



**PATIENT**

Atlas Knehans

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Neutered Male

**AGE**

4 Years

**WEIGHT**

8.94

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Jo Goodman

**HOSPITAL NAME**

Evandale-Blue Ash PH

**REFERRING VET**

Dr. Jo Goodman

**INVOICE**

46626

**DATE**

4/12/23

**PRESENTING CLINICAL SIGNS**

For 6 months to 1 year, Atlas has been vomiting frequently, 3-4 times a week. Mostly hairballs. Loves to chew on plastic, tape, cardboard boxes, eats litter occasionally. Gets laxatone daily. Week of 4/12 became constipated, had enema and scheduled ultrasound. Sending out Texas A&M GI panel.

Abnormal PE/Chem/CBC/UA Results: Jan 21/2023: Elevated white blood cells and eosinophils

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is minimally distended with anechoic urine. While no abnormalities are noted, full evaluation of the urinary bladder is not possible due to lack of urine distention.

The left kidney has a normal shape and size (3.87 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 (4.14 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 0.37 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 region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

**Spleen**

The spleen is subjectively normal in size (0.68 cm), 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 subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

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 majority of the gastric wall and gastric mucosa appear relatively normal with a wall thickness at 0.26 cm. There is a section of gastric wall in the pyloric region that appears thickened, measuring between 0.49 cm and 0.75 cm with a reduced detail of wall layering.



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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. Jejunum wall measures 0.27 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 left and right limbs of the pancreas is prominent and hypoechoic as compared to the surrounding isoechoic 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. The pancreaticoduodenal lymph node is prominent in the cranial abdomen measuring 0.95 cm in diameter. There are a cluster of lymph nodes around the ileocecal junction measuring 0.31 cm and 0.43 cm.

**ULTRASONOGRAPHIC FINDINGS**

- Prominent, hypoechoic pancreas in the left and right limbs – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Heterogeneous liver – 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 significance of this is uncertain if liver enzyme values are normal.
- Focal thickening of the gastric wall with reduced detail of wall layering – Differentials would include gastritis, edema, or infiltrative disease (round cell neoplasia, carcinoma, etc.).
- Prominent muscularis layer to the small intestine – 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.
- Mild mesenteric lymphadenopathy – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

There is a focal area of the gastric wall that appears prominent. Wall layering is present but decreased in detail. Consider a fine needle aspirate of the thickened area of gastric wall. Additionally, there are some prominent mesenteric lymph nodes, and the pancreas is prominent but not overtly inflamed.

If a cytologic evaluation of the gastric wall is not possible or is non-diagnostic, surgical biopsies of the small bowel, lymph nodes, and gastric wall may be considered. Additionally, you could consider treatment for gastritis/pancreatitis, additionally changing to a hydrolyzed protein/novel protein prescription diet, and reevaluation with ultrasound in 6-8 weeks could be considered.



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

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Additional things to consider with chronic vomiting would include:

- 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.

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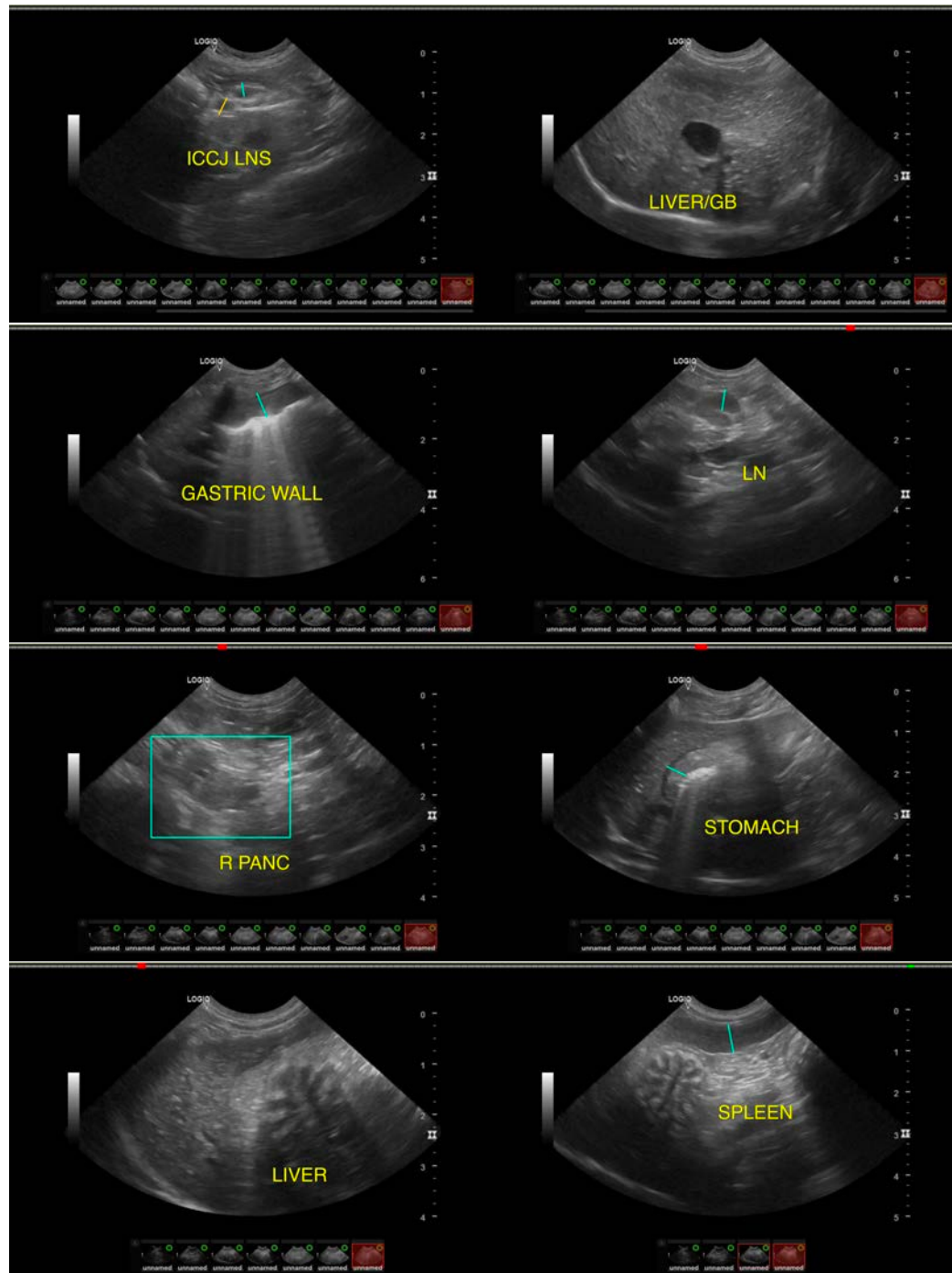
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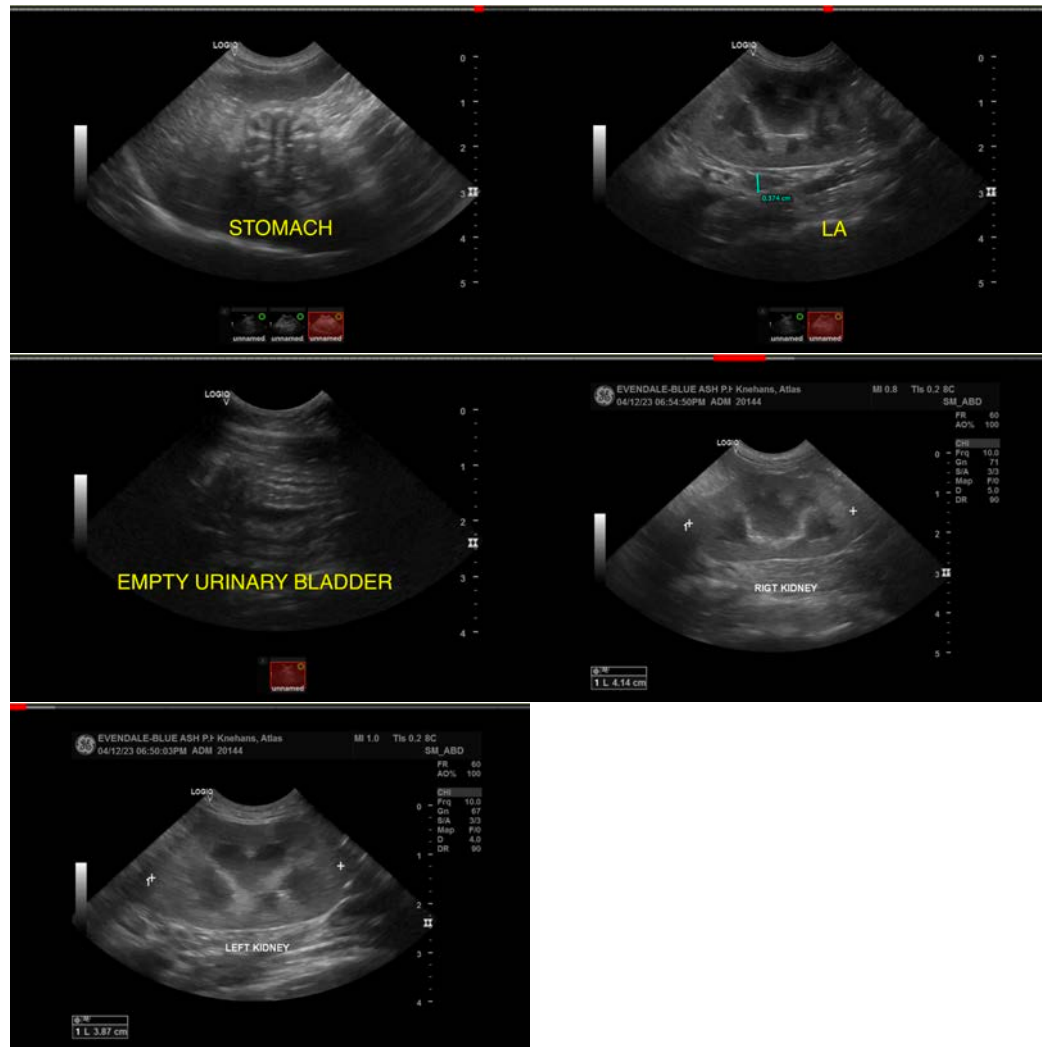
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

kathleen.sennello@sonopath.com