

**DATE PRESENTING CLINICAL SIGNS**

4/5/23 11 y/o NM Brussels Griffon Mix presented for chronic, recurrent diarrhea. Initially improved on metronidazole, pro-pectalin and bland diet, but then returned. Fecal negative. Physical exam unremarkable other than loose yellow stool on rectal.

PATIENT

Murphy Miller Current Medications: Pro-pectalin 3/4 tab tid, visbiome 1 cap bid
Lab Results: ALT 297, ALP 3317, PLT 726

SPECIES

Canine Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

BREED**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Brussels Griffon X

Urinary System**SEX**

The urinary bladder is moderately distended with anechoic contents. No masses or inflammatory changes. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface. Mineral sand/debris is noted as well as possible small cystoliths, the largest of which measures 0.40 cm in diameter within the intraprostatic urethral lumen.

Neutered Male

AGE

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

3/4/12

WEIGHT

The right kidney is normal in size (4.24 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.

16.25 Pounds

INTERPRETED BY

The left kidney is normal in size (4.48 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.

Beth Johnson, DVM
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HOSPITAL NAME**Adrenal Glands**

The right adrenal gland is normal in size (1.83 cm long x 0.52 cm at the cranial pole and 0.52 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Stevenson Village VH

REFERRING VET

The left adrenal gland is normal in size (2.12 cm long x 0.49 cm at the cranial pole and 0.54 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Dr. Dreizen

INVOICE**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.

46428

Liver

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. 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 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 very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. 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

- **Hyperechoic hepatomegaly** - This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible but considered less likely.
- **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.

SECONDARY FINDINGS

- Mineral sand/debris/small cystoliths within the intraprostatic urethral lumen

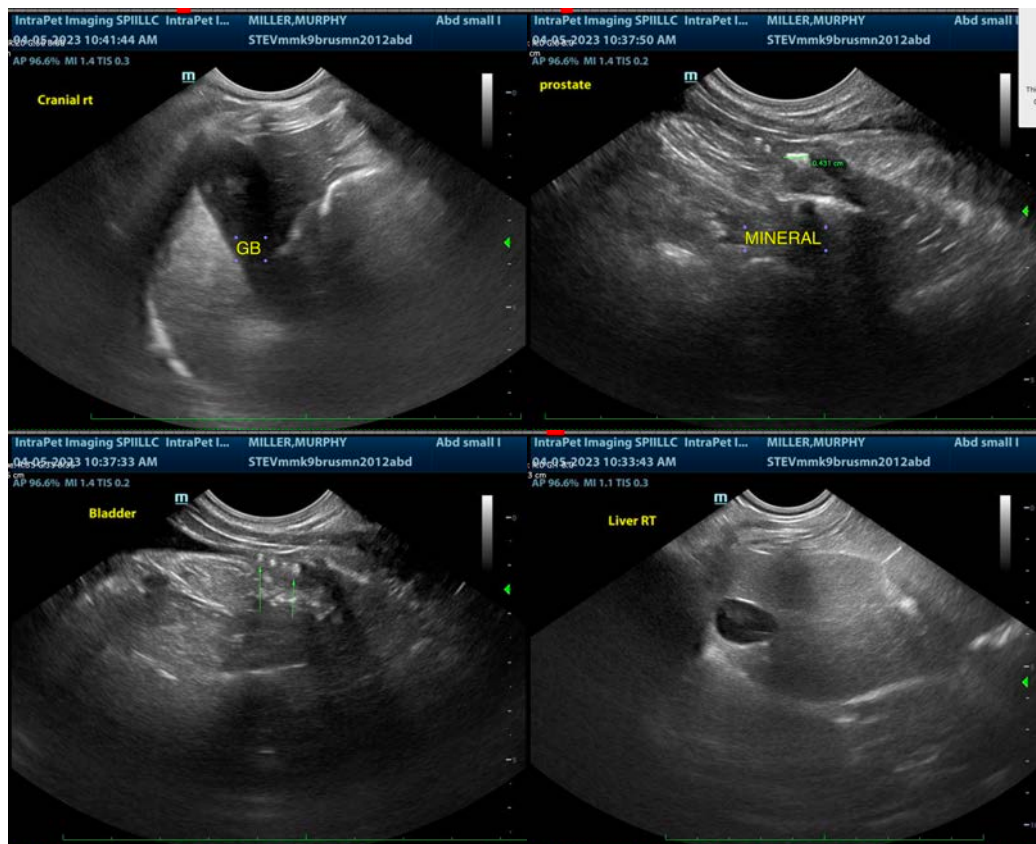
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

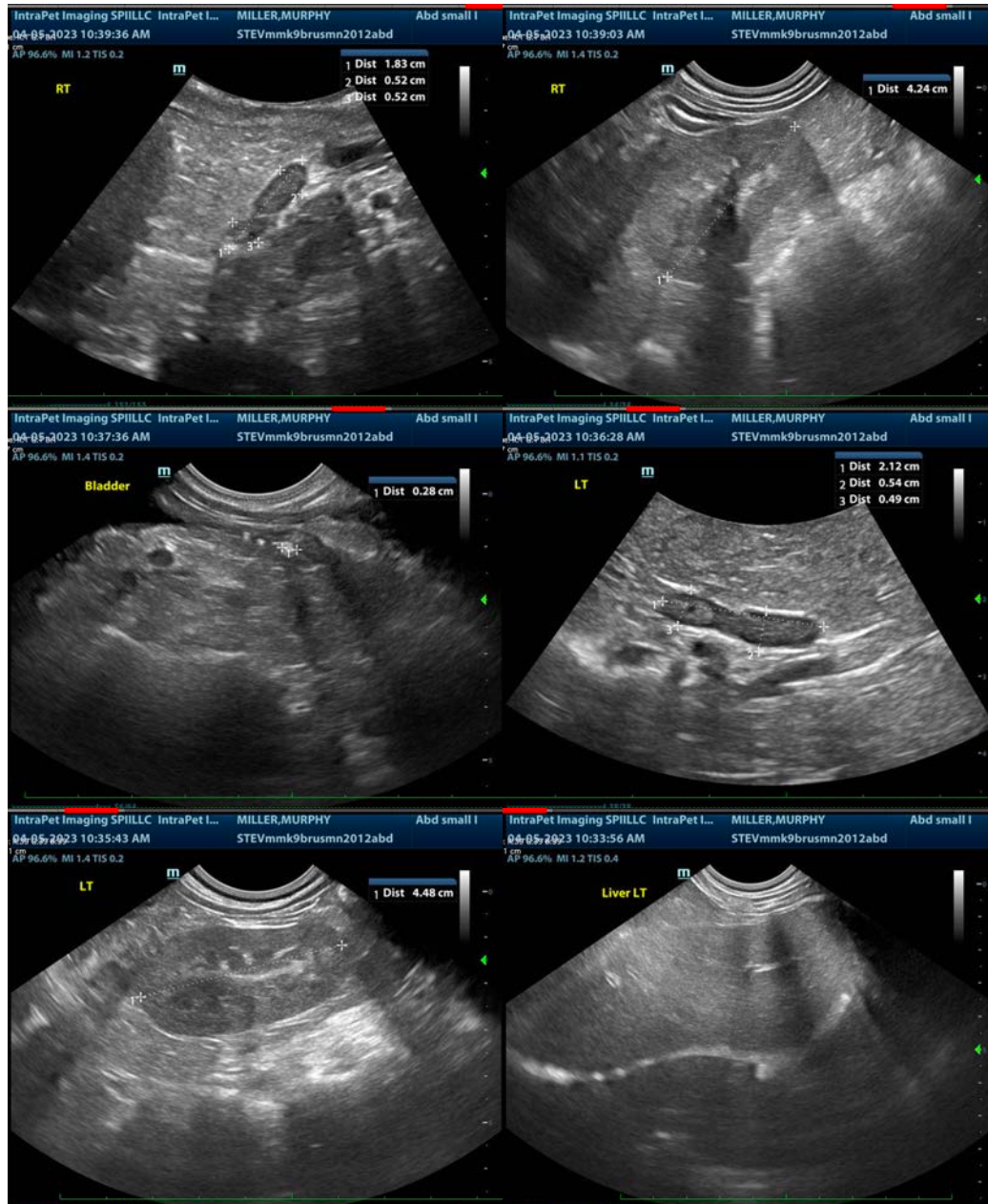
Further diagnostic recommendations, given this patient's historical diarrhea, include a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory, as well as a fecal enteropathogen PCR panel to Texas A&M GI Laboratory.

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 ratio is recommended.

Differentials for an elevation in ALP are vast and non-specific. Differentials include, but are not limited to, benign nodular hyperplasia which occurs in 70% of older dogs and often does not result in an abnormal ultrasound, reactive or idiopathic/vacuolar hepatopathy, cholestasis and/or hyperadrenocorticism as well as many chronic non-hepatobiliary diseases such as chronic infections/inflammation from dental disease, IBD, neoplasia, hyperlipidemia, hypothyroidism, chronic pancreatitis, chronic stress, etc. There is no ultrasonographic evidence of cholestasis. Adrenocortical testing such as a low dose dexamethasone suppression test could be considered if clinical signs of hyperadrenocorticism are present. Ursodiol could be considered if gallbladder sludge is noted. A fine needle aspirate of the liver could be considered if patient's coagulation status is appropriate. Otherwise, recommendations include addressing any other concurrent disease and monitoring. If values are progressive, recheck imaging is recommended.

In the meantime, empirical deworming with a 5-day course of a Panacur is recommended, as is continued probiotic therapy such as Visbiome or Provable, and if tolerated, transition in diet could be considered, beginning with a hydrolyzed protein diet. Some patients respond better to one brand or version of hydrolyzed protein diet better than another, so several trials are sometimes necessary.





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.

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