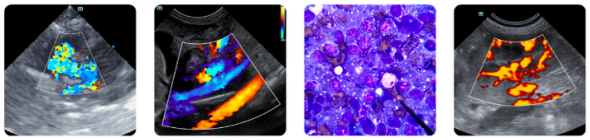


PATIENT

Bhow Penner

SPECIES

Canine

BREED

Brittany

SEX

NM

AGE

10 years 5 months

WEIGHT

18.5 kg

INTERPRETED BY

Alicia Angosto Guerrero, DMV, PgDip, MSc.

IMAGING PERFORMED BY

Dr. Jill Rankin

HOSPITAL NAME

Bridgeland Vet Clinic

REFERRING VET

Dr. Costa

INVOICE

11321

DATE

2/13/2026

PRESENTING CLINICAL SIGNS

- The patient is a 10-year, 5-month-old male Brittany whose pre-anesthetic screening revealed a markedly elevated ALP and isosthenuria, prompting postponement of a dental procedure for further investigation despite the patient being clinically well.
- On 04/02/2026, pre-anesthetic labs performed for a COHAT showed a markedly elevated ALP at 1,564, while the ALT and CBC were within normal limits. A urinalysis from the same day demonstrated isosthenuria with a urine specific gravity of 1.011, trace hematuria, and trace proteinuria on dipstick with an inactive sediment. The patient was noted to be clinically well, with no significant PUPD, polyphagia, or other signs. Consequently, the COHAT was postponed pending further investigation.
- On physical examination, the patient had a soft, non-painful abdomen. Other findings included multiple soft, mobile SQ masses on the ventral thorax, alopecia with a greasy lesion on the dorsal tail, and myocalculus noted on oral exam.
- The current diagnostic plan is to perform an abdominal ultrasound to evaluate the liver and biliary system to investigate the cause of the marked ALP elevation. The ultrasound will also be used to assess adrenal size, symmetry, and architecture to rule out underlying disease.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is normally distended. The wall is thin and smooth. The luminal contents are anechoic. The bladder neck and proximal urethra are unremarkable. No uroliths or ultrasonographic evidence of inflammatory or neoplastic disease are identified.

Left Kidney
The left kidney is normal in shape and size, measuring 5.28×3.17cm in the sagittal plane. Cortical thickness is 0.55cm.

Right Kidney
The right kidney is normal in shape and size, measuring 4.98×3.26cm in the sagittal plane. Cortical thickness is 0.60cm.

Both: The renal cortex is isoechoic compared to the hepatic parenchyma. There is mild hyperechogenicity of the outer medulla. The corticomedullary ratio is normal, and corticomedullary distinction is preserved. There is no pyelectasia, nephrolithiasis, or hydronephrosis.

Adrenal Glands

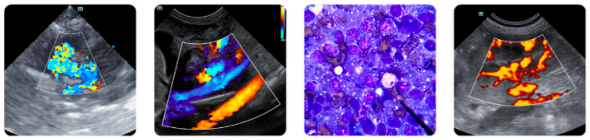
Dorsoventral diameters measured in the sagittal plane:

- Left adrenal gland: 0.74 cm at the cranial pole and 0.70 cm at the caudal pole.
- Right adrenal gland: 0.74 cm at the cranial pole and 0.61 cm at the caudal pole.

Spleen

Splenic thickness is 1.53cm. The parenchyma demonstrates normal echogenicity and a fine, homogeneous echotexture without focal abnormalities. The splenic capsule is smooth and regular.

Liver



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The liver is subjectively normal in size, with sharp margins and a regular contour. The parenchyma is homogeneous and isoechoic relative to the surrounding falciform fat. Two focal hypoechoic nodular lesions are identified, measuring 2.13×2.42cm and 1.02×1.18cm. No hepatic lymphadenopathy is observed.

The gallbladder is normally distended. The wall is mildly irregular, with small intraluminal polypoid-type projections, compatible with mucosal hyperplasia or polypoid change. The contents are predominantly anechoic with a minimum amount of biliary sludge. There is no dilation of the cystic duct or common bile duct.

Gastrointestinal

The stomach is empty and folded, with normal mural thickness (2.24mm) and preserved wall layering. The pylorus measures 4.62mm.
Duodenum: 3.51mm.
Jejunum: 3.58mm.
Ileum: 2.32mm.
Ileocecal junction: 3.29mm.
Wall layering is preserved throughout. No ultrasonographic evidence of ileus, inflammation, or foreign material is identified.
Colon measures 1.27–1.58mm, with formed feces in all the segments.

Pancreas

The evaluated pancreatic regions show no ultrasonographic evidence of overt inflammation.

Free Abdomen

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

PRIMARY FINDINGS

- Two focal hypoechoic hepatic nodules.

SECONDARY FINDINGS

- Mild gallbladder wall irregularity with small intraluminal polypoid projections.
- Mild hyperechogenicity of the outer medulla of the kidneys.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

In medium-sized dogs (10–30kg), the upper reference limit for the caudal pole is generally considered 7.0–7.5mm. Some studies cite 7.4mm as a practical cutoff for distinguishing normal from enlarged glands. Both measurements fall in the upper reference limits for a dog of this size. The glands are symmetric and maintain normal contour and architecture. These findings neither confirm nor exclude hyperadrenocorticism. While there is no ultrasonographic evidence of adrenal-dependent disease, early or mild pituitary-dependent hyperadrenocorticism cannot be ruled out based on adrenal size alone.

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Abdominal ultrasound reveals two well-defined hypoechoic hepatic nodules measuring 2.13×2.42cm and 1.02×1.18cm within an otherwise normal-appearing liver. These are most consistent with nodular hyperplasia or other benign hepatocellular proliferative lesions, although cytology would be required for definitive characterization.

The ultrasonographic appearance is most consistent with gallbladder mucosal hyperplasia (cystic mucosal hyperplasia) with mild biliary sludge, without evidence of obstructive cholestasis. In an older dog, small polypoid intraluminal projections arising from a mildly irregular wall, in the absence of wall thickening, pericholecystic effusion, or biliary duct dilation, most commonly represent benign mucosal hyperplastic change. This condition may be age-related but is also reported in association with endocrine disorders, including hyperadrenocorticism. At this stage, there are no features to support gallbladder mucocele formation or extrahepatic biliary obstruction.

The mild increased echogenicity of the outer medulla is a nonspecific finding and does not explain the documented isosthenuria.

Given the magnitude of ALP elevation, concurrent isosthenuria, and dermatologic findings, pituitary-dependent hyperadrenocorticism remains a clinically reasonable differential despite normal adrenal dimensions, and endocrine testing would be required for further assessment.

Recommendations

- Endocrine testing for screening pituitary-dependent hyperadrenocorticism.
- Recheck liver enzymes in 4–6 weeks.
- If endocrine testing is negative, consider bile acids testing to evaluate functional hepatic disease.
- Re-evaluation of the hepatic nodules with follow-up ultrasound. Fine needle aspiration may be considered if interval growth, architectural change, or new lesions develop, or if laboratory abnormalities progress without alternative explanation.

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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.

info@SonoPath.com