



PATIENT

Noli Walker

SPECIES

Canine

BREED

Mixed

SEX

Spayed Female

AGE

5 Years

WEIGHT

42 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Dr. Elaina Petrone

HOSPITAL NAME

Long Branch AH

REFERRING VET

Dr. Elaina Petrone

INVOICE

40345

DATE

8/11/22

PRESENTING CLINICAL SIGNS

5yo FS mixed breed dog, age is an estimate as patient is a rescue from Puerto Rico. Routine lab work showed elevated ALT: 270, after a course of Denamarin and Amoxi/metro ALT is 953 and AST 118. AUS showed splenic mass.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is only mildly distended (empty). Visible contents are anechoic. Urinary bladder wall is unable to be fully assessed for pathology without further distension. No visible masses or cystoliths are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface. If there are urinary signs and/or concern for urinary bladder pathology, reassessment after complete filling is recommended.

The right kidney is normal in size (5.26 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. A hyperechoic band parallel to the corticomedullary border is present.

The left kidney is normal in size (5.25 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. A hyperechoic band parallel to the corticomedullary border is present.

Adrenal Glands

The area of the right adrenal gland is examined without evident pathology.

The left adrenal gland is normal in size (0.50 cm at the cranial pole and 0.55 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. 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). A 2.0 cm round mixed, primarily hypoechoic mass is noted near the head of the spleen. A similar appearing, slightly smaller mass is noted in the mid spleen. Both masses result in capsular bulge. Splenic vasculature appears normal.

Liver

Liver is normal to subjectively small in size with slightly undulating or scalloped capsular contour or margins. Parenchyma is diffusely heterogenous with increased portal markings and coarse architecture. 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 stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with 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

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

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ULTRASONOGRAPHIC FINDINGS

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- **Multiple hypoechoic splenic nodules/masses** – concerning for infiltrative neoplasia such as round cell neoplasia versus other. However, benign lesions such as cysts, hematomas, nodular hyperplasia, extramedullary hematopoiesis, etc. can mimic malignant lesions and cannot be definitively ruled out.
- **Non-specific hepatopathy** – An obvious cause for the reported increased liver enzymes is not identified in these images. Microscopic disease such as Leptospirosis, bacterial cholangiohepatitis, chronic active hepatitis, copper-associated hepatotoxicity, other hepatotoxicity, infiltrative neoplasia (considered unlikely), etc. cannot be definitively ruled out.
- **Medullary rim sign** - This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

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A fine needle aspirate of both the liver and the splenic nodules could be considered if patient's coagulation status is appropriate. Alternatively, an exploratory laparotomy could be performed with plans for a splenectomy as well as a liver biopsy. The latter is likely the ultimate necessity to obtain a definitive diagnosis, and if elected, liver biopsy should be submitted for histopathology as well as copper level assessment.

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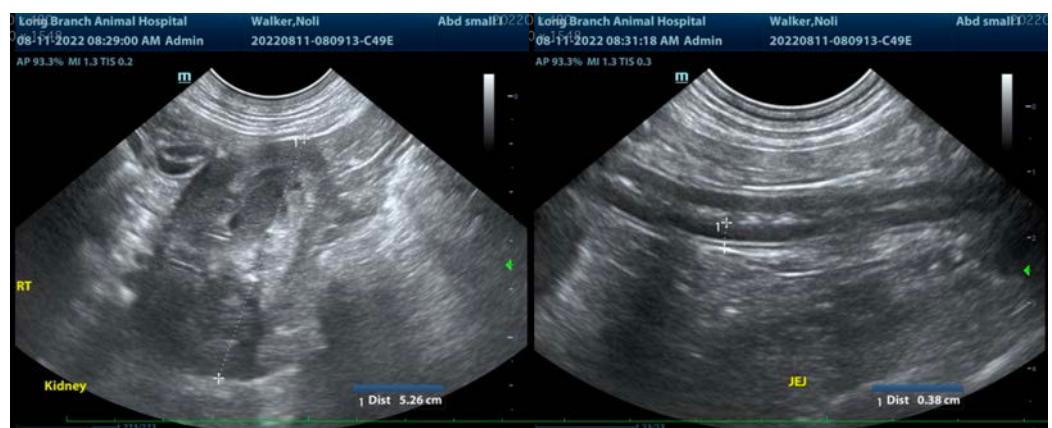
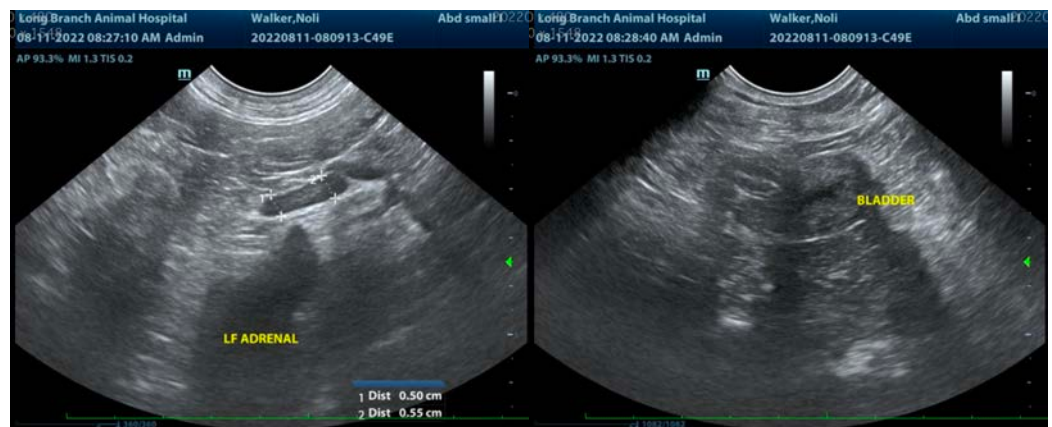
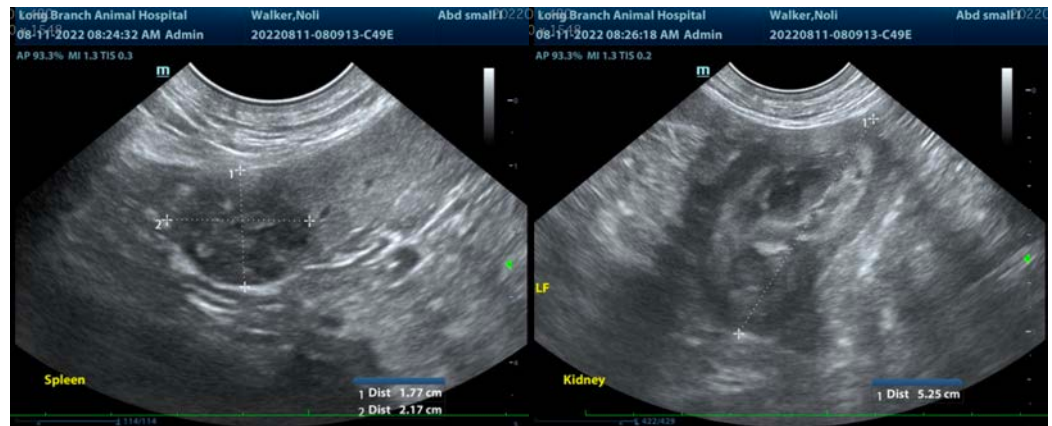
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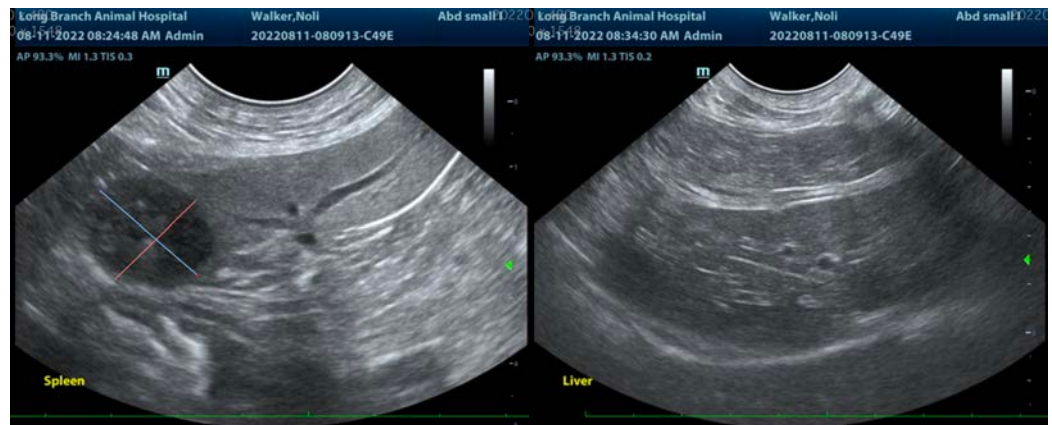
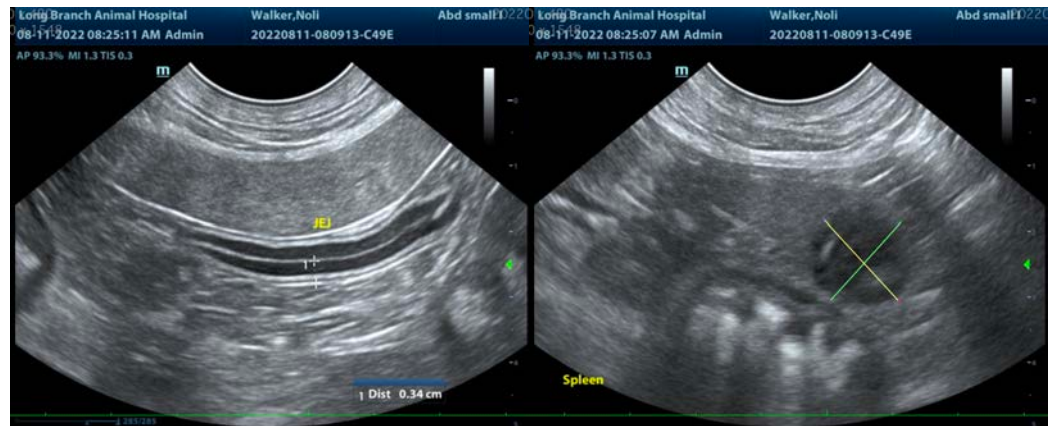
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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