



PATIENT

Joey Dunmire

PRESENTING CLINICAL SIGNS

history of chronically elevated liver enzymes (alkp and alt). Asymptomatic. Had LDDS test previously at a different vet and results were normal.

SPECIES

Canine

Abnormal PE/Chem/CBC/UA Results: chem 10 - ALP 1709 (previous record BW 6/2022 1261) ALT 235 (previous record BW 6/2022 140) Bile acids not performed yet

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

BREED

Beagle

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

SEX

Neutered Male

The prostate is normal in size and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

AGE

9.5 Years

The left kidney has a normal shape and size (5.7 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

45 Pounds

The right kidney has a normal shape and size (6.2 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

Kathleen Sennello DVM,
MS, Diplomate ACVIM
(Small Animal Internal
Medicine)

Adrenal Glands

The left adrenal gland is normal in size measuring 0.65 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

IMAGING PERFORMED BY

Dr. Meghan Myers

The right adrenal gland is normal in size measuring 0.50 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is somewhat irregular in appearance in that there is an ill-defined hyperechoic region within the right adrenal measuring 0.47 cm x 0.48 cm, consistent with a hyperechoic adrenal nodule.

HOSPITAL NAME

Hershire AH

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

REFERRING VET

Dr. Meghan Myers

Liver

The liver is large in size and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are numerous ill-defined hyperechoic nodules throughout the liver. One such nodule is visualized on the left, which is a small cystic portion measuring at 1.3 cm. The right side of the liver is more irregular with ill-defined hyperechoic to mixed echogenic mass effects. One such region measures 2.7 cm x 3.9 cm. Additionally, the region of the caudate lobe is large, lobulate and irregular with mixed echogenic nodules and occasional small cystic regions. This area measures 7.2 cm.

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40348

DATE

8/11/22



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The gall bladder lumen is significantly distended. Some areas of the wall appear mildly thickened with adherent debris. There is a large amount of primarily non-organized echogenic debris. There is no evidence of bile duct dilation. These changes can be consistent with an early gall bladder mucocele.

SPECIES

Canine

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

BREED

Beagle

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.)

SEX

Neutered Male

Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

AGE

9.5 Years

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

WEIGHT

45 Pounds

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

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Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

IMAGING PERFORMED BY

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- Large, irregular, severely heterogeneous liver with ill-defined hyperechoic to mixed echogenic nodules and masses - The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. These lesions are poorly defined, creating "mass effects". The right side of the liver appears more irregular, but there is diffuse involvement. This could represent a benign or neoplastic lesion.

HOSPITAL NAME

Hershire AH

- Large, distended gallbladder with gallbladder sludge adhered to the wall - The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

REFERRING VET

Dr. Meghan Myers

- Small, ill-defined hyperechoic nodule in the right adrenal gland - This lesion could represent hyperplasia, an incidentaloma, or represent an early benign or neoplastic lesion. Recommend blood pressure evaluation and continued monitoring.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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The liver is large and heterogeneous with numerous ill-defined nodules and masses. These areas coalesce into each other, and a discrete mass effect cannot be clearly visualized. These lesions could represent benign or neoplastic lesions. Recommend a liver function test and consider a fine needle



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aspirate of the liver (particularly the caudate lobe would be a good example). If surgical intervention would be considered, I would recommend a contrast CT scan to better delineate these regions and see if surgical intervention is possible. If these lesions represent a primary liver mass or are benign lesions, there could be a favorable prognosis, particularly with surgical resection. These tend to be slow progressing lesions and often are not identified until they are quite large.

SPECIES

Canine

There is a large amount of adhered debris on the gallbladder wall with minimal surrounding inflammation. Recommend starting Ursodiol and continuing to monitor the gallbladder with ultrasound to look for progression of this lesion.

BREED

Beagle

There is a small hyperechoic region in the right adrenal gland. This does not deform the gland at all and could be incidental. Recommend blood pressure evaluation and continued monitoring with ultrasound for possible progression of this lesion.

SEX

Neutered Male

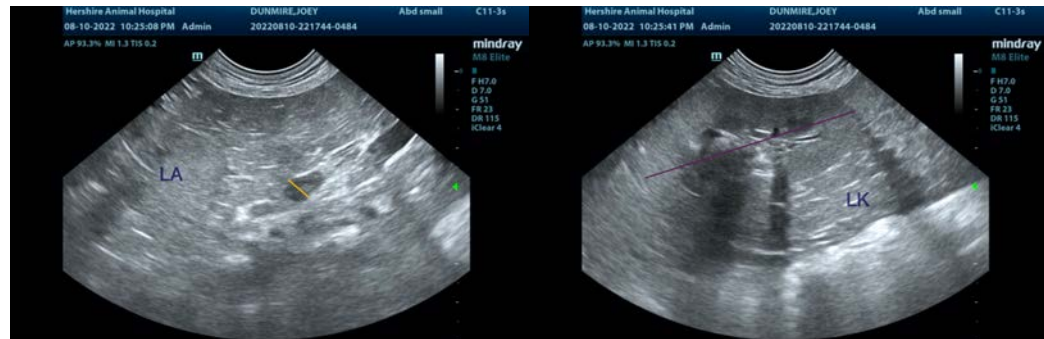
Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

AGE

9.5 Years

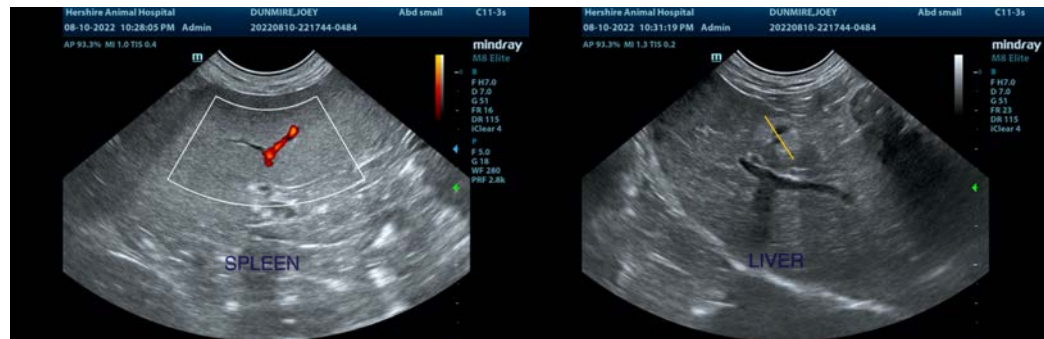
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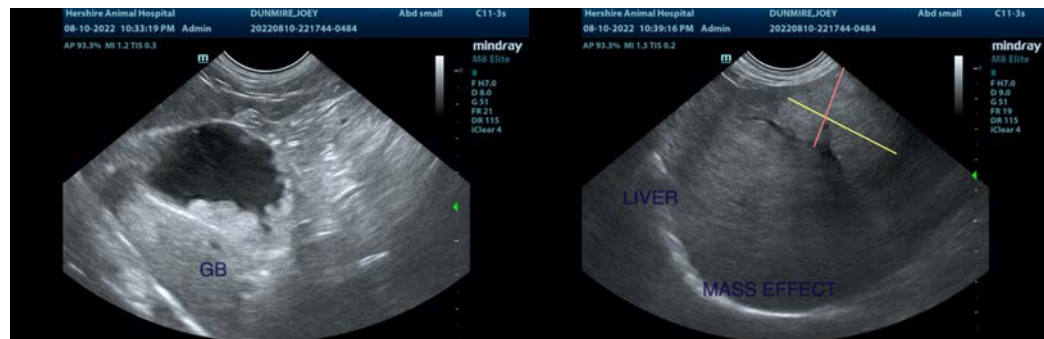


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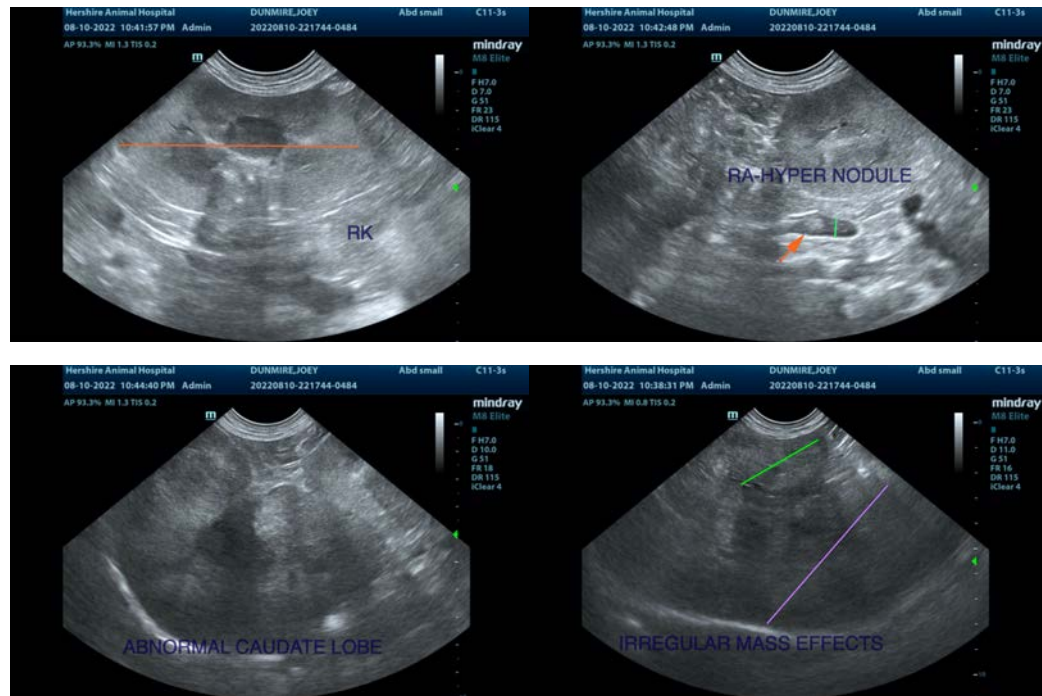
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

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