



**PATIENT**

Max Lococo

**SPECIES**

Canine

**BREED**

Mixed K9

**SEX**

Neutered Male

**AGE**

11 years

**WEIGHT**

17 lbs

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

Glen Rock VH

**REFERRING VET**

Dr. Scott Stekler

**INVOICE**

10866

**DATE**

5/5/22

**PRESENTING CLINICAL SIGNS**

History: Elevated liver enzymes. Current meds: Lasix 12.5 mgs BID, Enalapril 5mgs.  
Abnormal PE/Chem/CBC/UA Results: BUN 41, creat. 1.7, Alk. Phos. 342. Per RDVM, in January, the ALT was 700 and in April it was 500.

**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 (1.39 cm in length) (0.68 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 (4.86 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney presented normal size (4.74 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. Trace pyelectasia is present. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is mildly enlarged (0.63 cm at cranial pole) (0.66 cm at caudal pole) (2.24 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 upper limits of normal size (0.74 cm at cranial pole) (0.58 cm at caudal pole) (1.90 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 (1.32 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 prominent in size with swollen curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity. No distinct focal lesions are observed. Hepatic vasculature 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 0.32 cm aggregation of hyperechoic to mineralized debris is observed within the lumen. The cystic and common bile ducts are normal.

### ***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.

### ***Pancreas***

The right limb is prominent to enlarged with irregular peripheral contours. The parenchyma is isoechoic to hyperechoic relative to surrounding omental fat and diffusely mottled and heterogenous in appearance. The pancreatic duct is borderline dilated (0.27 cm in diameter). There is no evidence of peripancreatic effusion.

### ***Free Abdomen***

There is no evidence of free fluid. The abdominal lymph nodes are normal/not visible.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

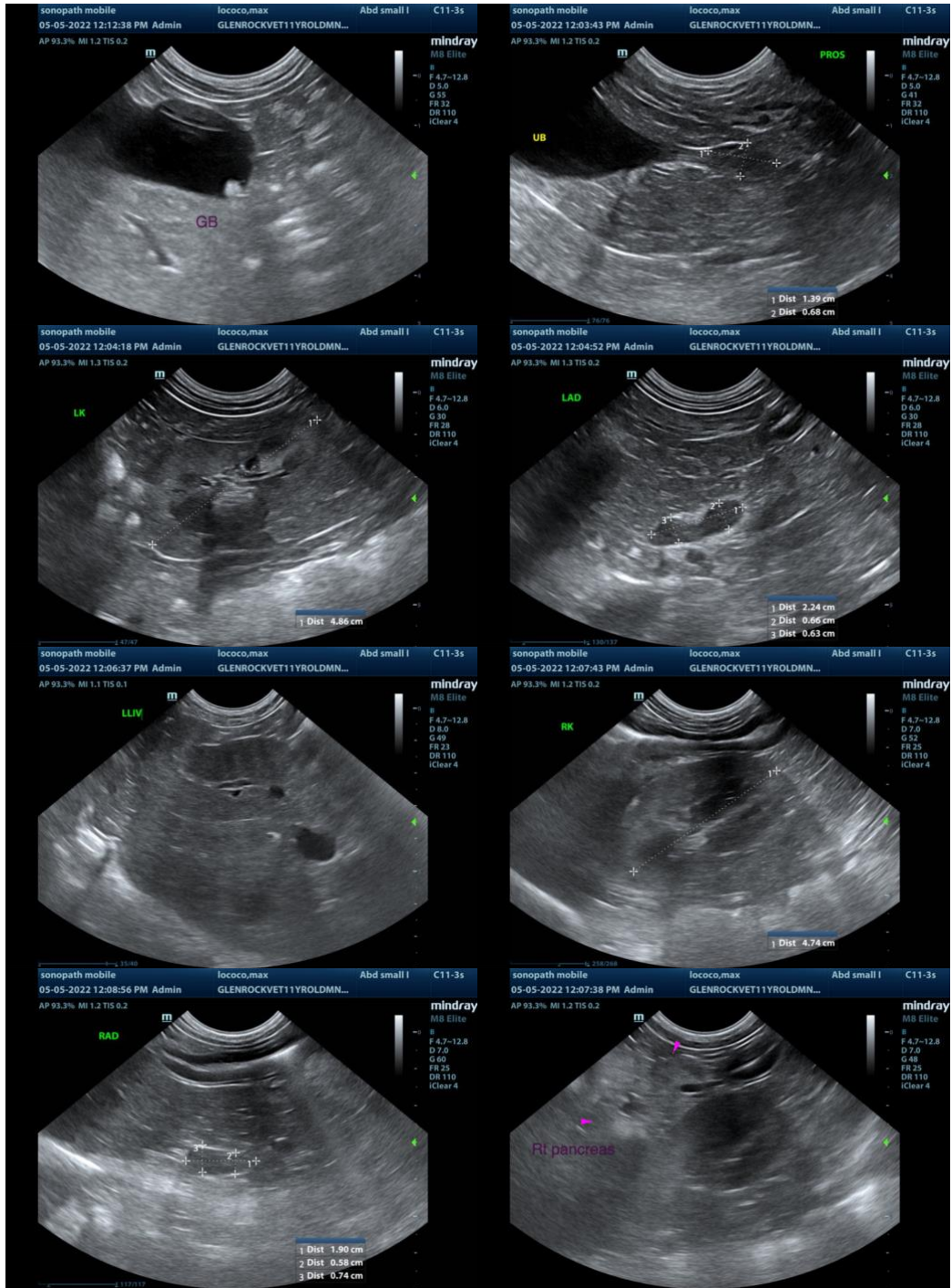
- Diffuse hepatopathy. Top differentials include regenerative nodular hyperplasia, age-related remodeling and/or vacuolar hepatopathy. Given that the ALT was substantially elevated 4 months ago, a low-grade inflammatory process (i.e., chronic active hepatitis, cholangiohepatitis) or hepatotoxicosis (i.e., copper) are also possible. Infiltrative neoplasia is also a consideration but is considered less likely in this patient.
- The pancreatic changes are suggestive of pancreatic remodeling with fibrosis and possible concurrent chronic or resolving pancreatitis. Correlation with the patient's clinical history is recommended.

### **Secondary Findings**

- Mild bilateral adrenomegaly
- Bilateral age-related renal changes

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Serial monitoring (i.e., every 3-4 months) of the patient's liver values is recommended. If values continue to increase, a repeat abdomen ultrasound +/- a more advanced hepatic work-up (i.e., tissue sampling) may be warranted.
- Given the mild azotemia, a urinalysis, urine culture and sensitivity, UPC (if proteinuria is present), and a baseline blood pressure measurement are recommended along with transition to a prescription renal diet, if the patient will tolerate it.
- Consider testing for hyperadrenocorticism with a low-dose dexamethasone suppression test or ACTH stimulation test if clinical signs (i.e., PU/PD) develop in the future.



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.

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