**DATE PRESENTING CLINICAL SIGNS**

2/21/23

Elevated ALT.

**PATIENT**

Samurai Shaffer

Current Medications: Metronidazole suspension 35mg/mL 1mL BID for 14 days.

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

**BREED**

Domestic shorthair

**SEX**

Male, neutered

**AGE**

10/13/2008

**WEIGHT**

6.86 lbs.

**INTERPRETED BY**

Andrea Nicastro, DVM,  
 Diplomate ACVIM  
 (Small Animal Internal  
 Medicine)

**HOSPITAL NAME**

Banfield White Marsh

**REFERRING VET**

Dr. Esdaile

**INVOICE**

14624

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended. A small amount of suspended echogenic debris is observed within the lumen. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The left kidney is small in size (2.72 cm in length) with a slightly irregular shape. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Several non-obstructive nephroliths are visualized. Trace pyelectasia is present. A cortical infarct is suspected at the caudal pole. There is no evidence of hydronephrosis. Renal vasculature is normal.

The right kidney is normal in size (3.70 cm in length) with a slightly irregular shape. There is moderate loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. A cortical infarct is suspected at the cranial pole. There is no evidence of pyelectasia or hydronephrosis. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size (0.38 cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal in size (0.33 cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

**Spleen**

The spleen is normal in size (0.89 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

**Liver**

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. The portal vein to caudal vena cava ratio is approximately 1:1. The gall bladder lumen is moderately distended. The wall is thin and smooth. A small amount of mostly gravity-dependent echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

**Gastrointestinal**

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. There is disruption in the normal 1:3 muscularis:

mucosal ratio in most segments. Discreet masses are not identified. The ileocecal colic junction and colonic wall are normal. No obstructive disease is noted.

### ***Pancreas***

The pancreas is diffusely visible with minimal deviation from the normal peripheral contours. The parenchyma is slightly hypoechoic relative to surrounding omental fat and homogeneous in appearance. No focal lesions are observed. The pancreatic duct is not overtly dilated. The mesentery effacing the serosal surface of the right limb is slightly hyperechoic.

### ***Free Abdomen***

There is no obvious evidence of free fluid. A few prominent lymph nodes are observed at the ileocecolic junction, the largest measuring 0.70 cm in length. Surrounding mesentery is mildly hyperechoic.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings:**

- An obvious cause for the elevated ALT is not definitively identified in this study. Considerations include primary hepatopathy (i.e., bacterial cholangiohepatitis, lymphoplasmacytic hepatitis, emerging hepatic lipidosis, infiltrative neoplasia (less likely)), reactive hepatopathy, other. Correlation with the degree of ALT elevation is recommended.

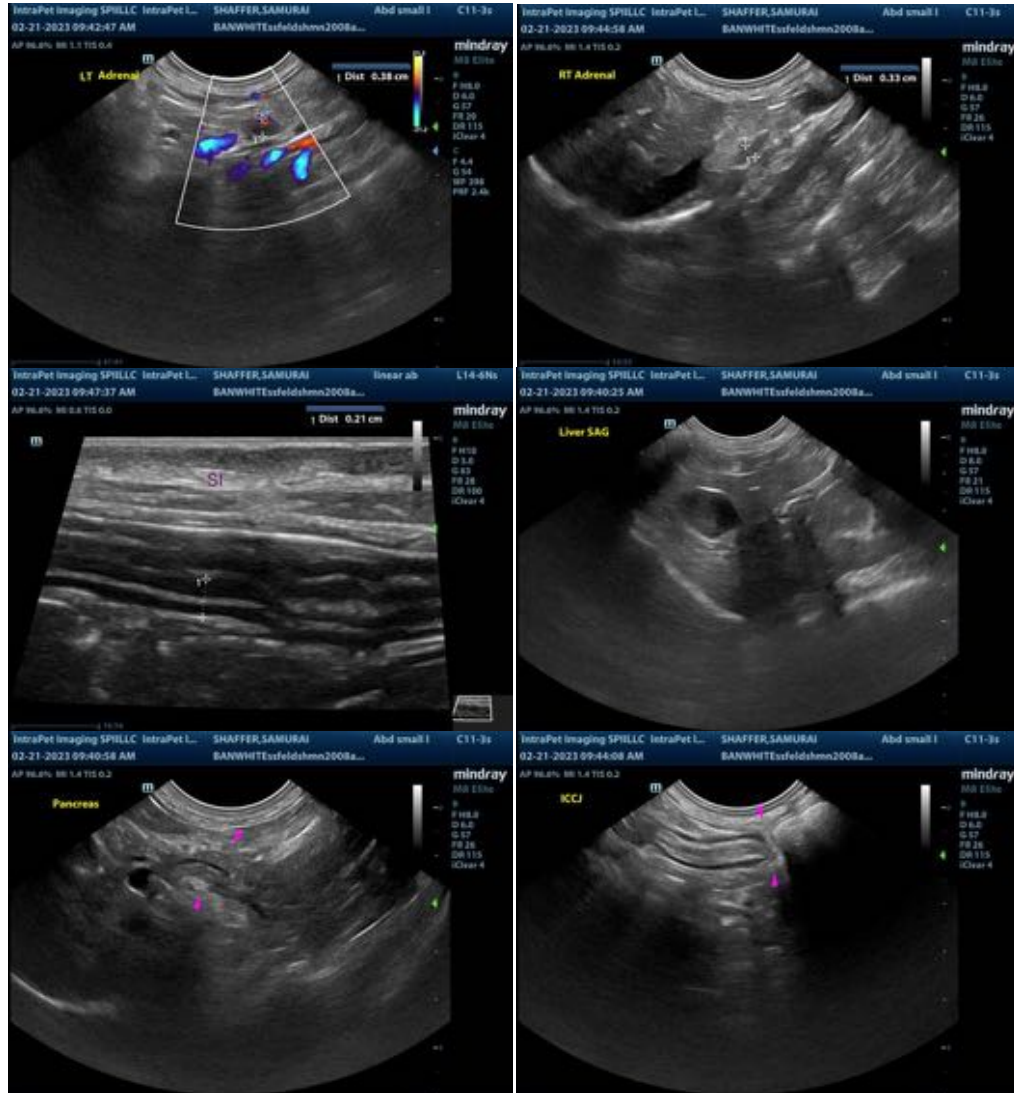
### **Secondary Findings:**

- Small intestinal changes consistent with inflammatory bowel disease with some potential for emerging lymphoma.
- The lymph node changes are most consistent with reactive lymphadenitis or lymphoid hyperplasia.
- The pancreatic changes could be consistent with chronic pancreatitis. However, correlation with the patient's clinical history is recommended.
- Bilateral degenerative renal changes with non-obstructive nephrocalcinosis and cortical infarcts.

\*Given the patient's clinical history and sonographic changes, "triaditis" is a consideration in this patient.

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

- If the ALT is substantially elevated, consider pre and post prandial serum bile acids +/- hepatic tissue sampling (i.e., fine needle aspirate or biopsies). If biopsies are pursued, aerobic and anaerobic bile cultures should also be obtained.
- Given the sonographic changes in the bowel and pancreas, a malabsorption panel including serum cobalamin, folate, TLI and PLI should also be considered.



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.

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