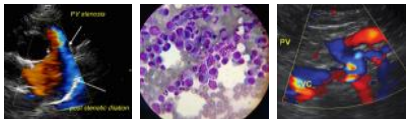
IMAGING PERFORMED BY

IntraPet.com



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DATE

3/20/23

PATIENT

Romeo Willis

SPECIES

Canine

BREED

Maltese

SEX

Neutered Male

AGE

2005

WEIGHT

5.93 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Noah's Ark Vet & Boarding Resort

REFERRING VET

Dr. Martinez-Hernandez

INVOICE

21734

PRESENTING CLINICAL SIGNS

Fluctuating appetite; recently diagnosed CKD, hyperkalemic. Moderate degenerative valvular disease- stable on Pimobendan- CVCA visit 4/22/22

Current Medications: Enalapril 1/2 tablet SID (this was just reduced from BID due to hyperkalemia), Pimobendan (Vetmedin) 1.25 mg - 1/2 tablet bid, Gabapentin 25 mg BID
Lab Results: hyperkalemia - rechecking this the day of US after dose adjustment, uremic.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Stephanie Warga RDCS, RVT.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

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.

Prostate is normal in size, echotexture and echogenicity for a neutered male.

Kidneys are bilaterally small, irregular and diffusely echogenic with decreased corticomedullary distinction and poor visualization of internal architecture. There is pyelectasia bilaterally, in the left kidney it measures 0.31 cm in the transverse view, and in the right kidney it measures 0.39 cm in the transverse view. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted bilaterally. The left kidney measures 3.02 cm. The right kidney measures 2.9 cm.

Adrenal Glands

Left adrenal gland is normal in size (1.88 cm long x 0.68 cm at cranial pole and 0.93 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (1.52 cm long x 0.53 cm at cranial pole and 0.58 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Spleen

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 heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. In the mid to left ventral liver, there is a slightly more discrete 1.0 cm x 1.5 cm hypoechoic area/nodule. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as mild 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 mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is 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 mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas 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 evidence of peritoneal effusion. There is no apparent lymphadenopathy.

ULTRASONOGRAPHIC FINDINGS

- Chronic Kidney Disease with bilateral pyelectasia – This appearance of the kidneys is consistent with chronic kidney disease such as chronic glomerular or interstitial nephritis, chronic pyelonephritis, etc. Differentials for pyelectasia include pyelonephritis, diuresis, congenital malformation or ureteral or lower urinary tract obstruction.

- Heterogenous Liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.

- Mild 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

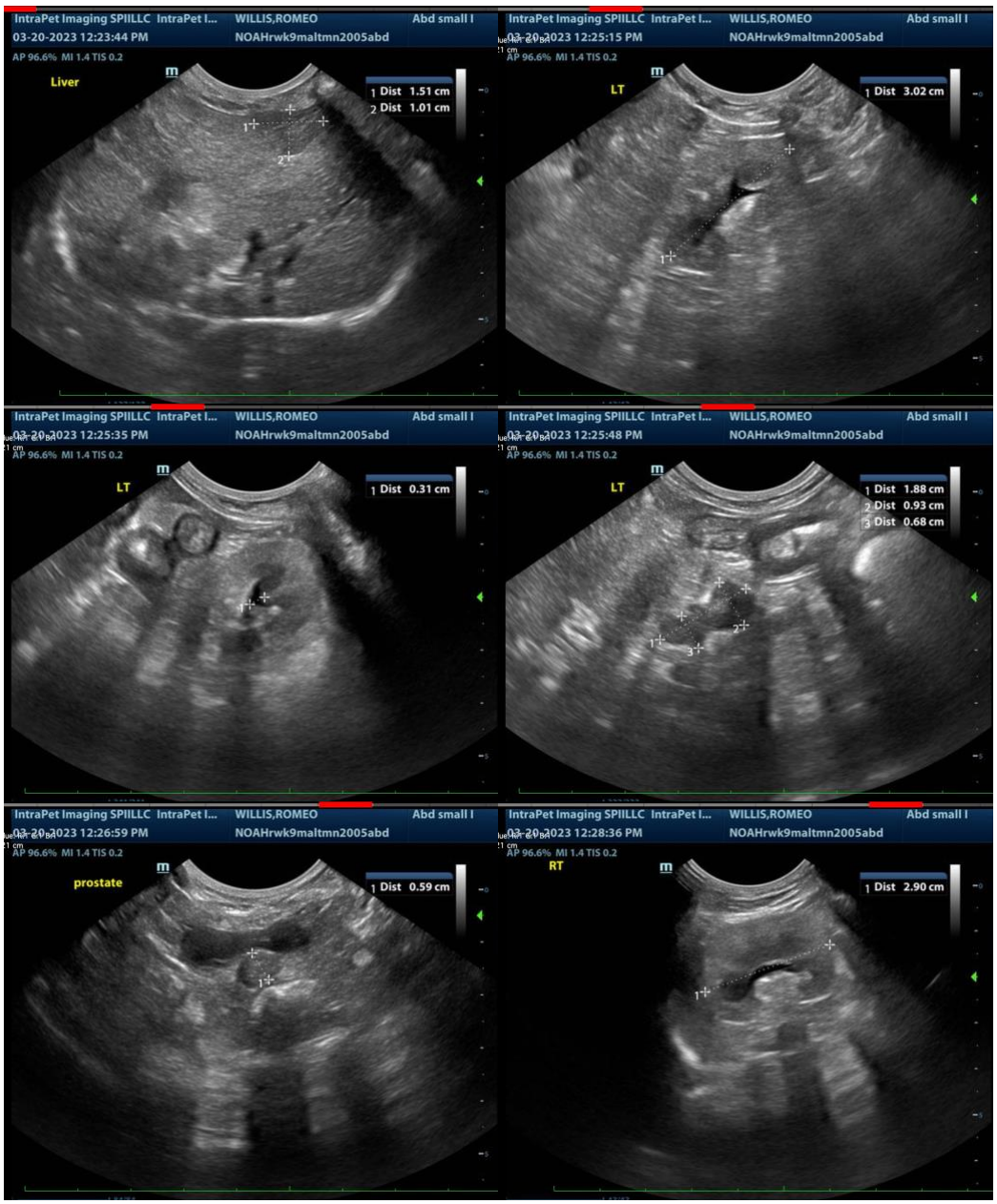
If not recently evaluated, urinalysis and, if indicated based on urinalysis results, urine culture is recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

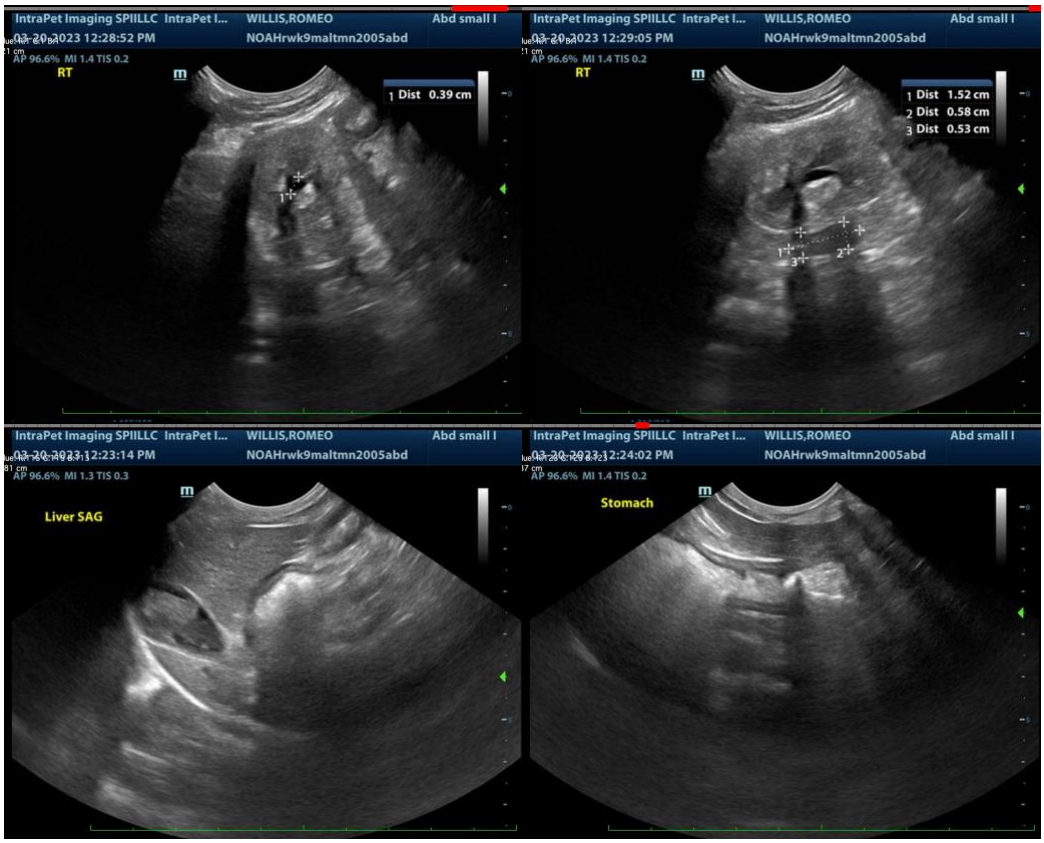
A blood pressure is also recommended, if not recently evaluated.

While the appearance of the liver trends toward benign on appearance, a fine needle aspirate could be considered if patients coagulation status is appropriate.

In the meantime, supportive/symptomatic medical management of this patients reported chronic kidney disease, +/- secondary hypertension, infectious and/or proteinuria (if present), as well as possible gastritis,

associated with the chronic kidney disease, etc., is recommended. Antiemetics, gastroprotectants and an appetite stimulant may be necessary to help maintain patents appetite. Additionally, subcutaneous fluid therapy could be helpful.
While the hyperkalemia is most likely related to the kidney disease and ace-inhibitors, etc., additionally, to be safe, a baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.





The information and recommendations provided are based on the images presented by the referring veterinarian. 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