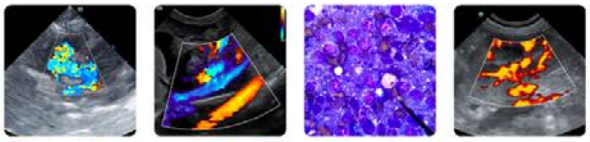




**PATIENT**

Olivia Flanagan

**SPECIES**

Canine

**BREED**

Terrier x

**SEX**

Spayed Female

**AGE**

11 Years 4 Months

**WEIGHT**

9.28 lbs

**INTERPRETED BY**

Beth Johnson, DVM DACVIM

**IMAGING PERFORMED BY**

Cameron Johnson, DVM

**HOSPITAL NAME**

Craig Road Animal Hospital

**REFERRING VET**

Cameron Johnson, DVM

**INVOICE**

73832

**DATE**

3/20/26

## PRESENTING CLINICAL SIGNS

3/9/26 Olivia is an 11 year and 3 month old FS terrier mix presenting for evaluation of diarrhea. The O states that P was acting completely normally yesterday but then had one bout of diarrhea in the evening. This morning, she was acutely lethargic and was not interested in breakfast. She then had several episodes of straining before producing liquid diarrhea in the yard. She does tend to get into things she is not supposed to but has not had any new treats or table scraps. P has been resistant to jumping onto furniture in recent months. 3/19/26 Olivia presents for anorexia and vomiting

Patient History: Vomited today (afternoon around 2-3 PM) and yesterday. Decreased appetite since discharge from hospital stay per O. Has not eaten today, ate small amount yesterday. Drinking water normally. History of intermittent eating patterns - will go without food for 1-2 days then overeat. Chronic difficulty with defecation, walks while defecating. Previously seen on 3/10 for similar clinical signs. Previous bloodwork showed low albumin (2.3). Was prescribed pain medication, antibiotics, and food additives after previous visit. Had diarrhea after previous medications but not currently

Abnormal PE/Chem/CBC/UA Results: Albumin decreased to 2.1

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with a moderate amount of echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal is size (4.4 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.

The left kidney is normal is size (4.6 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.

### *Adrenal Glands*

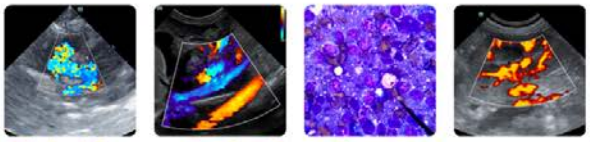
The adrenal glands are unable to be visualized in these images.

### *Spleen*

The 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 enlarged with mildly irregular margins. Parenchyma is moderately heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.





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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 mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign material, or infiltrative disease; however, visualization is partially inhibited by gas.

In the right cranial abdomen medial to the right kidney is a focal loop of small bowel (I believe duodenum) that is mildly thick, measuring between 0.50-0.60 cm thick. The loop of bowel is very closely surrounded by very echogenic appearing free fluid and markedly enhanced hyperechoic fat and mesentery that appear adhered to the bowel, making it difficult to differentiate loss of layering that area of bowel versus adhered fluid and tissue directly adjacent to or even adhered to the bowel. Bowel wall integrity is unable to be assessed in this area, with a perforation not able to be ruled out. In some views, the area almost appears to enter another loop of bowel consistent with a possible intussusception, potentially a sliding intussusception, although that too is not a definitive finding given the marked degree of pathology adjacent to the bowel and difficulty assessing bowel wall layers.

The remaining small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

### *Pancreas*

The pancreas that is observed appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### *Free Abdomen*

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.

There is a moderate amount of very echogenic appearing free fluid noted in these images, primarily associated with the focally thickened small bowel described above.

## ULTRASONOGRAPHIC FINDINGS

- A suspected infiltrative process affecting what I believe is the duodenum is suspected, with both benign inflammatory differentials as well as infiltrative neoplastic disease being possible. Having said that, a focal bowel wall perforation can't be ruled out given the very focal aggressive appearing peritonitis described.
- Moderately reactive mesenteric lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.

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- Moderately heterogenous liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.

- Moderate gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs 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.

- Moderate amount of echogenic urinary bladder debris.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Recheck full general metabolic health screen is recommended to include CBC/Chem panel, electrolytes, and if possible, a urinalysis and, if indicated based on urinalysis results, urine culture. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

Sampling of the abdominal fluid adjacent to the focally thick bowel for analysis and cytology and to rule out a septic abdomen is recommended if patient's coagulation status is appropriate.

In the meantime, additionally a full 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.

+/- A fecal enteropathogen PCR panel to Texas A&M GI Laboratory could be considered for further evaluation of possible infectious disease. Contact lab for recommendations on how long to discontinue antibiotics (if indicated) prior to obtaining a stool sample for submission.

Ultimately, pending results of above, advanced imaging such as an abdominal contrast CT scan, potentially contrast radiography, being sure to use contrast that would be safe in perforated bowel, and/or an exploratory laparotomy may be necessary both for therapeutic purposes as well as a definitive diagnosis and therefore to further guide medical management.

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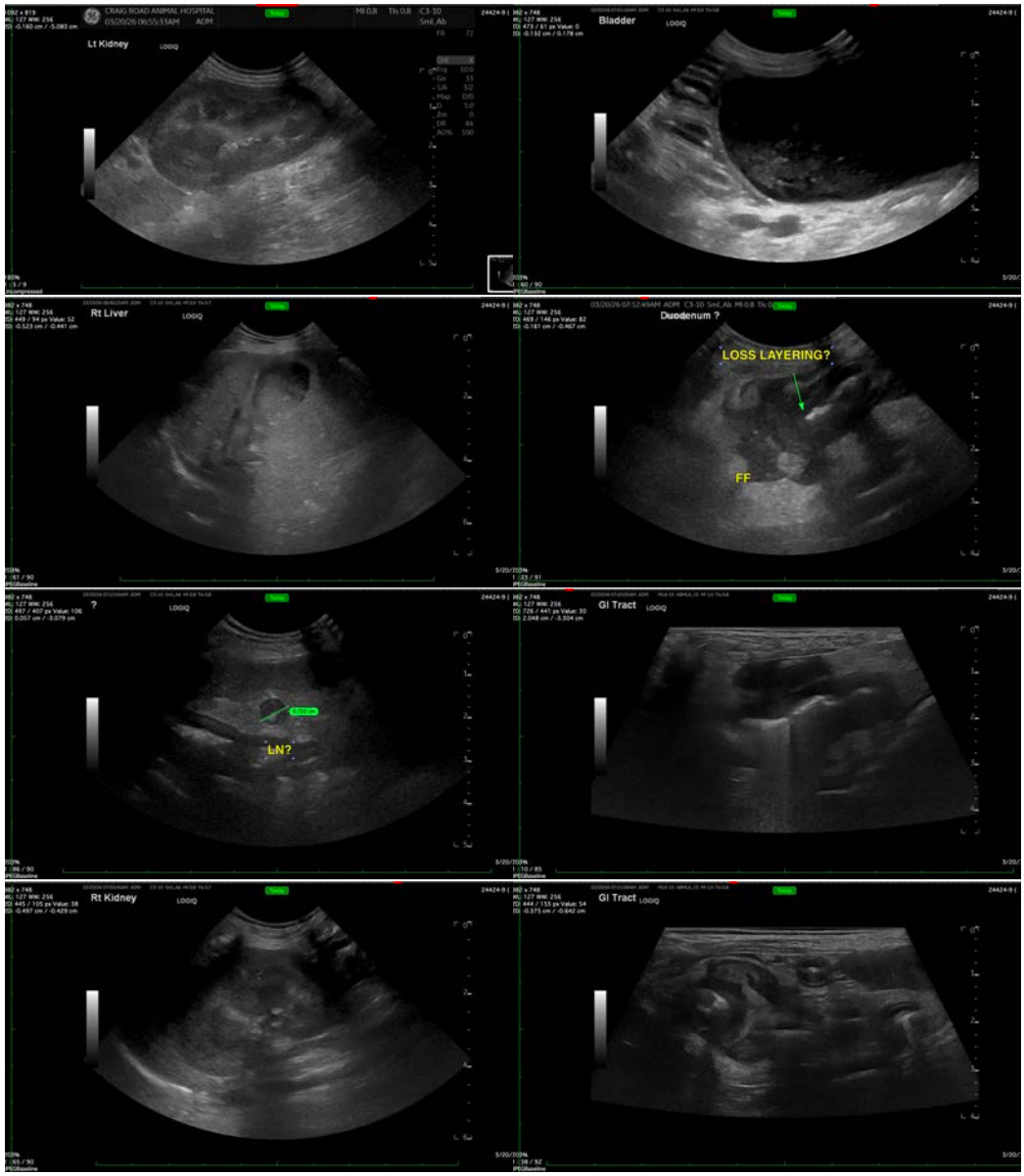


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**Beth Johnson**, DVM, DACVIM
info@sonopath.com