



**PATIENT**

Chloe Watson

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Spayed Female

**AGE**

10.5 Years

**WEIGHT**

17.6 Pounds

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Dr. Tam Mengine

**HOSPITAL NAME**

Stoney Creek VH

**REFERRING VET**

Dr. Tam Mengine

**INVOICE**

36727

**DATE**

4/7/22

**PRESENTING CLINICAL SIGNS**

Slightly elevated ALT noted on routine labwork in 7/21, and has since slowly increased. Clinically pet is asymptomatic and ALP and other chem values are normal. ALT - 7/21 - 139 - 9/21 - 144 - 4/5/22 - 248

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

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.

The left kidney has a normal shape and size (4.16 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.

The right kidney has a normal shape and size (4.59 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.

**Adrenal Glands**

The left adrenal gland is normal/borderline large in size measuring 0.34 cm at the cranial pole. 0.70 cm at the caudal pole, and 1.9 cm in length. It is observed in its normal position cranial to the left renal artery. It is somewhat irregular in appearance in that the caudal pole is much larger than the cranial pole. There is no significant change in echogenicity, and there are smooth capsular margins.

The right adrenal gland is normal in size measuring 0.37 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.

**Liver**

The liver is large in size, and hyperechoic with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

**Gastrointestinal**

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.



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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 measured 0.46 cm. Jejunum wall measured 0.36 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. The wall measures 0.16 cm in 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 pancreas is normal and isoechoic to surrounding 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**

**WEIGHT**

17.6 Pounds

- Enlarged caudal pole of the left adrenal gland – Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other. This lesion is of questionable significance, as the caudal pole is only mildly enlarged.
- Large, hyperechoic, heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

**INTERPRETED BY**

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

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The caudal pole of the left adrenal gland appears larger than the cranial pole. In general, this enlargement is relatively mild, but this is a small dog. Recommend a blood pressure evaluation, and if signs of Cushing's are present, recommend adrenal function testing. Recommend continued monitoring of this lesion with ultrasound (recheck in 2-3 months) to look for change, as this could represent a benign incidental asymmetry, or could represent an early mass lesion.

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The liver appears large and heterogeneous, and is hyperechoic in echogenicity. No focal lesions are observed. Consider the following:

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- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate liver function
- Consider Fine needle aspirate if round cell neoplasia is on your differential list (25 g needle, normal coags)
- If these tests are not helpful, and the ALT is persistent/continuing to increase despite supportive care such as Denamarin +/- ursodiol, etc., you could consider obtaining liver biopsy with samples obtained for histopathology, culture, and copper levels.

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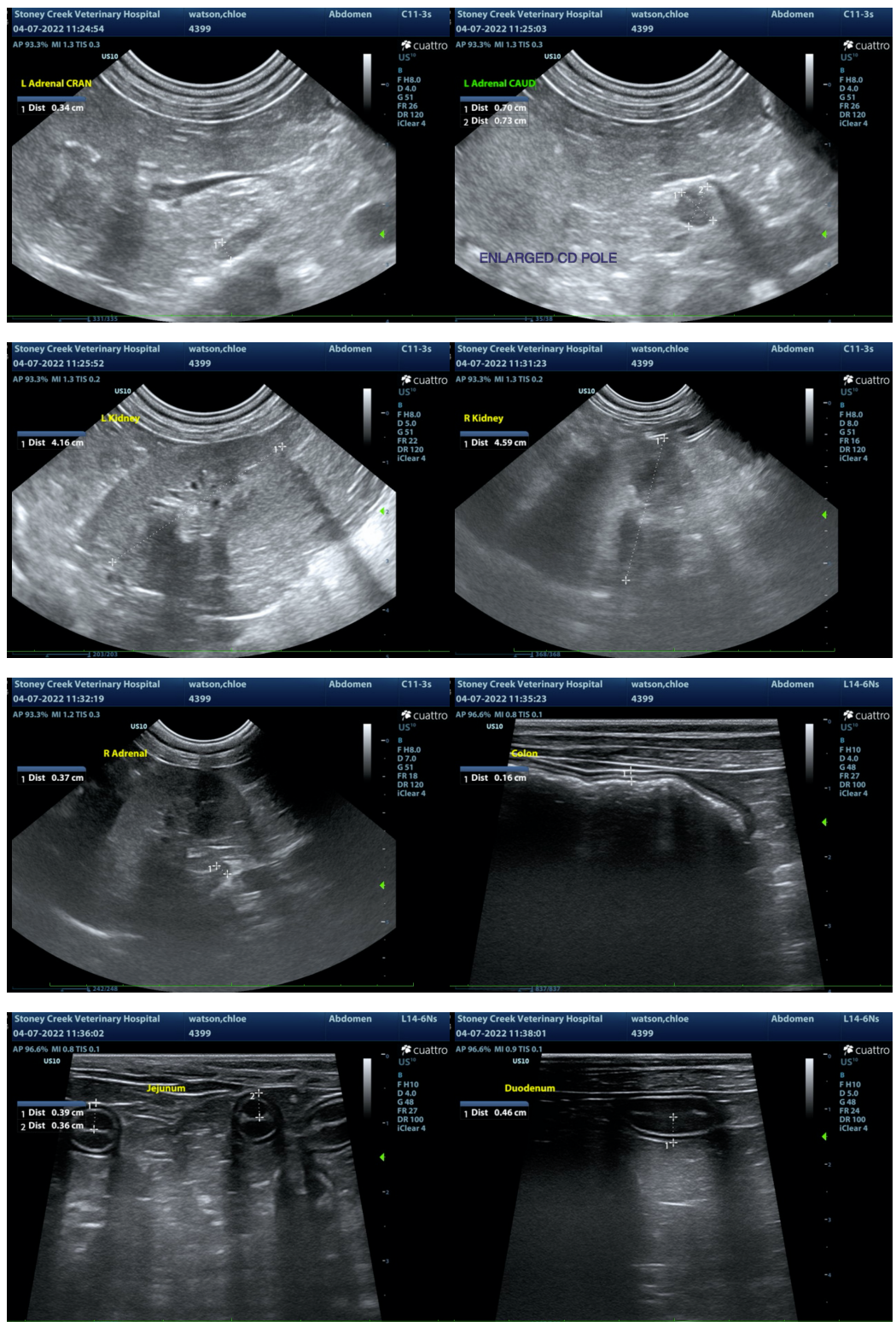
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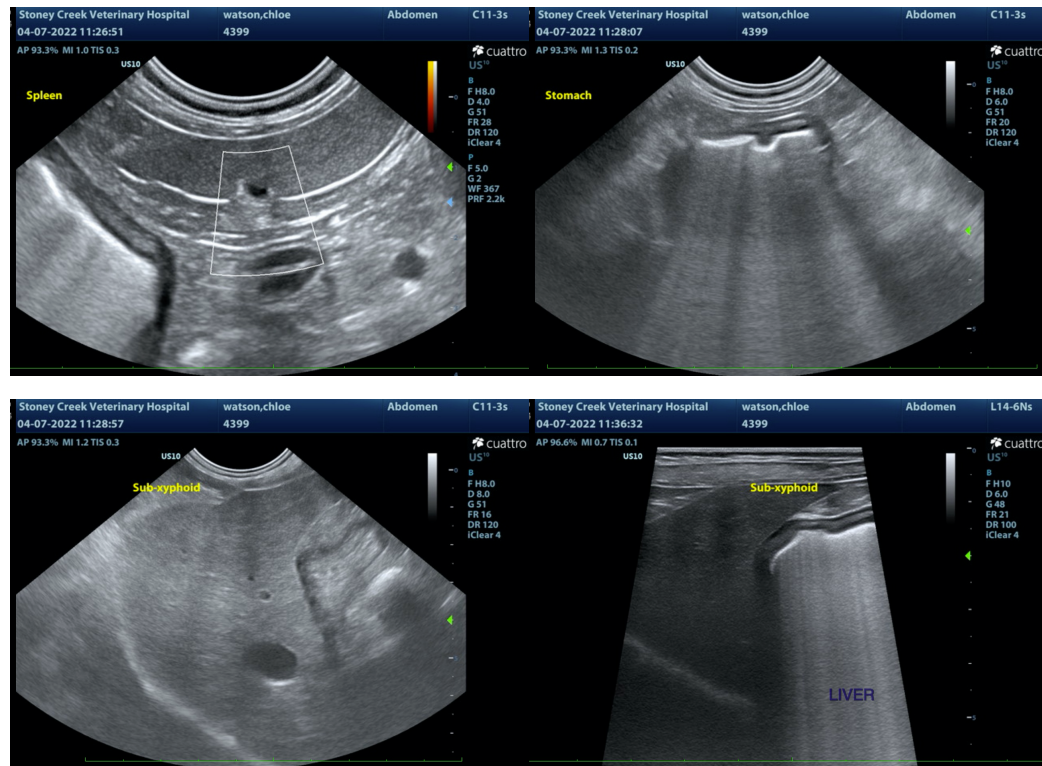
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

kathleen.sennello@sonopath.com