



**PATIENT**

Tassa Geiss

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Spayed Female

**AGE**

14 Years

**WEIGHT**

7.6 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Shari Reffi, CVT

**HOSPITAL NAME**

Andover AH

**REFERRING VET**

Dr. Vanderbogart

**INVOICE**

45609

**DATE**

3/1/23

**PRESENTING CLINICAL SIGNS**

Vomiting and hematuria. 1/26/23-bw showed increased liver enzymes and increased on bw 2/22/23 incl. wbc. Convenia administered (O reports no more bloody urine)

Abnormal PE/Chem/CBC/UA Results: 2/22/2023-Glob 5.7, Alt 279, Alp 170, Wbc 25.6, Abs. neuts 18,432, Abs monos 1280, Abs eos 10244, Lymphs 19, USG 1.016

**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 occasional echogenic non-shadowing debris, most consistent with incidental suspended lipid in a cat, possibly 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.

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 right kidney measures 3.73 cm. The left kidney measures 3.76 cm.

**Adrenal Glands**

The right adrenal gland is normal in size (0.46 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.42 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**Spleen**

Spleen is subjectively large in size (1.1 cm thick) with normal smooth margins. Parenchyma is normal in echogenicity with a coarse/heterogenous echotexture. No focal nodules or masses are observed. Splenic vasculature appears normal.

**Liver**

Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. No focal nodules or masses 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 and dilated, ranging between 0.4-0.6 cm, traceable all the way to the duodenal papillae.

**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 intestine demonstrates areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and



<b>PATIENT</b>	hyperechoic, without evident loss of layering appreciated. The lumen is empty with no evidence of obstruction or foreign material.
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<b>SPECIES</b>	The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.
Feline	<b>Pancreas</b>
<b>BREED</b>	Pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and has a mildly irregular undulating contour. Parenchyma is coarse with mixed echogenic remodeling noted. Pancreatic duct dilation is noted.
DSH	
<b>SEX</b>	<b>Free Abdomen</b>
Spayed Female	There is no evidence of free peritoneal effusion noted in these images.
<b>AGE</b>	The 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.
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	<b>PRIMARY FINDINGS</b>
	<ul style="list-style-type: none"> <li><b>Inflammatory bowel disease (IBD) pattern</b> – 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.</li> <li><b>Reactive mesenteric lymph nodes</b> – infiltrative neoplastic disease cannot be ruled out but is considered less likely.</li> <li><b>Hypoechoic hepatomegaly with concurrent evidence of chronic pancreatitis and a dilated common bile duct</b> – Consistent with concurrent, potentially chronic resolved (although active can't be ruled out) cholangitis/cholangiohepatitis or "Triaditis".</li> <li><b>Coarse splenomegaly</b> – can be associated with congestion caused by sedation (if sedated) but can also be associated with diffuse infiltrative disease. Both benign conditions such as extramedullary hematopoiesis, lymphoid hyperplasia, amyloidosis (leave amyloidosis out if canine) as well as infiltrative neoplastic diseases such as round cell neoplasia should be considered.</li> </ul>
	<b>SECONDARY FINDINGS</b>
	<ul style="list-style-type: none"> <li>Urinary bladder debris</li> <li>Age related kidney changes</li> </ul>
	<b>INTERPRETATION OF THE FINDINGS &amp; FURTHER RECOMMENDATIONS</b>
	The pathology described above could represent a benign inflammatory bowel disease with concurrent chronic active pancreatitis, cholangitis, etc. as is seen with "Triaditis". However, given the splenic changes, lymphadenopathy, etc., infiltrative neoplasia must also be considered. Therefore, recommendations include fine needle aspirates of the liver and spleen +/- lymph nodes if patient's coagulation status is appropriate, and given the reported eosinophilia, premedication with diphenhydramine is recommended in case of mast cell tumor.



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Pending results, 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.

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Ideally, if a cytologic diagnosis isn't obtained, biopsies of the GI tract, being sure to include ileum if possible, are recommended to definitively diagnose and therefore manage the infiltrative bowel disease.

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If biopsies cannot be obtained, empirical therapies could include diet change, empirical deworming with a 5 day course of Panacur, cobalamin supplementation (unless cobalamin level is evaluated and supplementation is not warranted) and prednisolone (if not contraindicated based on patient contraindications, co-morbidities, etc.). Other supportive therapeutic considerations could include fiber supplementation, especially with large bowel diarrhea and/or a probiotic. Additionally, pending liver cytology results, medical management of cholangiohepatitis, including hepatic nutraceuticals and broad-spectrum antibiotics in addition to the above therapy, could be considered.

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If urinary signs return, a urine culture is recommended, or a urine culture could be considered empirically if at least a week to 10 days has passed since this patient has received antibiotics to ensure full clearance of the suspected urinary tract infection.

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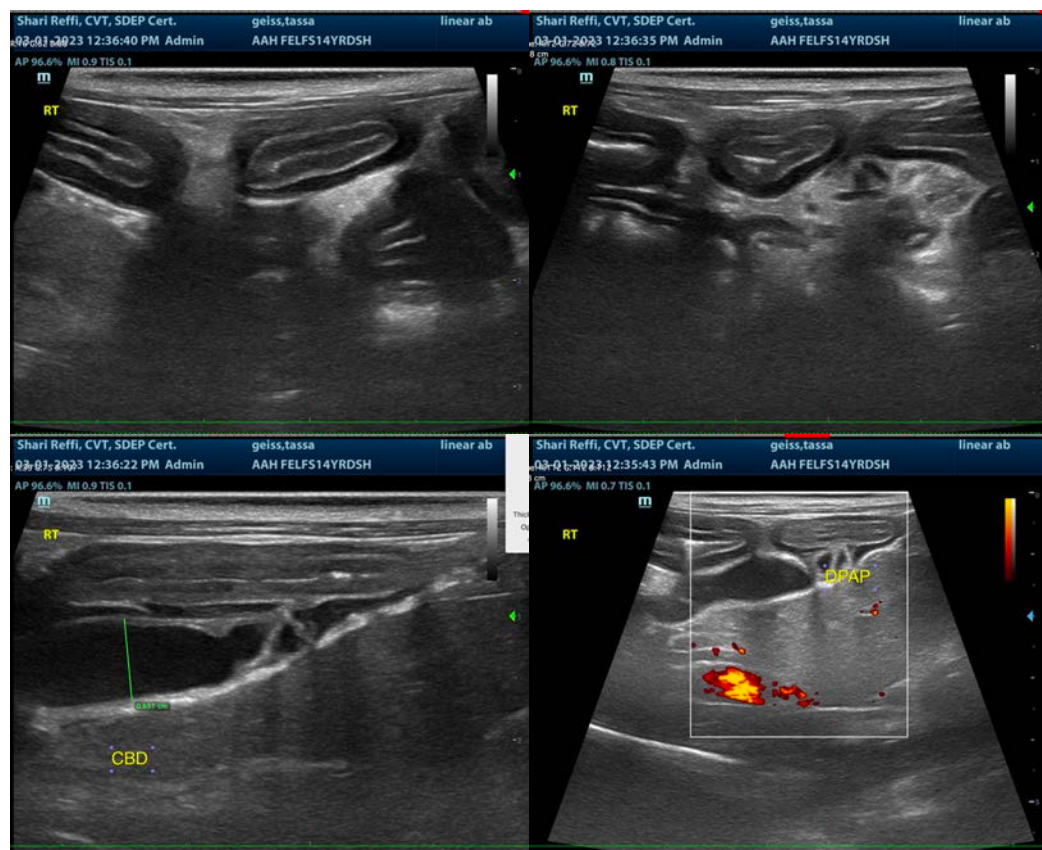
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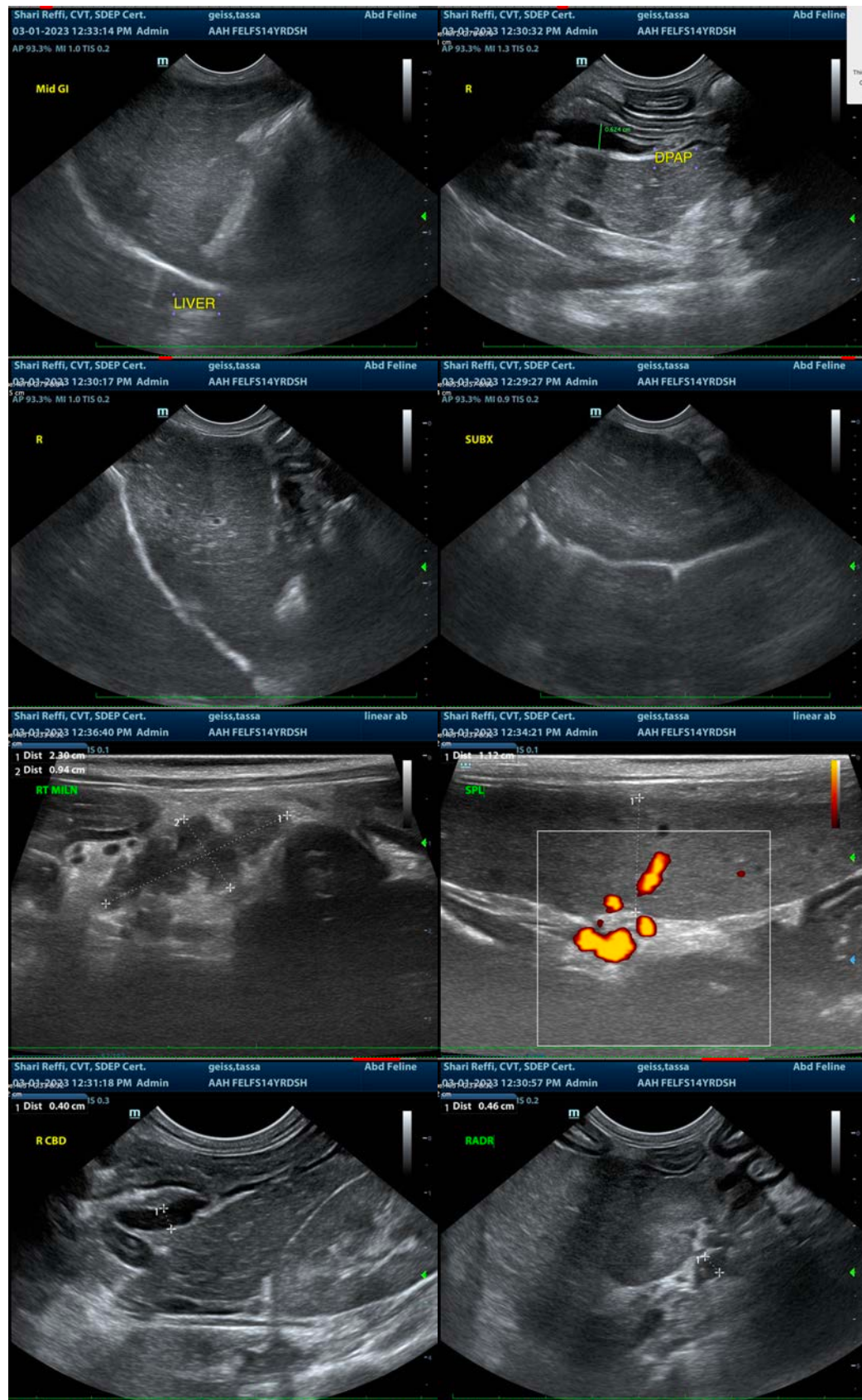
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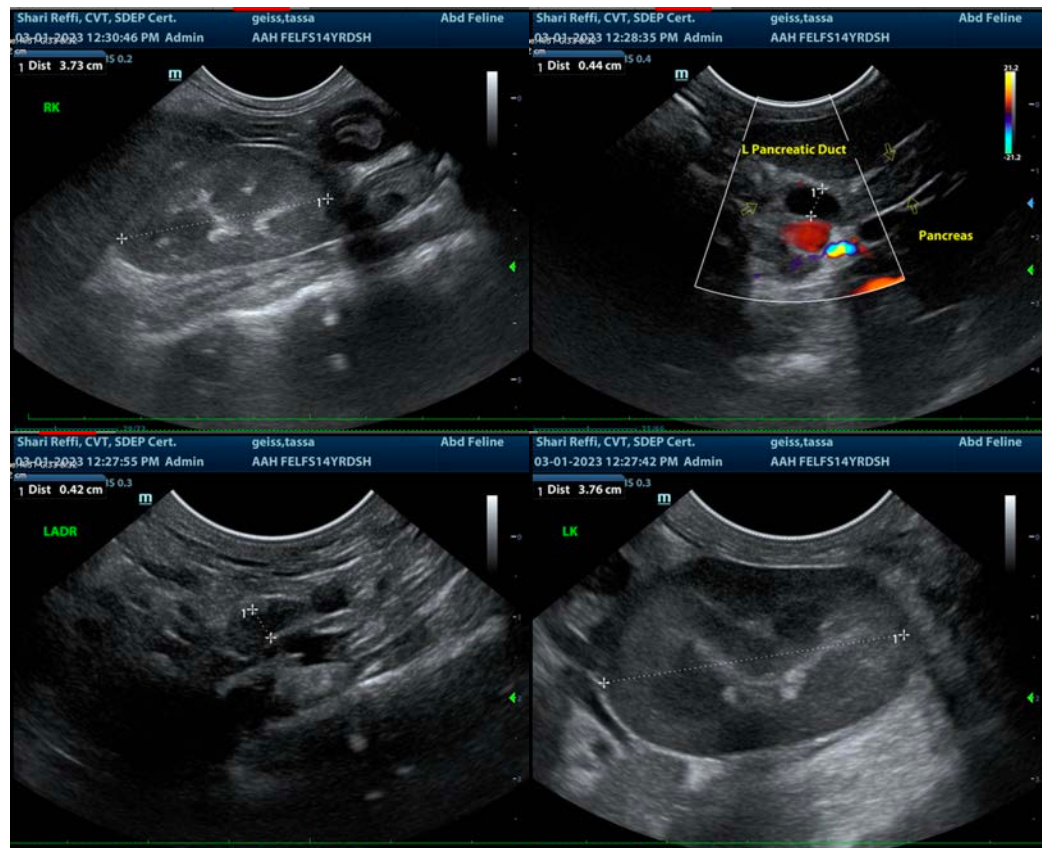
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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**  
Beth.Johnson@sonopath.com