE**

10240

**DATE**

1/28/22

**PRESENTING CLINICAL SIGNS**

History: weight loss, vomiting- improved overnight with bland diet and cerenia

Abnormal PE/Chem/CBC/UA Results: HCT 61%, BUN 8, ALT 996, ALP 494, GGT 28, Bili total 0.6, chol 377, normal spec, negative 4dx, negative fecal

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is mildly distended with mostly anechoic urine. The wall is diffusely thickened (up to 0.83 cm) with an irregular mucosal surface. No cystic calculi are observed. The visible portion of the proximal urethra is normal.

The prostate is normal in size (1.17 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 (7.08 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.

The right kidney is normal size (6.52 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild 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 (0.79 cm at cranial pole) (0.68 cm at caudal pole) (2.59 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 (1.25 cm at cranial pole) (0.59 cm at caudal pole) (3.09 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.

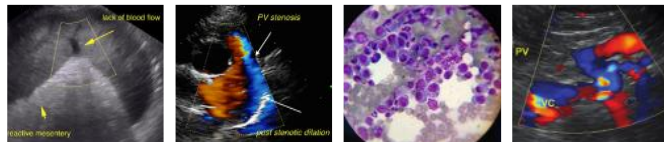
**Spleen**

The spleen is subjectively normal in size (1.40 cm in width at the level of the hilus) with normal curvilinear peripheral contours. The parenchyma is of appropriate echogenicity and echotexture. A few myelolipomas are observed in the region of the hilus. A 1.30 cm irregular ill-defined hyperechoic nodule/area is observed in the mid- to caudal aspect. Splenic vasculature appears normal with no evidence of thrombosis.

**Liver**

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to surrounding omental fat, with a few small ill-defined hypoechoic nodules/areas. 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 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 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 or overt infiltrative disease is noted.

**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.

**Free Abdomen**

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

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

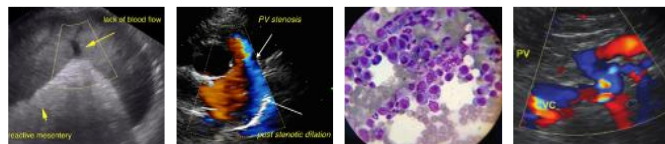
- An obvious cause for the elevated liver enzymes is not identified in the study. However, a microscopic hepatopathy (i.e., bacterial cholangiohepatitis, Leptospirosis, chronic active hepatitis, copper-associated hepatotoxicity, infiltrative neoplasia (less likely), other hepatopathy) is considered likely given the degree of liver enzyme elevations.

**Secondary Findings**

- The urinary bladder wall changes are most consistent with cystitis. Neoplasia is also a consideration. The wall thickening may be somewhat artifactual due to lack of full repletion. Correlation with clinical findings is recommended.
- Minor age-related renal changes
- The hyperechoic splenic nodule trends toward the benign (i.e., myelolipoma), with low potential for emerging neoplasia.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Leptospirosis testing (i.e., blood-in-urine PCR, serology) +/- pre-and postprandial bile acids should be considered.
- Cytologic evaluation of the liver should be considered in this patient if clotting status is appropriate. If cytology results are inconclusive, consider a surgical liver biopsy with aerobic and anaerobic bile cultures and acquisition of additional hepatic tissue samples for copper quantitation.
- If a more conservative approach is to be pursued, consider empirical treatment for cholangiohepatitis with amoxicillin-clavulanic acid and hepatic antioxidants. If liver values improve with therapy, a 4-6 week course of treatment is recommended.
- Given the patient's age, three-view thoracic radiographs are recommended to assess cardiopulmonary status.
- Given the urinary bladder wall changes, a urine culture and sensitivity should be considered.



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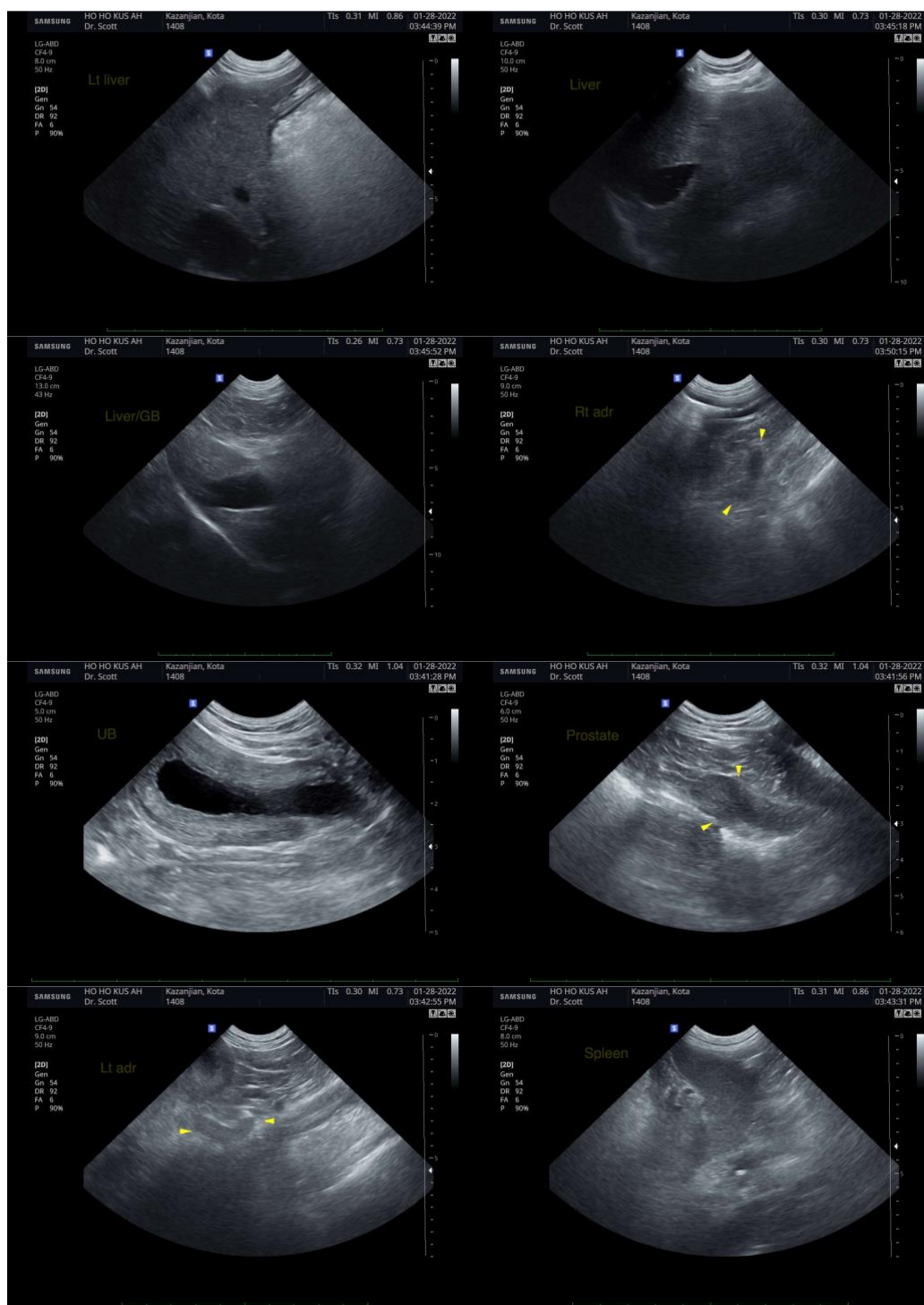
Dr. Eisenberg

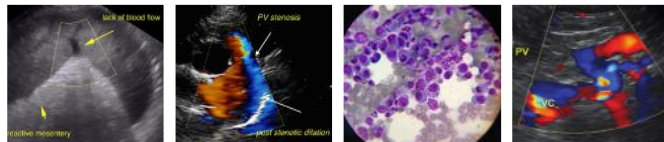
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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 DACVIM (Small Animal Internal Medicine)**  
info@SonoPath.com