

**PATIENT PRESENTING CLINICAL SIGNS**

Thom Owens History: 2 year duration slow weight loss, occasional diarrhea, mild lethargy, responsive to medical management.

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Feline

**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, or masses. There is a small area of dependent mineralized debris evident, most consistent with sandy debris. Upon review of the radiographs provided, there are 3-4 small stones within this area, most consistent with small cystic calculi and mineralized debris.

**BREED**

DSH

**SEX**

MN

The left kidney has a normal shape and size (3.9 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 pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**AGE**

12 years

The right kidney has a normal shape and size (4.25 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 pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**WEIGHT**

7.9 lbs

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.32 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 0.31 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.

**INTERPRETED BY**

Kathleen Sennello,  
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ACVIM (*Small Animal  
Internal Medicine*)

**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.

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT  
ARDMS/RVT

**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. No focal nodules or cystic lesions are observed.

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Dr. Jennings

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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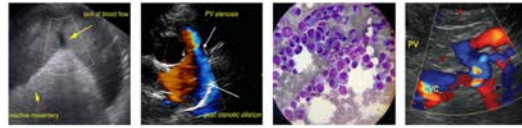
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**Gastrointestinal**

The stomach contains minimal luminal contents. There is a little bit of fluid and a hyperechoic shadowing structure. The stomach wall measures at a normal thickness of <0.36cm with some variability due to the

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10.1.2021



**PATIENT** presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. The significant of this shadowing material is unclear. There is no evidence of a current obstruction.  
 Thom Owens

**SPECIES** Many of the visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall thickness is normal to slightly increased at 0.24 cm. Some areas of bowel appear mildly fluid dilated, and several areas have a mildly corrugated, bunched appearance, most consistent with enteritis, but foreign material cannot be excluded as a possibility. Some shadowing foreign material is visualized within the small intestine, but there is no associated orad dilation consistent with a complete obstruction. The remainder of the bowel loops follow a typical curvilinear path. Some of the corrugated bowel areas have mildly reduced distinction of wall layering, and some other areas display a prominent muscularis layer which does not display the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measured 0.24 cm. Findings are most consistent with a chronic enteropathy, but foreign material and partial obstruction cannot be excluded.  
 Feline

**BREED** 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.  
 DSH

**SEX**  
 MN

**AGE** **Pancreas**  
 12 years 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.

**WEIGHT** **Free Abdomen**  
 7.9 lbs Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is a mesenteric lymphadenopathy present with mesenteric lymph nodes measuring 0.5, 0.51, and 0.62 cm. 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.

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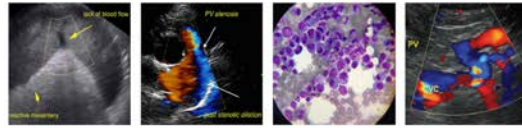
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**ULTRASONOGRAPHIC FINDINGS**

- Subjectively thickened small intestine with prominent muscularis layer with focal areas showing a bunched, corrugated appearance with mild fluid dilation and some shadowing of foreign material/ingesta. Findings are most likely consistent with chronic intestinal disease, inflammation, infiltration, less likely neoplasia, but there is also the possibility of an acute foreign material ingestion causing irritation or partial obstruction.
- Small urinary bladder calculi – recommend urinalysis and culture and close monitoring, as these stones could be small enough to cause an obstruction (correlate with radiographs taken).
- Non-distended stomach with small amount of shadowing material – correlate with feeding history. The stomach is not dilated and does not appear obstructed, but there is some shadowing material within it.
- 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**

Finding are consistent with chronic intestinal disease. There is mild thickening with a reduction of layering and corrugation consistent with focal enteritis. Additionally, there is mild fluid dilation in some



**PATIENT**

Thom Owens

areas, and some shadowing material, which could be consistent with foreign body ingestion, but I do not see obvious evidence of an obstruction. Recommend close monitoring and serial evaluation with radiographs and ultrasound. I suspect this is partially ileus, but don't want to miss a possible foreign body because of the chronic nature of this issue.

**SPECIES**

Feline

- Recommend GI panel with PLI, TLI, folate and cobalamin to further evaluate for pancreatic and small intestinal disease.
- Recommend urinalysis and culture to further evaluate the stones in the urinary bladder.
- If the patient is stable, and foreign material is thought very unlikely, then consider transition to a novel protein or hydrolyzed diet.
- Recommend starting a probiotic
- Recommend symptomatic therapy for vomiting and diarrhea.
- If symptoms persist, recommend GI biopsies +/- removal of bladder stones if you feel they are large enough to require removal.

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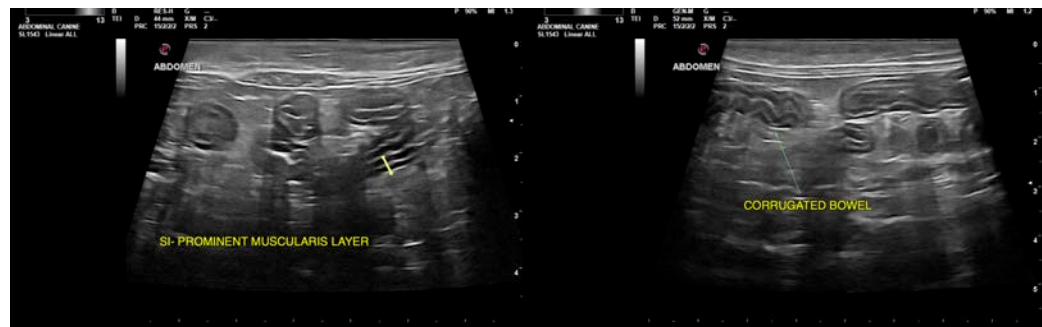
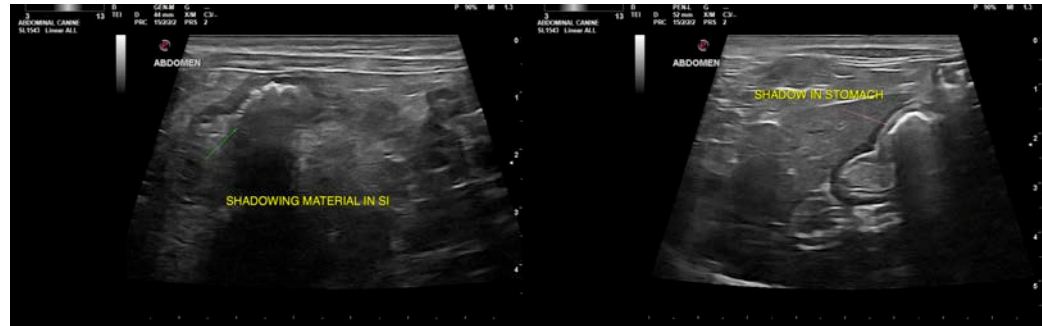
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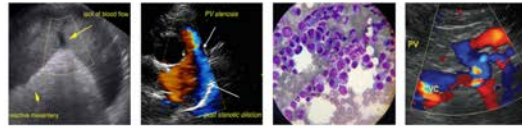


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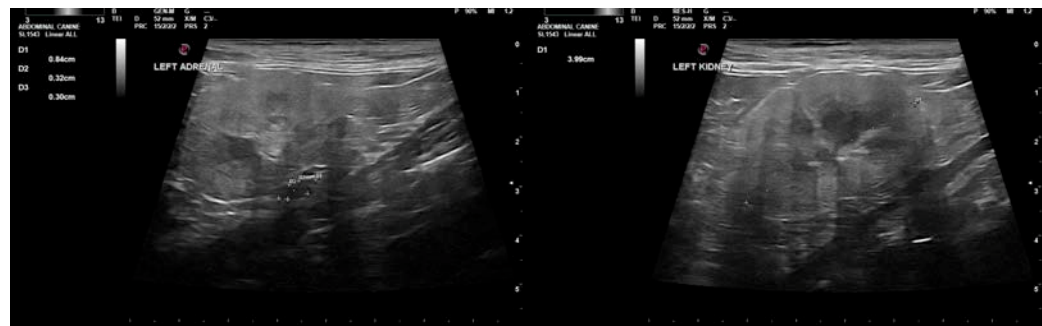
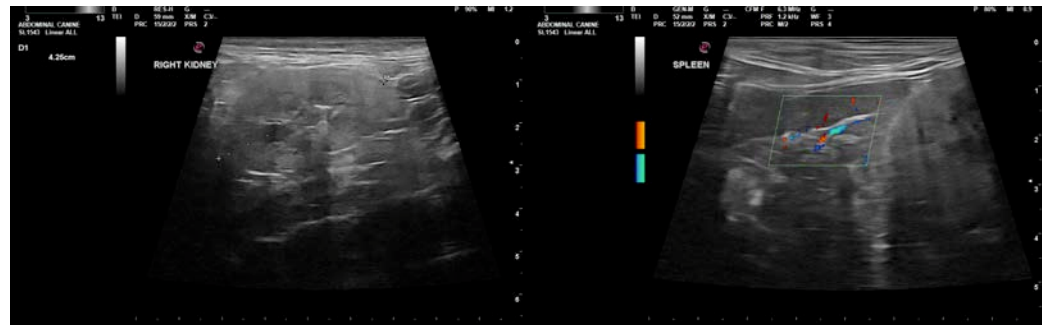
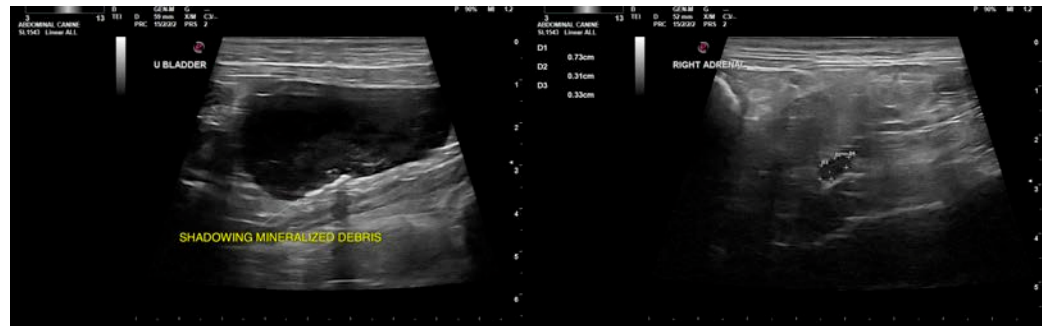
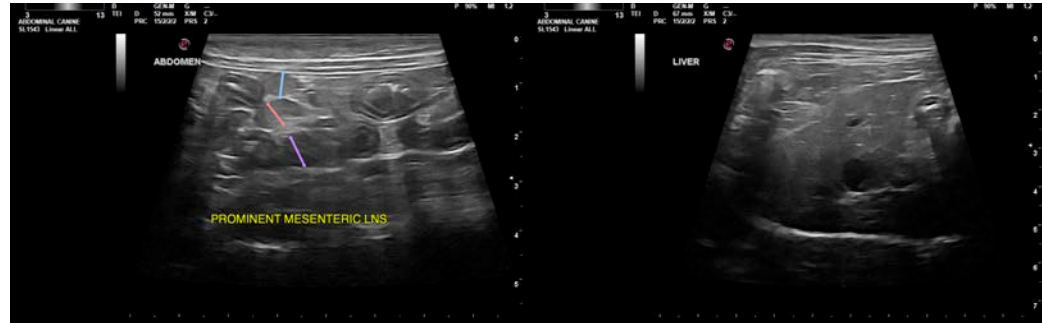
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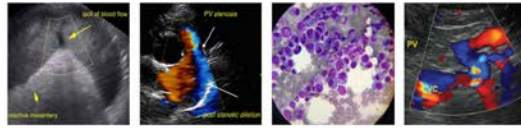
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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, Diplomate ACVIM (*Small Animal Internal Medicine*)



**PATIENT** Kathleen.Sennello@sonopath.com

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