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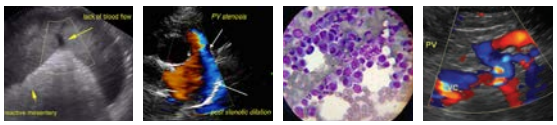

ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Sophie Wingard

SPECIES

Canine

BREED

Wheaton/Border Terrier

SEX

Spayed Female

AGE

11 Years

WEIGHT

19 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

VCA Delta Oaks AH

REFERRING VET

Dr. Samuel

INVOICE

46790

DATE

4/19/23

PRESENTING CLINICAL SIGNS

Pre op Dental blood work concerns Current Medications Levothyroxine 0.2mg BID Primary Question/Differential to Be Answered in This Exam Originally was suspected of Cushing's, but that doesn't seem to fit current labs. Does the P have enlarged adrenal gland(s) - eg, Cushing suspicion? Are there any ultrasonographic findings to explain elevated ALT/ALP.

Abnormal PE/Chem/CBC/UA Results: Historically elevated ALP (650) and ALT (161), normal USG (1.033) at a different clinic 6/24/22 Preops show increased ALT (459) and similar ALP (527) with elevated BUN (34) and mild lymphocytosis (4558)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (0.73 cm). Mucosa is hyperechoic and irregular. No masses observed. A cystolith measuring 0.65 cm long is noted against the dependent wall. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface.

Kidneys are overall normal in size 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 cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. The right kidney measures 5.31 cm. The left kidney measures 4.96 cm. Small cortical cysts noted bilaterally.

Adrenal Glands

The right adrenal gland is normal in size (1.67 cm long x 0.39 cm at the cranial pole and 0.48 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (1.82 cm long x 0.30 cm at the cranial pole and 0.53 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The 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 moderate 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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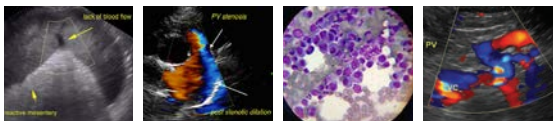

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Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) 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 (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). 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 pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. 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.

PRIMARY FINDINGS

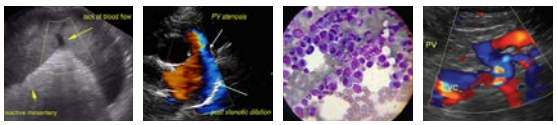
- **Heterogenous Liver –** These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.
- **Moderate gallbladder 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.
- **Chronic Cystitis with a 0.65 cm cytolith -** Urinary bladder wall changes are most consistent with chronic cystitis. Infiltrative neoplasia cannot be ruled out but is considered less likely give the location and diffuse nature of the changes.

SECONDARY FINDINGS

- Age related kidneys with bilateral small cortical cysts

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Testing for Leptospirosis is recommended. Bile acids are recommended, if tbili is not increased. An empirical course of antibiotics and hepatic nutraceuticals may be tried empirically; however, ultimately, tissue sampling is likely warranted. FNA of the liver can be performed to assess inflammatory cell type, rule in/out round cell neoplasia, etc. If round cell neoplasia is not diagnosed, a liver biopsy (including copper level assessment) may be required to definitively diagnose the underlying hepatopathy.



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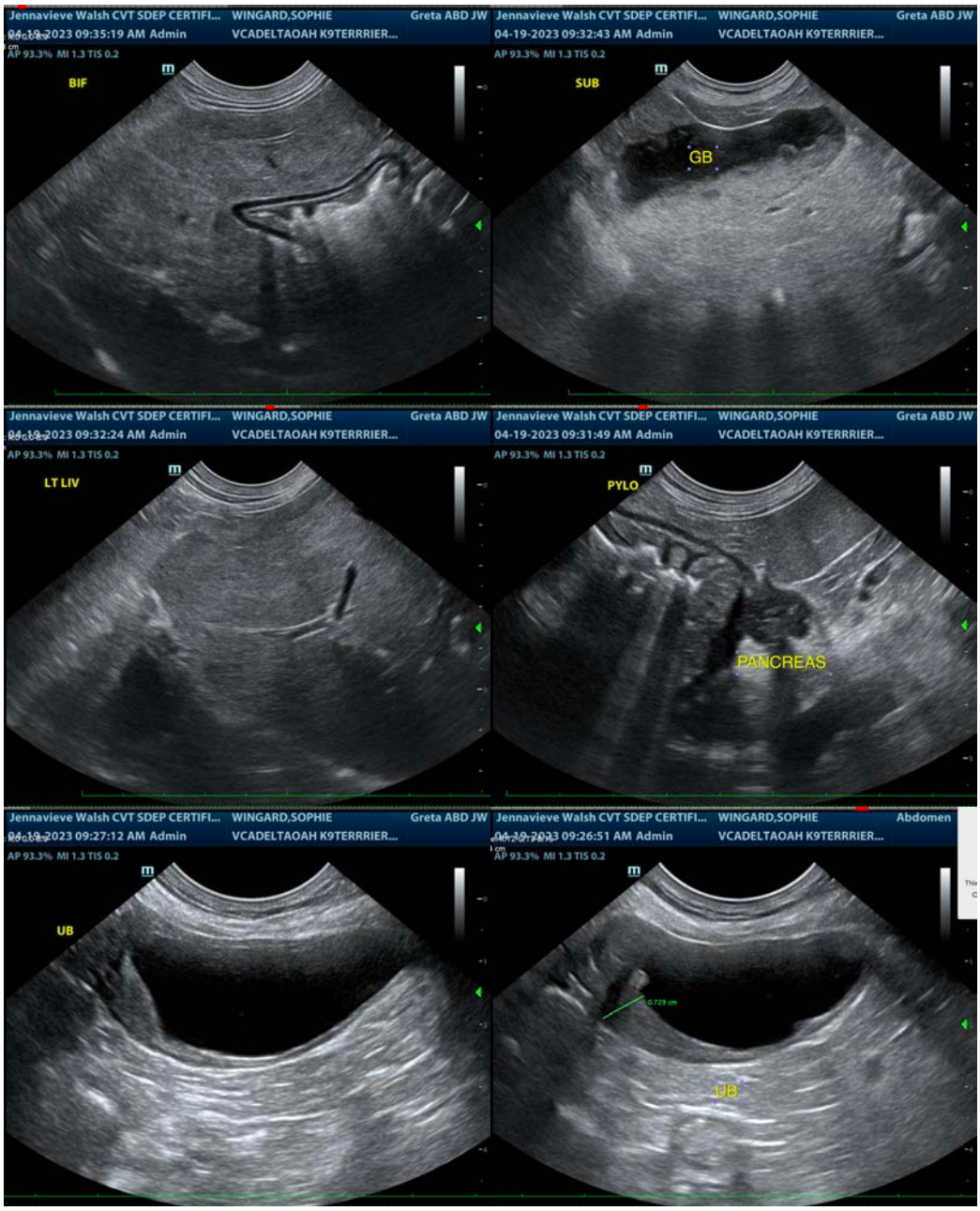
Additionally, if not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.



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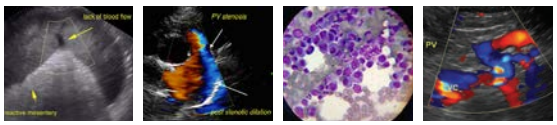

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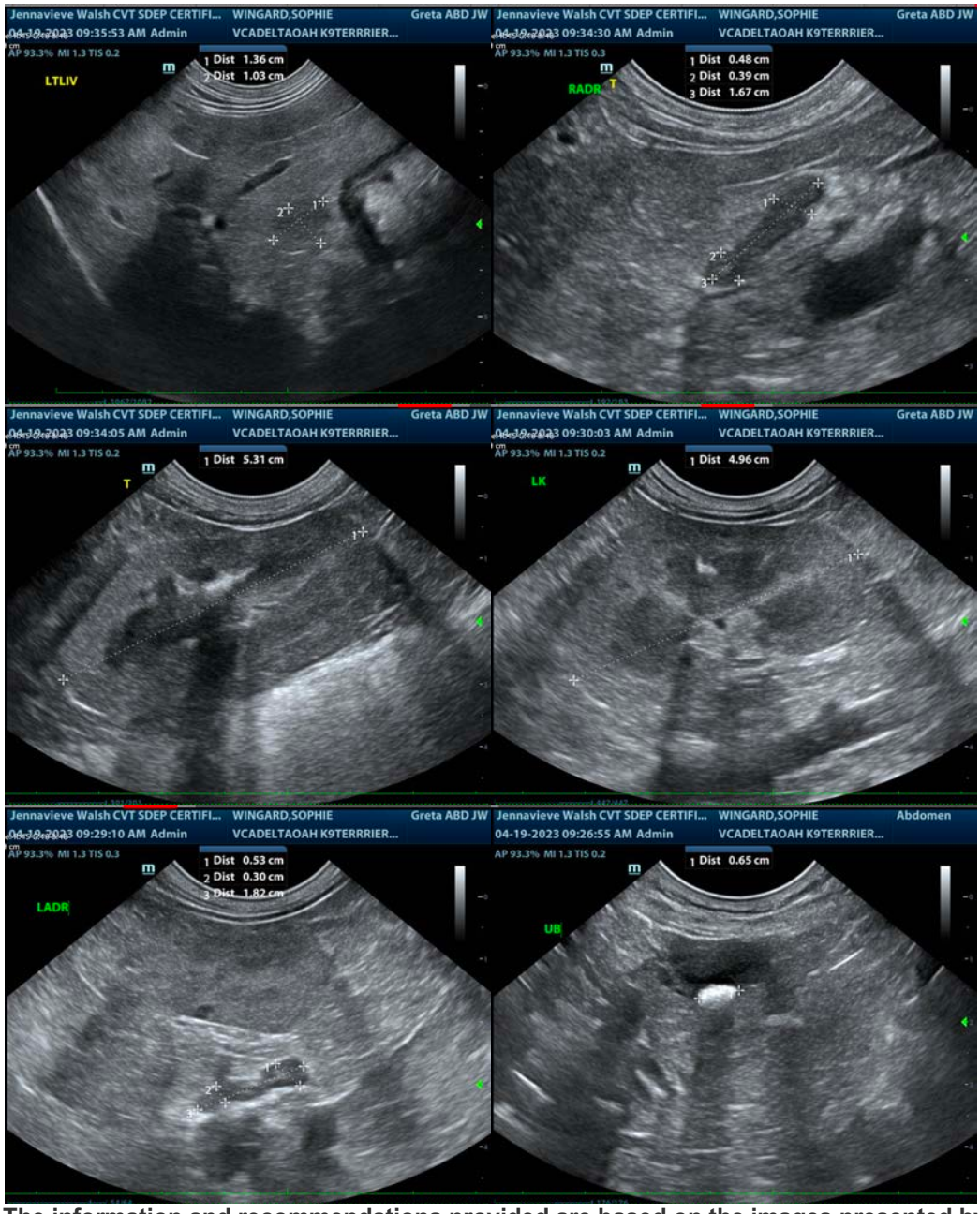

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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