**PATIENT PRESENTING CLINICAL SIGNS**

Leo Liyanaarachchi

History: Saw initially in March 2023. He had been on Enalapril for 2-3 years due to a heart murmur. I diagnosed with hyperthyroidism at that visit.

**SPECIES**

Feline

**BREED**

DMH

**SEX**

Neutered Male

**AGE**

11 years, 8 mos

**WEIGHT**

11 lbs

Abnormal PE/Chem/CBC/UA Results: At initial visit, ALT=319 and T4 was 5. Started on Ferimzone 2.5mg twice daily. At recheck 4/20/23, ALT was 245. T4 was 2.1. When checked again (full panel) 5/9/23, AST was high at 122, ALT high at 284 and ALP high at 125. Total bilirubin was high at 0.9. Discontinued ferimzone and checked labs again on 6/3/23. AST was 109. ALT was 371. ALP was normal at 94. Total bilirubin was 0.6. Owner is interested in doing radioactive iodine but want to make sure nothing else appears to be going on. Planning to take 3-view chest rads and another full blood panel at ultrasound appt.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with a moderate to large amount of echogenic non-shadowing debris, which could be partially consistent with incidental suspended lipid in a cat, likely combined with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**INTERPRETED BY**Beth Johnson, DVM  
DACVIM

Left kidney is normal in size (3.94 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 pyelectasia, mineral or infarcts observed.

Right kidney is normal in size (3.84 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 pyelectasia, mineral or infarcts observed.

**IMAGING PERFORMED BY**

Amy Mayhew LVT

**Adrenal Glands**

Left adrenal gland is normal in size (0.56 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

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Right adrenal gland is normal in size (0.44 cm) shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

**REFERRING VET**

Dr. Larsen

**Spleen**

Spleen is subjectively large in size with a swollen and scalloped/undulating capsular contour. Multifocal coalescing nodules are noted throughout the parenchyma. Splenic vasculature appears normal. Enhanced hyperechoic surrounding fat is noted.

**INVOICE**

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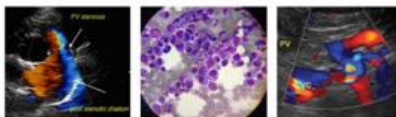
**Liver**

Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. In the right caudal liver, there is an approximately 2.00 cm in diameter, heterogenous nodule/mass. Visible vasculature and biliary tree appear normal without distension or congestion.

**DATE**

7.10.23

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.

**PATIENT** *Gastrointestinal*

Leo Liyanaarachchi

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

**SPECIES**

Feline

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

**BREED**

DMH

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

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*Pancreas*

The observed pancreas 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 a small amount of anechoic free fluid throughout the abdomen. The lymph nodes are enlarged with swollen irregular capsular contour and loss of normal length to width ratio (rounded in shape). Nodes are hypoechoic with loss of normal parenchymal detail.

**WEIGHT**

11 lbs

**ULTRASONOGRAPHIC FINDINGS****INTERPRETED BY**Beth Johnson, DVM  
DACVIM**Primary Findings**

- Honeycomb Spleen – This finding is strongly suggestive of infiltrative disease such as round cell neoplasia. Benign disease cannot be ruled out but is considered less likely.
- The heterogenous liver mass is concerning for a metastatic or infiltrative round cell neoplasia nodule/mass - A benign cyst, hematoma, nodular hyperplasia, etc. is possible but considered exceedingly less likely, especially given the concurrent pathology.
- Aggressive lymph nodes – most consistent with infiltrative round cell or metastatic neoplasia. A benign aggressive inflammatory response cannot be ruled out without tissue sampling +/- culture.
- There is a small amount of free fluid throughout the abdomen.

**IMAGING PERFORMED BY**

Amy Mayhew LVT

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**Secondary Findings**

- Urinary bladder debris
- Mild gallbladder debris – Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness, however, it can also be associated with hepatobiliary disease in cats 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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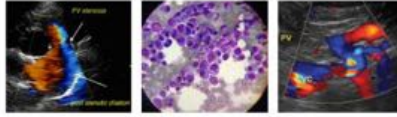
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Fine-needle aspirates of this patient's spleen as well as the right caudal liver/mass are recommended (if coagulation status of the patient is appropriate). Premedication with diphenhydramine should be considered.



**PATIENT**

Additionally, if not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

Leo Liyanaarachchi

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Further treatment recommendations are dependent on the cytology results.

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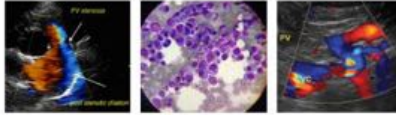
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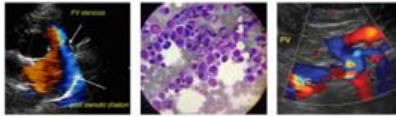
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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  
info@SonoPath.com