

**DATE PRESENTING CLINICAL SIGNS**

8/2/23

Weight loss noted in Jan 2023 along with a new heart murmur. FeLV/FIV test was negative. Labwork in May concerning for hyperthyroidism. Normal T4 but elevated fT4. Started methimazole and had a dental procedure a month later. Soon after dental procedure, noticed progressively decreasing appetite and continued weight loss. Labwork monitoring showed T4 was 1.5, ALT was mildly increased compared to starting methimazole. Reevaluated 7/27/23 for continued poor appetite, lethargy, and weight loss.

**PATIENT**

Champ Schauman

**SPECIES**

Feline

Current Medications: Methimazole 2.5 mg BID x 2 months, Cerenia 8 mg SID x 6 days.

Lab Results: 5/15/23 - ALT 197, AST 109, creat 1.8, T4 2.5, fT4 57.5.. 6/22/23 - fT4 21.3 (after starting methimazole 2.5 mg BID). 7/14/23 - ALT 254, AST 123, creat 1.8, CK 2378, T4 - 1.5. 7/27/23 (in house) - ALT 105, Alb 2.5

**BREED**

DSH

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.

**SEX**

Neutered Male

**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 to large amount of echogenic non-shadowing debris, which could be partially consistent with incidental suspended lipid in a cat, likely combined with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also 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.

**AGE**

2/21/11

**WEIGHT**

8.25 Pounds

**INTERPRETED BY**Beth Johnson, DVM  
DACVIM

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. The left kidney measures 4.16 cm. The right kidney measures 3.98 cm.

**HOSPITAL NAME**

Stevenson Village VH

**Adrenal Glands**

The right adrenal gland is normal in size (0.27 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**REFERRING VET**

Dr. Vinson

The left adrenal gland is normal in size (0.43 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**INVOICE**

44592

**Spleen**

Spleen is generally normal in size and shape with a smooth capsular contour. Parenchyma is diffusely nodular in appearance characterized by small discrete hypoechoic nodules. Splenic vasculature appears normal.

**Liver**

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. The cystic and common bile duct are tortuous in appearance and mildly dilated, measuring 0.53 cm dilated.

### ***Gastrointestinal***

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. Additionally, there is a small echogenic density with acoustic shadow, consistent most likely with a pill if that clinically fits, but a small non-obstructive foreign body can't be ruled out. There is no evidence of obstruction or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestine demonstrates areas of mildly 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 is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction or foreign material noted.

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

### ***Pancreas***

The observed pancreas appears appropriately isoechoic to surrounding omental fat. The capsule is mildly irregular in shape. Parenchyma is mildly heterogenous and coarse. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### ***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**

- Hyperechoic hepatomegaly – This appearance is most consistent with benign hepatic lipidosis. Infiltrative disease such as amyloidosis or round cell neoplasia, such as mast cell tumor or less likely, lymphoma, is also possible.
- Tortuous, mildly dilated cystic and common bile duct – concerning for concurrent or potentially past, resolved, or chronic smoldering cholangitis.
- Pancreatic age-related remodeling – Mild irregularities are consistent with benign age-related change. Low-grade smoldering chronic pancreatitis cannot be ruled out and should be suspected in the face of appropriate clinical signs.
- Mild/subtle inflammatory bowel disease (IBD) pattern – Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No aggressive lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probable, but lymphoma cannot be definitively ruled out without tissue sampling.
- This combination of changes is consistent with “Triaditis” in addition to the splenic micronodular hyperplasia pattern, which is often associated with benign aging nodular hyperplasia. Infiltrative

neoplasia, however, including both early hemangiosarcoma as well as round cell neoplasia cannot be ruled out.

## SECONDARY FINDINGS

- Age related kidney changes

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Fine needle aspirates of this patient's liver and spleen could be considered if patient's coagulation status is appropriate.

Additionally, if not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

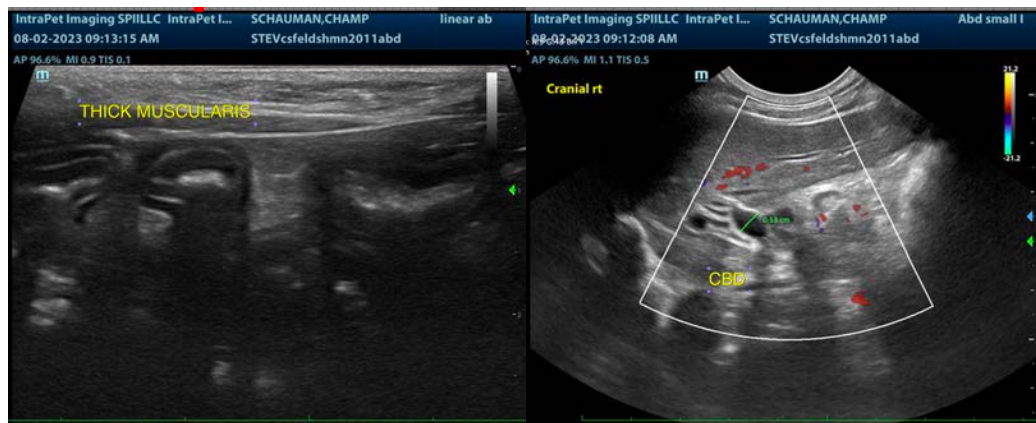
A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

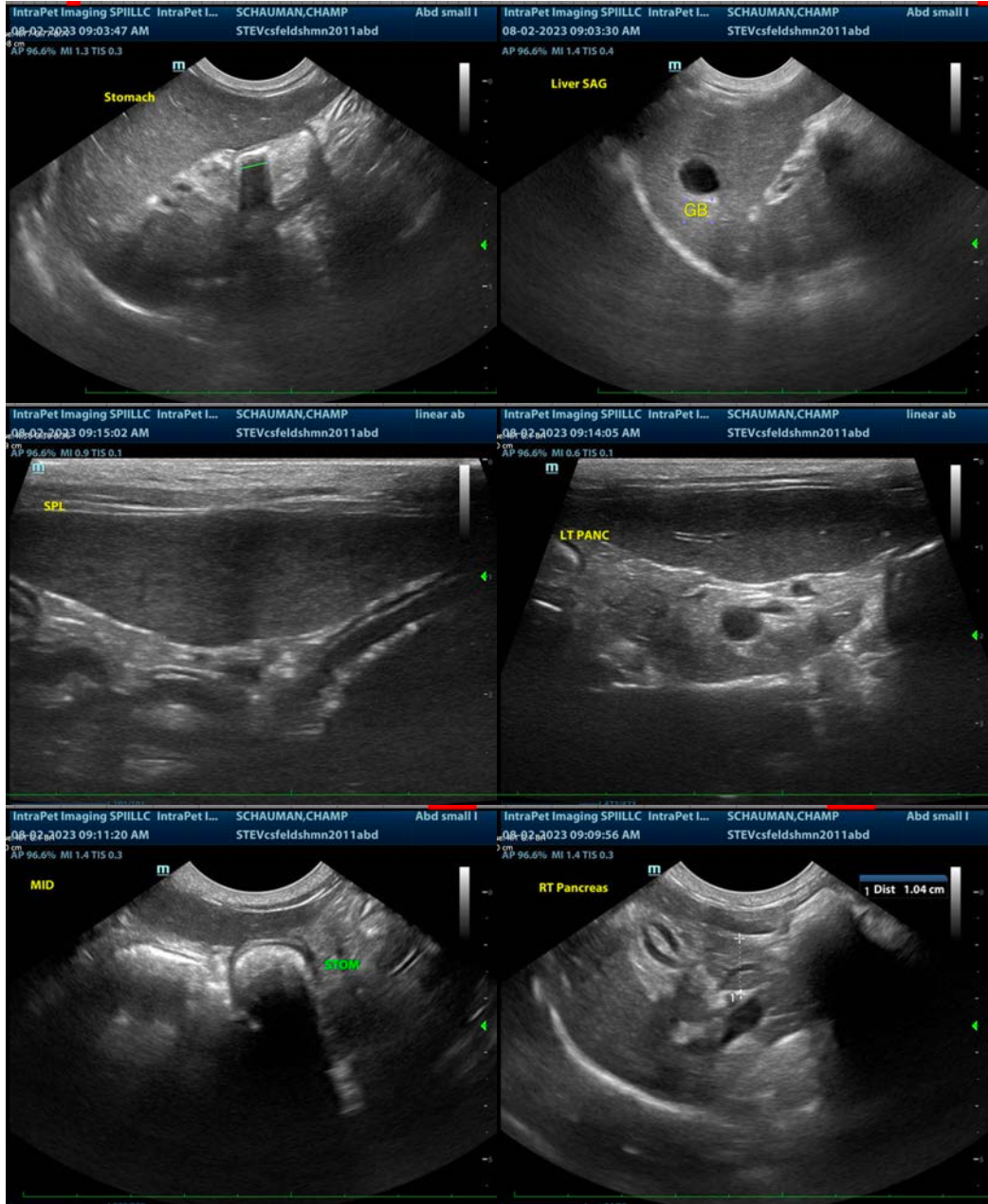
In the meantime, treatment recommendations include fluid therapy, anti-emetics, gastroprotectants, hepatic nutraceuticals such as ursodiol and/or Denamarin, and broad spectrum antibiotics. Nutritional support is critical to prevent/manage concurrent hepatic lipidosis, so appetite stimulants and/or, if indicated, feeding tube placement is also recommended.

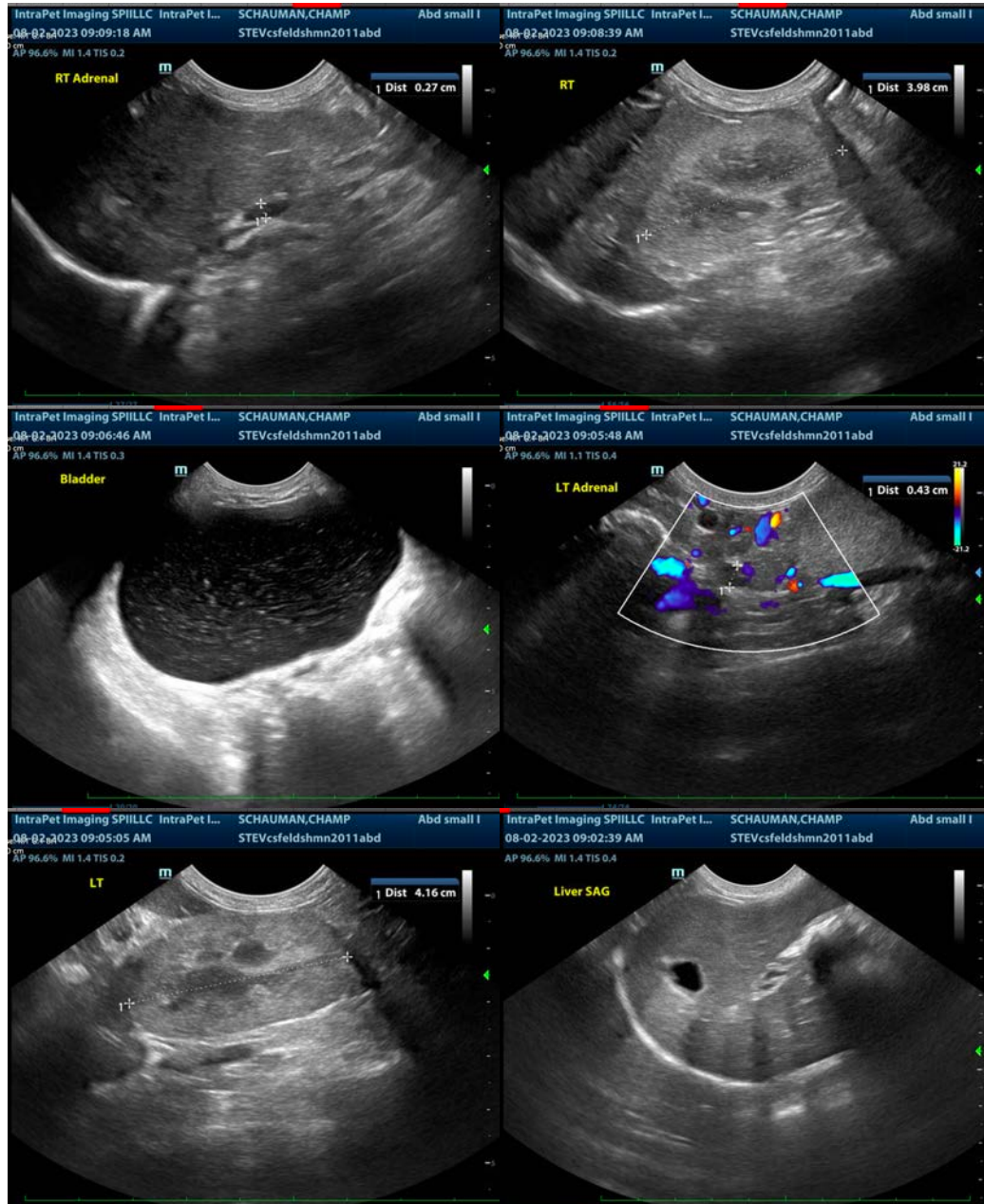
Pending results/patient status, etc., ideally biopsies of the GI tract, being sure to include ileum if possible, are recommended to definitively diagnose and therefore manage the infiltrative bowel disease.

If biopsies cannot be obtained, empirical therapies could include a probiotic (if diarrhea is present, such as visbiome or proviable), empirical deworming with a 5-day course of Panacur and, if tolerated, a transition in diet, based on trial-and-error response, beginning with a hydrolyzed protein diet. Some patients respond to one brand/version of a hydrolyzed protein diet better than another brand, so several trials may be required.

Additional considerations could include cobalamin supplementation (unless cobalamin level is evaluated and supplementation is not warranted) and prednisolone (if not contraindicated based on patient contraindications, co-morbidities, etc.).







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