



**PATIENT PRESENTING CLINICAL SIGNS**

**Faith Ricks**  
Dx'd with suspected small cell lymphoma based on ultrasound in 11/18 - thickened colon up to 4mm, enlarged colic lymph nodes, and thickened muscularis layer in small bowel. started on pred / chlorambucil. Switched from pred to chlorambucil in 9/20 due to elevated blood glucose. Previous episodes of cholangiohepatitis and cholelithiasis, identified on U/S in 2019 and 2020, that resolve with antibiotic therapy. Now inappetant and vomiting with ALT of 855 and mineralized biliary tree seen on rads.

**SPECIES**

Feline

**BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

DSH

**Urinary System**

**SEX**

Spayed Female

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.

**AGE**

12.5

The left kidney has a normal shape and size (3.69 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**WEIGHT**

7.7 Pounds

The right kidney has a normal shape and size (3.21 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. Two small, non-obstructive nephroliths are seen. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

**INTERPRETED BY**

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

The left adrenal gland is normal in size measuring 0.4 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.

**IMAGING PERFORMED BY**

Dr. Tam Mengine

The right adrenal gland is normal in size measuring 0.44 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.

**HOSPITAL NAME**

Stoney Creek VH

**Spleen**

The spleen is subjectively normal in size, 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.

**REFERRING VET**

Dr. Tam Mengine

**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. There are multiple small, hyperechoic shadowing structures within the hepatic parenchyma, representing shadowing intrahepatic biliary stones. In some of these areas, the intrahepatic bile duct appears mildly dilated. The biliary tract is abnormal (see gallbladder). There are no focal nodules or cystic lesions observed within the hepatic parenchyma.

**INVOICE**

25268

**DATE**

9/9/21

The gallbladder lumen is mildly distended. The wall of the gall bladder appears thickened and hyperechoic, measuring 0.31 cm. It has a smooth mucosal surface, and luminal contents are primarily anechoic. The bile duct is moderately dilated and tortuous with what appears to be mineralization in the



**PATIENT**

Faith Ricks

wall, and occasional stones within the bile duct. Additionally, there is an area with what appears to be thickened bile secretions/mucoid debris. A specific point of obstruction is not observed.

**Gastrointestinal**

**SPECIES**

Feline

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.

**BREED**

DSH

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. Duodenum wall measured 0.31 cm. Jejunum wall measured 0.25 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**SEX**

Spayed Female

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of increased thickness, measuring 0.3 cm. Sections of colon are visualized with formed fecal material and gas shadowing distally.

**AGE**

12.5

**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/moderate pancreatitis.

**WEIGHT**

7.7 Pounds

**Free Abdomen**

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of increased echogenicity in the area around the liver and pancreas.

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**ULTRASONOGRAPHIC FINDINGS**

**IMAGING PERFORMED BY**

Dr. Tam Mengine

- Prominent, hypoechoic pancreas with surrounding hyperechoic mesentery – The pancreatic changes are most consistent with 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.

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- Large, heterogeneous liver with intrahepatic biliary stones and mild intrahepatic biliary dilation – Hepatic changes are non-specific and could be consistent with inflammation/infection (cholangiohepatitis), infiltrative neoplasia, lipidosis or other hepatopathy.

**REFERRING VET**

Dr. Tam Mengine

- Thickened gallbladder wall with dilated mineralized bile duct with suspected mucoid debris and small stones – Dilation of the common bile duct could be consistent with a functional obstruction (i.e. primary hepatic disease resulting in hepatocellular swelling) or with an extrahepatic bile duct obstruction (ie. choledocholith, bile duct tumor, pancreatic disease, other).

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- Subjective small intestinal wall thickening with a prominent muscularis layer – The small intestinal wall changes are most consistent with an inflammatory process (i.e., inflammatory bowel disease) with a low possibility of emerging lymphoma.

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9/9/21



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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The biliary changes observed are chronic, so it is difficult to know what is acutely an issue versus has always been there. Based on the thickening and dilation, it is possible that there is another episode of cholangiohepatitis. No focal site of obstruction is observed.

Additionally, the pancreas appears inflamed. Recommend fPLI, B12 and folate to further evaluate the pancreas and small intestine. The small intestine is subjectively thickened with intact layering and a prominent muscularis layer. The colon wall is prominent as well. This is consistent with infiltrative disease, either inflammatory or neoplastic is most likely. This combination of findings can be consistent with Triaditis, but considering the concern for small cell neoplasia, I would recommend a fine needle aspirate of the liver, treatment for pancreatitis, and possibly starting Ursodiol (this could make things better or worse). If not currently doing so, recommend Denamarin, and if non-responsive to antibiotic therapy, you may need to consider a very short course of anti-inflammatory steroids (2-5 days). You may need to consider placing a feeding tube if this cat won't eat in order to help you better manage the diabetes and prevent secondary lipidosis. Additionally, there is some concern that Chlorambucil can be hepatotoxic, so if values are getting worse with no response, you could consider transitioning to a different medication.

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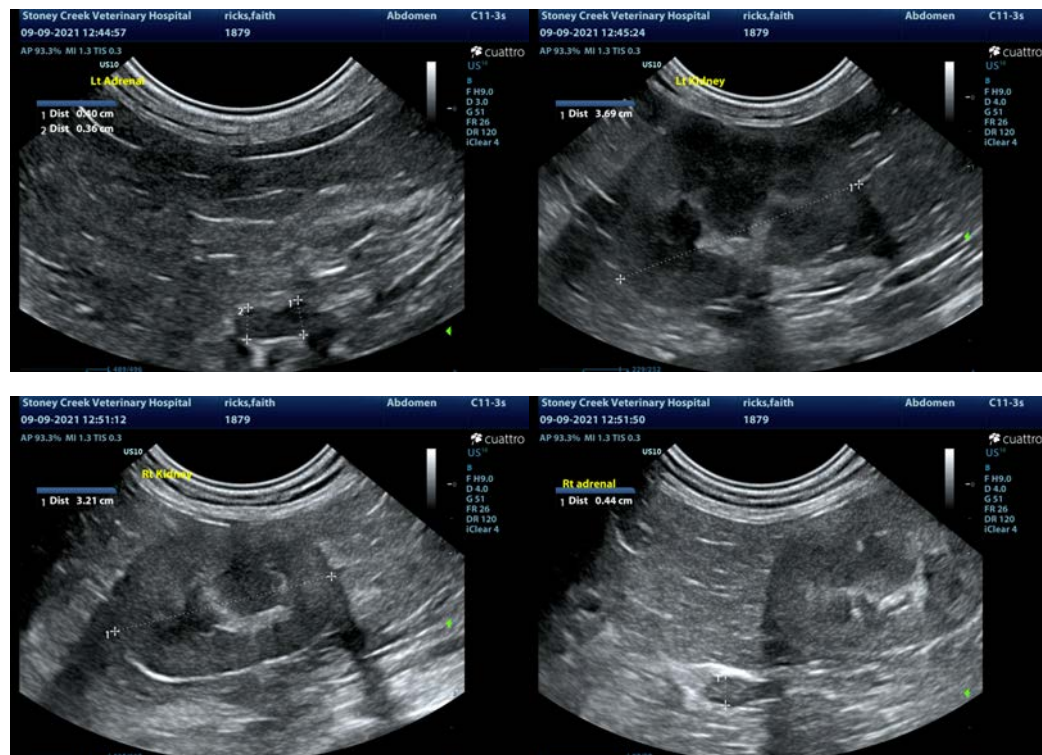
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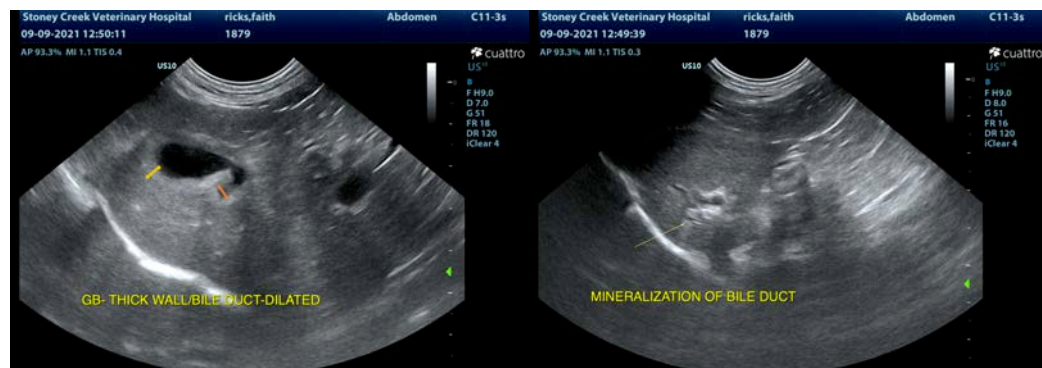
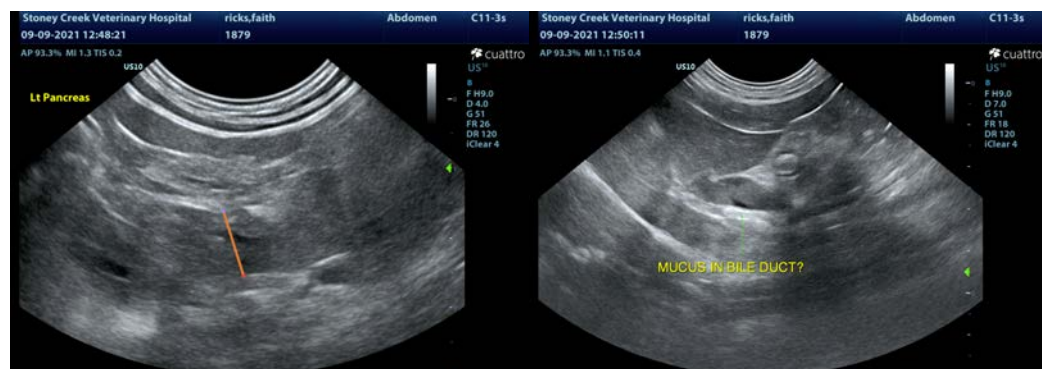
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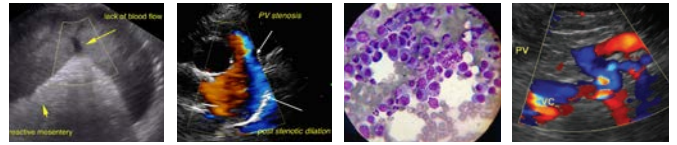
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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