



## PATIENT

Larry Vandermast

## SPECIES

Canine

## BREED

Shih Tzu Mix

## SEX

Neutered male

## AGE

13 years

## WEIGHT

13.5 lbs

## INTERPRETED BY

Alicia Angosto  
Guerrero, DMV,  
PgDip, MSc.

## IMAGING PERFORMED BY

Jenn Copp

## HOSPITAL NAME

Westside AH Maine

## REFERRING VET

Dr. Copp

## INVOICE

78342

## DATE

6/3/26

## PRESENTING CLINICAL SIGNS

History: Elevated liver enzymes, progressive. No significant PU/PD, panting or signs of cushings. Asymptomatic.

Abnormal PE/Chem/CBC/UA Results: PE- NSF other than slightly pot-bellied, suspected cranial organomegaly. 10/17/23- ALT 457, ALP 385 11/9/23- ALT 103, ALP 223 4/15/25 - ALT 150, ALP 441 4/16/26- ALT 161, ALP 1228 5/27/26- ALT 160, 1228

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The urinary bladder is normally distended, and the urinary bladder wall appears thin and smooth. The urine is anechoic. The bladder neck and proximal urethra appear normal. No calculi or sonographic evidence of inflammatory or proliferative disease are identified.

The left kidney is normal in shape and size, measuring 4.51×3.01 cm. Cortical thickness measures 0.44 cm in the sagittal plane.

The right kidney is normal in shape and size, measuring 4.67×2.56 cm. Cortical thickness measures 0.46 cm in the sagittal plane.

In both kidneys, cortical echogenicity is within normal limits. Corticomedullary definition and corticomedullary ratio are preserved. No pyelectasia, nephrolithiasis, or hydronephrosis is identified.

### Adrenal Glands

Both adrenal glands are normal in shape and echogenicity. Dorsoventral diameters measured in the sagittal plane are as follows: the left adrenal gland measures 0.56 cm at the cranial pole and 0.50 cm at the caudal pole. The right adrenal gland measures 0.56 cm at the cranial pole and 0.55 cm at the caudal pole. The reported values represent the largest measurements obtained from three separate acquisitions of each gland.

### Spleen

Splenic thickness measures 1.73 cm. The splenic parenchyma demonstrates normal echogenicity and a fine homogeneous echotexture. Several small well-defined hyperechoic myelolipoma-like nodules are present, the largest measuring approximately 0.5 cm. The splenic capsule is smooth and regular.

### Liver

The liver is subjectively enlarged with a smooth contour. The hepatic parenchyma demonstrates a generally homogeneous echotexture with multiple well-defined homogeneous hyperechoic nodules distributed throughout the hepatic parenchyma, ranging from approximately 0.5 cm to 2.0 cm in diameter. No hepatic lymphadenopathy is identified.



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The gallbladder is normally distended. The wall is thin and regular. A moderate amount of non-shadowing biliary sludge is present within the lumen. No dilation of the cystic duct or common bile duct is identified.

### ***Gastrointestinal tract***

The stomach is empty and folded. Gastric wall thickness measures 2.46 mm and normal wall layering is preserved.

The pyloric wall measures 6.07 mm. The duodenal wall measures 3.93 mm. The jejunal wall measures 3.31 mm. Intestinal wall layering is preserved throughout the examined segments.

No sonographic evidence of gastrointestinal obstruction, focal mural lesions, ileus, or foreign material is identified.

The colon appears within normal ultrasonographic limits.

### ***Pancreas***

The evaluated pancreatic regions do not show evidence of overt inflammation or neoplastic disease.

### ***Free Abdomen***

No sonographic evidence of abdominal effusion, peritonitis, or lymphadenomegaly is identified. The iliac trifurcation is normal.

## **PRIMARY FINDINGS**

- Hepatomegaly with multifocal homogeneous hyperechoic hepatic nodules.
- Moderate biliary sludge.
- Multiple small splenic myelolipoma-like nodules.

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Hepatomegaly with chronic hepatic remodeling characterized by multifocal homogeneous hyperechoic hepatic nodules and concurrent biliary sludge. In an elderly dog, these findings most commonly represent benign chronic hepatocellular proliferative and degenerative changes, including nodular hyperplasia and/or vacuolar hepatopathy.

The ultrasonographic findings are compatible with chronic hepatobiliary disease and likely account for the progressive elevation in liver enzyme activities, particularly the marked ALP elevation. No sonographic evidence of extrahepatic biliary obstruction, aggressive hepatic neoplasia, or clinically significant pancreatic disease is identified.

The adrenal glands are within normal ultrasonographic size limits and do not demonstrate changes



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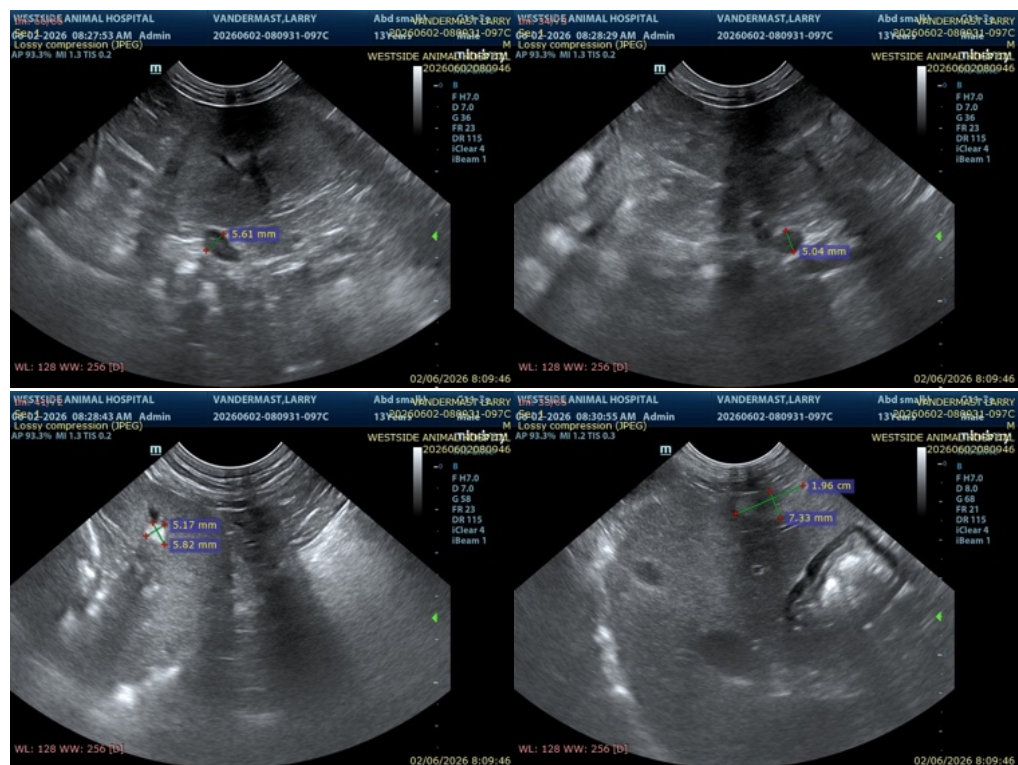
typically associated with adrenal enlargement. However, ultrasonography cannot assess adrenal function, and hyperadrenocorticism cannot be excluded solely on the basis of imaging findings.

The splenic nodules are most consistent with incidental benign myelolipoma-like lesions.

### Recommendations

- Serial monitoring of liver enzyme activities.
- Consider hepatoprotective therapy (SAME and/or silybin-containing products).
- Ursodeoxycholic acid may be considered, as no sonographic evidence of extrahepatic biliary obstruction is identified.
- Ultrasound-guided fine-needle aspiration of representative hepatic nodules may be considered if definitive characterization is clinically desired.

Final diagnostic and therapeutic decisions should be made by the attending veterinarian, who can best integrate these findings with the patient's clinical status.





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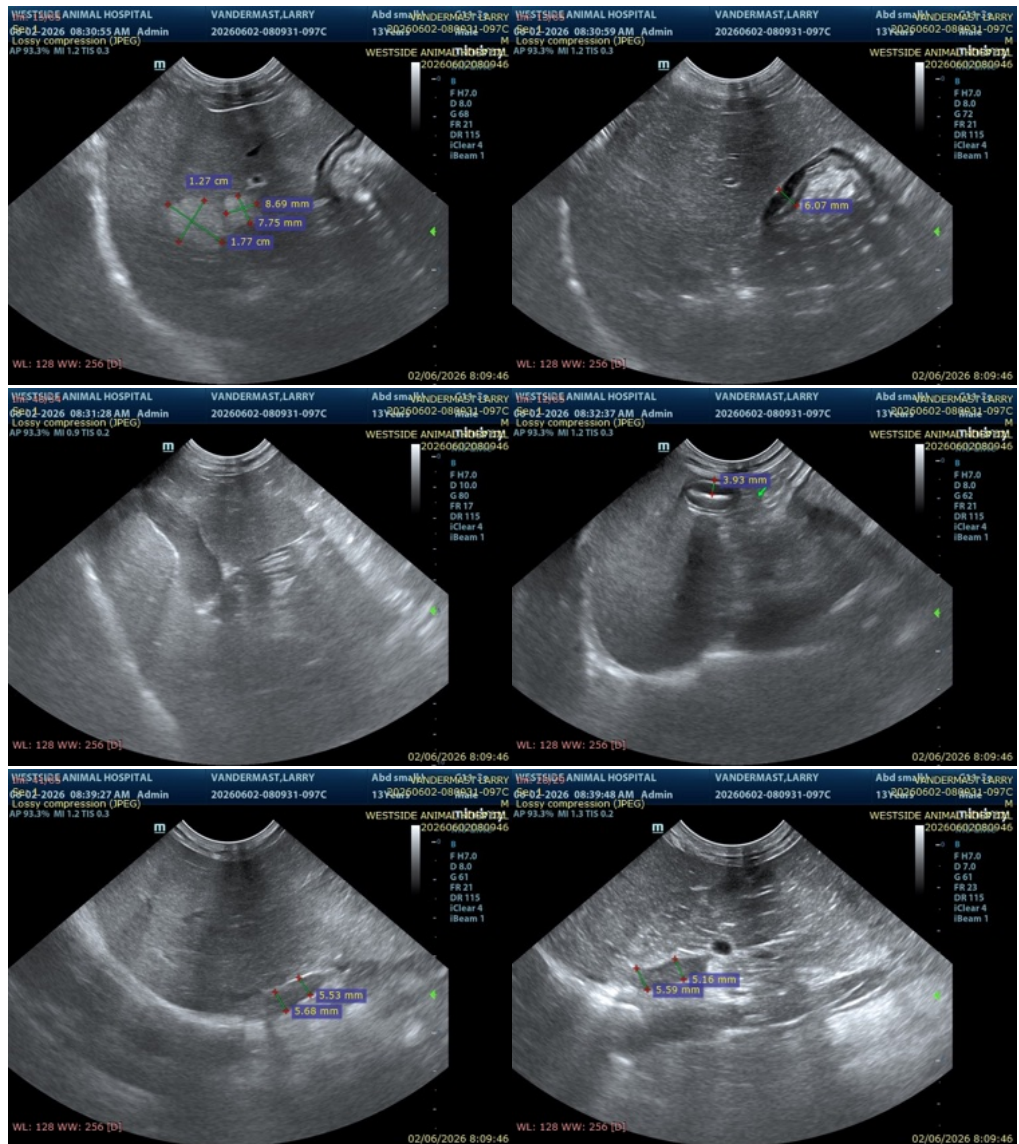
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Alicia Angosto Guerrero, DMV, PgDip, MSc.**

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