



PATIENT

Toby Conway

SPECIES

Canine

BREED

Shih Tzu

SEX

Neutered Male

AGE

13 Years

WEIGHT

21.8 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Elaina Petrone

HOSPITAL NAME

Long Branch Animal
Hospital

REFERRING VET

Dr. Elaina Petrone

INVOICE

71584

DATE

11/5/25

PRESENTING CLINICAL SIGNS

Elevated Liver Enzymes. ALT 1160, ALP 784. HX of Diabetes. Bile Acids normal. Clinically normal

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall appears mildly thickened and prominent, measuring 0.56 cm in the ventral wall with smooth mucosal surface. The 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 visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (5.17 cm). Overall echogenicity is normal with adequate 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 (5.48 cm). Overall echogenicity is normal with adequate 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 borderline "plump", measuring 0.74 cm at the cranial pole and 0.64 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 borderline "plump", measuring 0.62 cm at the cranial pole and 0.74 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 (1.05 cm), 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 rounded. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is an isoechoic rounded region in the right liver measuring 3.18 cm x 3.14 cm.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and likely incidental at this time. The cystic and common bile ducts are normal/not visible.



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Gastrointestinal

The stomach contains mild shadowing ingesta. 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.

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 0.43 cm. Jejunum wall measures 0.38 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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.

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.

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.

ULTRASONOGRAPHIC FINDINGS

- Mildly thickened ventral wall of the urinary 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.
- Pancreatic changes most consistent with mild pancreatic remodeling.
- Large, heterogeneous, rounded 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. The poorly defined rounded region is most consistent with a rounded liver lobe. A very subtle isoechoic mass effect cannot be ruled out.
- Borderline “plump” adrenal glands – Findings could be consistent with anatomic variation, early hyperplasia, etc.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No definitive focal lesions are visualized associated with the liver to explain the elevation in liver enzyme reported. Generally, this appearance is most consistent with a vacuolar hepatopathy, although the significant elevation in ALT is not classic for this scenario. On some views there is an isoechoic rounded region associated with the right lobe of the liver, but this is not repeatable on all views and is



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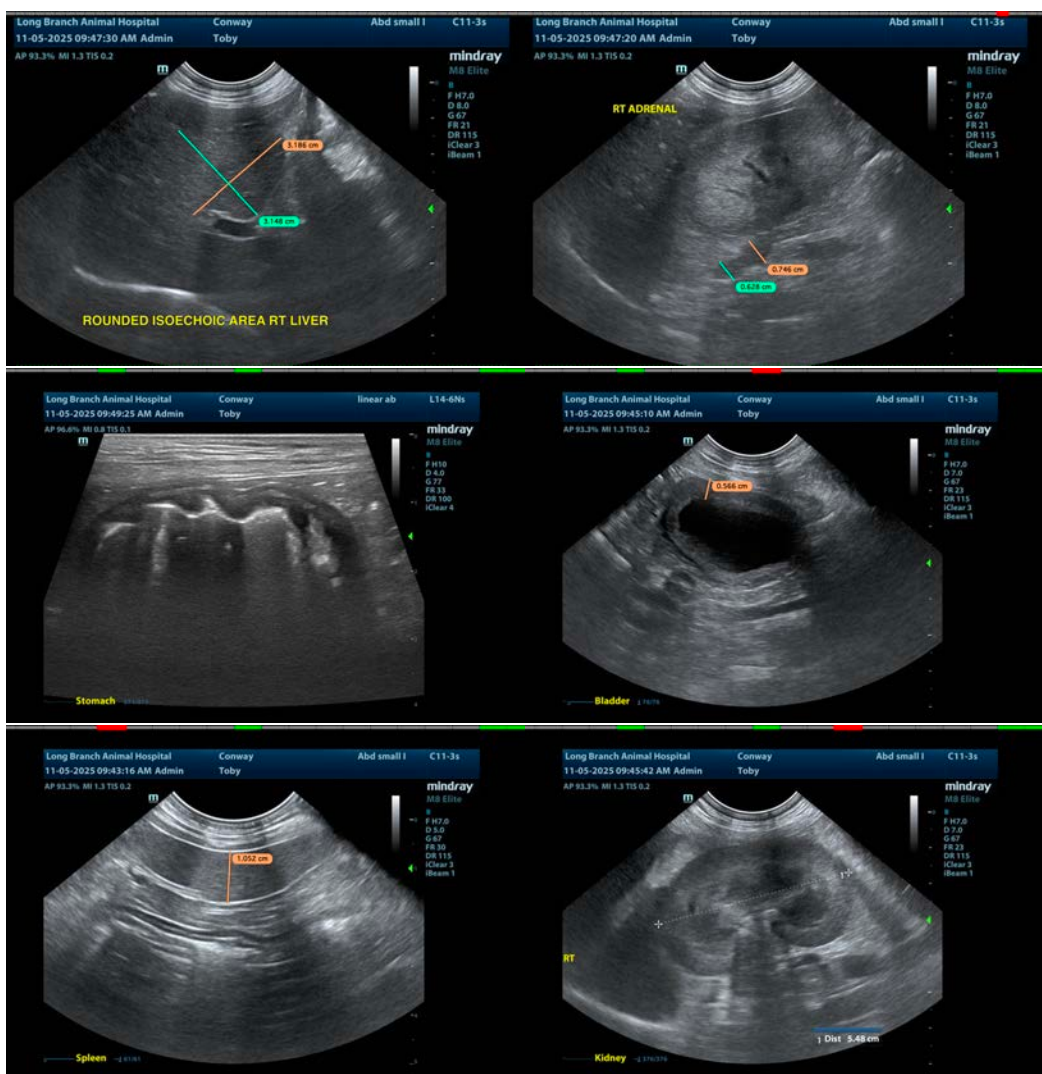
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very subtle. Consider a fine needle aspirate of the liver and close continued monitoring. If liver enzyme elevations are continuing to rise with no significant changes, options would include a liver biopsy with samples for histopathology, culture and copper levels and/or a contrast CT scan to better delineate the right lobe of the liver. Additionally, repeat imaging of this area with ultrasound over time could demonstrate change/growth of a lesion.

Recommend a urinalysis +/- culture to further evaluate the mild bladder wall thickening reported.

Both adrenals appear somewhat "plump". Correlate this with the ease of diabetic management. If the patient is unregulated, seems insulin resistant, etc., further evaluation for underlying Cushing's could be considered.





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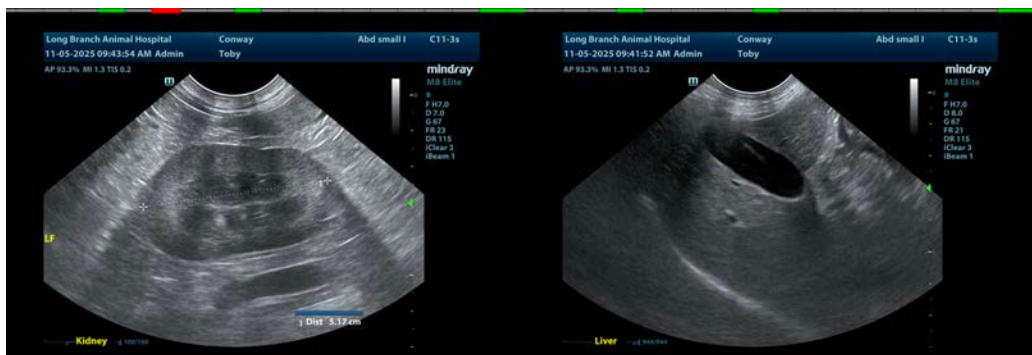
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

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