

**DATE PRESENTING CLINICAL SIGNS**

12/27/22 Vomiting and diarrhea starting at 2 am this morning. No known foreign body ingestion. Did get a new treat for Christmas. Pet standing hunched during exam. Abdominal palpation was normal. Recent (12/3/22) treatment for Roundworm with pyrantel. Stool negative 12/19/22.

PATIENT

Ziggy Cullen
 Current Medications: received 3.5ml pyrantel 12/10/22
 Lab Results: ALT 820. WBC 18.52k/ul (neu 14.35)
 Date of Previous IntraPet Ultrasound: No previous.
 Sedation: IV dexdomitor.
 Stat Report: Not requested.
 Imaging Performed By: Rachel Brillhart, RDMS.

SPECIES

Canine

BREED

Mix

SEX

Intact Male

AGE

2/19/22

WEIGHT

37.9 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Festival Vet Clinic

REFERRING VET

Dr. Davies

INVOICE

43741

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 prostate is large but has a regular shape with smooth external margins. The parenchyma is heterogenous but no discrete focal lesions are present. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi. The prostate measures 3.36 cm in length, 2.43 cm in height, and 2.94 cm in width.

The left kidney has a normal shape and size (6.7 cm). 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, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.34 cm). 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, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.46 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 right adrenal gland is normal in size measuring 0.55 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, 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 large, irregular, and hypoechoic. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is a

rounded irregular, somewhat cystic lesion visualized in the region of the caudate lobe of the liver, measuring 2.74 cm x 4.51 cm. The mesentery surrounding this lesion appears somewhat hyperechoic.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. 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. Duodenum wall measures 0.42 cm. Jejunum wall measures 0.34 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. 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 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. There are prominent enlarged lymph nodes visualized at the mesenteric root measuring 0.78 cm and 0.88 cm in diameter. The omentum is generally of normal echogenicity, but mildly increased in the cranial abdomen.

ULTRASONOGRAPHIC FINDINGS

- Large, hyperechoic prostate – Findings are most consistent with benign prostatic hypertrophy +/- prostatitis.
- Heterogeneous, hypoechoic liver with a cystic/cavitated mass lesion – 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. The nature of the caudate liver lobe lesion is unclear. This could represent an abscess, cystic lesion, etc.
- Prominent mesenteric lymph nodes – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely. This can be a normal finding for some young dogs.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

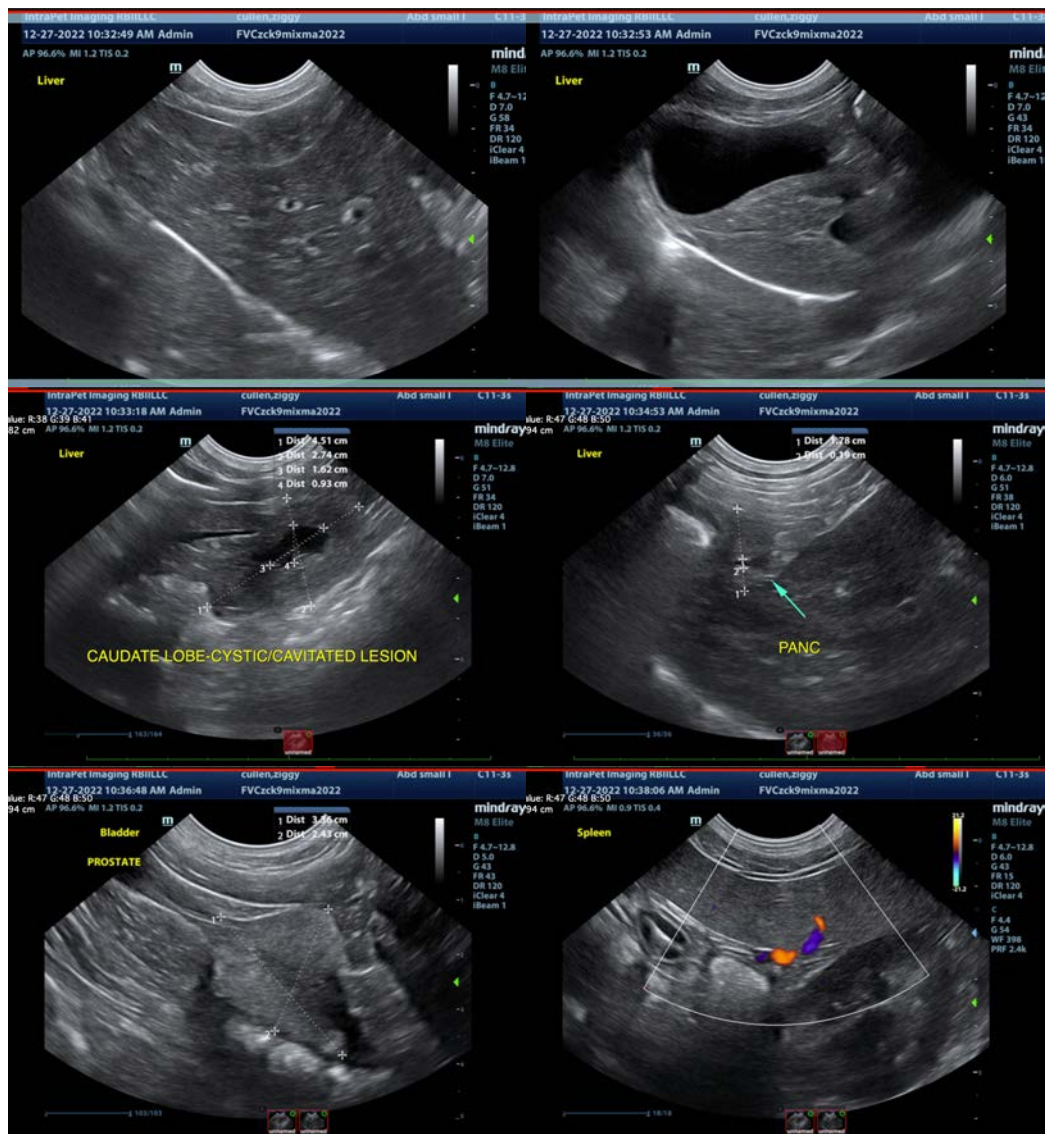
There is a somewhat cavitated, rounded mass lesion associated with the caudate lobe of the liver. This is an unusual finding in such a young dog, but could be associated with an abscess, cystic structure, anatomic abnormality, etc. Given the acute liver enzyme elevations, acute liver injury would be a concern with either infectious or toxic insult, and additionally this lesion could be playing a role. In an ideal situation, I would consider a fine needle aspirate of the liver, screening for Leptospirosis, and consider a contrast CT scan to

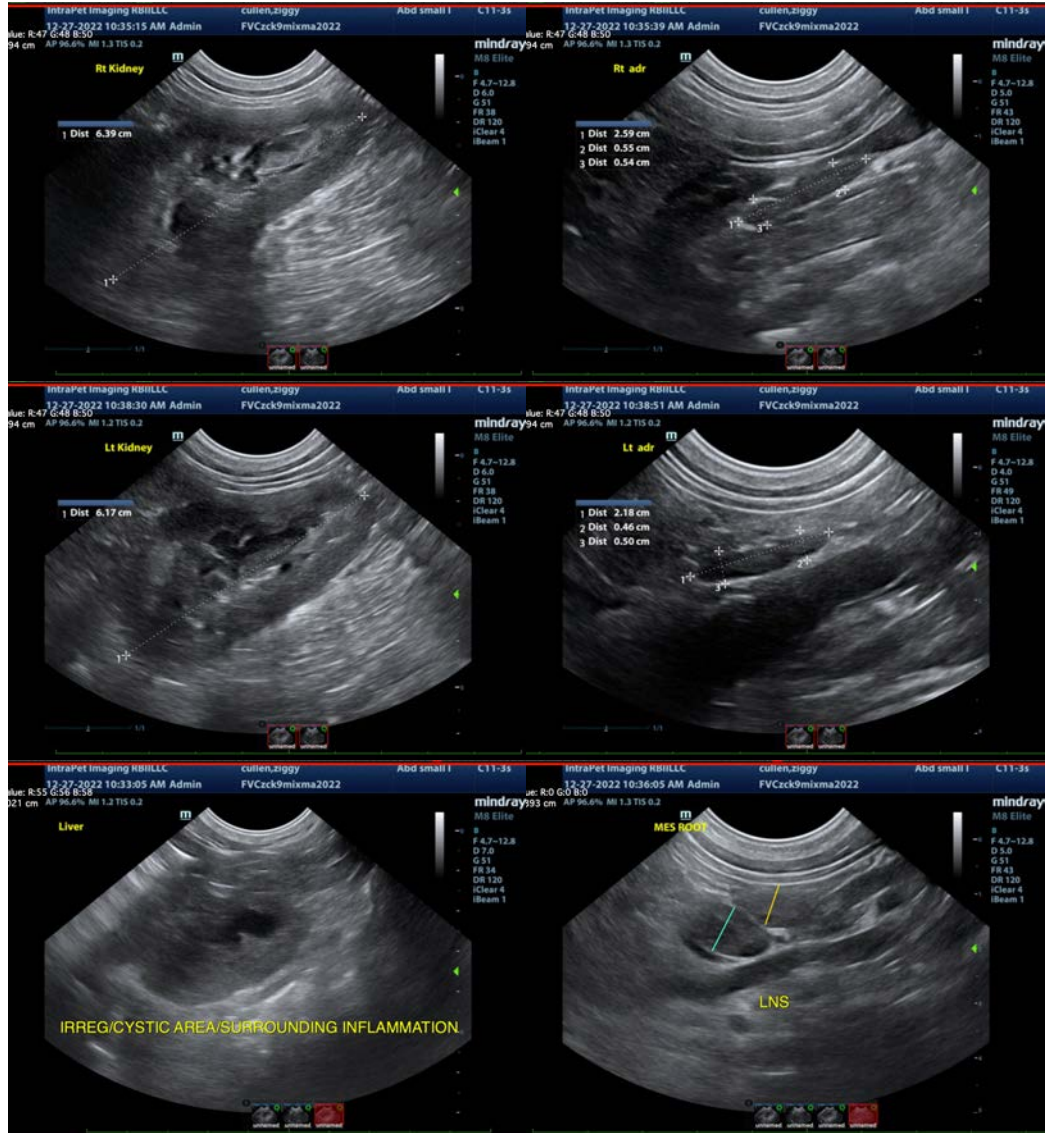
further evaluate the lesion on the liver for possible surgical removal. Alternately, consider referral to a veterinary surgeon for explore and likely surgical removal with histopathology and aerobic, anaerobic cultures, etc.

The prostate is large and hyperechoic. This is a normal finding for an intact male dog. Neutering would alleviate these changes.

The lymph nodes at the root of the mesentery are large and rounded. These are most consistent with "puppy" lymph nodes, but inflammation associated with the liver is also possible.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.





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)
 kathleen.sennello@sonopath.com