

**PATIENT**

Murphy Meredith

SPECIES

Feline

BREED

Norwegian Forest Cat

SEX

Neutered Male

AGE

16 Years

WEIGHT

10.6 Pounds

INTERPRETED BYKathleen Sennello DVM,
MS, Diplomate ACVIM
(Small Animal Internal
Medicine)**IMAGING PERFORMED BY**

Amy Mayhew, LVT

HOSPITAL NAME

SVS Imaging MI

REFERRING VETWixom Family Pet
Practice**INVOICE**

38039

DATE

5/26/22

PRESENTING CLINICAL SIGNS

Current Medications: Cosequin and Fortiflora Patient History: Severe weight loss over the last 6 months, from about 18lb to 10.5lb. Vomiting phlegm daily, stools normal, PU/PD; seems to be having cognitive issues at home, yowls a lot for the owners, may have decreased hearing. Seems lethargic recently as well. Prev AUS revealed a hepatic cyst, age related kidney changes, thickened intestines, BW had NSF.

Abnormal PE/Chem/CBC/UA Results: Bw today shows mild increase BUN/USG 1.022; PE, thin, 5% dehydrated, mild gingivitis, kidney's feel small/smooth, intestines feel thickened. Stool in colon. Chest x-rays, esophagus is visible on the right and left lateral, heart and lungs appear normal. Treating with SQ fluids and cerenia today.

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 left kidney has a normal shape and size (3.55 cm) with mild pyelectasia at 0.33 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.03 cm) with pyelectasia at 0.21 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.45 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 0.46 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 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 is a large, hyperechoic, multiloculated cystic structure visualized within the hepatic parenchyma. This lesion was previously visualized and it remains at approximately the same size. Today's measurements are 2.74 cm x 3.0 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 primarily anechoic. The cystic and common bile ducts are normal/not visible.

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Gastrointestinal

The stomach is dilated with a large amount of fluid and irregular shadowing material most consistent with normal ingesta and gas. 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 layering 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 measured 0.29 cm. Jejunum wall measured 0.28 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, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

- Decreased corticomedullary distinction in both kidneys with mild pyelectasia – The bilateral renal findings are consistent with age-related change. Pyelectasia of the left/right kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Large cystic lesion visualized within the liver – This lesion appears stable from the last scan is likely most consistent with a benign cystadenoma.
- Mildly prominent muscularis layer to the small intestine – The small intestinal wall changes are most consistent with an inflammatory process (i.e., inflammatory bowel disease) with a low possibility of emerging lymphoma. This can be a normal finding in some older cats.
- Large amount of shadowing material within the gastric lumen - Correlate with feedings history and abdominal radiographs. If adequately fasted then consider such differentials as delayed gastric emptying or a partial outflow tract obstruction (none visualized). Evaluation of the pylorus is very difficult due to the presence of the shadowing material.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The lesions observed on today's scan are relatively mild and could be largely age related. The hepatic cyst appears stable in size and is likely benign. Continued monitoring is warranted.

The changes visualized in the kidneys are likely age related as well. Recommend urinalysis and culture to rule out the presence of pyelonephritis.

The changes observed in the small intestine are very subtle and could be age related. Given the history

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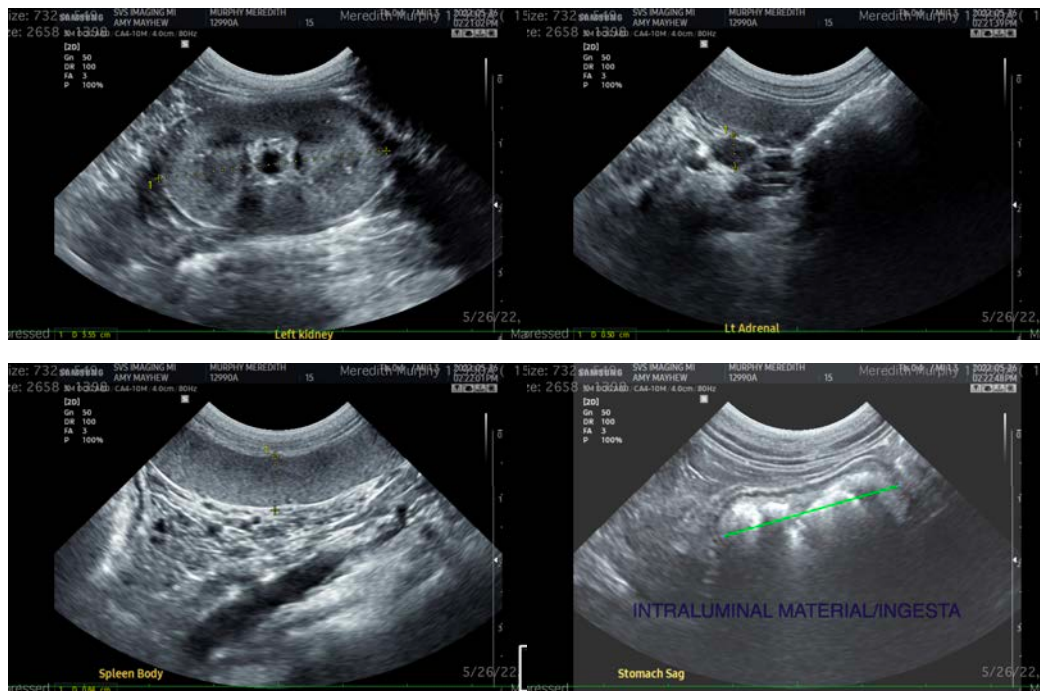
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of vomiting and PU/PD, there is the possibility of an underlying gastrointestinal issue. There is a large amount of shadowing ingesta within the gastric lumen. If this patient was adequately fasted, this likely indicates either delayed gastric emptying or possibly an outflow tract obstruction (none visualized, but the material does prevent full evaluation of the pyloric region). The description of the prominent esophagus is concerning (is this a megaesophagus, aerophagia, etc.?). If megaesophagus is present, then a different workup is recommended (is it possible that this patient is regurgitating rather than vomiting?).

Provided this is true vomiting, then consider:

- Recommend a GI panel to Texas A&M for a qualitative fPLI, TLI, cobalamin and folate to further evaluate for pancreatic and small intestinal disease.
- Recommend a hydrolyzed protein/novel protein diet.
- Consider chronic probiotic therapy.
- If symptoms persist despite general treatment for gastroenteritis/pancreatitis, then consider obtaining surgical biopsies. Endoscopy could be considered, as it might evaluate the esophagus and upper esophageal sphincter as well.
- Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.



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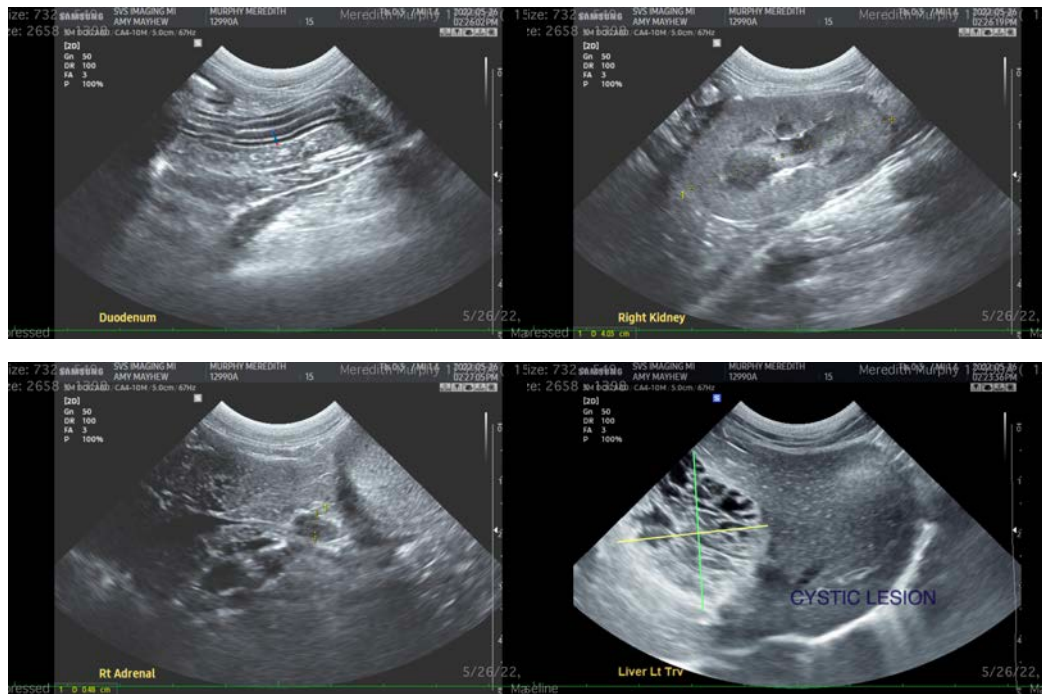
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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