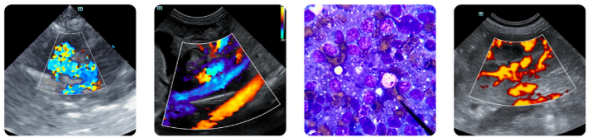




**PATIENT**

Teddy Lemus

**SPECIES**

Canine

**BREED**

Yorkie

**SEX**

NM

**AGE**

10 years 4 months

**WEIGHT**

5.9 kg

**INTERPRETED BY**

Alicia Angosto Guerrero, DMV, PgDip, MSc.

**IMAGING PERFORMED BY**

Dr. Jill Rankin

**HOSPITAL NAME**

Signal Hill Animal Clinic

**REFERRING VET**

Dr. Veronica D

**INVOICE**

11322

**DATE**

2/13/2026

## PRESENTING CLINICAL SIGNS

- Teddy is a canine patient with a one-year history of diabetes who presented for acute gastrointestinal distress, with significant concurrent findings of hepatomegaly and suspected hyperadrenocorticism (Cushing's disease).
- The patient was seen yesterday for an acute onset of vomiting and diarrhea. As of today, these clinical signs have reportedly improved. A Canine Pancreatic Lipase (CPL) test was normal, suggesting the gastrointestinal signs were not due to pancreatitis.
- One year prior to presentation, Teddy was diagnosed with diabetes. Current significant findings include hepatomegaly, and an elevated ALP in the 600s. Other lab values, including cholesterol and platelets, were normal. Suspicion for Cushing's disease, which may have developed since he was last tested for the condition some time ago.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is normally distended. The wall is thin and smooth. The urine is predominantly anechoic, with a small amount of sedimented, small echogenic calculi noted within the dependent portion of the lumen. No ultrasonographic evidence of cystitis or mural mass is identified.

The left kidney measures 4.21×2.25cm in the sagittal plane. Cortical thickness is 0.45cm. The cortex is isoechoic relative to the hepatic parenchyma. One to several small, well-defined cortical cysts measuring 1–5.2mm are present. The corticomedullary ratio is normal and corticomedullary definition is preserved. No pyelectasia, nephrolithiasis, or hydronephrosis is identified.

The right kidney measures 4.67×2.15cm in the sagittal plane. Cortical thickness was not provided. The cortex is isoechoic relative to the hepatic parenchyma. Several small cortical cysts are present. The corticomedullary ratio is normal and corticomedullary distinction is preserved. No pyelectasia, nephrolithiasis, or hydronephrosis is identified.

### *Adrenal Glands*

Both adrenal glands maintain normal shape and echogenicity. Dorsoventral diameters measured in the sagittal plane (maximum of three measurements obtained):

- Left adrenal gland: 0.45cm at the cranial pole and 0.62cm at the caudal pole.
- Right adrenal gland: 0.69cm at the cranial pole and 0.61cm at the caudal pole.

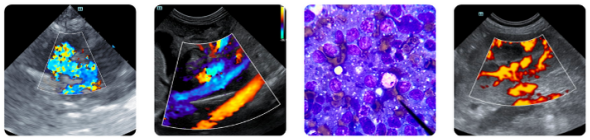
In small-breed dogs under 10kg, the upper reference limit for caudal pole thickness is generally considered approximately 6.0–6.5mm.

### *Spleen*

Splenic thickness is 1.93cm. The parenchyma is homogeneous with normal echogenicity. The capsule is smooth. Splenic vasculature is unremarkable.

### *Liver*

The liver is subjectively enlarged with rounded margins and regular contour. The parenchyma is homogeneous, isoechoic relative to falciform fat, with a fine echotexture. Multiple small focal





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hyperechoic areas measuring less than 1cm are present within the parenchyma. No hepatic lymphadenopathy is identified.

The gallbladder is normally distended. The wall demonstrates changes consistent with mucosal hyperplasia of the mucinous glands. A moderate amount of organized biliary sludge is present, compatible with early gallbladder mucocele formation (type I–II). No dilation of the cystic duct or common bile duct is identified.

### *Gastrointestinal*

The stomach is empty and folded with normal mural thickness (2.06mm) and preserved layering.
Pylorus: 3.70mm.
Duodenum: 2.90mm.
Jejunum: 3.10mm.
Ileum: 2.0mm.
Ileocecal junction: 3.76mm.
Wall layering is preserved throughout. No evidence of obstruction or inflammatory thickening.
Transverse colon: 1.14mm, containing fluid.
Descending colon: 1.23mm, empty and folded.

All measurements fall within expected normal limits for a small-breed dog.

### *Pancreas*

The pancreatic parenchyma appears mildly hyperechoic relative to adjacent omental fat. No peripancreatic fat hyperechogenicity, fluid, or architectural distortion is identified.

### *Free Abdomen*

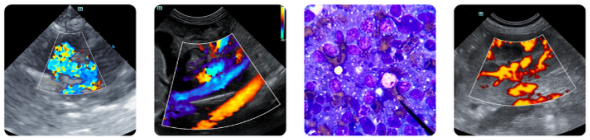
No abdominal effusion or ultrasonographic evidence of peritonitis is identified. Abdominal lymph nodes are not visualized; surrounding regions appear unremarkable. The iliac trifurcation region is normal.

## PRIMARY FINDINGS

- Hepatomegaly with multifocal small hyperechoic hepatic foci (<1cm).
- Gallbladder mucosal hyperplasia with organized sludge (early mucocele type I–II).
- Mild pancreatic hyperechogenicity.
- Small sedimented cystic calculi within the urinary bladder.
- Bilateral small renal cortical cysts.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This 10-year-old diabetic Yorkshire Terrier demonstrates subjective hepatomegaly with a homogeneous parenchymal pattern, most consistent with diffuse vacuolar hepatopathy. In a chronically diabetic dog, this may reflect glycogen-type hepatopathy. The small, multifocal hyperechoic hepatic foci (<1cm) are most compatible with benign nodular hyperplasia or vacuolar change.





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The gallbladder demonstrates mucosal hyperplasia with organized sludge consistent with early mucocele formation (type I–II), without evidence of biliary obstruction. This finding is clinically relevant, as gallbladder mucocele formation is reported with increased frequency in dogs with hyperadrenocorticism and diabetes mellitus.

The constellation of hepatomegaly and moderate ALP elevation maintains hyperadrenocorticism as a clinically relevant differential. The adrenal glands are symmetric and measure at the upper end of accepted reference limits for a dog of this size, without loss of normal morphology or evidence of unilateral enlargement. These findings do not support adrenal-dependent disease and are not definitively diagnostic of pituitary-dependent hyperadrenocorticism; however, adrenal dimensions within high-normal limits do not exclude early or mild pituitary-dependent disease.

The pancreas is hyperechoic relative to adjacent mesenteric fat, without peripancreatic inflammatory change. In a chronically diabetic patient, increased pancreatic echogenicity more commonly reflects lipomatous infiltration or chronic degenerative remodeling, changes that may be seen in association with longstanding diabetes mellitus and/or hypercortisolism.

Mild bilateral renal cortical cysts are consistent with age-related change and are unlikely to be clinically significant at their current size.

Overall, the imaging findings are most compatible with metabolic/steroid-induced hepatopathy, with hyperadrenocorticism remaining a clinically plausible unifying diagnosis that cannot be confirmed or excluded on ultrasound alone.

Recommendations

- Perform endocrine screening for hyperadrenocorticism.
- Closely monitor diabetic regulation, as concurrent hyperadrenocorticism may contribute to insulin resistance.
- Medical management and serial ultrasonographic monitoring of the gallbladder are recommended to assess progression of mucocele formation.
- Given the presence of small calculi, complete urinalysis with sediment evaluation and assessment of urine pH are recommended. Diabetic patients are predisposed to urinary tract infections and struvite formation. Survey abdominal radiographs may be useful to assess radiopacity and quantify stone burden.

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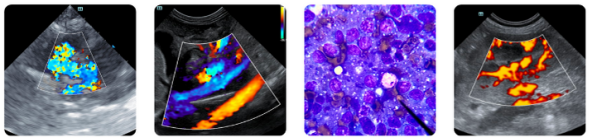

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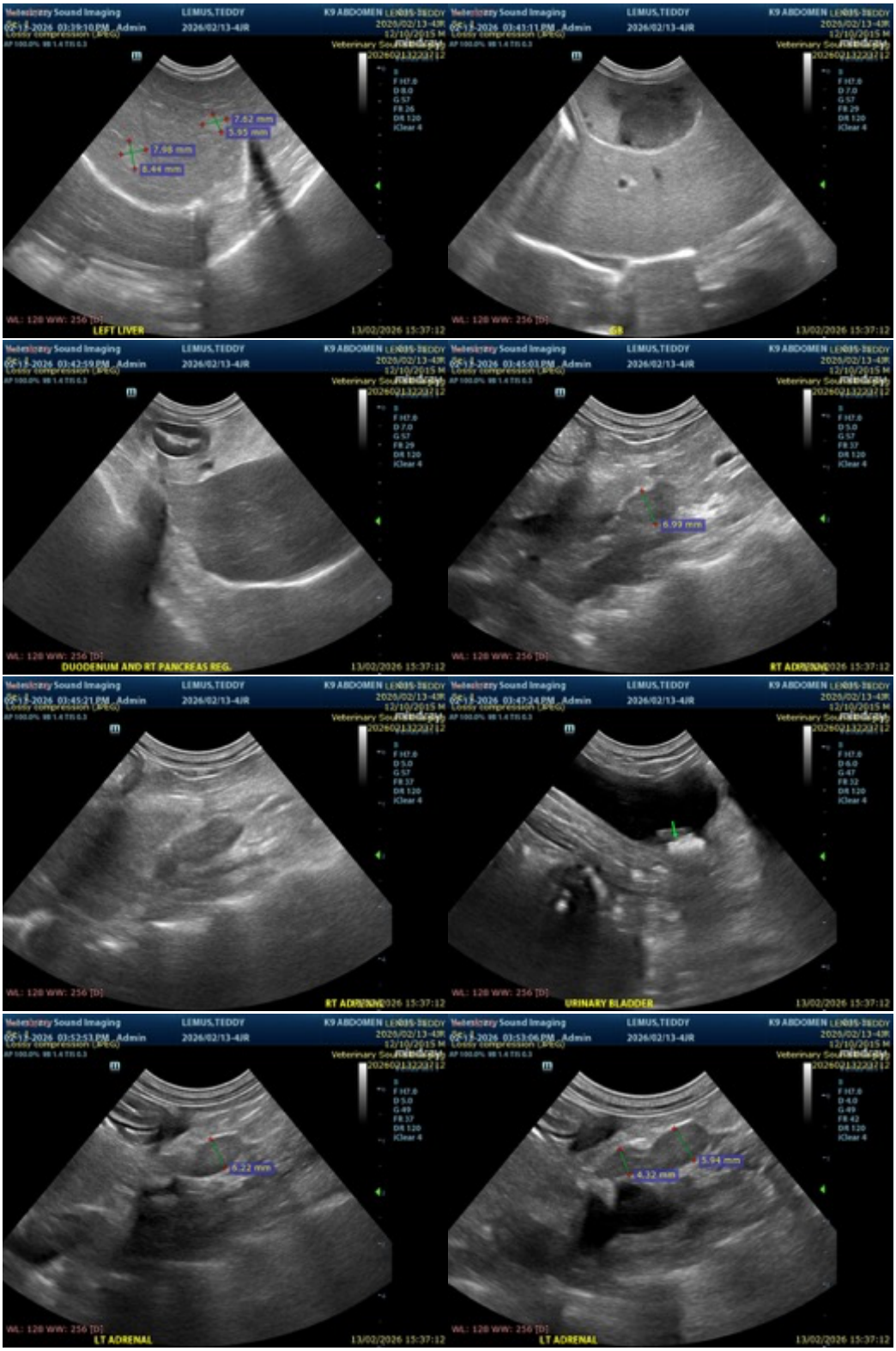

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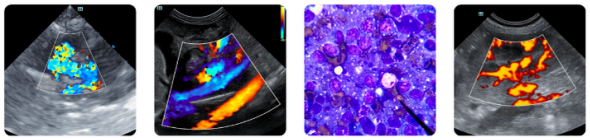

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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

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

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