

**DATE PRESENTING CLINICAL SIGNS**

8/15/22 Jamie presented to EVH for intermittent vomiting (approximately every 2 weeks) for the past 1-2 months. She would be lethargic and have a decreased appetite/thirst for a few days after this episode, and then return to normal. PE revealed a cranial to mid abdominal mass effect on palpation. The remainder of the exam was within normal limits.

**PATIENT**

Jamie Boyer

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Spayed Female

**AGE**

1/1/12

**WEIGHT**

18.8 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Andi Parkinson RDMS

**HOSPITAL NAME**

Everhart Vet Hospital

**REFERRING VET**

Dr. Kerr

**INVOICE**

40454

Current Medications: Cerenia 16 mg 1 tab PO SID PRN  
Lab Results: ALT (SGPT) 123 (12-118), Alk Phosphatase 184 (5-131)  
WBC 22.8 (4-15.5 x10<sup>3</sup>), Neutrophils 19608 (2060-10600)  
Radiographs: displacement of spleen ventrally on lateral views along with caudoventral displacement of small intestines.  
Date of Previous IntraPet Ultrasound: No previous.  
Sedation: Not required to complete full diagnostic ultrasound.  
Stat Report: Not requested.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately 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.

The right kidney is normal in size (4.92 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 in size (4.3 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 right adrenal gland is normal in size (1.96 cm long x 0.62 cm at the cranial pole and 0.63 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (1.99 cm long x 0.59 cm at the cranial pole and 0.61 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**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 heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. 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 stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) 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 intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). 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 is prominent in size with a swollen irregular contour. Parenchyma is heterogeneous. These changes are most apparent in the left limb of the pancreas with the distal of the left limb demonstrating an almost rounded mass-like appearance. Surrounding fat is markedly enhanced/hyperechoic, again most prominent around the distal left limb of the pancreas

### ***Free Abdomen***

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

## **PRIMARY FINDINGS**

- Acute pancreatitis suspected on top of likely low-grade smoldering pancreatitis. Infiltrative neoplasia is less likely, but cannot be definitively ruled out.
- **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.

## **SECONDARY FINDINGS**

- **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.

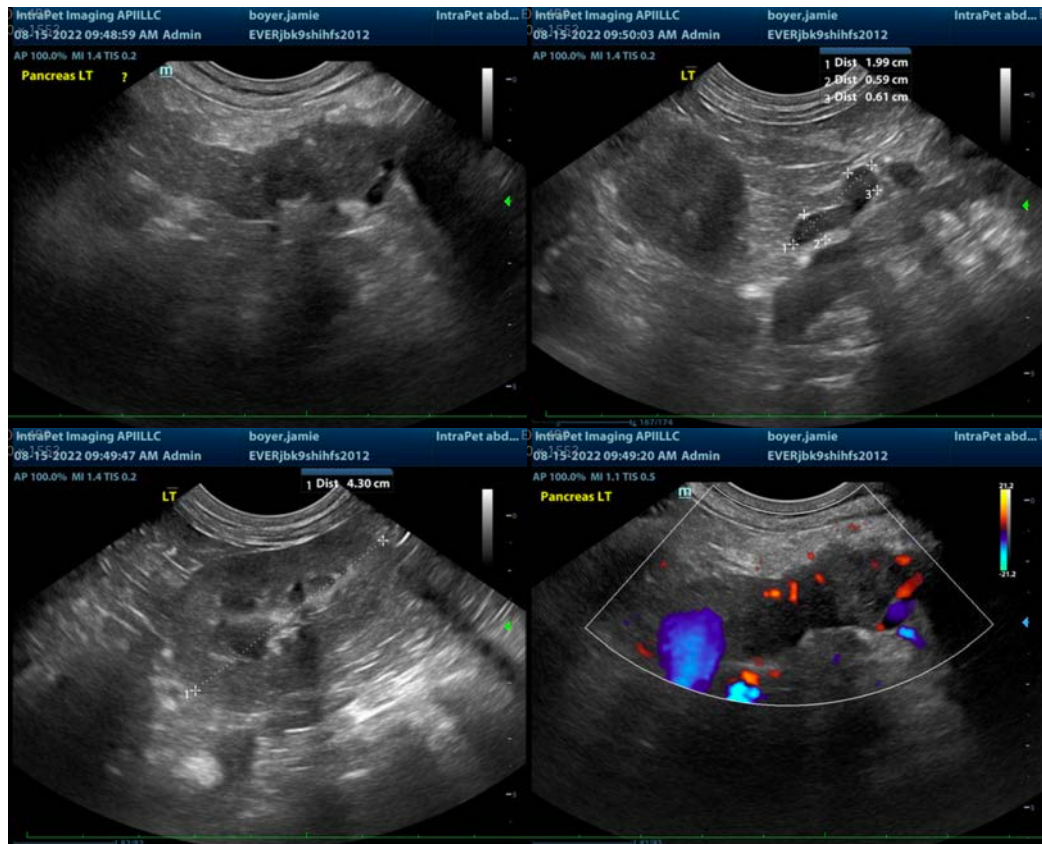
## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

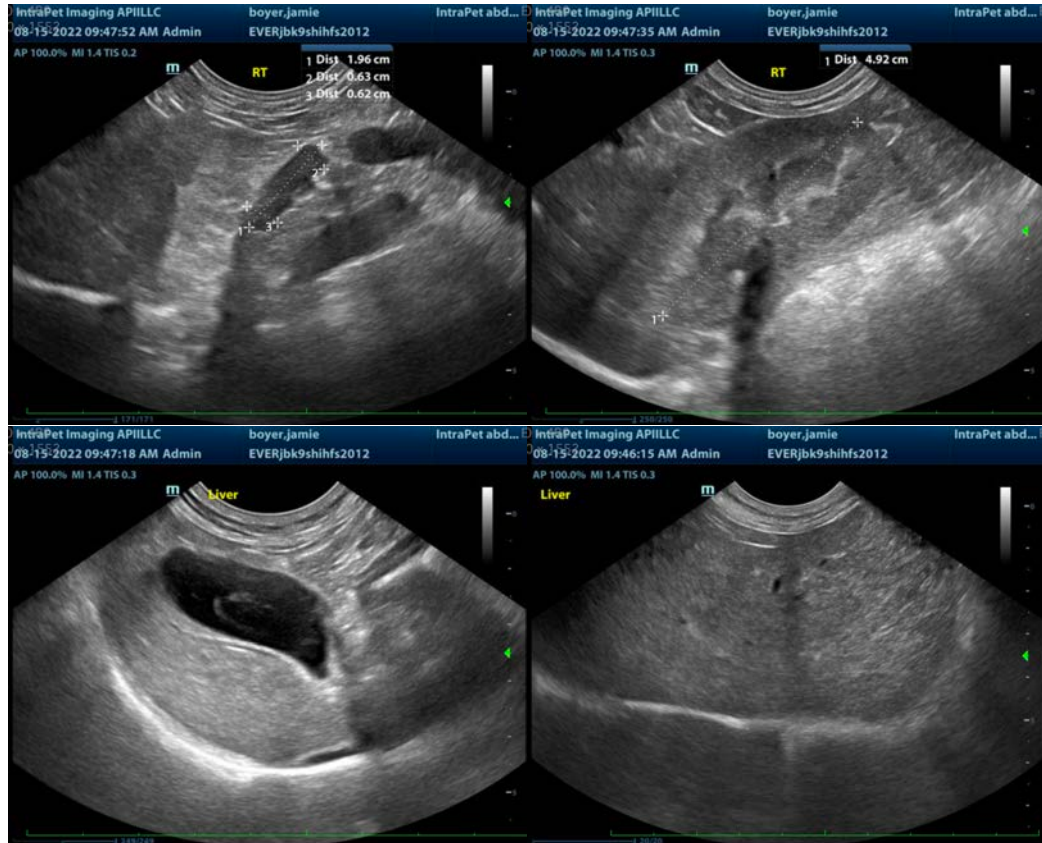
Further evaluation of the pancreas is recommended in this patient in the form of a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory.

Supportive/symptomatic medical management of acute on chronic pancreatitis is recommended in the form of antiemetics, gastroprotectants, pain management (if indicated), fluid therapy (if indicated), and transition to a low-fat diet to be continued long-term, etc.

If flare ups persist beyond medical management and diet change, and/or the appearance of the left limb evolves/progresses, a fine needle aspirate of the area could be considered to more definitively rule out infiltrative neoplasia.

Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.





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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