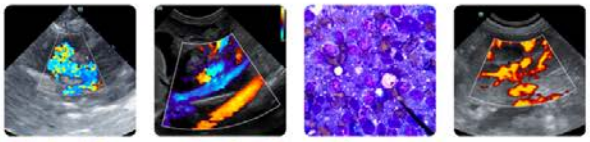

PATIENT

Bo Brownson

SPECIES

Canine

BREED

Lab

SEX

Neutered Male

AGE

7

WEIGHT

90

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Dr. Nikki Wright

HOSPITAL NAME

Bush Animal Hospital

REFERRING VET

Dr. Nikki Wright

INVOICE

72500

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12/11/25

PRESENTING CLINICAL SIGNS

Weight loss, mild Chronic Vomiting, Diarrhea, Lethargy, Hyporexia - intermittently for a few days at a time, when occuring, he will vomit everything he eats last vomited 3 days ago, eating well again, no diarrhea now possible cranial abdominal effusion on AFAST possible mass on AFAST

Abnormal PE/Chem/CBC/UA Results: Low TP 4.2, ALB 1.5 (GLOB 2.7) High ALT 145, AST 99 Low CHOL 78 High CK 311 Normal cPL High LYM 5.2 K/uL Na:K ratio 28

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The 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.

The area of the prostate is examined without evident prostatic pathology.

The right kidney is normal is size (7.0 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.

The left kidney is normal is size (6.7 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

The right adrenal gland is unable to be well visualized in these images.

The left adrenal gland is unable to be well visualized in these images, but I believe I see a caudal pole that is subjectively “flat”/small, measuring 0.37 cm in size. The cranial pole is unable to be visualized.

Spleen

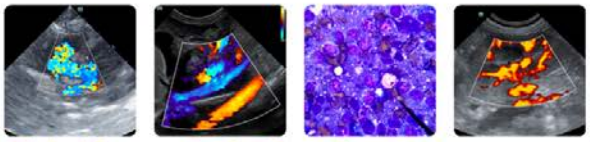
The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

*See liver.

Liver

Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. Visible vasculature and biliary tree appear normal without distension or congestion.

In the mid cranial abdomen is an approximately 11.5 cm in diameter coarse, hypoechoic, homogeneous density that has the same appearance as the diffuse hypoechoic coarse liver architecture. Having said that, association with the spleen versus liver can’t be definitively ruled out. The cranial abdomen is difficult to fully examine and differentiate organs from each other due to rib artifact and poor detail in some areas.



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The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

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 pancreas that is observed 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 a moderate amount of anechoic free fluid noted.

There is no visible pathologic lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

- An obvious cause for the liver changes is not identified in these images. Microscopic disease such as Leptospirosis, bacterial cholangiohepatitis, chronic active hepatitis, copper-associated hepatotoxicity, other hepatotoxicity, other reactive hepatopathy, infiltrative neoplasia, etc. cannot be definitively ruled out. As described above, there is an area that I believe is liver that has an emerging mass-like appearance, although also as described, splenic origin can't be ruled out. Regardless, both benign inflammatory as well as infiltrative neoplastic differentials are possible.

- Suspect flat adrenal glands – This can be a normal patient variant and/or a sign of exogenous cortisol administration. If exogenous steroids are not being administered, hypoadrenocorticism (either relative or absolute) should be considered.

- The free fluid is likely secondary to patient's reported hypoalbuminemia, although other pathologic sources of free fluid can't be ruled out.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given patient's reported clinical history, laboratory changes, especially the lymphocytosis, which can be associated with hypoadrenocorticism, a baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

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Given the concern for possible emerging liver mass described above:

Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

Fine needle aspirates of the liver as well as the mid cranial abdominal density described above are recommended if patient's coagulation status is appropriate.

If not recently evaluated, ruling out proteinuria is recommended, beginning with a 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 ratio is recommended.

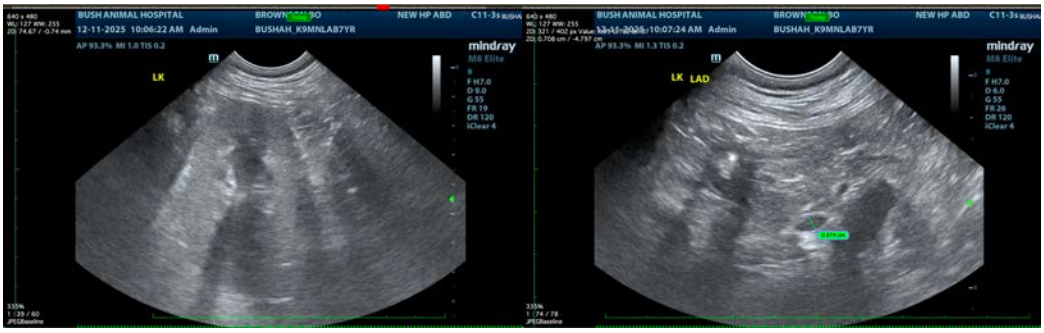
If a diagnosis is not obtained, further workup of the gastrointestinal tract is recommended in case of protein losing enteropathy, beginning with a routine fecal/giardia exam.

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.

A fecal enteropathogen PCR panel to Texas A&M GI Laboratory could be considered for further evaluation of possible infectious disease. Contact lab for recommendations on how long to discontinue antibiotics (if indicated) prior to obtaining a stool sample for submission.

In the meantime:

- Supportive/symptomatic medical management of clinical signs is recommended, including anti-emetics, gastroprotectants (+/- sucralfate, especially with any history of hematemesis), an appetite stimulant and fluid therapy if indicated, etc.
- Additionally, empirical deworming with a 5-day course of Panacur is recommended.
- A full course of empirical Helicobacter triple therapy could be considerd.
- A probiotic, such a visbiome or proviable, may be helpful.
- Finally, if tolerated, a transition in diet could be considered, based on trial-and-error response with some options to consider including a gastrointestinal biome diet vs a hydrolyzed protein diet (sometimes several trials with different brands are necessary) vs an easy to digest, bland or low-fat diet vs other.



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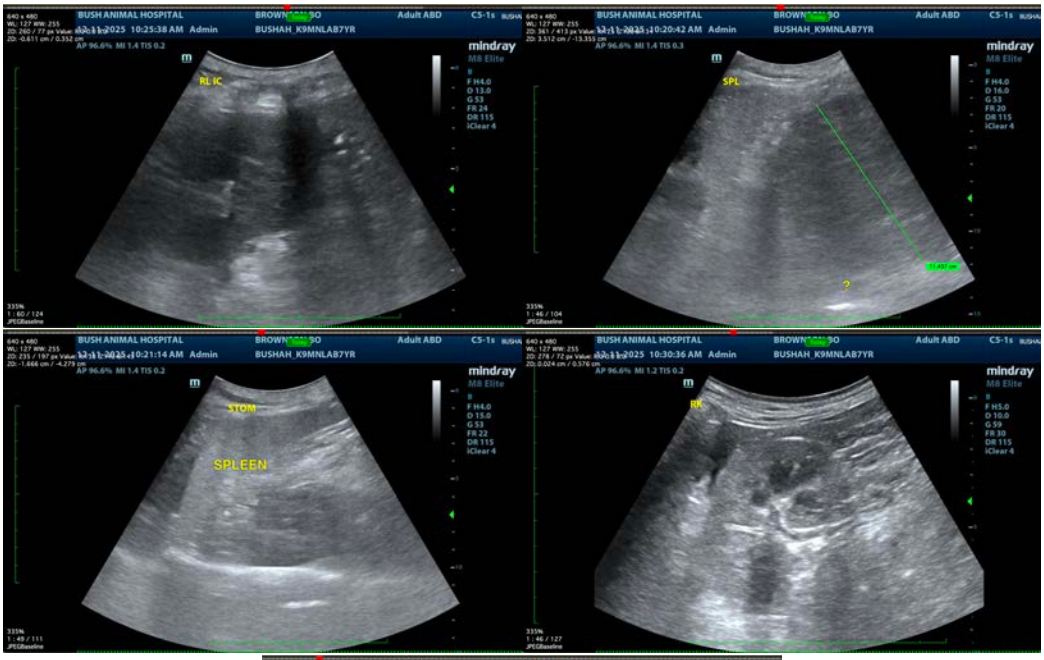

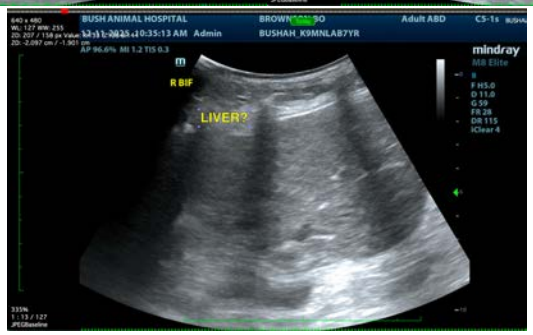

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
info@sonopath.com