



PATIENT

Roxie Denmark

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

7 Years 7 Months

WEIGHT

15 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Kathleen Byrnes

HOSPITAL NAME

Northwood Animal
 Hospital

REFERRING VET

Dr. Slivka

INVOICE

72837

DATE

2/10/26

PRESENTING CLINICAL SIGNS

P presented for US due to elevation in ALT and AST

Abnormal PE/Chem/CBC/UA Results: ALT 420 AST62

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 (4.53 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 (4.64 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 “plump” measuring 0.73 cm at the cranial pole and 0.66 cm at the caudal pole. There is a subtle hyperechoic area in the cranial pole measuring 0.61 cm x 0.88 cm, possibly consistent with a poorly defined nodule. No evidence of vascular invasion is visualized.

The right adrenal gland is normal in size but slightly irregular in shape, measuring 0.79 cm at the cranial pole and 0.46 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 slightly abnormal in appearance in that the cranial pole is somewhat prominent and rounded. No discrete mass effect is visualized.

Spleen

The spleen is subjectively normal in size (1.2 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 subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is mildly 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 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 moderate fluid. 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 0.30 cm. Jejunum wall measures 0.21 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 visible/mildly hypoechoic in the left limb. 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

- “Plump” left adrenal gland with poorly defined hyperechoic region in the cranial pole – Findings could be consistent with mild hyperplasia, poorly defined adenoma, etc. A benign process is favored, although an early neoplastic process cannot be ruled out.
- Pancreatic changes most consistent with mild pancreatic remodeling.
- Mildly 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.
- Moderately fluid distended stomach – Correlate with feeding history. If the patient was adequately fasted, findings could indicate delayed gastric emptying or a partial outflow tract obstruction (none visualized).

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver subjectively appears mildly heterogeneous. No focal lesions are identified. The significance of this is uncertain. Unfortunately, there are many causes for an elevation in ALT that cannot be definitively diagnosed by ultrasound alone. Further evaluation could include the following:

Consider pre- and post-prandial bile acids to assess liver function.

Consider Leptospirosis screening if clinically appropriate.



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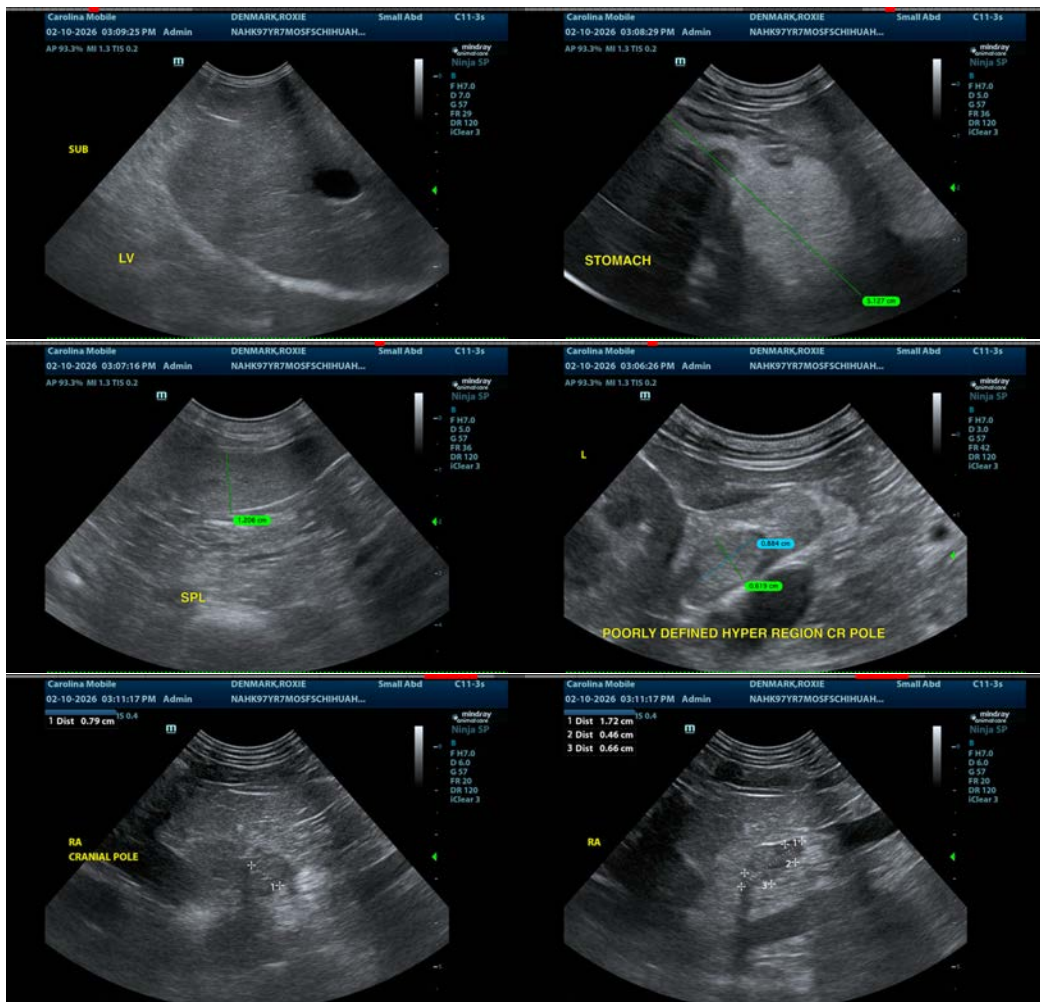
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Fine needle aspirate of the liver could be considered to rule out some types of infiltrative disease, etc. (provided coagulation parameters are normal).

If the ALT levels continue to rise despite further evaluation, you could consider empirical treatment for acute liver injury with a course of Ursodiol, Denamarin and antibiotics. Additionally, biopsies of the liver may eventually be warranted. No evidence of a portosystemic shunt was visualized on today's exam, but this cannot be definitively ruled out. If this is strongly suspected a contrast CT scan may need to be considered to further evaluate.

The left adrenal gland is somewhat "plump" with a poorly defined hyperechoic region in the cranial pole. Additionally, the cranial pole of the right adrenal gland is prominent. These findings could be incidental, mild hyperplasia, etc. Continued monitoring of the adrenals is warranted.





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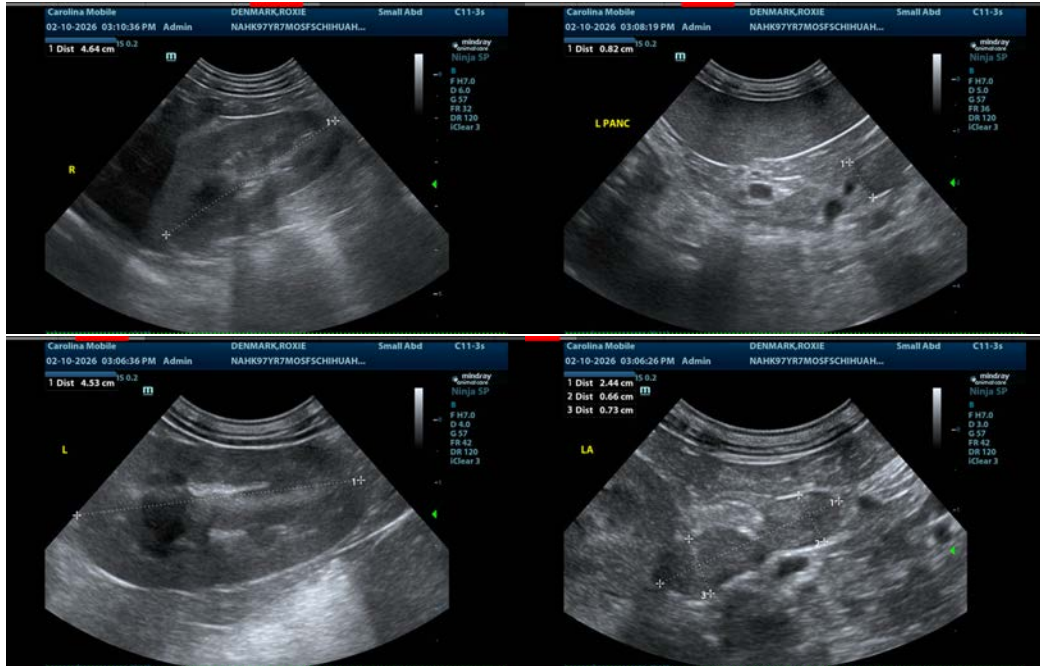
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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