



**PATIENT PRESENTING CLINICAL SIGNS**

Teddie Hutchings

**SPECIES**

Canine

**BREED**

Shih Tzu x

**SEX**

Neutered Male

**AGE**

11 Years

**WEIGHT**

6.7 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Sarah Barthelemy

**HOSPITAL NAME**

Healing Traditions VC

**REFERRING VET**

Dr. Vockeroth

**INVOICE**

43934

**DATE**

7/12/23

In early June started having diarrhea. Resolved with symptomatic treatment (metronidazole and cerenia). Started new treats and diarrhea returned with onset of vomiting and hyporexia. Lab work showed elevated liver values and AUS at ER clinic showed mild GB wall thickening, echogenic liver with mild hepatomegaly, age related renal changes. Bile culture performed showing alpha hemolytic Strep and was started on amoxy-clav. Also started ursodiol, maropitant. Appetite and energy have been up and down. Repeat labs showed further elevation in ALP and ALT. Added metronidazole back in to therapy.

Abnormal PE/Chem/CBC/UA Results: Mild monocytosis and mild basophilia. Elevated albumin at 54 and low globulins at 9. Marked ALT elevation 903 (previously 759) and ALP elevation 3778.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is mildly distended with anechoic urine. The Bladder wall is diffusely mildly thickened (0.43 cm), and the mucosa is mildly irregular. The trigone, ureteral papillae, and visible urethra (to a depth of 2cm) appear normal with no evidence of severe mucosal irregularities, masses or cystic calculi. Findings are most consistent with bacterial cystitis or lack of urine distension. Recommend urinalysis and culture.

The prostate is normal in size (1.17 cm in height in the sagittal view) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (4.49 cm). Overall echogenicity is slightly hyperechoic with poor 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 (4.52 cm). Overall echogenicity is slightly hyperechoic with poor 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 0.42 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 0.50 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, 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.



**PATIENT** *Liver*

Teddie Hutchings The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

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The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

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**Gastrointestinal**

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Neutered Male

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm 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.

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The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.46 cm. Jejunum wall measures 0.34 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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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.

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**Pancreas**

The right limb of the pancreas is prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

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**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 normal uniform echogenicity.

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**ULTRASONOGRAPHIC FINDINGS**

**REFERRING VET**

Dr. Vockeroth

- Subjectively thickened urinary bladder wall with a non-distended bladder – The bladder mucosal changes could be consistent with cystitis or artifactual due to lack of adequate luminal distension. Bladder neoplasia cannot be ruled out but is considered unlikely in this patient.
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Prominent, mottled right limb of the pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

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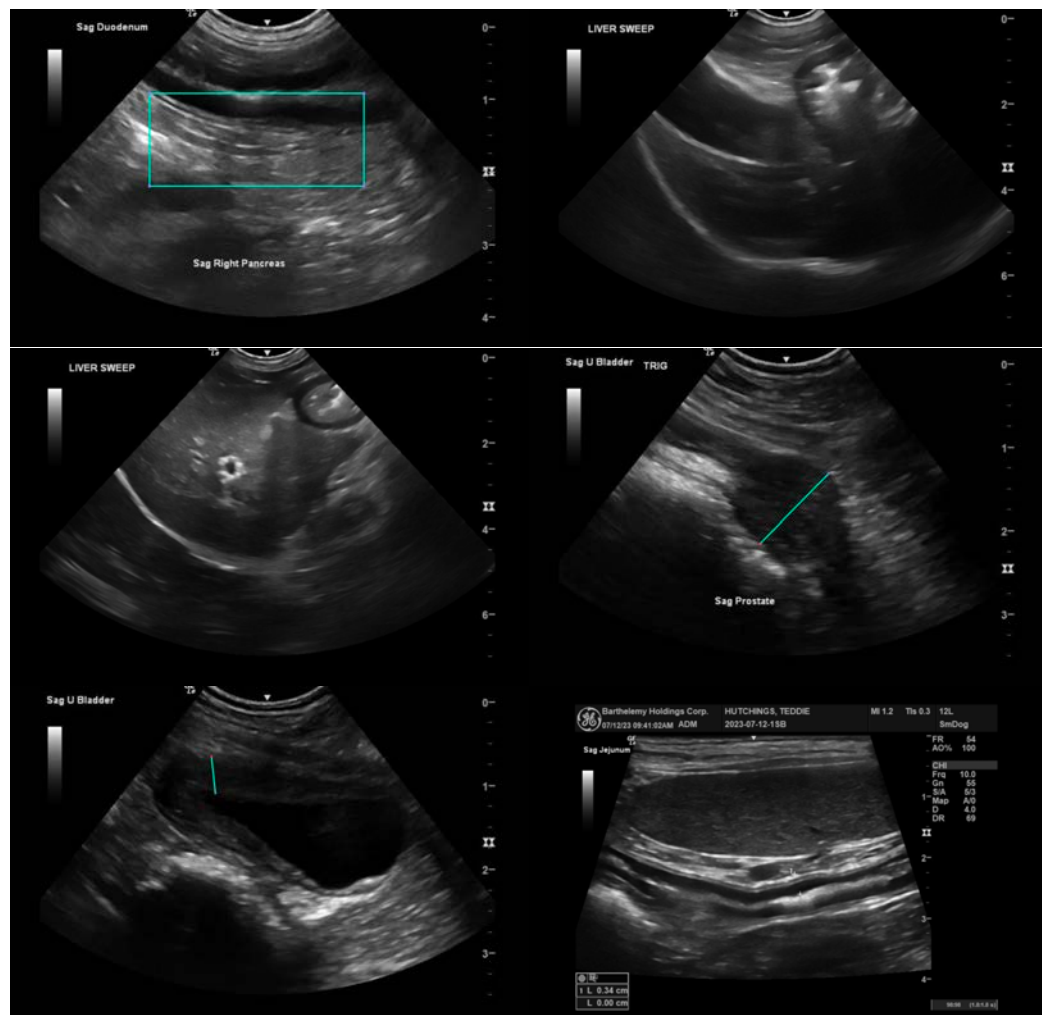
**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

An obvious source for the recent reduction in appetite and energy is not readily identified. No focal lesions are visualized associated with the liver, and the gallbladder changes appear relatively mild on today's evaluation. Findings could be consistent with a primary hepatopathy. Consider a liver function test and a fine needle aspirate of the liver (provided coagulation parameters are normal). Additionally, consider the possibility of underlying gastrointestinal disease, as sometimes this results in relatively minor ultrasonographic changes. You could consider a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate, looking for additional evidence of underlying gastrointestinal disease. Additionally, you could consider a hydrolyzed protein or novel protein prescription diet, probiotic therapy, and continued therapy with Ursodiol.

The changes visualized associated with the pancreas are non-specific and minor, likely more consistent with pancreatic remodeling than active inflammation, but if chronic pancreatitis is thought possible then you could consider empirical treatment with appetite stimulants, nausea medications, pain medication, etc.

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

Recommend a urinalysis +/- culture to evaluate the urinary bladder for possible cystitis.





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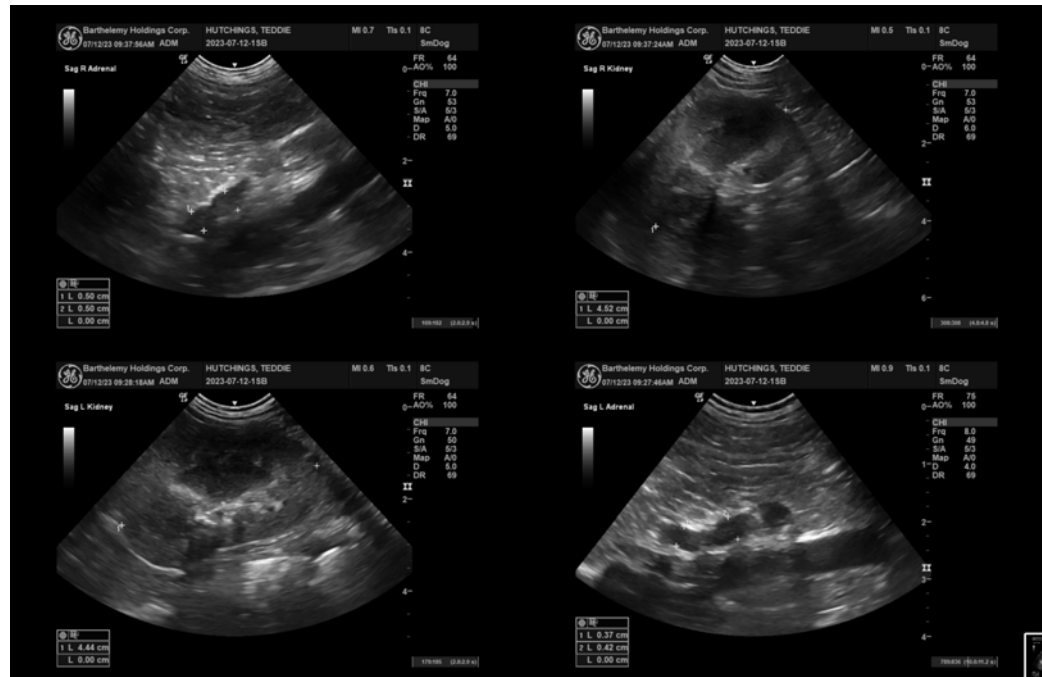
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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