

**PATIENT**

Cookie Donaldson

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

10 Years

WEIGHT

10 Pounds

INTERPRETED BYBeth Johnson, DVM
DACVIM**IMAGING PERFORMED BY**

Amy Mayhew, LVT

HOSPITAL NAME

SVS Imaging MI

REFERRING VET

Union Lake VH

INVOICE

42535

DATE

11/3/22

PRESENTING CLINICAL SIGNS

Elevated ALT and ALP, no symptoms. ALT is 575, progressively increased
 Abnormal PE/Chem/CBC/UA Results: Elevated ALT and ALP, no symptoms. ALT is 575, progressively increased

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (3.95 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted.

The left kidney is normal in size (3.83 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, or infarcts observed. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted. A chronic infarct is noted at the cranial pole.

Adrenal Glands

The right adrenal gland is normal in size (0.43 cm at the caudal pole, cranial pole is not well visualized), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.45 cm at the cranial pole and 0.56 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). A hypo- to anechoic splenic nodule is noted near the tail of the spleen, non-capsule disrupting, measuring 1.25 cm x 0.75 cm. Splenic vasculature appears normal.

Liver

The liver is subjectively small in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of

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obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

An isoechoic, normal shaped left medial iliac lymph node measuring 0.44 cm thick is noted.

PRIMARY FINDINGS

- **Mild subjective microhepatica** – Rule out normal patient variant versus chronic end stage liver disease versus vascular anomaly versus other.
- **Hypo to anechoic splenic nodule** – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

SECONDARY FINDINGS

- **Gallbladder debris** - 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. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- Non-obstructive dystrophic mineralization bilaterally with a chronic infarct in the left kidney

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Bile acids are recommended if bilirubin is normal.

Testing for Leptospirosis is indicated if not recently evaluated.

An empirical course of hepatic nutraceuticals and antibiotics could be tried. However, ultimately, unless full improvement is achieved with empirical therapy, tissue sampling is likely warranted. A fine needle aspirate of the liver may be difficult, given the small size, but could be attempted if patient's coagulation status is appropriate to assess inflammatory cell type, rule in/out round cell neoplasia, etc. However, if a diagnosis is not obtained, a liver biopsy including copper level assessment may be required to definitively diagnose the underlying hepatopathy.

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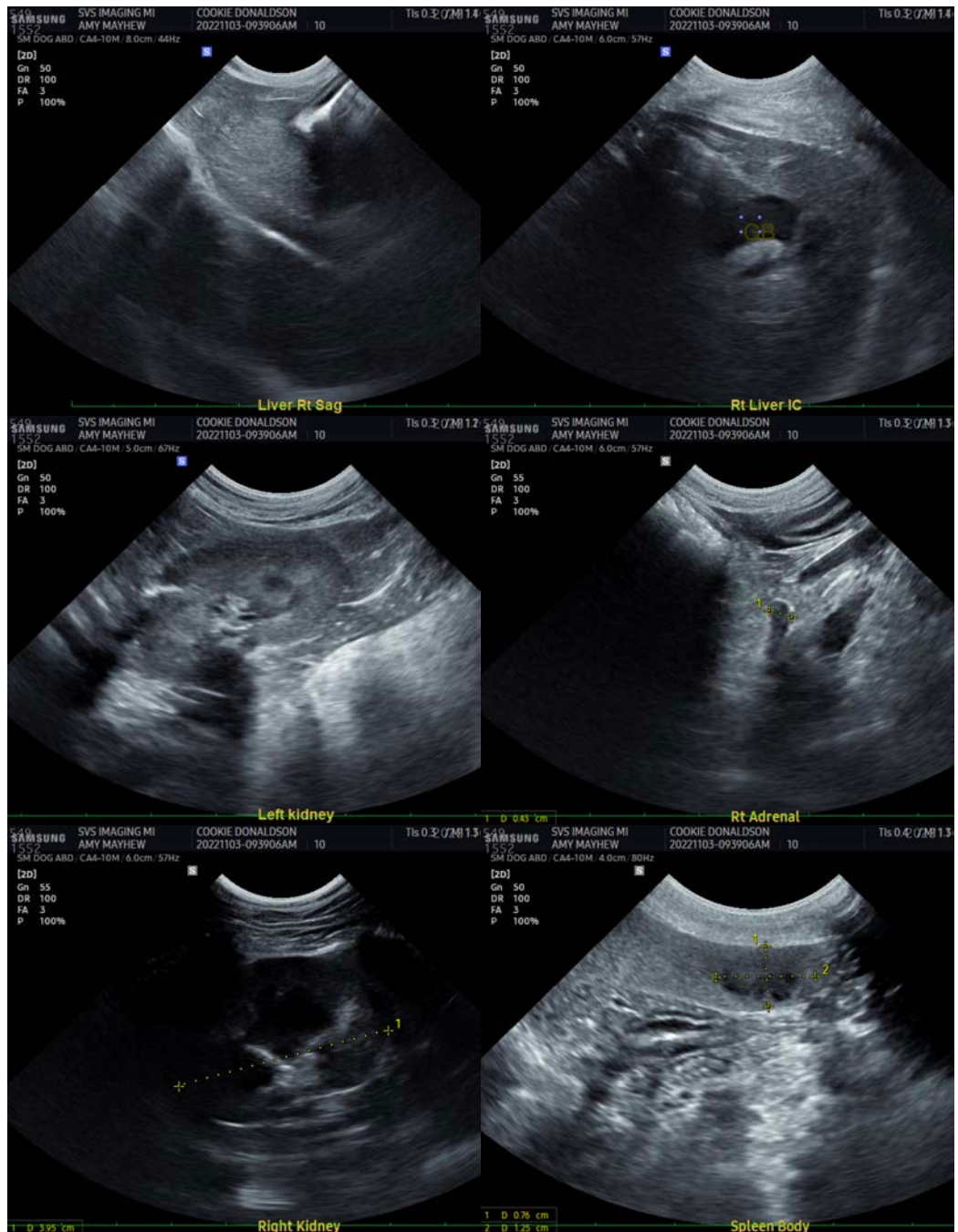
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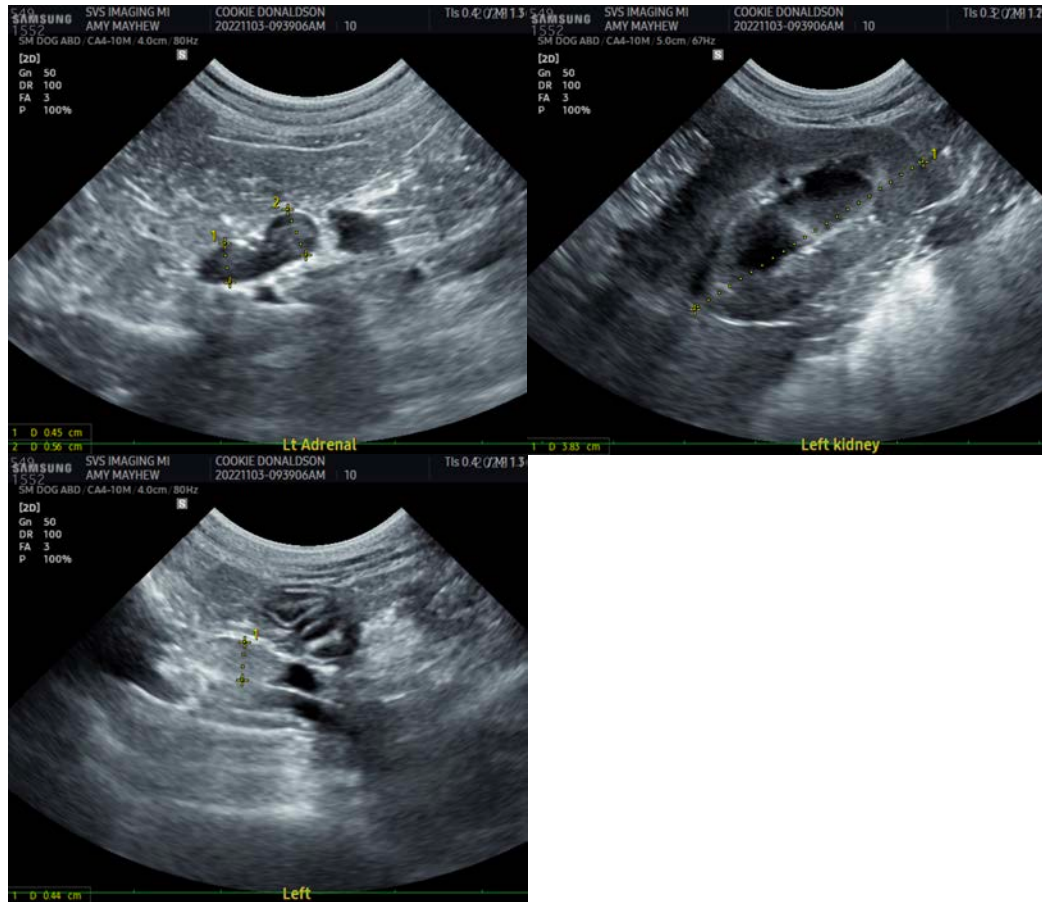
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM, DACVIM
Beth.Johnson@sonopath.com