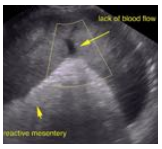
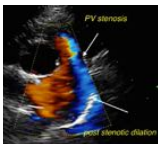
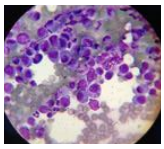
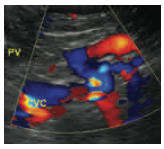
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Coda Miller

SPECIES
Canine

BREED
Pomeranian

SEX
Spayed Female

AGE
15 years

WEIGHT
9 lbs

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Dr. Reser

HOSPITAL NAME
Harvest Hill VH

REFERRING VET
Dr. Reser

INVOICE
96036

DATE
2/14/22

PRESENTING CLINICAL SIGNS

Chronic ALP elevation (past 4 years), normal LDDST (2 years ago), overall dog is in good shape for her age
Abnormal PE/Chem/CBC/UA Results: High ALP (1150 today), ALT (141), rest normal

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is moderately distended with anechoic contents. It has normal uniform wall thickness (< 0.2 cm). No masses or cystoliths are observed.

Left kidney is normal in size (2.9 cm) and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased echogenicity and mild loss of corticomedullary distinction. Renal pelvis is dilated (pyelectasia), measuring (0.3 cm). No visible obstruction is observed, but cannot be ruled out.

There is no evidence of mineral or infarcts observed.

Right kidney is normal in size (3.9 cm) and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased echogenicity and mild loss of corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

Left adrenal gland is normal in size (0.53 cm at cranial pole and 0.47 cm at caudal pole), shape and contour. Corticomedullary structure is unremarkable.

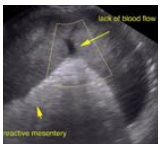
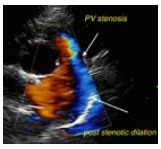
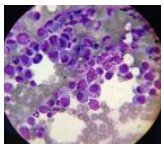
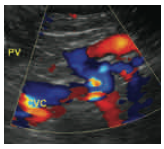
Right adrenal gland is unable to be visualized.

Spleen

Spleen is subjectively normal in size with normal smooth margins. Parenchyma is normal in echogenicity and echotexture. No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with rounded margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. A larger than the other diffuse nodules, discrete, 2.0 cm, hypoechoic nodule/mass is noted in the left caudal liver. Visible vasculature appears normal. GB is moderately distended with anechoic bile and gravity dependent echogenic sediment. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

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Gastrointestinal

The visible gastric wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm). The stomach is mildly fluid distended.

The small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). There are no luminal contents noted within small intestines.

Colon is normal in wall thickness (< 0.2 cm) and layering.

Pancreas

Pancreas has normal homogenous echotexture and is normal in echogenicity and smooth margination. There is no evidence of peripancreatic inflammation.

Free Abdomen

Lymph nodes are normal with no observed enlargement.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

Age related kidney change – This finding is expected/consistent with age-related mild degenerative disease and should be interpreted clinically in combination with laboratory changes.

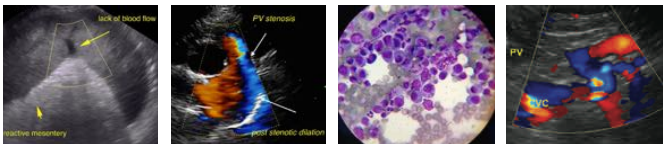
Left renal pyelectasia – Differentials for pyelectasia include pyelonephritis, diuresis, congenital malformation or ureteral or lower urinary tract obstruction.

Heterogenous liver with a more discrete, larger nodule as described above – Differentials for hepatic changes include both benign steroid (vacuolar) hepatopathy or extramedullary hematopoiesis as well as infiltrative round cell or metastatic neoplasia. Differentials for the larger nodule include benign changes such as nodular hyperplasia as well as potentially, less likely, but possible infiltrative primary hepatic neoplasia, round cell neoplasia or metastatic neoplasia.

Canine 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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

ALP – Differentials are vast and non-specific. Differentials include, but are not limited to, benign nodular hyperplasia which occurs in 70% of older dogs and often does not result in an abnormal ultrasound, reactive or idiopathic/vacuolar hepatopathy, cholestasis and/or hyperadrenocorticism as well as many chronic non-hepatobiliary diseases such as chronic infections/inflammation from dental disease, IBD, neoplasia, hyperlipidemia, hypothyroidism, chronic pancreatitis, chronic stress, etc.



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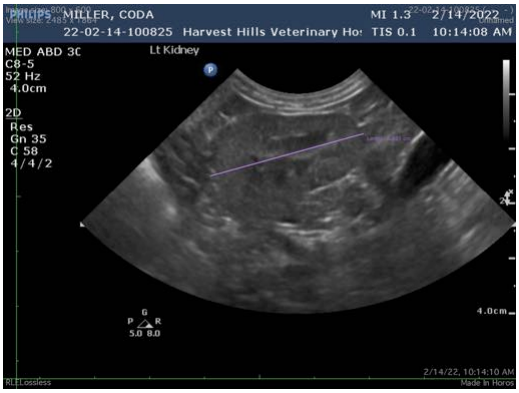
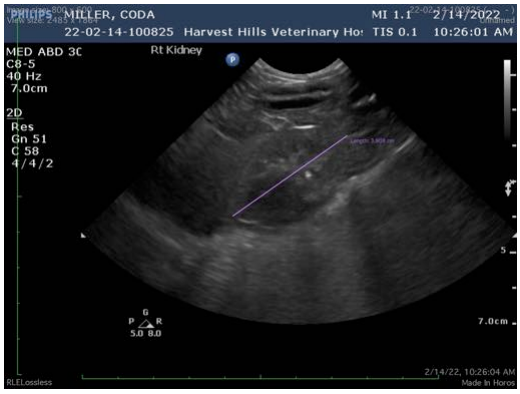
There is no ultrasonographic evidence of cholestasis. Adrenocortical testing such as a low dose dexamethasone suppression test could be considered if clinical signs of hyperadrenocorticism are present. Ursodiol could be considered if gallbladder sludge is noted. A fine needle aspirate of the liver could be considered if patient's coagulation status is appropriate. Otherwise, recommendations include addressing any other concurrent disease and monitoring. If values are progressive, recheck imaging is recommended.

Specifically for this patient recommendations include a FNA of the liver both the diffuse changes as well as the larger, more discrete nodule described above, if the patient's coagulation status is appropriate empirical therapy with Ursodiol can also be considered while monitoring ALP for improvement given the amount of gallbladder debris.





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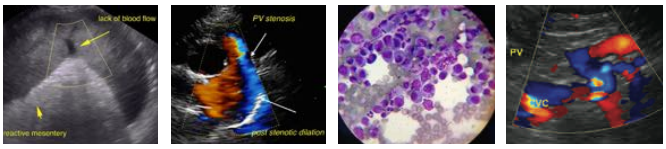

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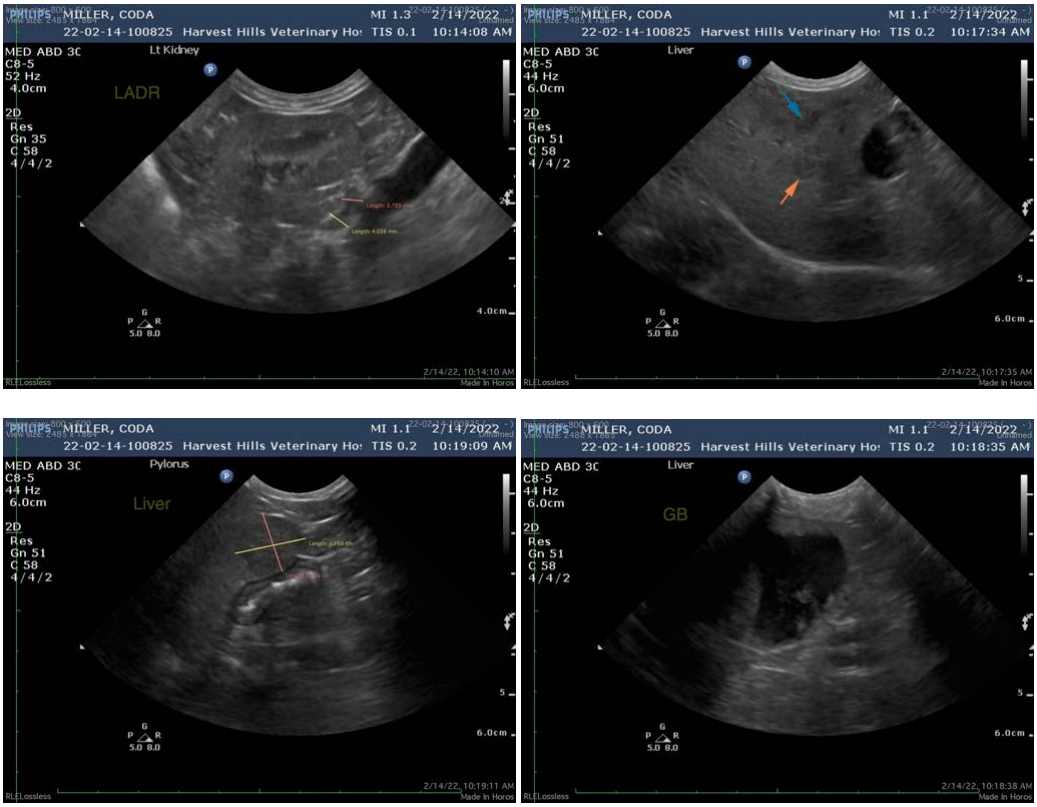

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM DACVIM

Beth.Johnson@SonoPath.com