



## PATIENT

Evie Olenick

## SPECIES

Canine

## BREED

Terrier x

## SEX

Spayed Female

## AGE

9.4 Years

## WEIGHT

43.2 lbs

## INTERPRETED BY

Beth Johnson, DVM  
DACVIM

## IMAGING PERFORMED BY

Dr. Kristen Carpenter

## HOSPITAL NAME

Pennridge Animal  
Hospital

## REFERRING VET

Dr. Jen Heller

## INVOICE

73355

## DATE

3/3/26

## PRESENTING CLINICAL SIGNS

Hx: Sedated with Butorphanol. Owner noted PU/PD and some hair loss on dorsal tail over the last 6 months. Bloodwork performed and elevated liver enzymes noted and mildly low T4. Patient's weight has been stable. Patient treated with a 3 week course of clavamox and hepatosupport with no improvement/worsening of liver enzymes. Here for AUS as next step

Current Meds: Hepatosupport. Discontinued carprofen at onset of liver enzyme elevations.

Diet: Purina Pro Plan Salmon and Rice

Abnormal PE/Chem/CBC/UA Results: Diagnostics: - Bloodwork 1/29/26: CBC: Mild leukopenia (3600), neutropenia (2581), Lymphopenia (605) - these have all been overall stable over the past 2 years. Chem: ALT 355 ( 18-121), AST 77 ( 16-55), ALP 330 ( 5-160). UA: USG 1.010, no proteinuria, quiet sediment. T4 0.9 ( 1-4), 4dx neg x4. Fecal NOS. - Recheck Bloodwork after Clavamox 2/18/26: ALT 440 ( 18-121), ALP 511 ( 5-160). Total T4 0.9 ( 1-4)

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal is size (5.93 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of mineral or infarcts observed. Mild pyelectasia is present.

The left kidney is normal is size (5.74 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of mineral or infarcts observed. Mild pyelectasia is present.

### Adrenal Glands

The right adrenal gland is normal in size (0.93 cm at cranial pole and 0.61 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.64 cm at cranial pole and 0.70 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

### Spleen

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

### Liver

Liver is subjectively normal in size with mildly irregular margins. Parenchyma is markedly heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion



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Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

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### **Gastrointestinal**

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with a small to moderate amount of echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

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The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta/chyme. There is no evidence of obstruction, foreign material or infiltrative disease.

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The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

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### **Pancreas**

The pancreas that is observed appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

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### **Free Abdomen**

There is no visible free peritoneal effusion noted in these images.

There is no apparent pathologic lymphadenopathy noted in these images.

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## ULTRASONOGRAPHIC FINDINGS

- Non-specific hepatopathy – An obvious cause for the significant liver changes is not identified in these images. Microscopic disease such as Leptospirosis, bacterial cholangiohepatitis, chronic active hepatitis, copper-associated hepatotoxicity, other hepatotoxicity, other reactive hepatopathy, infiltrative neoplasia, etc. cannot be definitively ruled out.
- Moderate gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Bile acids are recommended if patient's total bilirubin is not increased.

Comprehensive infectious disease evaluation including testing for Leptospirosis is recommended.



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Ultimately, liver sampling is indicated, beginning potentially with a fine needle aspirate of the liver if patient's coagulation status is appropriate, or proceeding to a liver biopsy if necessary, being sure to include copper level assessment.

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Other than supportive/symptomatic medical management of clinical signs, further treatment recommendations are largely dependent on results of the above.

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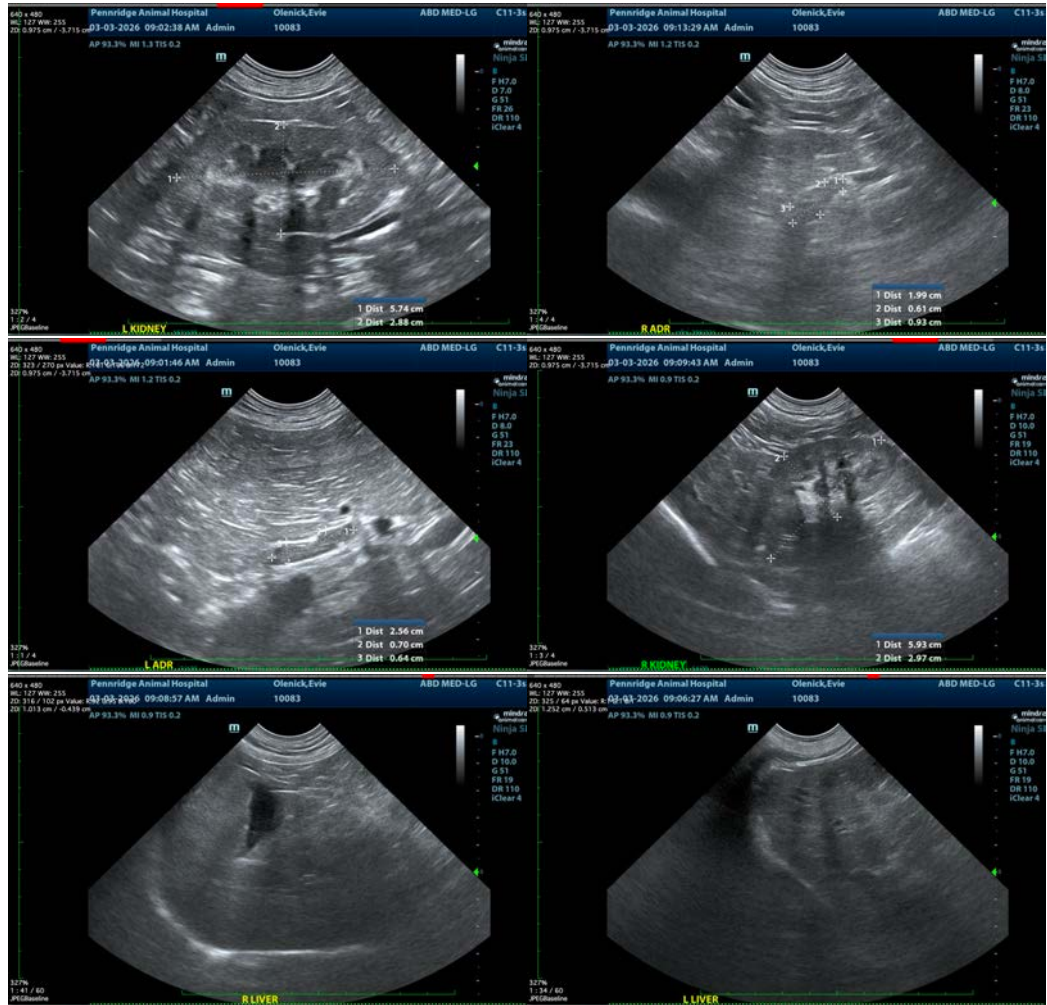
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Beth Johnson, DVM, DACVIM**  
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