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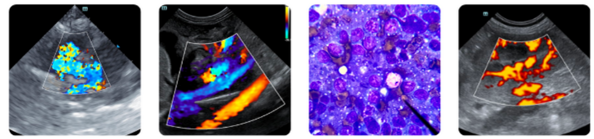


Clinical Sonography & Telecytology
Educational Teleconsultation Services™

PATIENT
Budy Slattery

SPECIES
Canine

BREED
Mini Poodle

SEX
MN

AGE
11 years

WEIGHT
12 lbs

INTERPRETED BY
Greg Kuhlman, DVM, DACVIM (SAIM)

IMAGING PERFORMED BY
Dr. Julia Bakker

HOSPITAL NAME
Orange Blossom Veterinary Imaging

REFERRING VET
Dr. Arthur Newman

INVOICE
12068

DATE
6/3/2026

PRESENTING CLINICAL SIGNS

Elevated liver enzymes - progressive ALT and ALKP elevations. Previous AUS attached.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with a mild amount of echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can present with echogenic debris. There is a single, mildly shadowing, hyperechoic cystolith present measuring 2.5 mm in width. No masses observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed.

Left kidney measures 3.9 cm in length, and the right kidney measures 4.0 cm in length.

Adrenal Glands

The left adrenal gland presents normal shape and homogenous parenchyma. The phrenic vasculature is unremarkable. The cranial pole measures 5.8 mm and the caudal pole measures 5.6 mm.

The right adrenal gland is mildly enlarged, presents normal shape and homogenous parenchyma. The phrenic vasculature is unremarkable. The right adrenal gland is 6.0 mm in width, and cranial pole is enlarged and measures 12.4 mm.

Spleen

The spleen is normal in size, shape, margination and echogenicity. There are multiple hyperechoic lesions adjacent to large vessels consistent with benign myelolipomas.

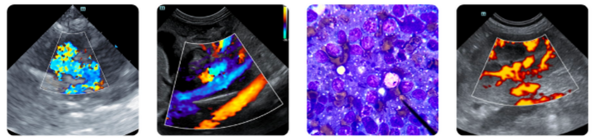
Liver

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is mildly overdistended with a moderate amount of non-dependent, mildly aggregated/inspissated sludge. Hypo to anechoic cystic areas are noted between the gallbladder sludge and luminal wall. The wall is otherwise smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion.

Gastrointestinal

The stomach has normal thickness and layering.



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Small intestine is diffusely mildly thick with a relatively thick mucosa compared to other layers. Normal wall layering is preserved; however, the mucosa is more echogenic than normal and contains hyperechoic striations perpendicular to the lumen. The lumen of the small intestine is empty with no evidence of obstruction or foreign material.

Colon contains normal contents with normal wall thickness.

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. The capsule is mildly irregular in shape. Parenchyma is mildly heterogenous and coarse. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There are no enlarged abdominal lymph nodes seen on this exam. No free abdominal fluid is seen.

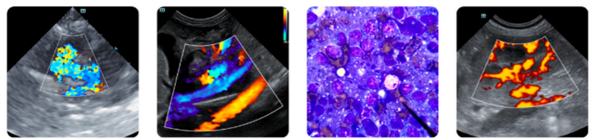
ULTRASONOGRAPHIC FINDINGS

- A moderate amount of echogenic urinary bladder debris with a single, mildly shadowing, hyperechoic cystolith.
- Age related changes visualized in both kidneys.
- Enlarged right adrenal gland.
- Lymphangiectasia – Small bowel findings are most consistent with lacteal dilation. These findings can be observed with protein-losing enteropathies caused by either primary lymphangiectasia or primary infiltrative inflammatory disease with secondary lymphangiectasia. Infiltrative neoplasia is possible but considered less likely. Histopathology is necessary to definitively determine underlying cause.
- Hyperechoic hepatomegaly – This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.
- Emerging mucocele – Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. The non-dependent nature of this sludge combined with the cystic areas are suggestive, however, of possible emerging cystic mucosal hyperplasia or early gallbladder mucocele.
- The observed pancreas appears appropriately isoechoic to surrounding omental fat. The capsule is mildly irregular in shape. Parenchyma is mildly heterogenous and coarse. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the appearance of both kidneys, recommend full staging, monitoring, and managing per IRIS guidelines.

Due to the uniformed enlargement of the right adrenal gland, the appearance of the liver, and the gallbladder, recommend screening for hyperadrenocorticism via low dose dexamethasone suppression



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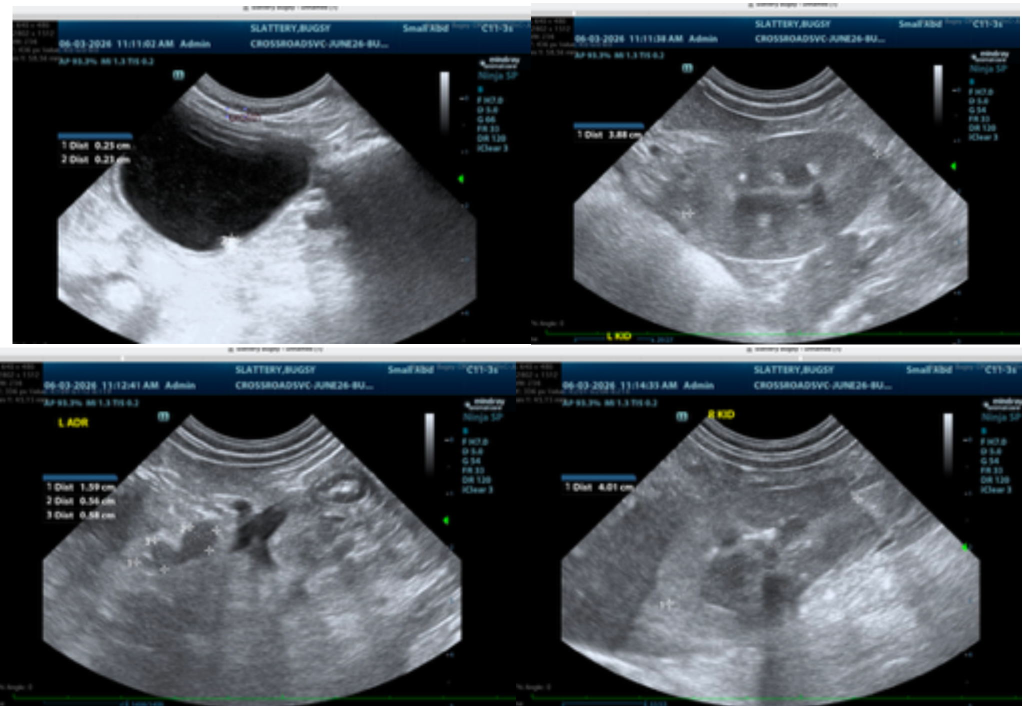
test. If hyperadrenocorticism is ruled out, consider testing for hypertriglyceridemia, hypothyroidism, and occult pancreatic or GI disease.

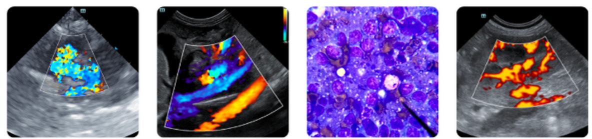
The gallbladder does not appear surgical at this time. Recommend continued monitoring via ultrasound every 3-6 months, as well as rechecking liver values, specifically cholestatic markers.

A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function, which may be contributing to elevated liver values causing an intermittent low grade extrahepatic biliary duct obstruction.

If a chronic enteropathy is identified on the GI Panel, recommend diet trial with either novel protein diets or hydrolyzed diet. If patient fails a diet trial, then recommend submission of GI biopsies. If there is no secondary cause for the elevation in liver values, then consider the possibility of primary liver disease being present.

If patient is not vaccinated for leptospirosis, then recommend testing for this disease to rule it out as a cause of the elevated liver values. Recommend fine needle aspirate of the liver to rule out infiltrative disease such as lymphoma or mast cell disease, however they do seem unlikely. Ultimately, a liver biopsy with submission for histopathology, copper quantification, and aerobic/anaerobic bacterial culture may be needed.





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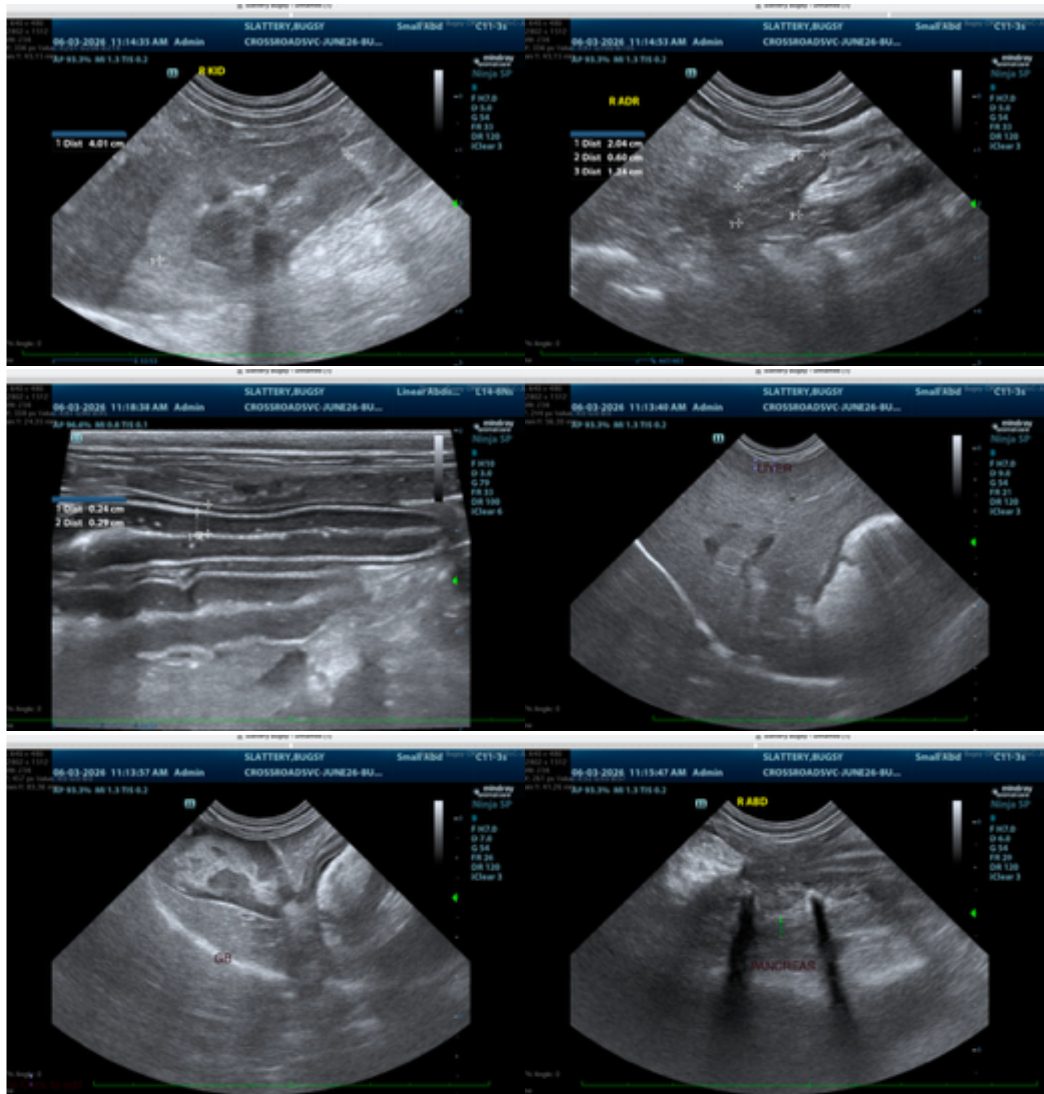

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Greg Kuhlman, DVM, DACVIM (SAIM)

Veterinary Internal Medicine Specialist
info@SonoPath.com