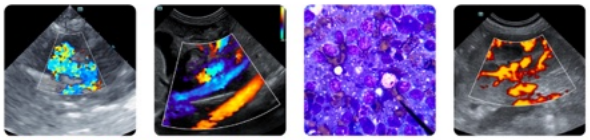


PATIENT

Louie Brogden

SPECIES

Canine

BREED

Yorkie

SEX

Neutered male

AGE

12 years

WEIGHT

17.6 lbs

INTERPRETED BY

Dr. Alicia Angosto Guerrero

IMAGING PERFORMED BY

Jessy Butcher

HOSPITAL NAME

Healing Paws

REFERRING VET

Dr. Key

INVOICE

69938

DATE

1/8/26

PRESENTING CLINICAL SIGNS

History: Pet presented as new patient 12/1/25 for elevated liver enzymes. Previous vet first noted 1/2025. Vet declined to do dental d/t elevations. On physical exam, pet had dorsal crusting consistent with previously dx'd atopy. Labs were submitted and showed continued liver enzyme elevations evn with diet change and Milk Thistle supplement.
ALKP 605 in 3/25, then 392 in 12/25. ALT 162 then 216. GLOB 4.7 then 4.1.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder lumen is normally distended, and the bladder wall appears thin and smooth. Due to mild underdistension, wall thickness measurements may be overestimated. The urine is predominantly anechoic with scant suspended echoes. The bladder neck and proximal urethra have a normal appearance. No uroliths are identified, and there is no evidence of inflammatory or neoplastic changes.

The left kidney is normal in shape and size, measuring 3.63×2.85 cm. Cortical thickness is 0.46 cm in the sagittal plane. The renal cortex is isoechoic relative to the liver parenchyma. Nephroliths measuring 2.19 mm and 1.51 mm are identified. There is no evidence of pyelectasia or hydronephrosis. Color Doppler demonstrates a normal perfusion pattern.

The right kidney is normal in shape and size, 3.80x2.32 cm. Cortical thickness is 0.40 cm. The renal cortex is isoechoic relative to the liver parenchyma. Nephroliths are identified, the largest measuring approximately 1.7 mm. There is no evidence of pyelectasia or hydronephrosis. Color Doppler demonstrates a normal perfusion pattern.

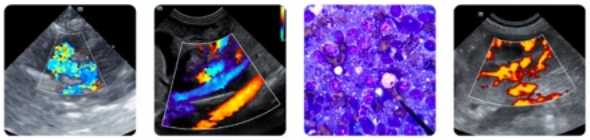
The prostate measures 1.40×0.67 cm and appears small and hypoechoic, compatible with post-orchiectomy prostatic atrophy.

Adrenal Glands

Both adrenal glands have normal shape and echogenicity. The left adrenal gland measures 0.53 cm at the cranial pole and 0.71 cm at the caudal pole; however, the cranial pole was only partially visualized, and this measurement may be underestimated. The right adrenal gland measures 0.70 cm at the caudal pole. The cranial pole of the right adrenal gland was not visualized.

Spleen

Splenic thickness is 1.48 cm. The splenic parenchyma demonstrates normal echogenicity and a fine, homogeneous echotexture without focal parenchymal abnormalities. The splenic capsule is smooth and regular.



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Liver

The liver is subjectively normal in size, with sharp margins and a regular contour. The hepatic parenchyma appears uniform and isoechoic relative to the falciform fat, with a fine echotexture. No hepatic lymphadenopathy is observed.

The gallbladder lumen is normally distended. The gallbladder wall is thin, and the contents are primarily anechoic with a small amount of biliary sludge. No dilation of the cystic duct or common bile duct is observed.

Gastrointestinal

The stomach is empty and folded, with mural thickness of 3.92 mm and preserved wall layering.

Pylorus: 4.63 mm. Duodenum: 1.80 mm. Jejunum: 2.15–2.46 mm, with preserved wall layering. Most intestinal segments contain gas. No evidence of inflammation, ileus, or foreign material is identified.

Colon: Colonic wall thickness is 1.2 mm, with formed feces present in the descending segment.

Pancreas

The pancreatic regions evaluated do not demonstrate evidence of active inflammation.

Peritoneal Cavity

No abdominal effusion or peritonitis is identified. Abdominal lymph nodes appear unremarkable. The iliac trifurcation is normal.

ULTRASONOGRAPHIC FINDINGS

PRIMARY FINDINGS

- Borderline to mildly increased adrenal thickness (up to 0.71 cm) based on the portions of the adrenal glands that could be confidently evaluated.

SECONDARY FINDINGS

- Bilateral mild renal nephrolithiasis without evidence of obstruction.
- Mild biliary sludge.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Abdominal ultrasonography does not reveal significant structural abnormalities of the liver or biliary system. Mild biliary sludge is noted and is considered incidental in the absence of cholestasis or biliary dilation.

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However, normal or near-normal hepatic ultrasonographic appearance does not exclude clinically relevant hepatopathy. Many common causes of chronic hepatocellular and cholestatic enzyme elevation in dogs—particularly those involving diffuse, microscopic, metabolic, inflammatory, or vacuolar hepatopathies—may not result in detectable ultrasonographic changes. Conditions such as steroid-induced or stress-related hepatopathy, chronic inflammatory hepatopathy, early vacuolar change, endocrine-associated hepatopathy, or early fibrotic processes can produce enzyme elevations well before architectural distortion becomes apparent on imaging.

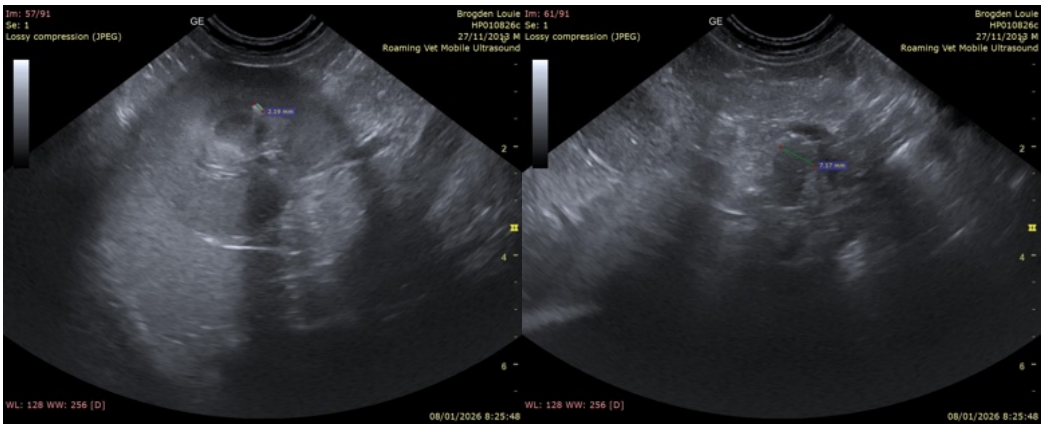
The progressive nature of the ALT elevation suggests ongoing hepatocellular injury, while the persistently elevated ALKP may reflect cholestatic enzyme induction rather than mechanical biliary obstruction. The absence of ultrasonographic abnormalities supports a diffuse, non-obstructive hepatic process rather than focal or mass-associated disease.

Adrenal measurements are borderline to mildly increased for a dog of this size (up to 0.71 cm), based on the portions that could be confidently evaluated; while nonspecific and not diagnostic of hyperadrenocorticism, this finding may be clinically relevant in the context of persistently elevated alkaline phosphatase and should be interpreted alongside clinical findings and endocrine testing, if indicated.

Concurrent renal findings, including bilateral nephrolithiasis and mildly increased renal cortical echogenicity, are noted but are not expected to directly account for the hepatic enzyme abnormalities.

Recommendations

- Interpret adrenal measurements in conjunction with clinical findings and biochemical trends; consider endocrine testing (hyperadrenocorticism screening) if clinically indicated.
- Continue periodic monitoring of liver enzymes (ALT, ALKP) to assess progression or stabilization.
- Consider further hepatic functional testing (bile acids) or hepatic sampling if liver enzyme elevations persist or continue to increase.



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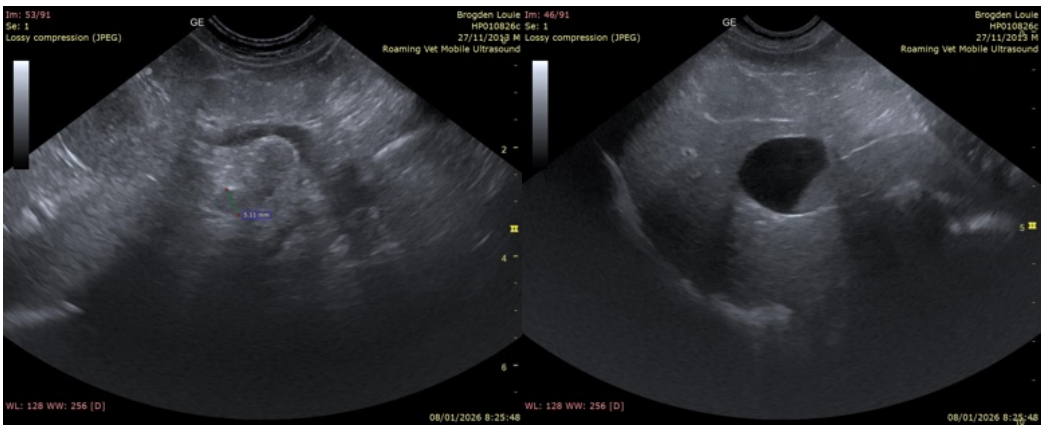

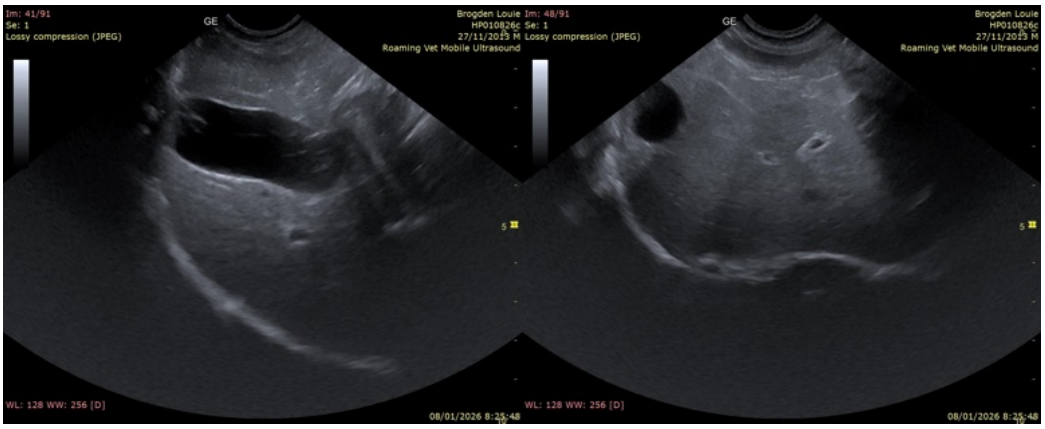

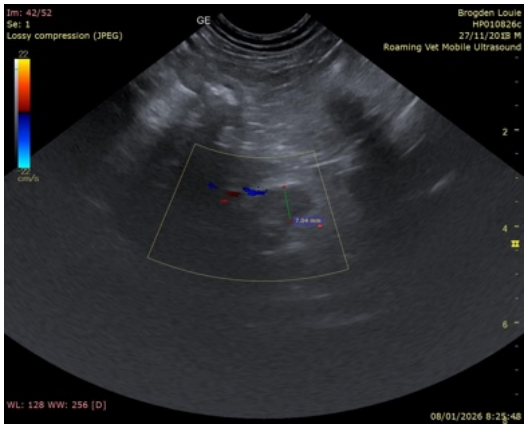

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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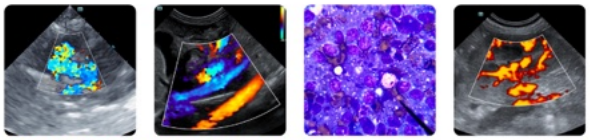

Clinical Sonography & Telecytology
Educational Teleconsultation Services™

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Alicia Angosto Guerrero, DMV, PgDip, MSc.

MV Esp Ultrasound in Domestic and Wild Animals

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