

**DATE**

4/28/22

**PATIENT**

Maggie Carroll

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Spayed Female

**AGE**

9/1/06

**WEIGHT**

8 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Andi Parkinson RDMS

**HOSPITAL NAME**

Cat Sense Feline  
Hospital

**REFERRING VET**

Dr. Sinclair

**INVOICE**

37242

**PRESENTING CLINICAL SIGNS**

2 weeks ago Maggie vomited and it had part of a blind cord that she had apparently chewed off but it didn't appear to be the entire missing piece. She has been eating and keeping the food down and having stool but about once daily for the past week she has been vomiting bile/fluid and this morning it was clear fluid with a little blood tinge. She also has been chewing on things like pieces of carpet on the stairs. She did not eat this am (but the food was laced with gabapentin for today's visit). She has lost 1.5# since November and the radiographs show either fluid-filled possibly plicating SI or thickened intestines. Concerned about the blind cord becoming a full LFB obstruction vs neoplasia.

Current Medications: Gabapentin 100mg at 10AM today.

Radiographs: See attached.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Requested by DVM.

**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 (3.28 cm) with small, non-obstructive nephroliths. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 (3.99 cm) with small, non-obstructive nephroliths. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The region of left adrenal (Cranial to left renal artery) is unremarkable but the adrenal is not distinctly visualized. 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.

**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 are several small, indistinct, hypoechoic nodules visualized within the hepatic parenchyma, measuring 0.77, 0.47, 0.57 cm in diameter.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a mild amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

### ***Gastrointestinal***

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm 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. Jejunum wall measured 0.39 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***

There is no free fluid. There is a significant lymphadenopathy with mesenteric lymph nodes measuring 0.97 cm x 2.73 cm. The omentum is of generally normal echogenicity, but is hyperechoic around the enlarged lymph nodes.

## **PRIMARY FINDINGS**

- Hypoechoic liver nodules – These lesions are concerning for a neoplastic process, but could be benign nodules.
- Thickened small intestine with prominent muscularis layer – The small intestinal wall changes are most consistent with an inflammatory process (i.e., inflammatory bowel disease) with a low possibility of emerging lymphoma.
- Moderate mesenteric lymphadenopathy – The moderate mesenteric lymphadenopathy could be concerning for a neoplastic process, although you can see significant lymphadenopathy in some cases of autoimmune/inflammatory disease, infectious disease (tick born disease-such as bartonella, fungal infections, FIP (cats)) etc. A fine needle aspirate with cytology is recommended for further evaluation.

## **SECONDARY FINDINGS**

- Mild gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

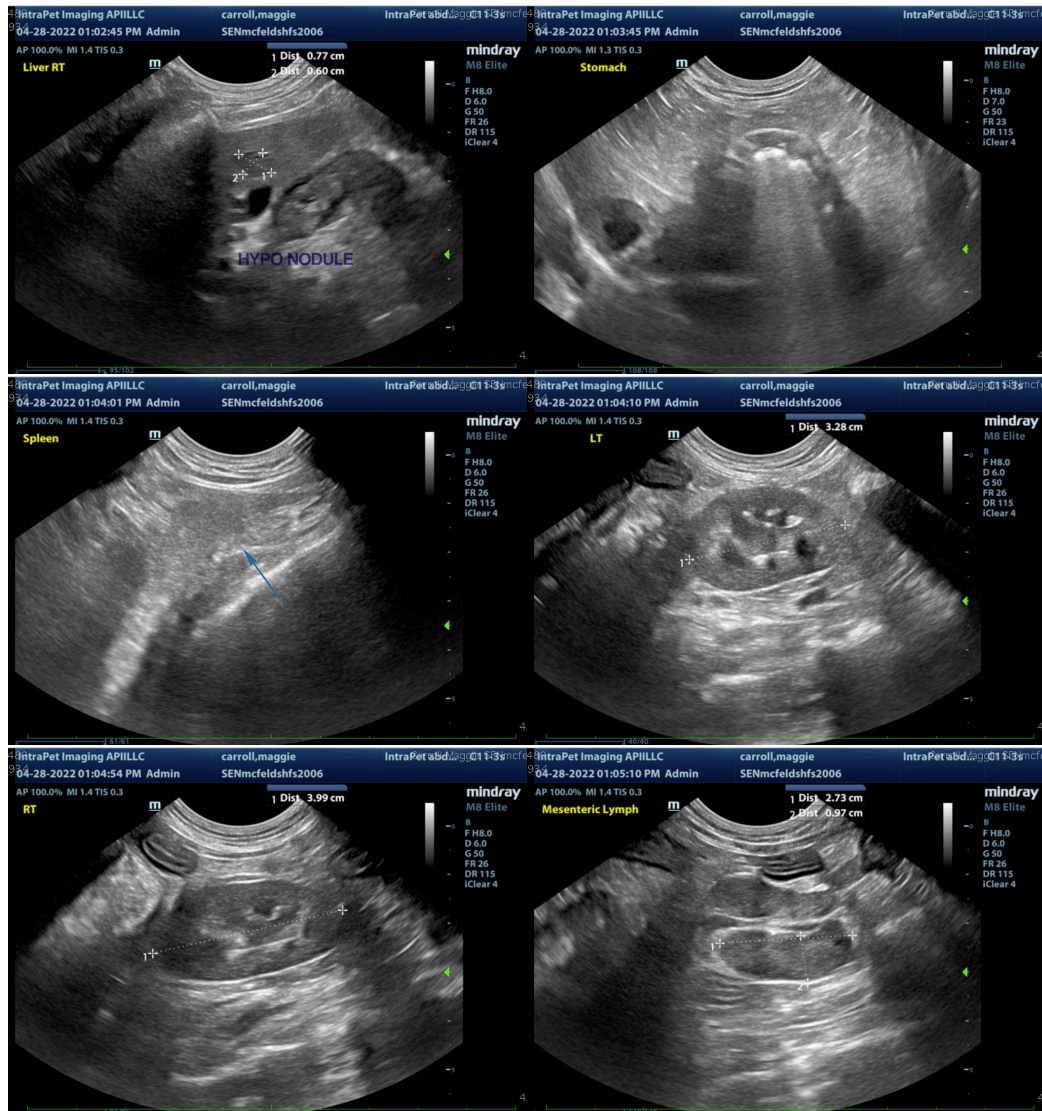
## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

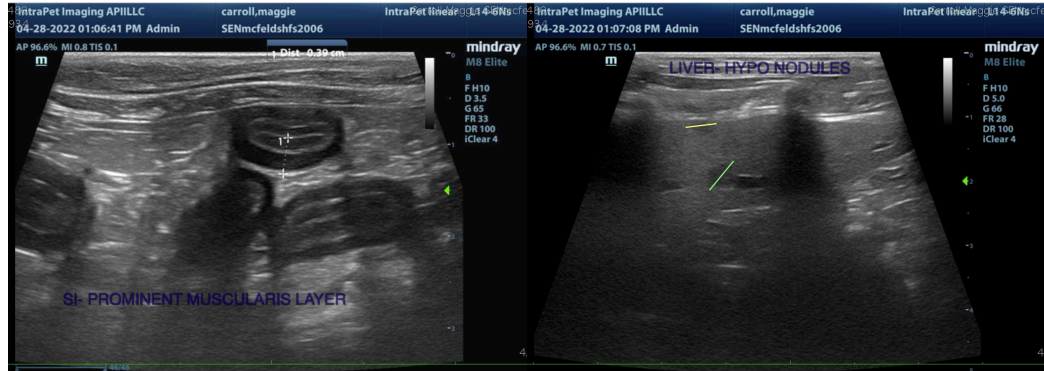
No obvious obstructive pattern or foreign material is observed, although some types of foreign material can be very difficult to pick up on ultrasound. Therefore, recommend continued monitoring for an obstructive pattern on radiographs.

The small intestine does appear thickened and has a very prominent muscularis layer. This along with the significant mesenteric lymphadenopathy is concerning for either a significant inflammatory process or even underlying neoplastic disease. Consider a fine needle aspirate of a mesenteric lymph node. Additionally, there are hypoechoic nodules within the liver. A fine needle aspirate of these nodules is recommended.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

If a cytologic diagnosis cannot be obtained based on cytology, then consider surgical biopsies of the GI tract, abdominal lymph nodes, and liver. Additionally, a GI panel to Texas A&M with a qualitative fPLI, TLI, cobalamin and folate may be helpful to obtain additional information regarding the pancreas and small intestine.





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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