



**PATIENT**

Whiskey Howell

**SPECIES**

Canine

**BREED**

Lab

**SEX**

Spayed Female

**AGE**

7 Years

**WEIGHT**

76 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Dr. Christina Sitton

**HOSPITAL NAME**

Sherwood Family PC

**REFERRING VET**

Dr. Christina Sitton

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**DATE**

7/20/22

**PRESENTING CLINICAL SIGNS**

ADR - lethargy, vomiting, labored breathing, hyporexia  
Abnormal PE/Chem/CBC/UA Results: thoracic rads: wnl BW: Chem Ca 7.9 mg/dL 8.4 - 11.8 TP 5.0 g/dL 5.5 - 7.5 ALB 2.2 g/dL 2.7 - 3.9 GLOB 2.8 g/dL 2.4 - 4.0 A/G Ratio 0.8 0.7 - 1.5 ALT 714 U/L 18 - 121 AST 406 U/L 16 - 55 ALKP 445 U/L 5 - 160 GGT 5 U/L 0 - 13 TBIL 0.3 mg/dL 0.0 - 0.3 CBC HCT 26.8 % 38.3 - 56.5 NRBC 4 per 100wbc 0 - 2 PLATELETS 39 K/uL Platelets appear markedly decreased on the blood film (30,000-50,000 per microliter). POLY MODERATE ANISO MODERATE Neutrophils appear slightly toxic. Dohle bodies seen. ABS NEUTS 13193 /uL 2940 - 12670 ABS LYMPHS 835 /uL 1060 - 4950 ABS MONOS 1670 /uL 130 - 1150 ABS BASO 334 /uL 0 - 100 ABS NEUTB 167 /uL 0 - 170 UA USG 1.027 pH 6.5 3+ bilirubin 2+ protein rest of chem/T4 wnl

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately 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 in size (6.6 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.

The left kidney is normal in size (6.8 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 noted.

**Adrenal Glands**

The right adrenal gland is normal in size (0.82 cm thick), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.70 cm thick), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**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.

**Liver**

Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. No focal nodules or masses are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

**Gastrointestinal**

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with 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 (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). 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.

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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.

**Pancreas**

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The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

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**Free Abdomen**

A scant amount of anechoic free fluid is noted between liver lobes.

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The medial iliac lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

**ULTRASONOGRAPHIC 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.
- **Hypoechoic hepatomegaly** – This appearance is consistent with an acute hepatopathy or acute cholangiohepatitis. Infiltrative neoplasia (round cell neoplasia) should also be considered.
- **Reactive medial iliac lymph nodes** – infiltrative neoplastic disease cannot be ruled out but is considered less likely.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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- The top differential for this patient's diffuse pathology is infiltrative neoplasia such as round cell neoplasia. Ideally, a fine needle aspirate of the spleen and liver is recommended. However, if coagulation status is inappropriate, a bone marrow cytology may be considered as an alternative way to look for round cell neoplasia with less risk of hemorrhage.

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- An alternative approach is to begin therapy for the reported thrombocytopenia with immunosuppressants +/- vincristine and pursue aspirates when it is safe to do so, the downside of this approach being that if the infiltrative process is lymphoma, therapy of the thrombocytopenia may mask the diagnosis.

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- Given the low albumin, 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.

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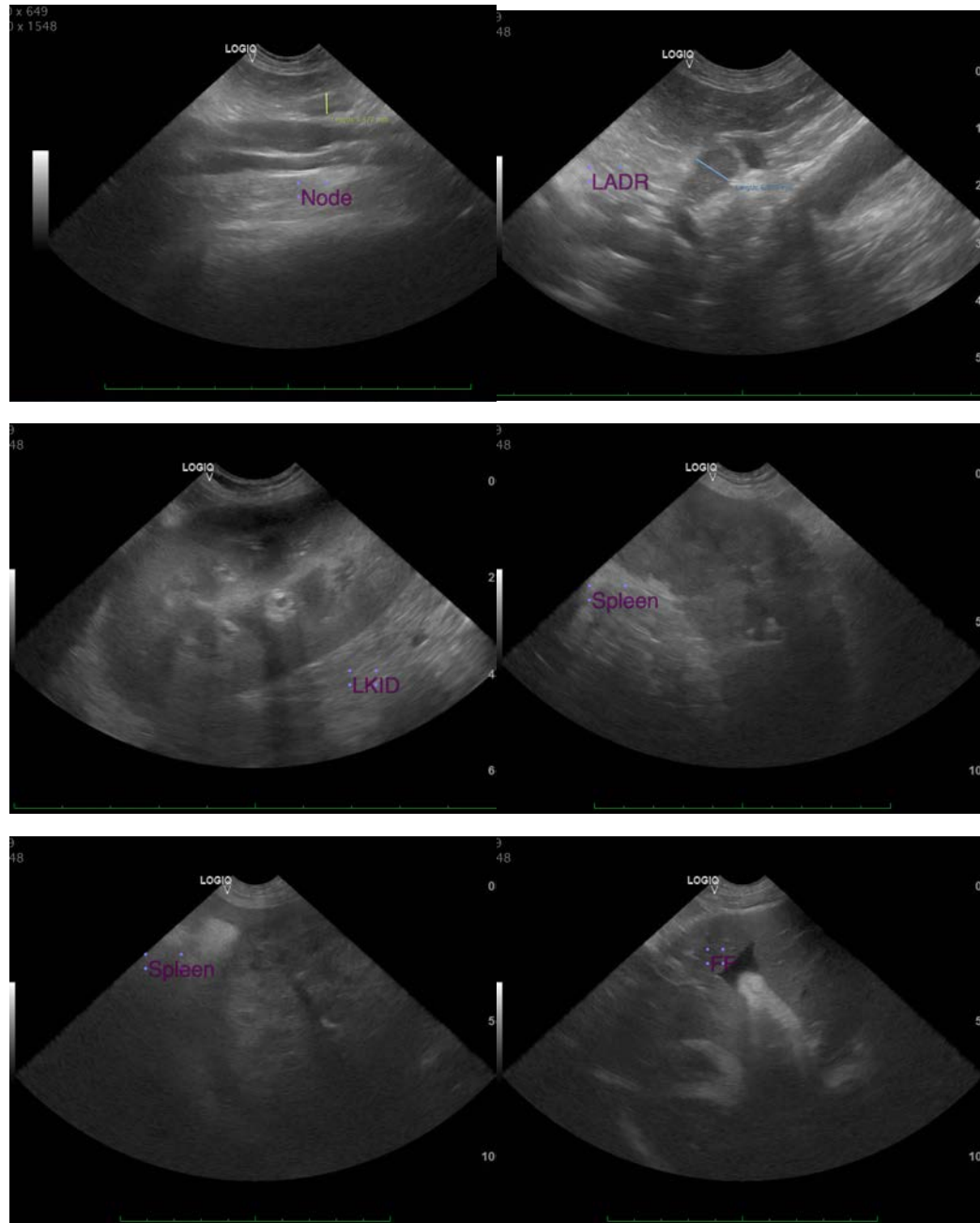
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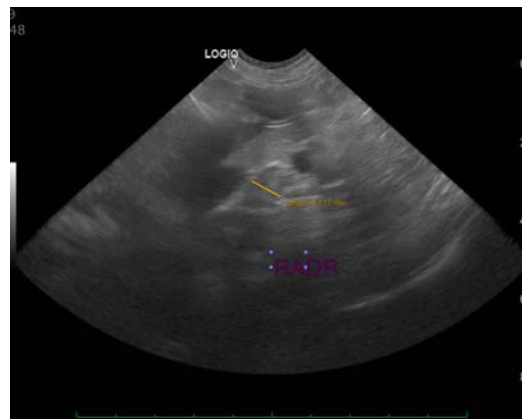
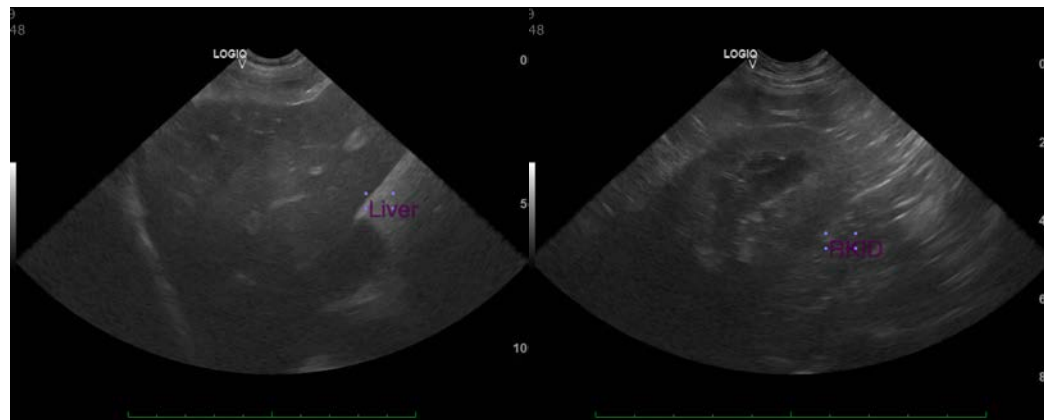
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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