

**DATE PRESENTING CLINICAL SIGNS**

3/23/23 Chronic vomiting every 36 hours for 1 m - undigested food, normal stools, good appetite. Per o weight loss over the past two years,

PATIENT 12/2021 (date of last exam) was 12.0 pounds, 3/14/2023 9.85 pounds

Dean Leen Current Medications: None.

Lab Results: 3/14/23 - cbc/chem - alt 211, felv / fiv negative, T 4 2.8

SPECIES Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Feline Stat Report: Not requested.

Imaging Performed By: Stephanie Warga RDCS, RVT.

BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

DSH

Urinary System

The urinary bladder is moderately distended with mild primarily suspended echogenic debris present. 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 calculi. Echogenic debris of this type can be associated with small crystals, cellular debris and proteinaceous debris.

AGE

7/26/09

The left kidney has a normal shape and size (3.6 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.

WEIGHT

4.47 kg

The right kidney has a normal shape and size (4.07 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.

INTERPRETED BY

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

Adrenal Glands

The left adrenal gland is normal in size measuring 0.26 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.

HOSPITAL NAME

Banfield Towson

The right adrenal gland is normal in size measuring 0.25 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.

REFERRING VET

Dr. Mike

Spleen

The spleen is borderline large in size (1.3 cm in width at the level of the hilus), 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.

INVOICE

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Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. There are numerous ill-defined hypoechoic nodules visualized in the liver. Examples of these measure 0.87 cm x 0.50 cm on the left, 1.21 cm x 0.98 cm, 0.61 cm x 0.60 cm, and 1.4 cm x 0.88 cm.

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 a large amount of ingesta. It measures at a normal thickness of <0.36cm 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 uniform diameter with minimal fluid distension. Wall thickness is normal to slightly increased. Bowel loops follow a typical curvilinear path with distinct wall layering, but some areas display a prominent muscularis layer which does not display the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.37 cm. Jejunum wall varies from 0.22-0.34 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 large and hypoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. Consistent with mild pancreatitis.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There are occasional prominent mesenteric lymph nodes, one measures 0.52 cm. The omentum is diffusely mildly hyperechoic.

PRIMARY FINDINGS

- Borderline large spleen – Consider such differentials as congestion, infiltration, or this could be normal for a large cat.
- Hypoechoic lesions visualized within the liver – These lesions are somewhat subtle and do not significantly deform the liver. The appearance trends towards a more benign lesion, but underlying neoplasia cannot be ruled out. Recommend a fine needle aspirate.
- Large, shadowing ingesta within the gastric lumen – Findings are consistent with a non-fasted patient.
- Diffusely thickened small intestine with a prominent muscularis layer – The small intestinal wall changes could be consistent with an underlying inflammatory process. These types of changes can sometimes be seen in normal older cats. Correlate with clinical signs.
- Occasional prominent mesenteric lymph node – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

SECONDARY FINDINGS

- Echogenic debris in the urinary bladder – The echogenic debris in the bladder lumen could be consistent with cells, crystals, and/or mucus.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The small intestine is diffusely prominent and “ropey” with a prominent muscularis layer. This can be an indicator of underlying small intestinal inflammation or even infiltrative disease. Unfortunately, a biopsy would be necessary to further evaluate. Initially, I would consider:

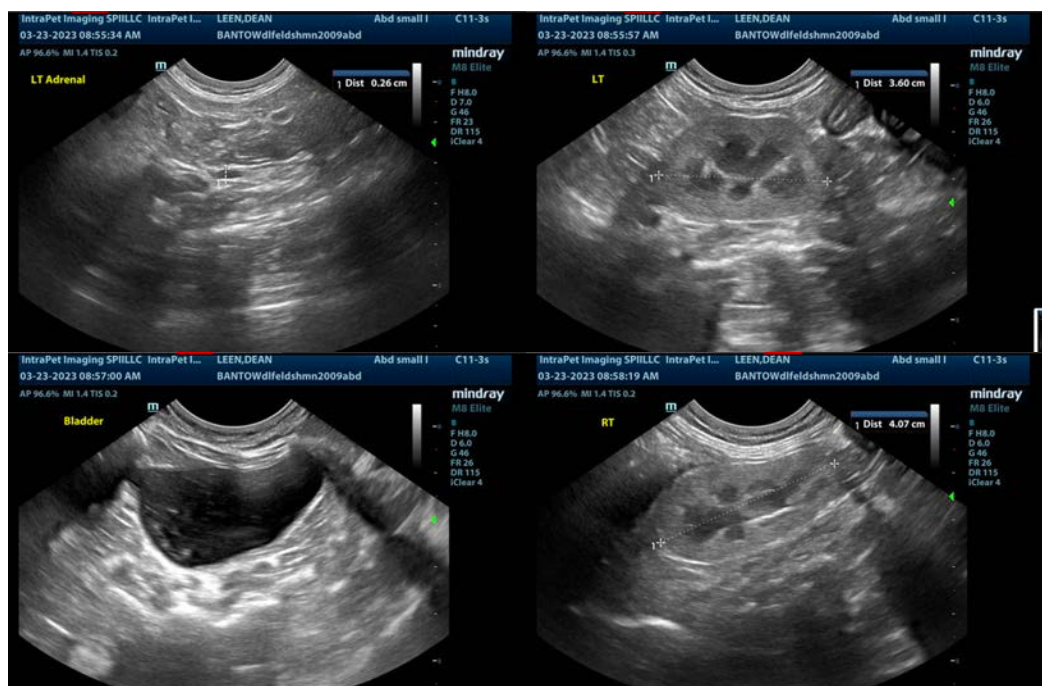
- Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks)
- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.
- Recommend chronic probiotic therapy.
- If symptoms persist despite taking these measures, then I would consider obtaining GI biopsies to further evaluate for underlying intestinal disease.

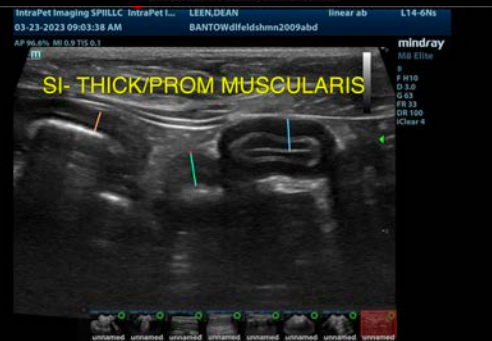
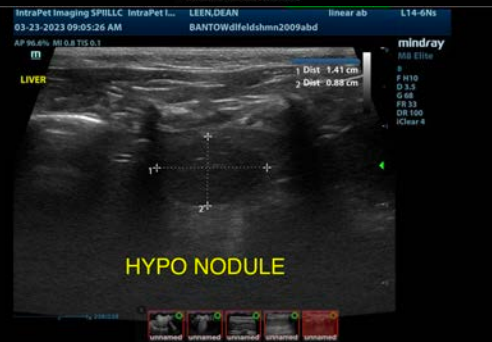
Additionally, the pancreas is hypoechoic and prominent throughout the abdomen with mild associated inflammation. These changes could be consistent with previous episodes of pancreatitis or mild current pancreatitis. Correlate these findings with an fPLI level (this is in the GI panel recommended above), and start empirical treatment for pancreatitis.

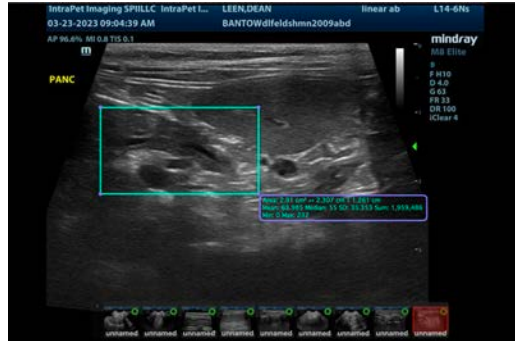
There are hypoechoic nodules visualized within the liver. The significance of these lesions is unknown, but there is a liver enzyme elevation and benign hepatic nodules are less common in cats. Recommend fine needle aspirate provided coagulation parameters are normal.

There is a small amount of echogenic debris visualized in the urinary bladder. Recommend a urinalysis and culture to further evaluate.

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.

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