



PATIENT

Max Weider

SPECIES

Canine

BREED

Miniature Poodle

SEX

Neutered Male

AGE

12 Years

WEIGHT

15 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Cassels-Conway

HOSPITAL NAME

Central Broward AH

REFERRING VET

Dr. Cassels-Conway

INVOICE

37555

DATE

5/9/22

PRESENTING CLINICAL SIGNS

Newly acquired grade 3/6 left systolic murmur noted on annual exam 3/16/22. Cardio rads showed left sided cardiomegaly, mild venous prominence and tracheomalacia. Started on pimobendan. Bloodwork showed elevated ALP, Tbili and hypertriglyceridemia, proteinuria. Started Hills I/D low fat and limiting treats. Recheck bloodwork 6 weeks later showed ALP further increased with elevated ALP. Hypertriglyceridemia significantly improved. P asymptomatic.

Abnormal PE/Chem/CBC/UA Results: 5/3/22 Chem: ALT 366, ALP 1528, TG 460 3/16/22 CBC: Thrombocytosis 488 CHEM: ALP 1081, Tbili 0.4, TG 1177 T4: WNL U/A: 1.037, 3+ protein

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of – 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.

Normal size and margination were present in the kidneys. Both kidneys exhibited subjective mild cortex hypertrophy with mild loss of corticomedullary border demarcation. No evidence of pyelectasia. The left kidney measured 4.2 cm.

Adrenal Glands

The adrenal glands were uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.41 cm at the cranial pole and 0.45 cm at the caudal pole. The right adrenal gland measured 0.55 cm at the cranial pole and 0.49 cm at the caudal pole. No overt evidence of adrenal hyperplasia or tumors.

Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. 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. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver

The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. Intermittent, well demarcated, primarily uniform, mildly hyperechoic intraparenchymal nodules were present. Example measured 1.4 cm in diameter. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily anechoic luminal content. Mild to moderate non-dependent yet non-organized, non-mineralized luminal debris was present. Gallbladder walls were normal without evidence of inflammatory criteria, as well as no evidence of peripheral gallbladder inflammation. The cystic and common bile ducts were normal.

Gastrointestinal

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.



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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.

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

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Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

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Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

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ULTRASONOGRAPHIC FINDINGS

- Hepatopathy exhibiting intermittent, subjectively benign intraparenchymal nodules – nodules suggestive of lipogranulomas or potential nodular hyperplasia.
- Moderate gallbladder debris (non-mucocele)
- Mild heterogeneous parenchyma
- Non-specific chronic renal changes
- Overtly normal bilateral adrenal glands

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, the appearance of the liver was non-specific, yet most consistent with benign hepatopathy. Considerations may include metabolic, reactive, or vacuolar hepatopathy, given the ALP elevation, with potential for non-obstructive cholestasis in light of presence of gallbladder debris, and inflammatory hepatopathy (i.e., cholangiohepatitis), given the ALT elevation and presence of gallbladder debris. No overt evidence of post-hepatic obstruction or obvious neoplastic criteria, which is thought less likely.

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Given no reported clinical signs and overtly normal adrenal presentation, hyperadrenocorticism is considered unlikely. However, adrenal workup could be considered if clinical signs suggestive of adrenal hyperfunctionality arise.

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Hepatic FNA (assuming normal clotting status and using 25-gauge needle) could be considered, primarily to assess for evidence of inflammatory cells.

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The pancreas may indicate patient or age related variant, although potential for low-grade to chronic inflammation, which may present sonographically unremarkable, cannot be excluded.

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Hepatosupportive medications including Denamarin and Ursodiol with continued monitoring of hepatic enzyme and triglyceride levels would be reasonable. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.

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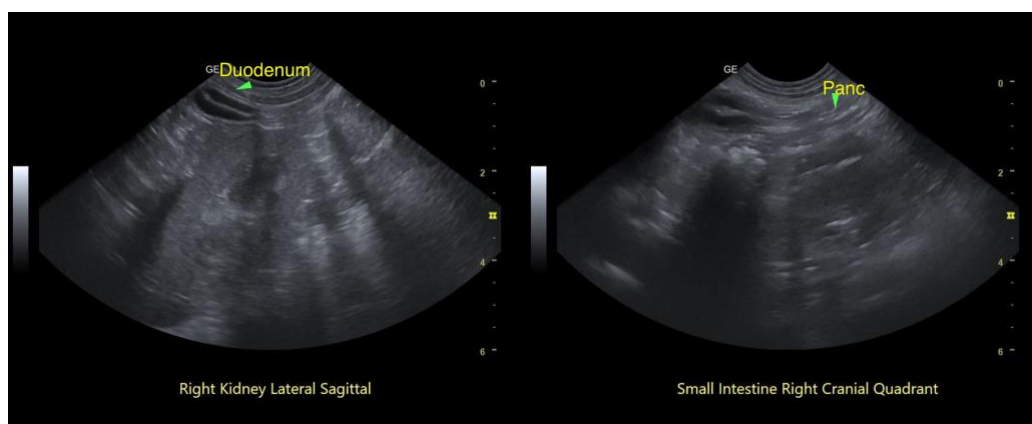
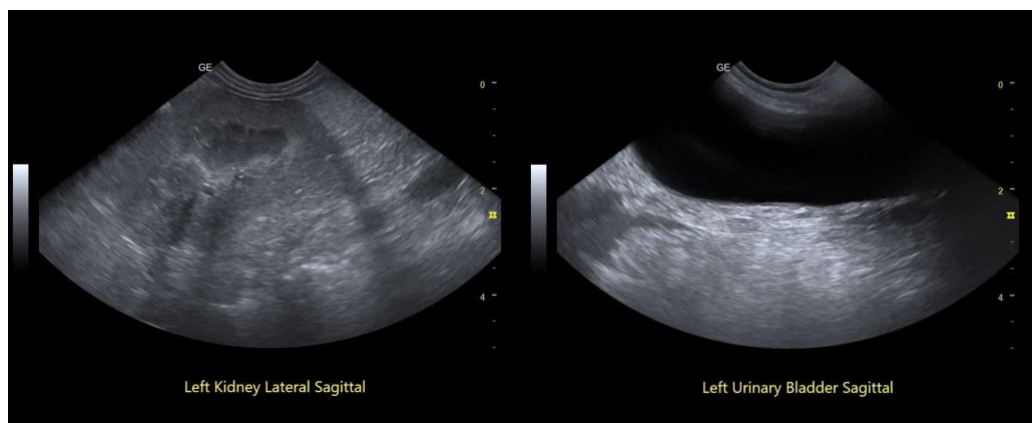
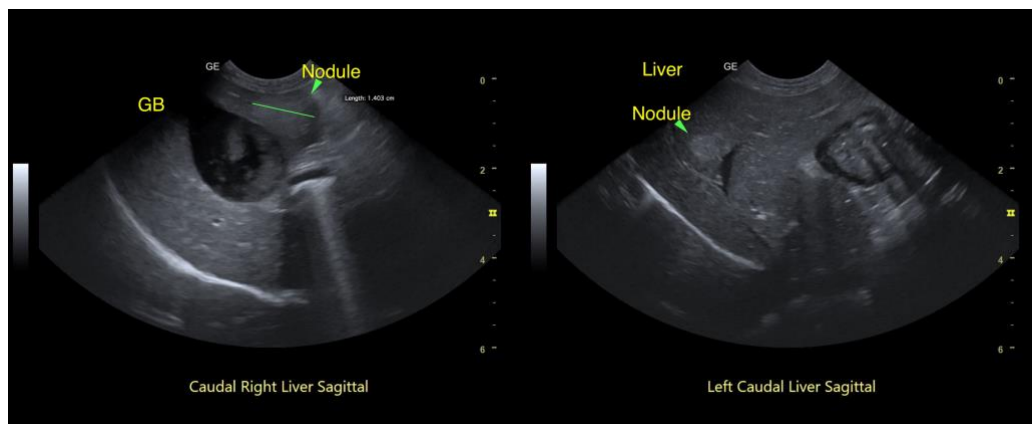
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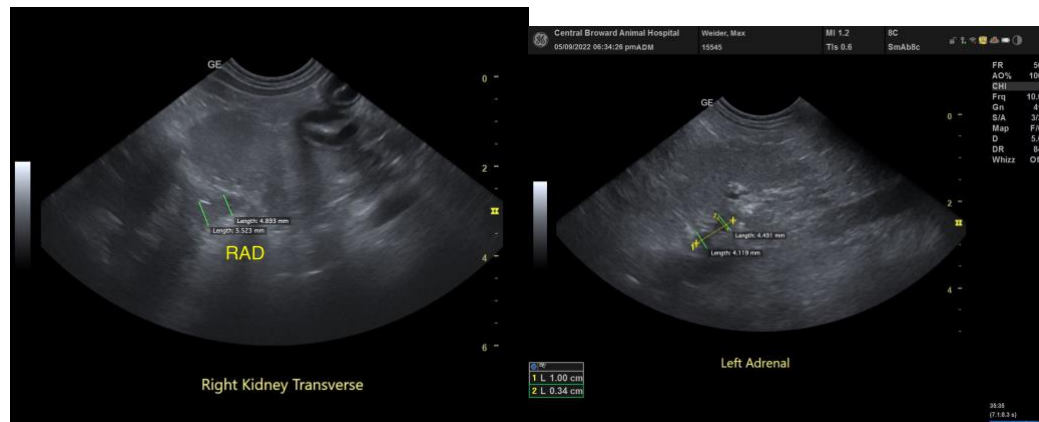
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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