



PATIENT PRESENTING CLINICAL SIGNS

Oreo Vetter Presented on 12/30/2022 for annual exam, with no significant findings. Bloodwork - elevated liver enzymes.

SPECIES Abnormal PE/Chem/CBC/UA Results: Reticulocytes 125 (10-110), Reticulocyte Hemoglobin 22.5 (24.5-31.8), Total protein 7.8 (5.5-7.5), Albumin 4.3c(2.7-3.9), ALT 451 (18-121), ALP 791 (5-160), Cholesterol 408 (131-345).
Canine

BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Labrador Retriever

Urinary System

SEX The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 4 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.
MN

AGE Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Bilateral pinpoint medullary mineral was present. The left kidney measured 6.6 cm in length. The right kidney measured 7.5 cm in length.
9yr

WEIGHT The area of the aortic trifurcation was free of pathology.

75lb The area of the residual prostate appeared normal and free of pathology measuring 0.64 cm in diameter.

INTERPRETED BY Adrenal Glands

R. McKenzie Daniel, DVM, DABVP (Canine and Feline) The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.81 cm width in the cranial pole and 0.64 cm width in the caudal pole. The right adrenal gland measured 0.67 cm width in the cranial pole and 0.59 cm width in the caudal pole.

IMAGING PERFORMED BY Spleen

Pamela Harrigan, RDMS

HOSPITAL NAME The spleen exhibited a finely textured and heterogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Solitary to intermittent non-disruptive discrete hyperechoic nodules were present. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis.

Wood River Animal Hospital

REFERRING VET Liver/Gallbladder

Dr. Plunkett The liver presented enlarged in size. Generalized heterogenous to mild variably echogenic parenchyma was present with evidence of moderate coarse echotexture and parenchymal remodeling. The capsule of the liver was symmetrically rounded to mildly swollen in margination. An ill-defined mass like lesion or possible lobar swelling was present in the caudal aspect of the right to caudate lobe measuring ~ 6.6 cm in diameter. Within the mass like lesion, mildly enhanced heterogenous to nodular parenchyma changes were present. Subtle evidence of mild hyperechoic perihepatic mesentery was present. The hepatic and portal vasculature were normal in appearance without signs of congestion.

INVOICE 12607ag

DATE 01/06/2023 The gallbladder was non-distended in size with primarily anechoic luminal content and mild non-dependent echogenic debris in the area of the gallbladder neck. The cystic and common bile ducts were normal.



PATIENT *Gastrointestinal*

Oreo Vetter The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.

SPECIES The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

Canine Normal visible colon wall layers were present with apparent formed feces in lumen.

BREED *Pancreas*

Labrador Retriever The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum, likely consistent with age related changes and considered incidental. No signs of active inflammation or neoplasia.

SEX *Free Abdomen*

MN No omental masses, overt lymphadenopathy or peritoneal effusion was present.

AGE **ULTRASONOGRAPHIC FINDINGS**

- 9yr
- Heterogenous nodular to irregular liver with nodular mass like lesion in the caudal aspect of the right caudate liver lobe
 - Mild gallbladder debris (non-mucocele)
 - Mild heterogenous spleen with subjective benign nodules-consistent with benign myelolipomas
 - Mild chronic renal changes with pinpoint medullary mineral

WEIGHT

75lb

INTERPRETED BY

R. McKenzie Daniel, DVM,
DABVP (Canine and Feline)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The diffuse hepatic changes including the mass like lesion in the right to caudate liver were non-specific with considerations including chronic vacuolar hepatopathy, inflammatory/immune mediated disease, hematopoiesis, hyperplasia, fibrosis, toxic hepatopathy i.e. copper, infiltrative neoplasia or other.

IMAGING PERFORMED BY

Pamela Harrigan, RDCS

Assuming normal clotting status and using a 25g needle, a hepatic parenchyma and liver lesion FNA for screening cytology is warranted for further assessment. Hepatic core surgical biopsy with histopathology is likely required for a definitive diagnosis. A leptospirosis titer/PCR may be considered if clinically indicated or if potential exposure/endemic to the area.

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Hepatosupportive medications such as Denamarin and Ursodiol with sonographic monitoring of the liver for evidence of progressive parenchymal changes or progressive liver mass lesion would be a more conservative approach.

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Labrador Retriever

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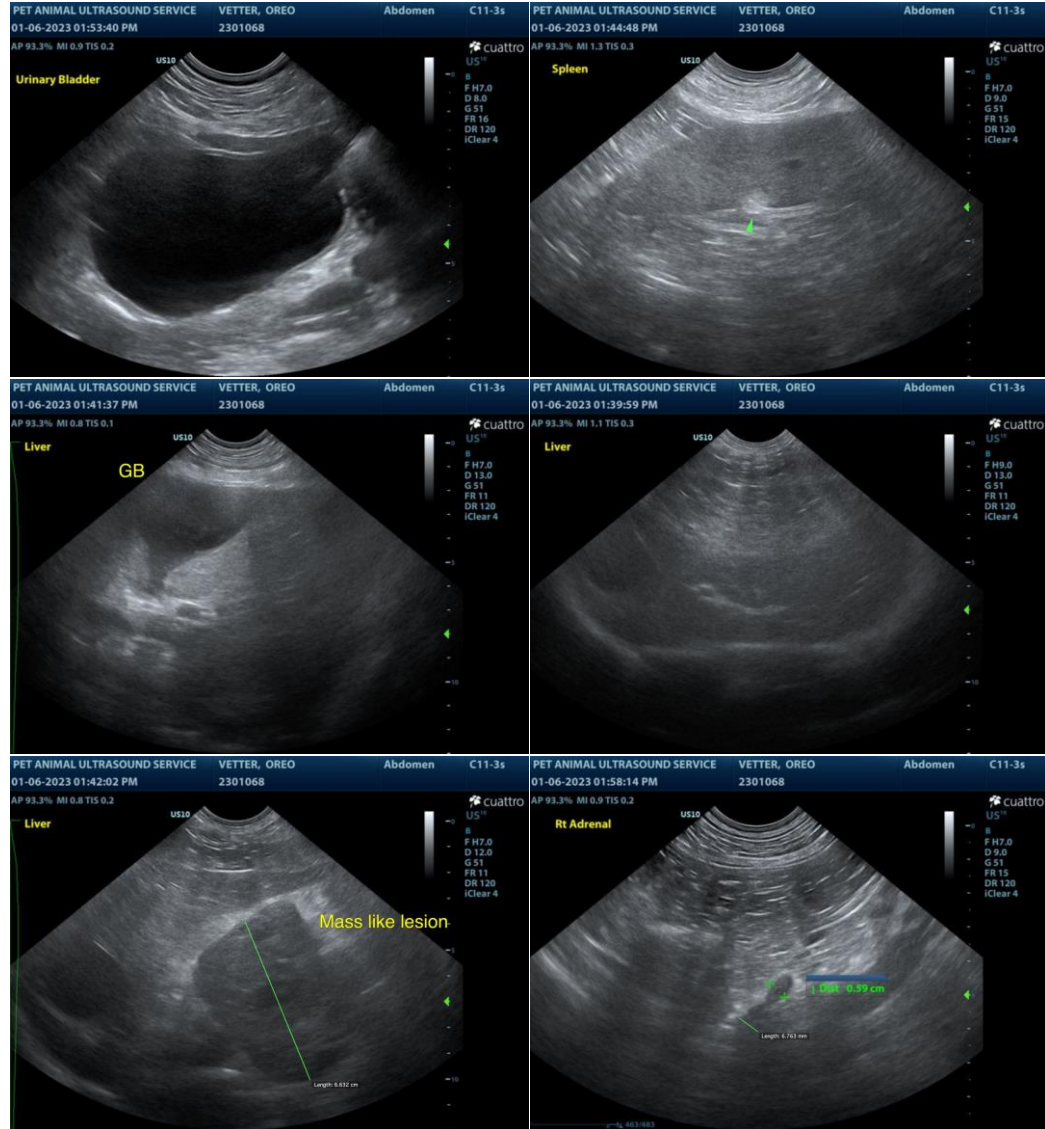
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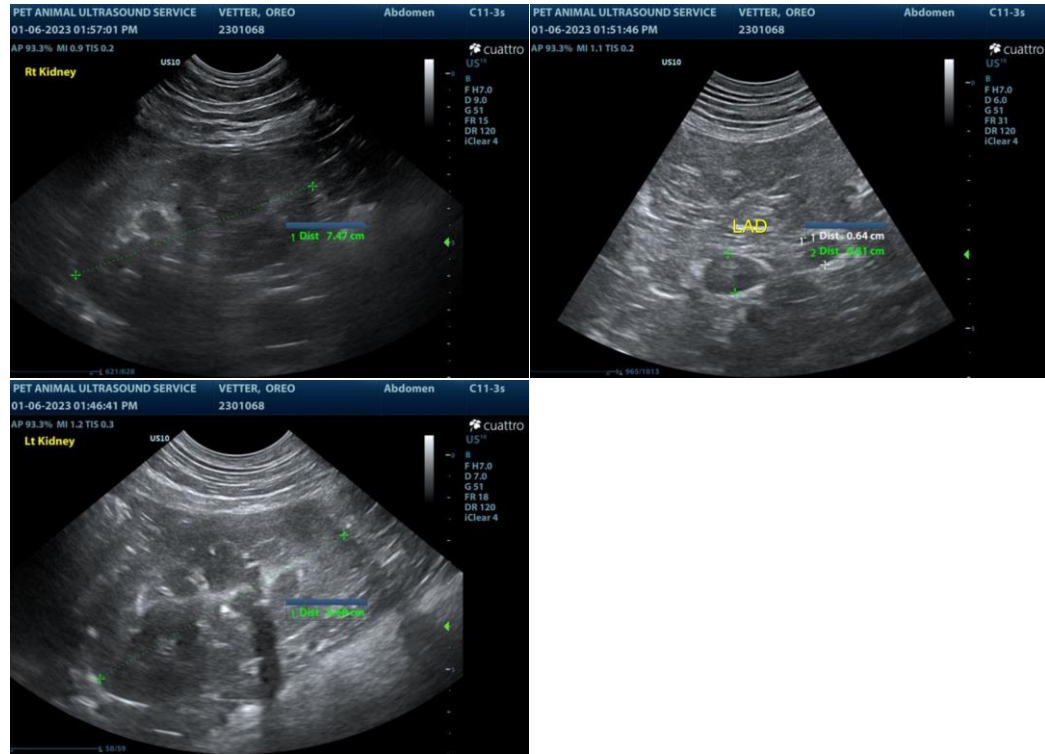
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

info@SonoPath.com