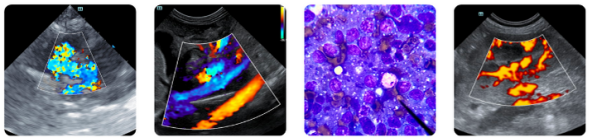


PATIENT

Holly Kazarosian

SPECIES

Canine

BREED

Labrador

SEX

FS

AGE

13 years

WEIGHT

90 lbs

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Dr. Melinda Persson

HOSPITAL NAME

At Home Veterinary

REFERRING VET

Dr. Melinda Persson

INVOICE

10826

DATE

11/25/2025

PRESENTING CLINICAL SIGNS

Right adrenalectomy (adrenal cortical carcinoma) and liver lobectomy (hepatocellular carcinoma, mild lymphoplasmacytic periportal hepatitis) in July 2024 *October 2024 no recurrence noted on ultrasound - two small nodules on the left adrenal that had gotten slightly bigger *Liver enzymes increasing *Recently (past few months) on carprofen after having been on metacam for a long time *Currently feeling well and doing well.

Abnormal PE/Chem/CBC/UA Results: ALT now 776, in May 223 ALP now 1434, in May 1141 AST now 146, in May 32.

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 (6.22 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 (6.96 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 has reportedly previously been removed.

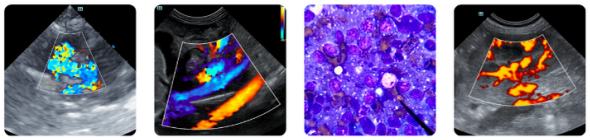
The left adrenal gland is normal in size (0.71 cm at cranial pole and 0.74 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal. A hyperechoic nodule is noted in the caudal pole pole. Nodule does not disrupt normal shape and/or architecture.

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). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is diffusely, markedly heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion. Additionally, in one view, there's an approximately 2.5 cm x 5.5 cm in size more focally discrete, slightly more hypoechoic density that could represent a liver mass. Although, given the debris within the gallbladder, as well as the markedly heterogenous appearance of the liver, combined with the positioning of the mass, an atypical view of the gallbladder versus a mass can't be definitively ruled out.



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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 empty with 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 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 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.

There is no apparent pathologic lymphadenopathy noted in these images.

* **This study is partially limited, especially the cranial abdomen, by a large amount of movement and artifact reportedly secondary to panting.** *

ULTRASONOGRAPHIC FINDINGS

- Diffusely, the markedly heterogenous liver could represent a benign process such as nodular hyperplasia, stereo vacuolar hepatopathy, extramedullary hematopoiesis, or a chronic inflammatory disease. However, infiltrative neoplasia such as round cell neoplasia, metastatic neoplasia, other, can't be ruled out without tissue sampling. Especially, if the more focally hypoechoic area described above is a true mass.

- 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.

- Hyperechoic adrenal nodule in the caudal pole of the left adrenal gland – Differentials include primary adrenal cortical adenoma or adenocarcinoma, pheochromocytoma, myelolipoma, adrenal hyperplasia secondary to pituitary disease or metastatic disease. Ultrasound alone cannot differentiate between functional and non-functional nodules and/or between benign

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and malignant disease. Small nodules without other evidence of abdominal disease (to suggest metastatic disease) and/or clinical signs (to suggest adrenal disease) are most often incidental and should be monitored. * The right adrenal gland has reportedly previously been removed. *

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

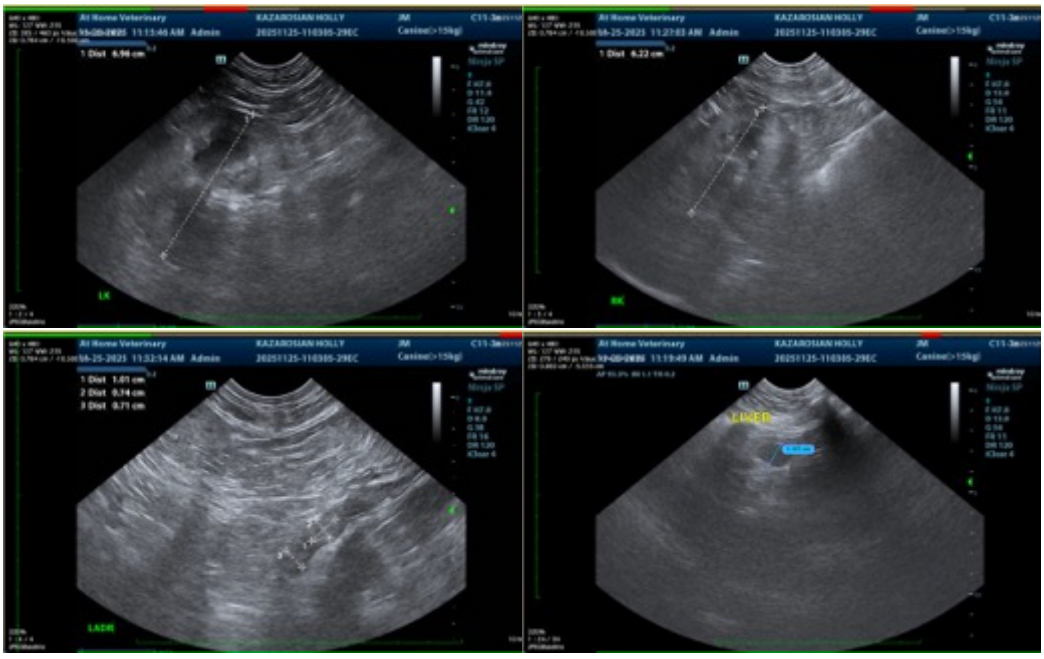
Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

Fine needle aspirates of the liver are recommended if patient's coagulation status is appropriate.

Pending results of above, bile acids could be considered if patient's total bilirubin is not increased.

If a diagnosis is not obtained, testing for leptospirosis could also be considered.

Other than supportive/symptomatic medical management of clinical signs, further treatment recommendations are largely dependent on results of the above.



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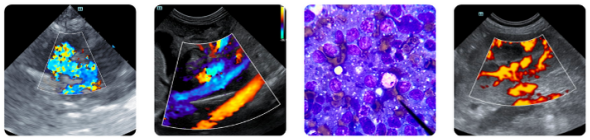

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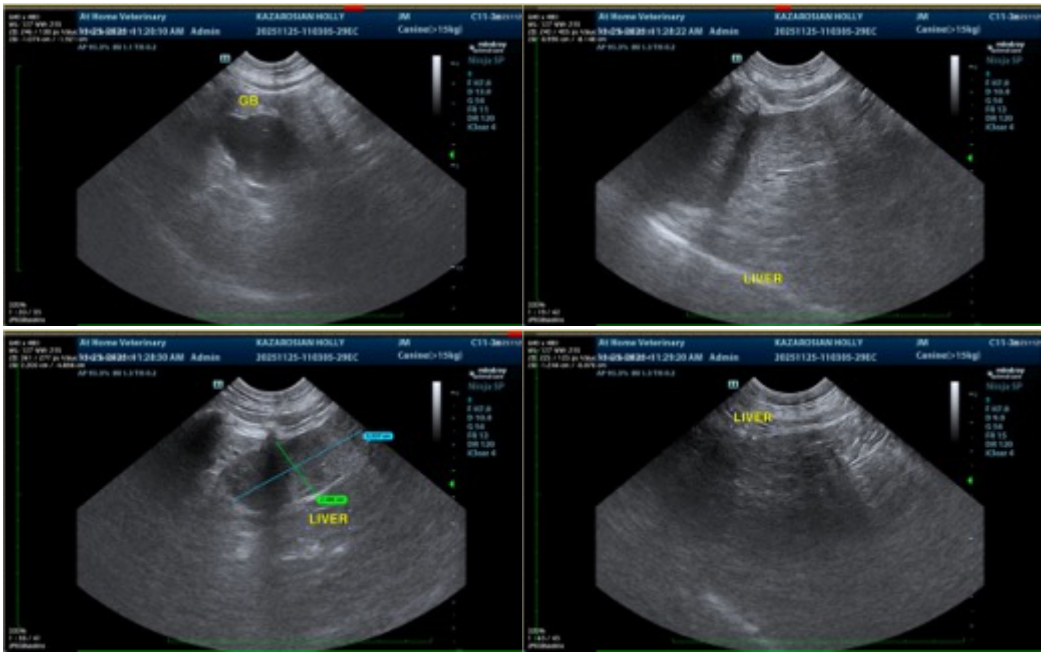

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
info@sonopath.com