**DATE PRESENTING CLINICAL SIGNS**

6/15/23 Significant liver value changes, mild azotemia.

**PATIENT**

Snickers Corcoran

Current Medications: None.  
 Lab Results: Attached.  
 Date of Previous IntraPet Ultrasound: No previous.  
 Sedation: Not required to complete full diagnostic ultrasound.  
 Stat Report: Not requested.  
 Imaging Performed By: Stephanie Warga RDCS, RVT.

**SPECIES**

Feline

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****BREED**

DSH

**SEX**

Spayed Female

**AGE**

4/20/08

**WEIGHT**

7 Pounds

**INTERPRETED BY**

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

**HOSPITAL NAME**

Bay Country VH

**REFERRING VET**

Dr. Smith

**INVOICE**

43224

**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 (3.57 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal 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 (3.07 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.34 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 0.38 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.

**Spleen**

The spleen is subjectively normal in size (0.87 cm), 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 large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. 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 measures 0.19 cm. Duodenum wall measures 0.24 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 large and hypoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. Consistent with mild to moderate pancreatitis.

### ***Free Abdomen***

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There are occasional prominent mesenteric lymph nodes, examples measure 0.46 and 0.66 cm. The omentum is slightly hyperechoic in the region of the pancreas.

## **ULTRASONOGRAPHIC FINDINGS**

- Large, prominent, hypoechoic/mottled pancreas with minimal to mild surrounding inflammation – The pancreatic changes are most consistent with mild to moderate pancreatitis/pancreatic inflammation. Recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.
- Large, heterogeneous liver – Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative neoplasia, lipidosis or other hepatopathy.
- Prominent muscularis layer of the small intestine – The small intestinal wall changes could be consistent with an underlying inflammatory process. These types of changes can sometimes be seen in normal older cats. Correlate with clinical signs.

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

The changes observed are most consistent with a primary hepatopathy. The gallbladder does not appear overtly distended. The pancreas is large and hypoechoic with mild surrounding inflammation. These changes are likely consistent with pancreatitis, but there is minimal evidence to support a post-hepatic obstruction.

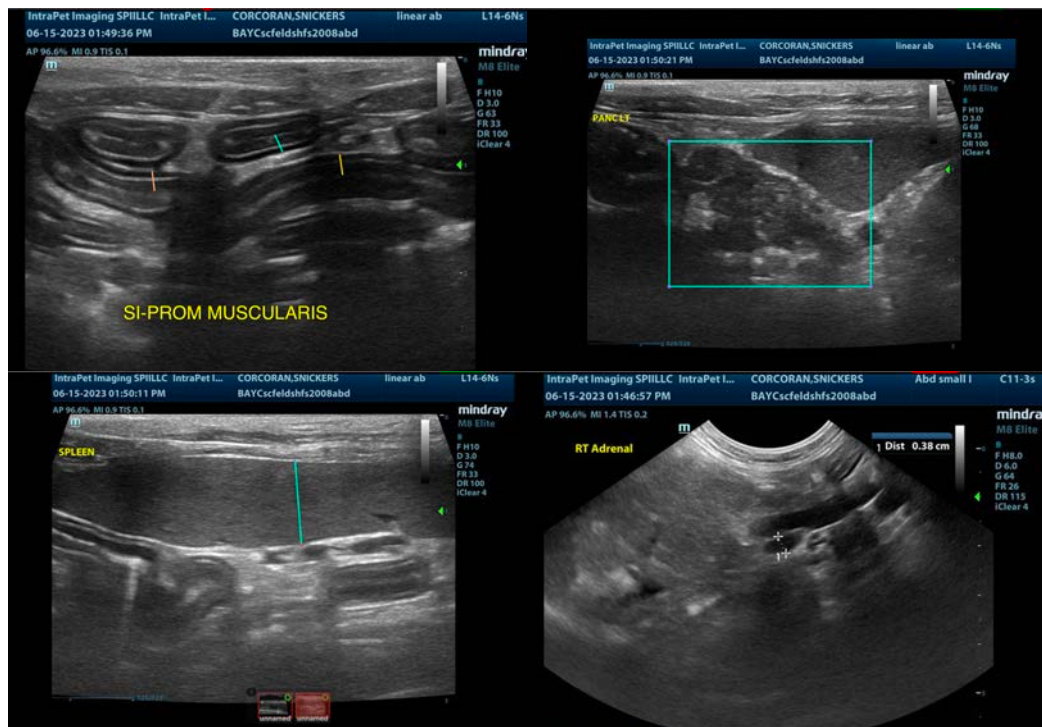
The changes observed in the liver are non-specific. Consider the following:

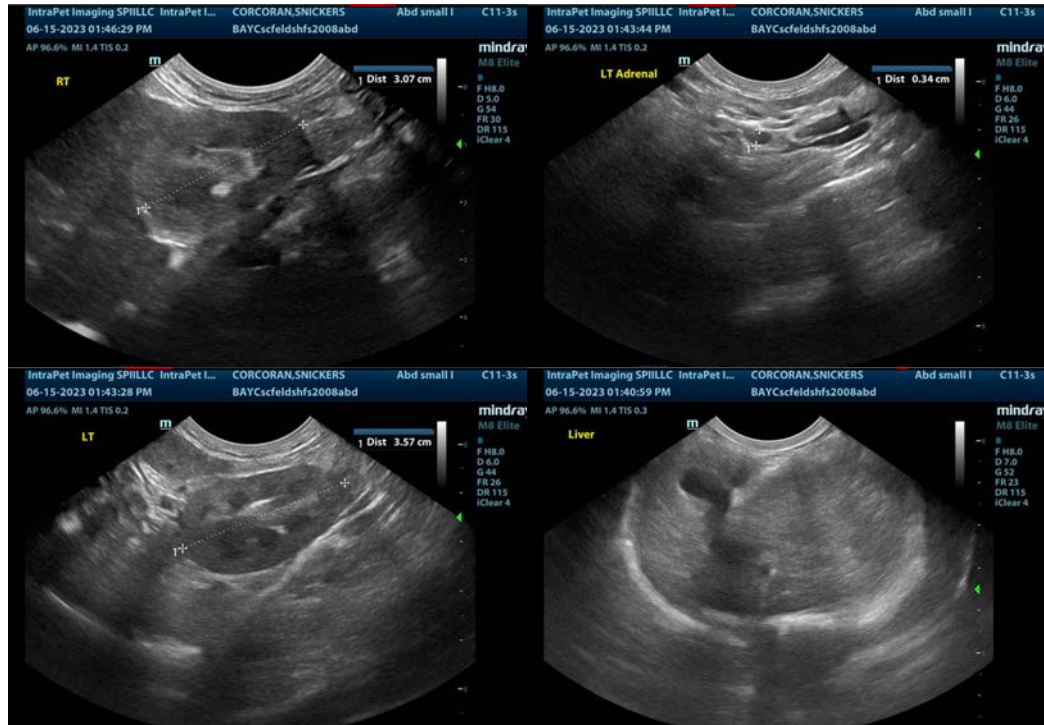
- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc.
- Consider screening for toxoplasmosis.

- Consider Fine needle aspirate if round cell neoplasia is on your differential list (25 g needle, normal coags)
- Consider liver biopsy with samples obtained for histopathology and culture
- Triaditis could be considered with the changes observed in the pancreas and bowel. Consider therapy for cholangiohepatitis (fluids, Ursodiol, probiotics +/- steroids/antibiotics). Consider testing for pancreatitis and evaluation for IBD (GI panel to Texas A&M GI lab for qualitative fPLI, TLI, cobalamin and folate).

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

If there is no response to therapy for pancreatitis/cholangiohepatitis and a fine needle aspirate is not helpful, then consider obtaining biopsies of the liver (possibly pancreas and GI tract as well).





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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