



## PATIENT

Ahsoka Meadows

## SPECIES

Canine

## BREED

Havanese

## SEX

Spayed Female

## AGE

6 Years 2 Months

## WEIGHT

21.2

## INTERPRETED BY

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

## IMAGING PERFORMED BY

Dr. Miranda Fritz

## HOSPITAL NAME

Richmond Animal  
Hospital

## REFERRING VET

Dr. Miranda Fritz

## INVOICE

72207

## DATE

1/14/26

## PRESENTING CLINICAL SIGNS

P presented early Dec for ADR, decreased app. BW done and mod LE elevation. P placed on amoxi/metro and bland diet and p clinically improved right away. At 2 week recheck liver values improved but not resolved. Continued amoxi/metro and added in denamarin supplement. 4 week recheck LEs increased again and polycythemia. Stopped antibiotics but continued denamarin and recommended IM referral. Over the weekend p became ADR again, pacing in the morning, uncomfortable, decreased app. No v/d/c/s. No pu/pd. O elected to do AUS sooner rather than later.

Abnormal PE/Chem/CBC/UA Results: PE: overweight and mild periodontal disease, otherwise unremarkable. CBC - hct 65% (H), reticulocytosis, all else wnl Chem - Albumin 4.0 (wnl, was 4.4), ALT 218 (H), ALP 564 (H), GGT 12 (H), TBili 1.1 (H) LEs at 2wk recheck - ALT 220, ALP 322, Tbili 1.6, GGT 5 Dec 11th - ALP 992, ALP 250 Fecal - NOS Chest x-rays wnl

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (4.39 cm) with occasional pinpoint cortical mineralizations. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.67 cm) with occasional pinpoint cortical mineralizations. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

### Adrenal Glands

The left adrenal gland is normal in size measuring 0.44 cm at the cranial pole and 0.51 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

### Spleen

The spleen is subjectively normal in size (1.63 cm), echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

### Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is subjectively mildly heterogenous in echotexture with subtle, indistinct focal mottling.



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The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and likely incidental at this time. The cystic and common bile ducts are normal/not visible.

### ***Gastrointestinal***

The stomach contains mild fluid. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measures 0.27 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### ***Pancreas***

The area of the pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### ***Free Abdomen***

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

## **ULTRASONOGRAPHIC FINDINGS**

- Mildly heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

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

No significant focal lesions are visualized associated with the liver or gallbladder to explain the liver enzyme elevations reported. The bile duct cannot be followed for the entirety of its length, but there is no evidence of significant cranial abdominal inflammation or overdistention of the gallbladder. Additionally, a liver shunt seems very unlikely based on the history and labs provided, but cannot be definitively ruled out. If this is a significant concern, a contrast CT scan could be considered.

Findings are suggestive of a primary hepatopathy. Consider the following for further evaluation:

- Recommend pre- and post-prandial bile acids to assess liver function.
- If clinically appropriate, consider screening for Leptospirosis.



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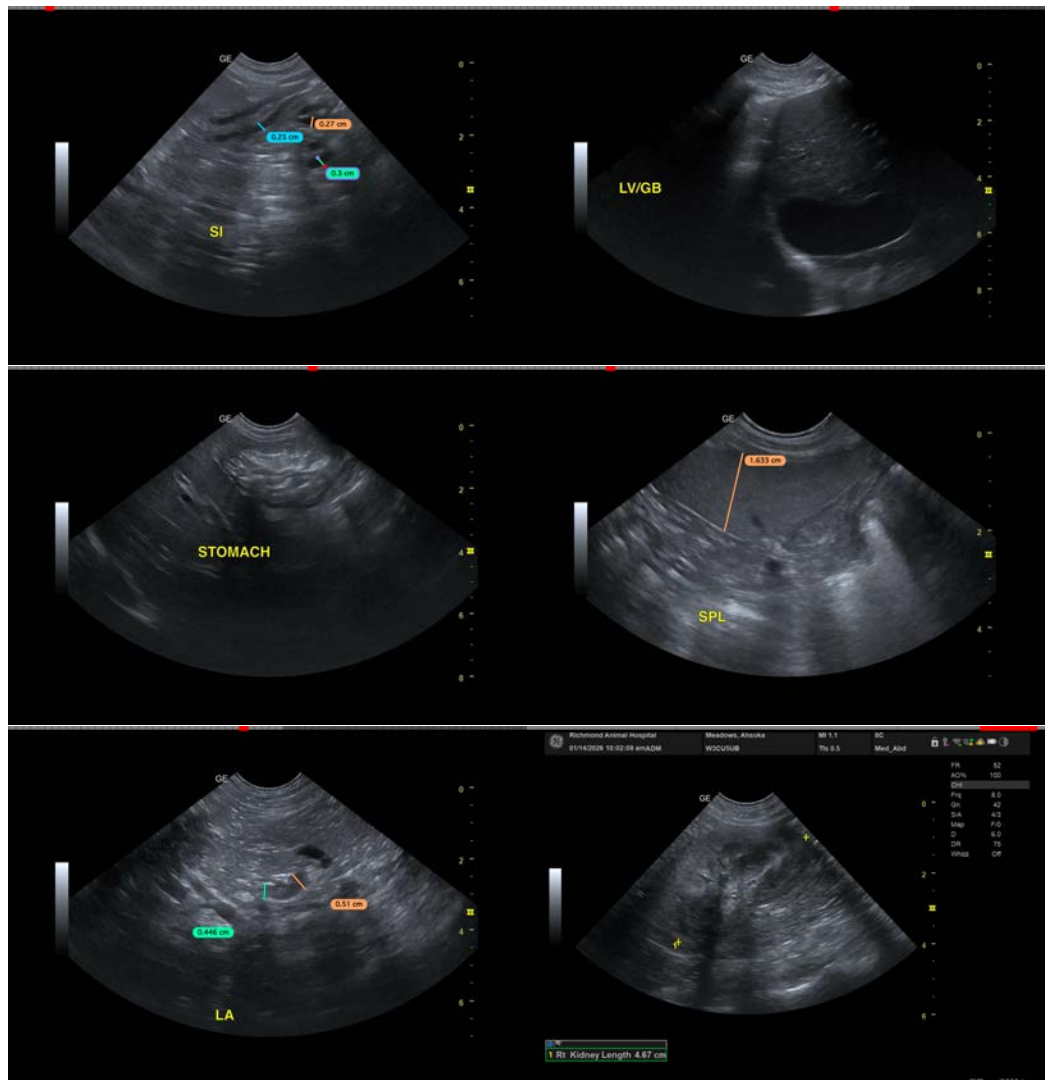
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- Fine needle aspirate of the liver could be considered (provided coagulation parameters are normal). This is likely most useful if there is concern for underlying round cell neoplasia, etc. In a situation such as this, biopsies of the liver with samples for histopathology, culture and copper levels are likely most helpful.

If biopsies are unlikely to be performed, then treatment for acute liver injury as previously performed with a course of Ursodiol, Denamarin and antibiotics could be considered. Repeat imaging could be considered in the future if the issue is persistent/progressing in the case of progressive biliary lesions or similar.





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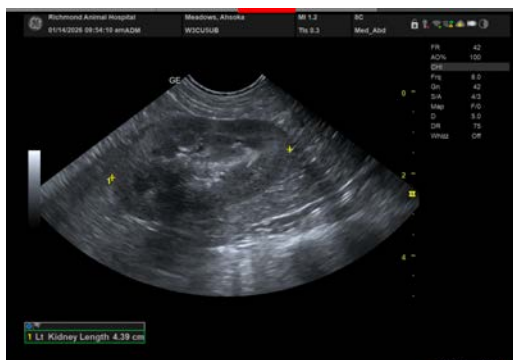
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

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