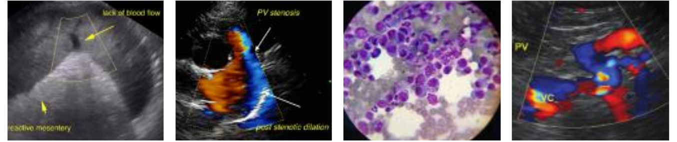
SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Lexie Liakos

SPECIES

Canine

BREED

Yorkie

SEX

Spayed Female

AGE

15 Years

WEIGHT

4.3 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Sorbo

HOSPITAL NAME

Millbrook AC-VBF

REFERRING VET

Sorbo

INVOICE

17894

DATE

11/7/22

PRESENTING CLINICAL SIGNS

History: Hx of CKD, presenting due to hematemesis and anorexia for 24-48hrs.

Abnormal PE/Chem/CBC/UA Results: Stage 4 periodontal dz. BUN 124, Crea 2.2, cPL (snap) ABNORMAL.

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 (0.39 cm). Mucosa is hyperechoic and irregular. No masses or cystoliths are observed. 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 infarcts observed. The left kidney measures 3.68 cm. The right kidney measures 4.08 cm. Small non-obstructive areas of mineralization/nephroliths are noted bilaterally. Cortical cysts were noted bilaterally. Mild pyelectasia is noted bilaterally.

Adrenal Glands

Left adrenal gland is normal in size (0.34 cm at cranial pole and 0.43 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (0.47 cm at cranial pole and 0.57 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). A 1.0 cm x 0.6 cm hypoechoic heterogenous mid body nodule was noted, that does not disrupt the capsule. Splenic vasculature appears normal.

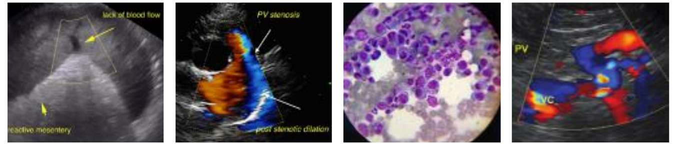
Liver

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. 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.

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.



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

PATIENT

Lexie Liakos

SPECIES

Canine

BREED

Yorkie

SEX

Spayed Female

AGE

15 Years

WEIGHT

4.3 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Sorbo

HOSPITAL NAME

Millbrook AC-VBF

REFERRING VET

Sorbo

INVOICE

17894

DATE

11/7/22

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 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.

Other

No evidence of pericardial effusion or heart-based tumors noted in these images.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Hypo to anechoic splenic nodule – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

Secondary Findings

- Chronic Cystitis **-** 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.

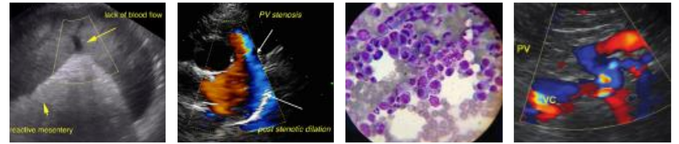
- Gallbladder debris (canine) - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

- Age-related kidney changes with small nonobstructive nephrolithiasis, cortical cysts and mild pyelectasia bilaterally.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

These images do not offer an identifiable visible cause for this patients reported hematemesis at this time. Differentials include microscopic diffuse gastrointestinal disease, which can be present without ultrasonographic abnormalities. Infectious parasitic disease and/or other metabolic disease such as the chronic kidney disease, hypoadrenocorticism, etc. Therefore, recommendations include:

A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.



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

PATIENT

Lexie Liakos

SPECIES

Canine

BREED

Yorkie

SEX

Spayed Female

AGE

15 Years

WEIGHT

4.3 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Sorbo

HOSPITAL NAME

Millbrook AC-VBF

REFERRING VET

Sorbo

INVOICE

17894

DATE

11/7/22

A baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

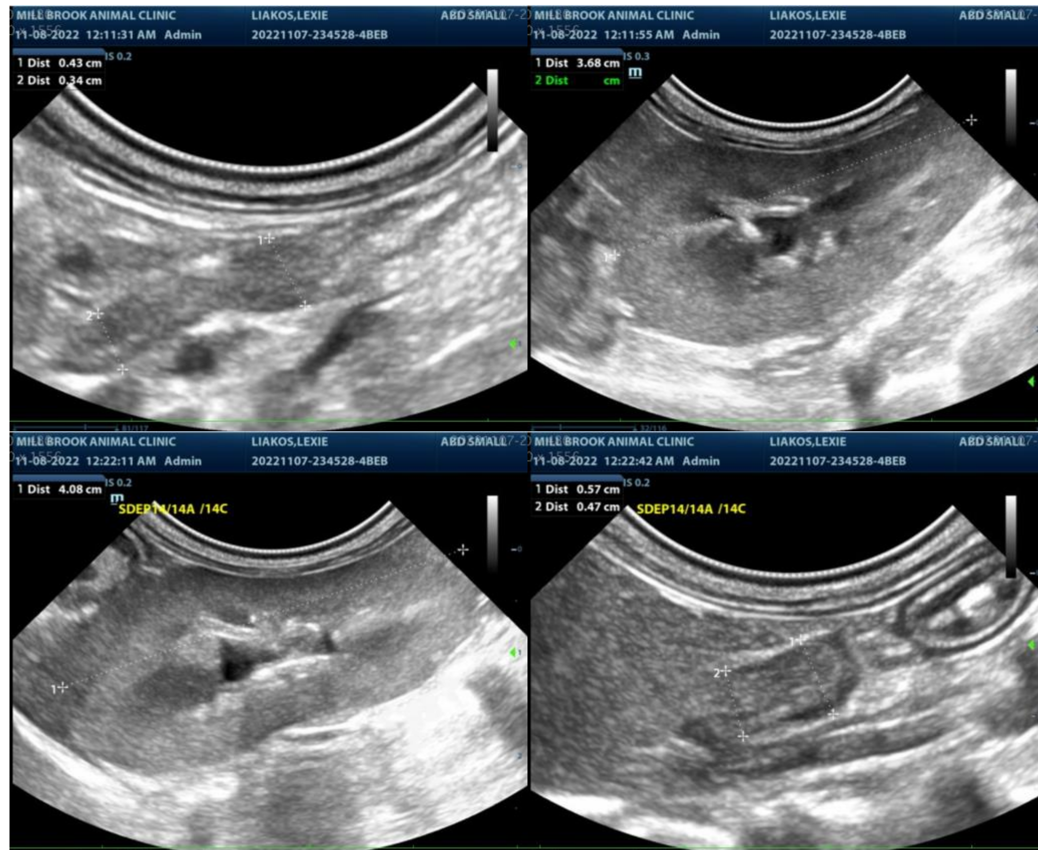
A fecal exam is recommended if not recently evaluated.

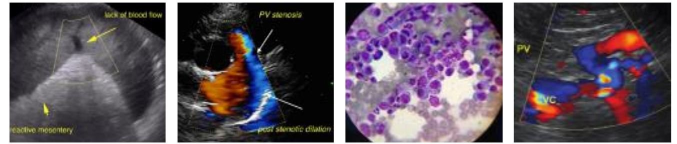
Given the history of kidney disease, and the azotemia, urinalysis and, if indicated based on urinalysis results, a urine culture is recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

In the meantime, empirical medical supportive/symptomatic therapy recommendations include antiemetics, gastroprotectants, including twice per day antacid therapy and sucralfate, empirical deworming with a 5-day course of Panacur, and potentially a diet transition, at least temporarily, to a bland easy to digest diet or potentially, if tolerated, a hydrolyzed protein diet. If clinical signs persist, further evaluation of the gastrointestinal tract via upper GI gastroscopy/endoscopy could be considered.

Additionally, while the appearance of the splenic nodule trends towards benign in appearance, a fine needle aspirate could be considered if patient coagulation status is appropriate. Premedication with Diphenhydramine is recommended prior to the aspirate in case of possible mast cell tumor.

Also, if the clinical picture of this patient supports potential gallbladder disease as a cause of the vomiting, characterized by liver enzyme changes and/or cranial abdominal pain, empirical ursodiol could also be considered, if tolerated, given the visible debris.





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

PATIENT

Lexie Liakos

SPECIES

Canine

BREED

Yorkie

SEX

Spayed Female

AGE

15 Years

WEIGHT

4.3 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Sorbo

HOSPITAL NAME

Millbrook AC-VBF

REFERRING VET

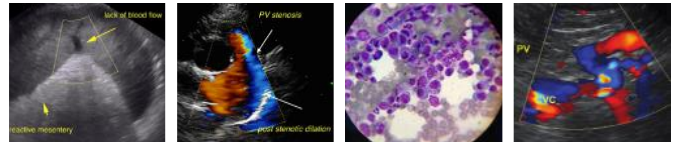
Sorbo

INVOICE

17894

DATE

11/7/22



PATIENT

Lexie Liakos

SPECIES

Canine

BREED

Yorkie

SEX

Spayed Female

AGE

15 Years

WEIGHT

4.3 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Sorbo

HOSPITAL NAME

Millbrook AC-VBF

REFERRING VET

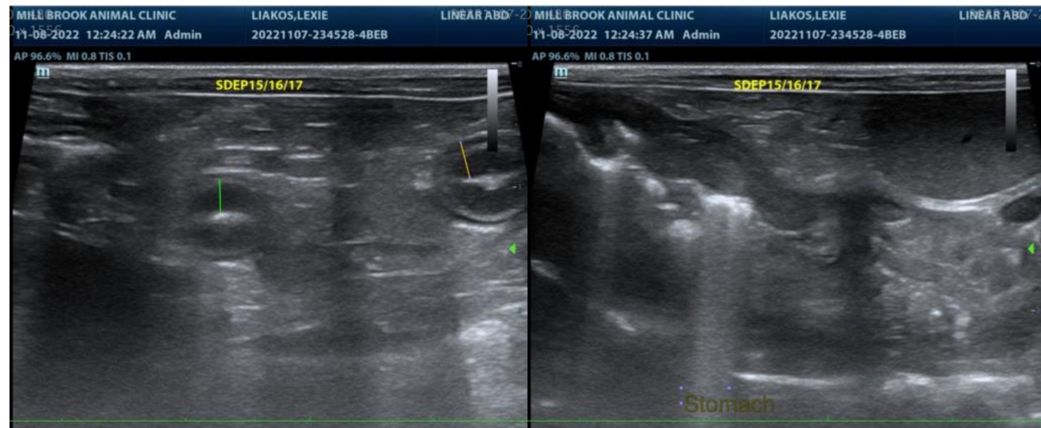
Sorbo

INVOICE

17894

DATE

11/7/22



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