PATIENT

Olivia Lucia

SPECIES

Canine

BREED

Mixed

SEX

FS

AGE

14 years

WEIGHT

20 kg

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Loetitia Saint-Jacques, LVT

HOSPITAL NAME

Desert Hills Animal Hospital

REFERRING VET

Dr. Amanda Brock

INVOICE

11881

DATE

5/5/2026

PRESENTING CLINICAL SIGNS

Patient presents for acute onset of lethargy, inappetance, and vomiting several days after starting doxycycline for tick exposure several weeks prior. No symptoms prior to starting the medication. Working diagnosis: Concern for liver insult possibly related to reaction to doxycycline, other.

Current Meds: Denamarin Advanced medium, Maropitant 24mg 2 tabs po SID.

Abnormal PE/Chem/CBC/UA Results: RAD report- CONCLUSIONS: 1. Rounded hepatic margins are nonspecific and could reflect vacuolar hepatopathy, hepatitis, or infiltrative neoplasia. Given the severely elevated ALT activity, clinically significant hepatopathy should be further investigated. 2. A small amount of soft tissue material in the stomach may be residual food in gastric secretions. Although a small amount of soft tissue opaque gastric foreign material cannot be excluded, there is currently no evidence of gastrointestinal obstruction. 3. There is possible sternal lymphadenopathy, although this appearance could be caused by mediastinal fat deposition. No other thoracic abnormalities are identified. There is no evidence of pulmonary neoplasia or pneumonia. ALT 5920 Alkphos 1364 GGT 65 T. Bilirubin 2.2 Cpli positive.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately 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 is size (6.27 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, mineral or infarcts observed.

The left kidney is normal is size (5.76 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, mineral or infarcts observed.

Adrenal Glands

The right adrenal gland is normal in size (0.79 cm at cranial pole and 0.56 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

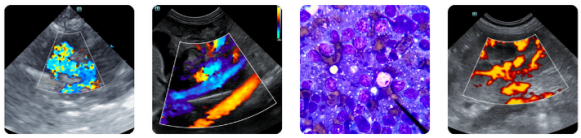
The left adrenal gland is normal in size (0.61 cm at cranial pole and 0.68 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

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). An approximately 0.4 cm in diameter, non-capsular disrupting anechoic density/cyst is noted mid spleen. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is mildly heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver



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parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion. Additionally, multifocal discrete, homogenous nodules are noted throughout the parenchyma with a representative nodule measuring approximately 0.6 cm in diameter.

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 is mildly distended with primarily fluid as well as some echogenic non-shadowing luminal contents and gas consistent with normal chyme. There is no evidence of obstruction, foreign material, or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction or foreign material noted.

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

Pancreas

The pancreas that is observed appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no visible free peritoneal effusion noted in these images.

Portal lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

ULTRASONOGRAPHIC FINDINGS

- An obvious cause for the moderate liver changes is not identified in these images. Microscopic disease such as Leptospirosis, bacterial cholangiohepatitis, chronic active hepatitis, copper-associated hepatotoxicity, other hepatotoxicity, other reactive hepatopathy, infiltrative neoplastia, etc. cannot be definitively ruled out.
- Mildly reactive portal lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.
- Moderate 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.

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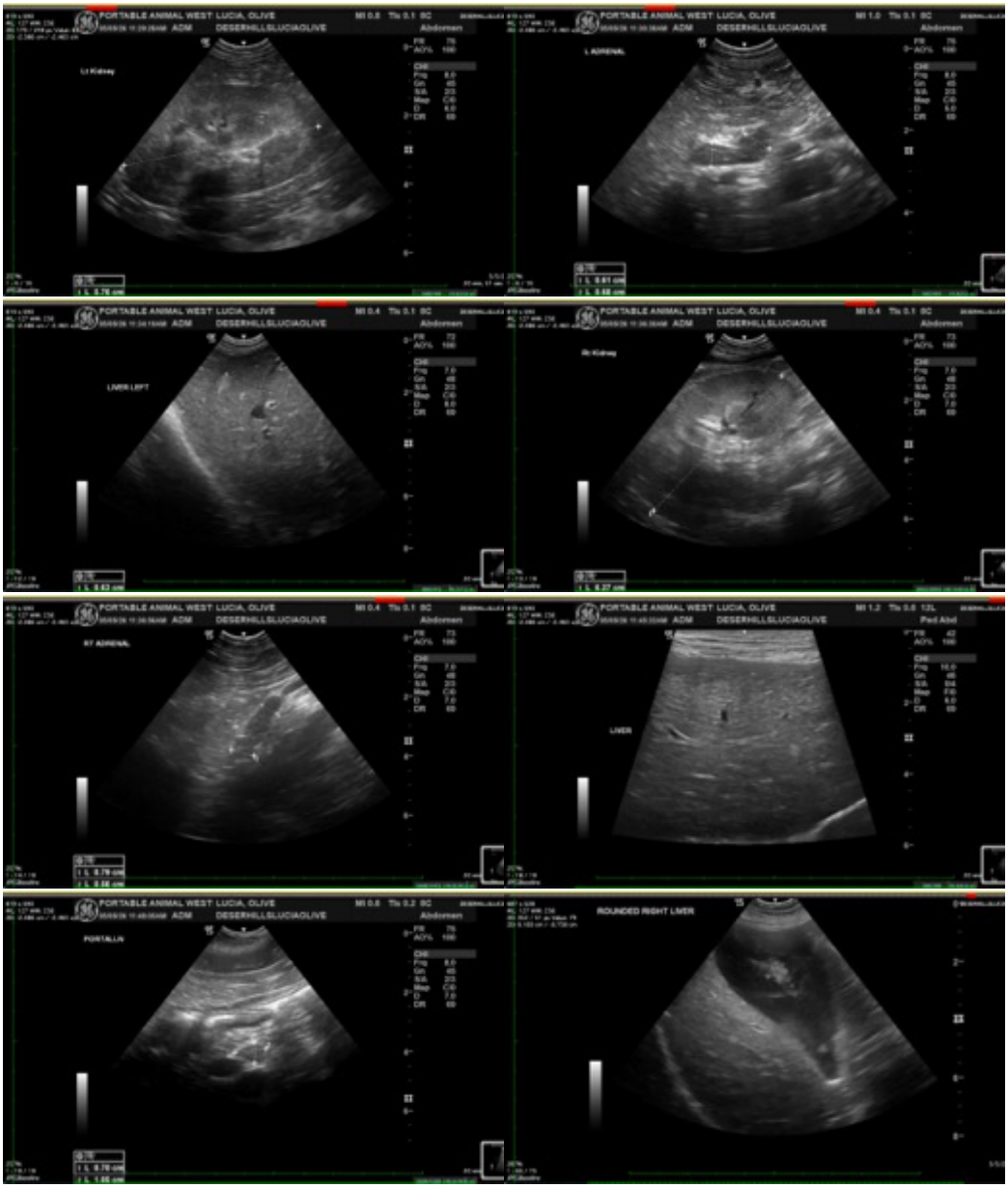
- Hypo to anechoic splenic nodule – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given patient's history, discontinuation of the doxycycline, if possible, while providing supportive/symptomatic medical management of clinical signs and hepatic nutraceuticals, and monitoring liver enzymes for improvement, can be considered. If, however, improvement is not noted, additional workup for underlying hepatopathy including liver sampling may ultimately be indicated.



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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
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