

**DATE**

6/29/22

**PRESENTING CLINICAL SIGNS****PATIENT**

Finn Brecht

History: Patient presented on 6/9/22 for routine exam and vaccines. At this appointment, owner reported chronic intermittent vomiting that started several weeks prior. Initially only ~1x/week, now multiple times weekly. Usually occurs in the mornings after eating. Meal fed twice daily since 6 months of age. Otherwise acting normally. No PUPD. Normal BM. Normal energy level. PE revealed hydrated pet with severe diffuse dental calculus--quite advanced for a pet this age. Heart and lungs auscultated normally, remaining exam unremarkable. Bloodwork, spec fPL and radiographs were performed. Based on these results, abdominal US was recommended

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Neutered Male

**AGE**

8/5/18

**WEIGHT**

10.05 Pounds

Current Medications: None. Gabapentin 100mg upon arrival

Lab Results: 6/9/22: CBC: Retic Hemoglobin: 14.2pg (15.3-22.9); Chemistry: normal; spec fPL: normal.

Radiographs: 6/9/22: Radiology Results: The stomach contains a small amount of ingesta. This is likely normal food since the patient is eating. However there is any clinical suspicion for foreign body ingestion, recheck abdominal radiographs are recommended to reevaluate the gastric contents. There are no radiographic findings that are supportive of a small intestinal obstruction. There may be thickening of the small intestinal walls. Diagnosing small intestinal wall thickening on radiographs can be difficult since fluid/mucus that is adherent to the wall may make the wall appear thickened radiographically. An abdominal ultrasound is recommended for better evaluation of the intestinal tract. If there is intestinal wall thickening, then possible differentials include inflammatory bowel disease or neoplasia (such as small cell lymphoma).

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Rachel Brillhart, RDMS.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****INTERPRETED BY**Beth Johnson, DVM  
DACVIM**Urinary System**

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Left kidney is normal is size (3.99 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**HOSPITAL NAME**

Westminster VH

Right kidney is normal is size (4.31 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**REFERRING VET**

Dr. Hall

**Adrenal Glands**

Left adrenal gland is normal in size (0.41 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

**INVOICE**

16397

Right adrenal gland is normal in size (0.39 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

**Spleen**

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

### ***Liver***

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

### ***Gastrointestinal***

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestine demonstrates areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated. The lumen of the small intestine is empty with no evidence of obstruction or foreign material.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

### ***Pancreas***

Pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and has a mildly irregular undulating contour. Parenchyma is coarse with mixed echogenic remodeling noted. Pancreatic duct dilation is noted.

### ***Free Abdomen***

The mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

No appreciable free fluid is noted in these images.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- Inflammatory bowel disease pattern. This finding has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No concurrent lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probably, but lymphoma cannot be definitively ruled out without tissue sampling.
- Chronic pancreatitis- very mild change

### **Secondary Findings**

- Gallbladder debris- Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness, however, it can also be associated with hepatobiliary disease in cats

and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

- Reactive mesenteric lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely

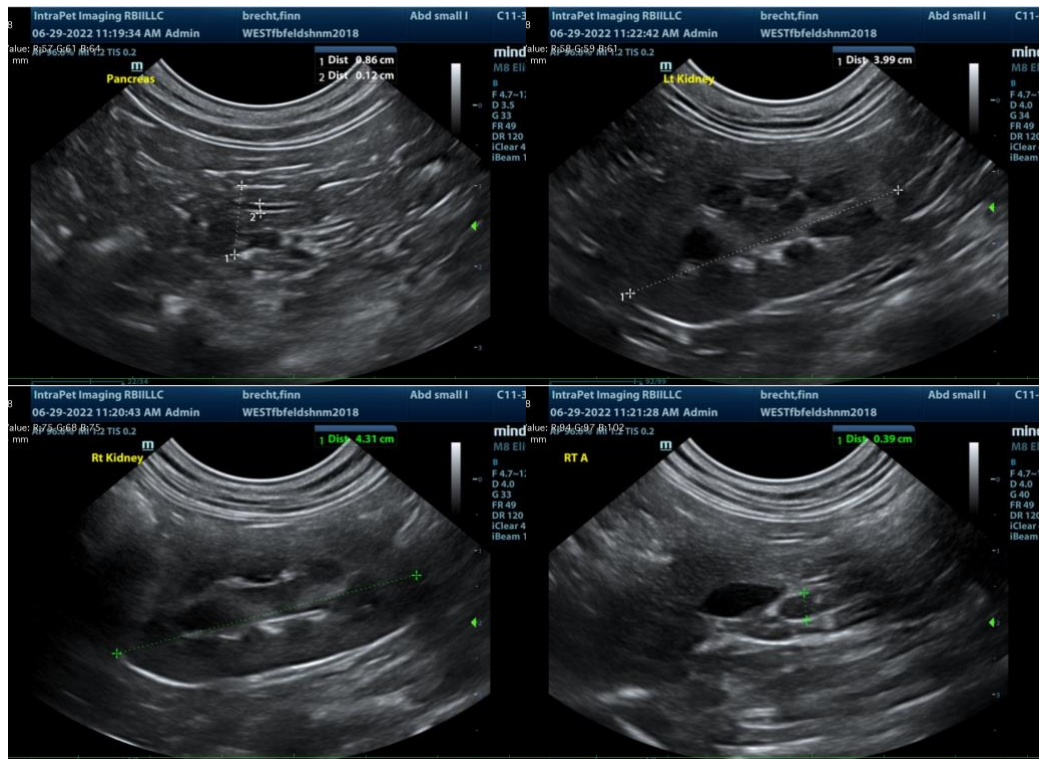
### **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

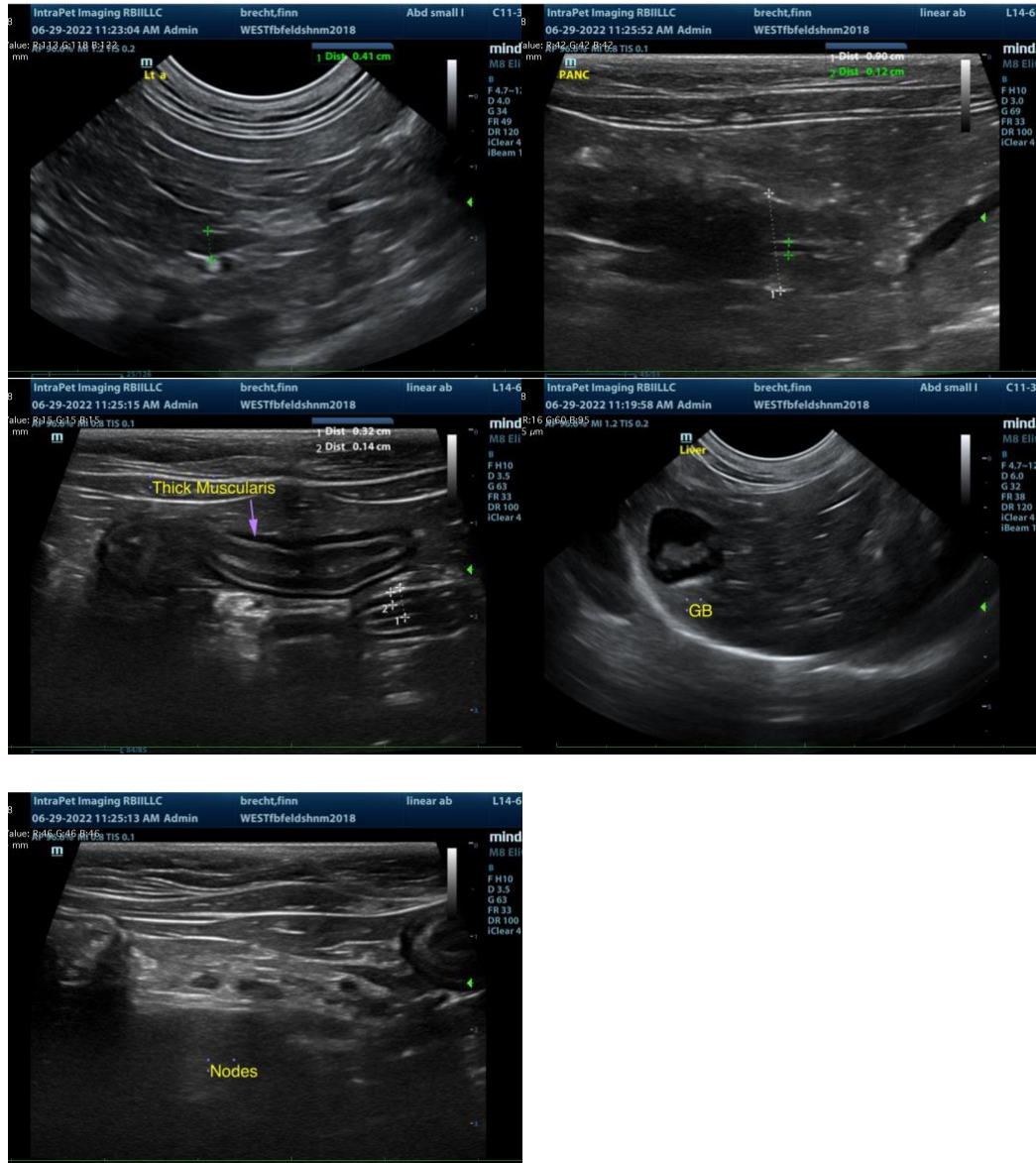
Recommendations for this patient:

A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

Ideally, biopsies of the GI tract, being sure to include ileum if possible, are recommended to definitively diagnose and therefore manage the infiltrative bowel disease.

If biopsies cannot be obtained, empirical therapies could include diet change, empirical deworming with a 5 day course of Panacur, cobalamin supplementation (unless cobalamin level is evaluated and supplementation is not warranted) and prednisolone (if not contraindicated based on patient contraindications, co-morbidities, etc.). Other supportive therapeutic considerations could include fiber supplementation, especially with large bowel diarrhea and/or a probiotic.





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.

**Beth Johnson, DVM DACVIM**  
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