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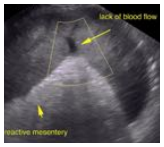
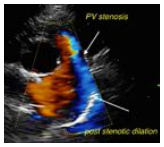
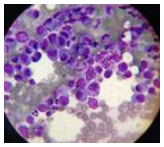
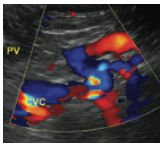

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1-800-838-4268 info@sonopath.com

PATIENT

Ruby Tovell

SPECIES

Canine

BREED

Jack Russell Terrier

SEX

Spayed female

AGE

11 years

WEIGHT

7.3 lbs

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Evan Bell

HOSPITAL NAME

Cedarview AH

REFERRING VET

Dr. Holzman

INVOICE

32394

DATE

8/17/22

PRESENTING CLINICAL SIGNS

History: Sudden onset PU/PD, increased anxiety. Mild elevation in liver enzymes. ACTH stim WNL. June 2022 Hx of elevated lipase but Spec CPL = WNL at 57 Aug 2022 ALT 171 H (mild) ALP 194 H (minimal) ACTH Stim - normal Pre and Post 4dx negative USG 1.009 pH 7 Prot 1+

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.

Left kidney is normal is size (4.6 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Right kidney is normal is size (4.2 cm),shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

Left adrenal gland is normal in size (0.46 cm at cranial pole and 0.81 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (0.56 cm at cranial pole and 0.56 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. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as 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.

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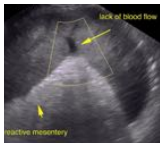
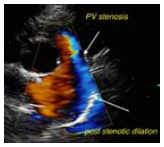
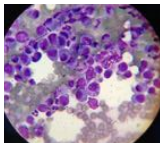
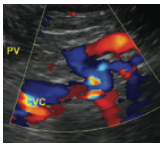

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Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with 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 empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) 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 free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- **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.
- **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

Given the reported polyuria, polydipsia and increased anxiety combined with the subtle ultrasound changes, etc. hyperadrenocorticism may still be the underlying cause and a more sensitive test can be considered such as low-dose Dexamethasone suppression test or even a full adrenal panel to the University of Tennessee to more definitively rule out hyperadrenocorticism. However, in the meantime, a urine protein to creatinine ratio is recommended given the mild proteinuria reported in dilute urine.

Blood pressure measurement is also recommended if not recently evaluated and as Leptospirosis can result in mild liver enzyme increases as well as PU/PD, testing for Leptospirosis is also indicated if not already evaluated.

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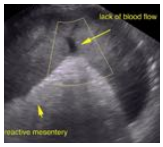
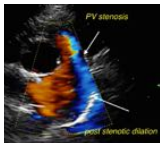
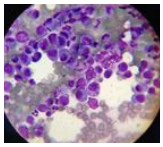
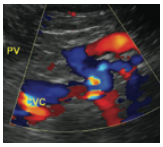

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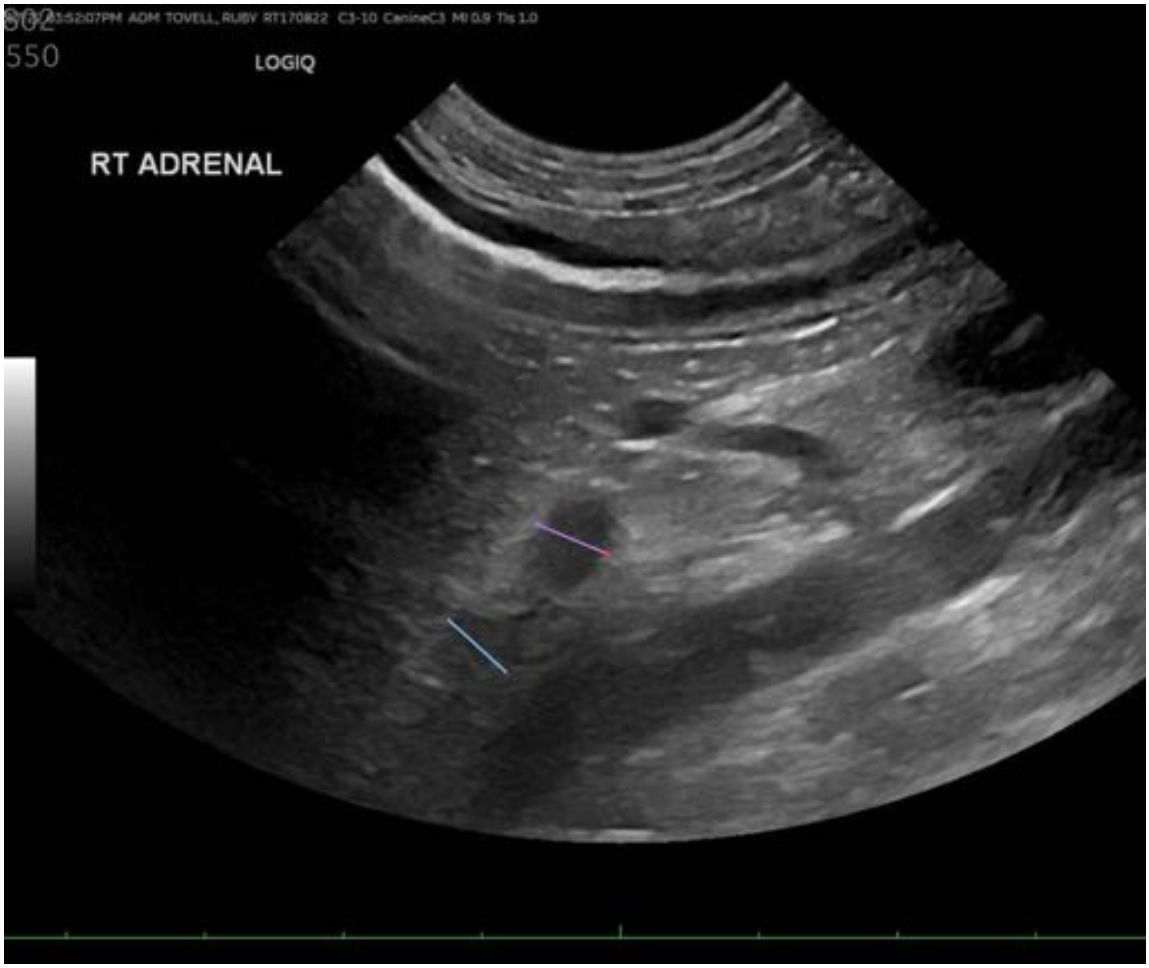
A urine culture could be considered to rule out an occult urinary tract infection and/or a course of empirical antibiotics could be tried with monitoring for improvement in both the PU/PD as well as the liver enzymes and is recommended combined with the Leptospirosis testing, UPC and blood pressure etc. prior to further evaluation of hyperadrenocorticism with more sensitive testing.



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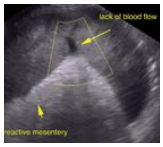
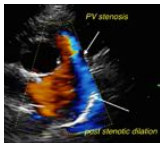
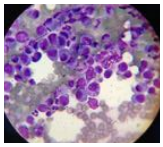
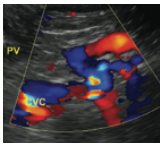

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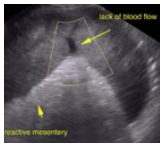
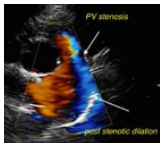
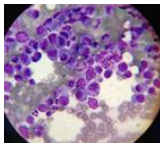
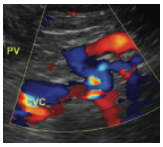

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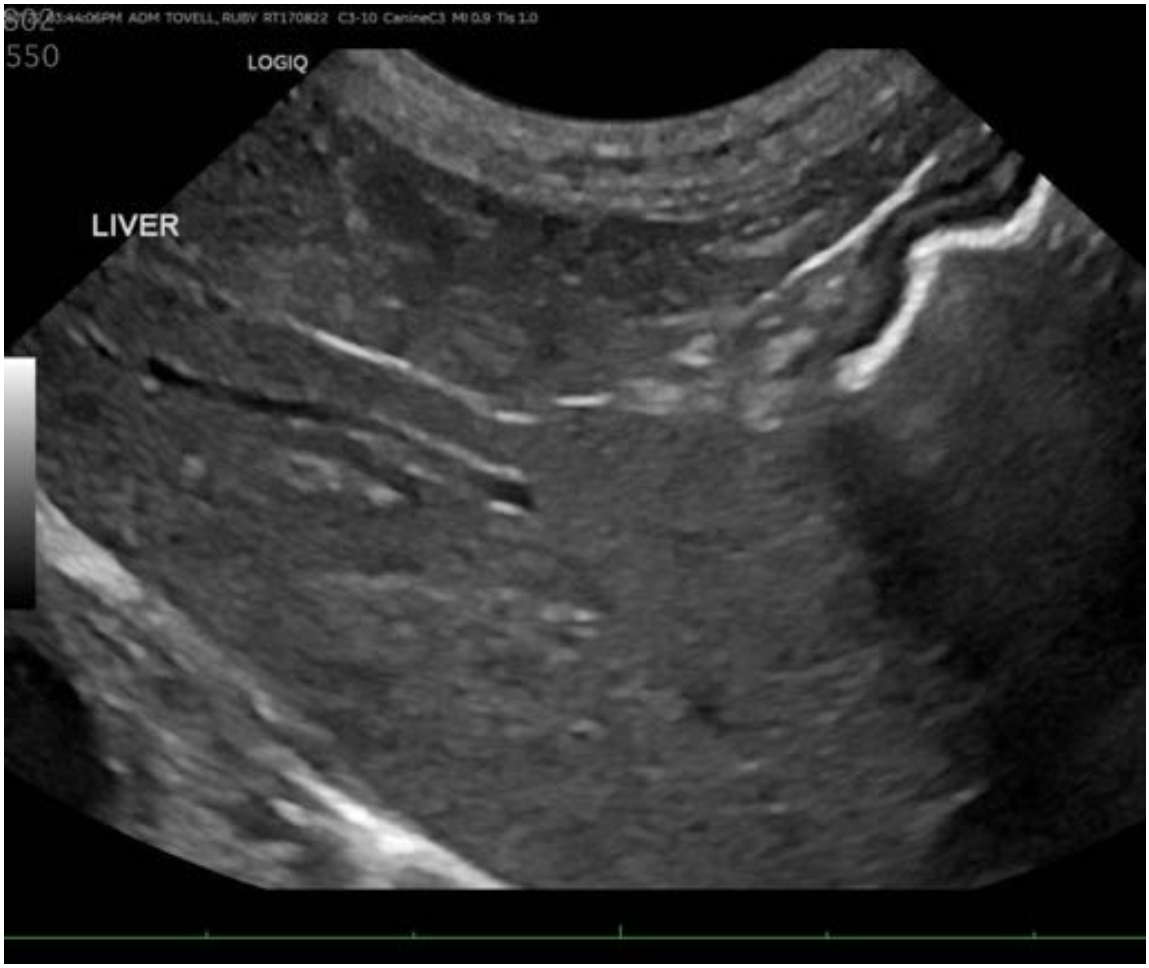

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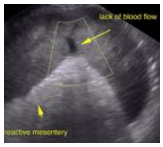
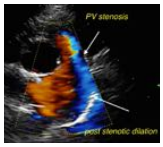
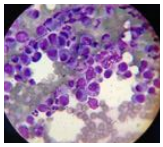
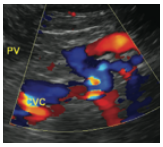

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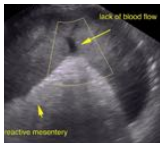
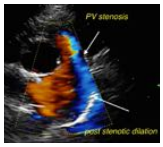
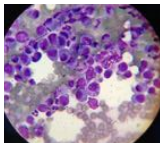
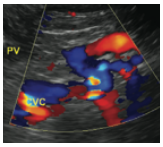

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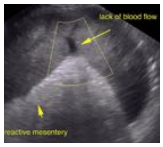
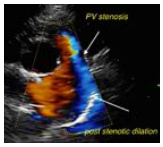
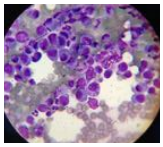
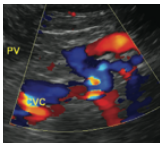

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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