

**DATE PRESENTING CLINICAL SIGNS**

10/28/21

History: History: Exam, vomiting and diarrhea, lack of appetite. Owner reports that Ghost has had GI issues ever since she adopted him. She has tried multiple different foods to no avail. He doesn't want to many days and is not interested in treats either during these times. He also vomits bile almost daily or every other day. This happens once a day. The diarrhea has subsided currently for the last 2 days, but he often has loose stool. Lack of appetite but drinks water normally. Energy level is good and high according to owner. No sneezing or coughing. No known reactions to any medications or vaccines. Mom adopted him from an Amish Farm 3 year ago as a puppy. He destroys metal crates and breaks his teeth when the owner leaves the house. He ate as a puppy, the older he gets the less he wants to eat; he was very thin when they first got him and they have been able to put some weight on him. A lot of plops of stool, Mrs. is not sure if his stool has ever been normal and formed. PE: mandibular p-2 and p-3 are not developed (per Mrs. never came in), heart auscults with a normal rhythm and no murmurs, lungs auscult with normal bronchovesicular sounds, BCS 2/5 prominent spinous processes, muscle wasted.

**PATIENT**

Ghost Neuman

**SPECIES**

Canine

**BREED**

German Shepherd

**SEX**

Intact Male

**AGE**

12/1/2017

**WEIGHT**

72 Pounds

**INTERPRETED BY**

Andrea Nicastro, DMV,  
Diplomate DACVIM  
(Small Animal  
Internal Medicine)

**HOSPITAL NAME**

Fullerton AH

**REFERRING VET**

Dr. Baker

**INVOICE**

14042

Current Medications: No current medications.

Lab Results: 10-22-2021 CBC: wnl; Chem: SDMA 15 (0-14); Lytes: wnl; TLI 8.2 (5-35); Cobalamin 342 (284-836); Folate 4.6 (4.8-19.0) L; 4DX: negative.

Radiographs: Not provided by the veterinarian.

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: oral Trazadone and Gabapentin administered prior to scan.

Stat Report: not requested by the veterinarian.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is enlarged (4.19 cm in width) with a normal shape and smooth peripheral contours. The parenchyma is hypoechoic to slightly mottled in appearance. No distinct focal lesions are observed. The prostatic urethra is not overtly dilated.

The left kidney presented normal size (7.36 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney presented normal size (7.63 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal size (0.59 cm at cranial pole) (0.63 cm at caudal pole) (3.27 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (0.63 cm at cranial pole) (0.57 cm at caudal pole) (3.25 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

### ***Spleen***

The spleen is normal in size (2.54 cm at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

### ***Liver***

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

The gall bladder lumen is moderately distended. The wall is thin and smooth. A small amount of suspended echogenic debris is observed within the lumen. The cystic and common bile ducts are normal.

### ***Gastrointestinal***

The gastric lumen is mildly distended with ingesta. The gastric wall is normal in thickness with a normal layering pattern. The small intestinal lumen is segmentally dilated with gas. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive or overt infiltrative disease is noted.

### ***Pancreas***

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

### ***Free Abdomen***

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

### ***Other***

The testicles are subjectively normal in size and symmetrical with homogeneous parenchyma. No focal lesions are observed.

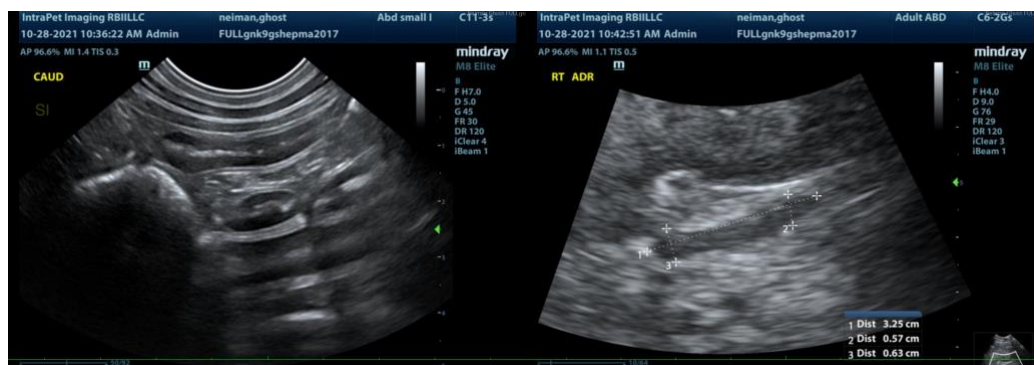
## **ULTRASONOGRAPHIC FINDINGS**

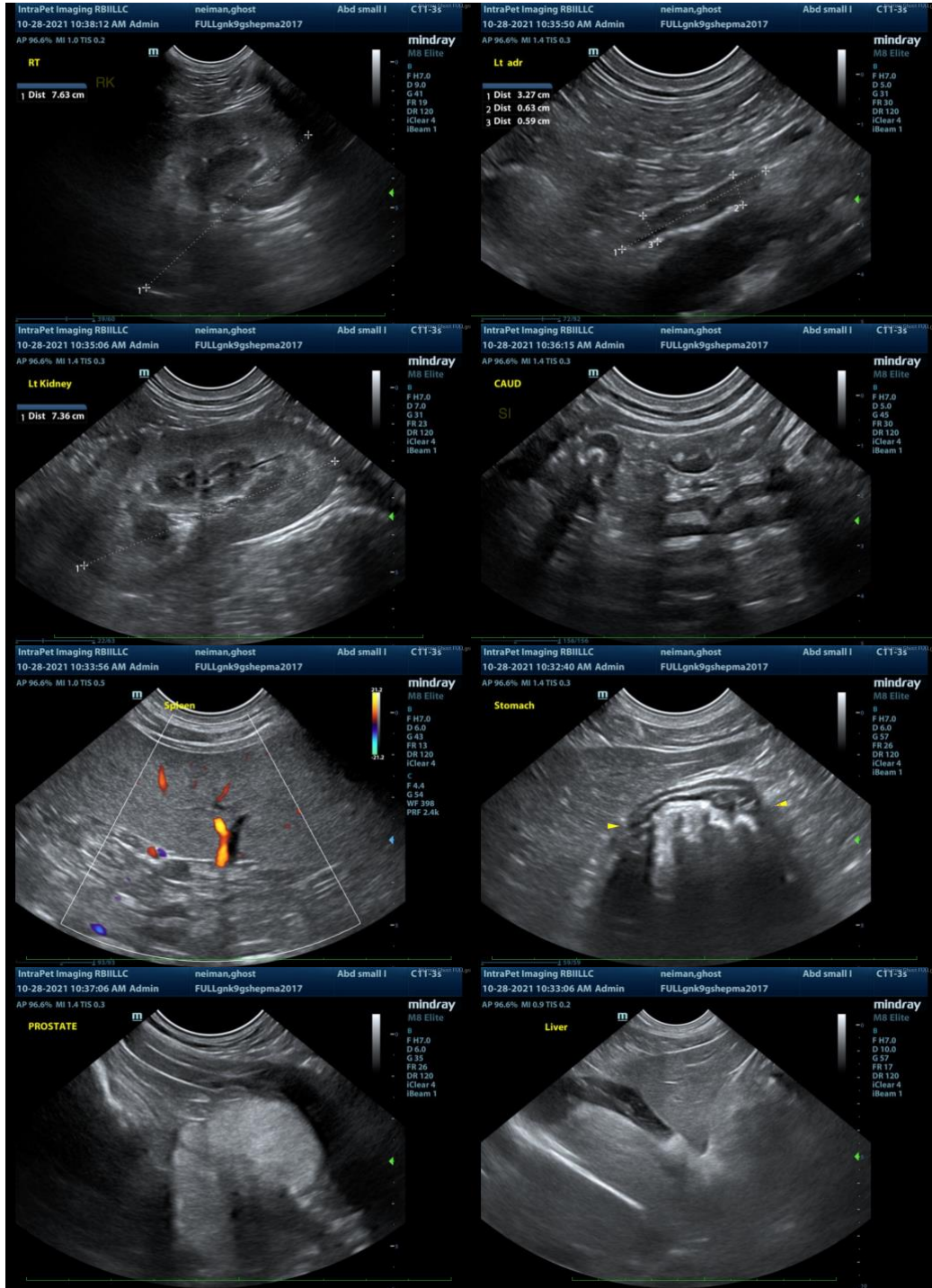
- The prostate changes are most consistent with benign prostatic hyperplasia. Bacterial prostatitis is also a differential but considered unlikely in the absence of lower urinary tract signs.

\*An obvious cause for the patients' clinical signs is not identified in the study. Considerations include primary maldigestion/malabsorption (i.e., due to inflammatory bowel disease, infectious parasitic disease, food allergy), early exocrine pancreatic insufficiency, other underlying metabolic issue.

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Given the borderline low cobalamin level, supplementation with vitamin B-12 is recommended.
- Regarding the borderline low TLI, consider repeating a TLI in 1-2 months. Alternatively, empirical supplementation with pancreatic enzymes can be considered to assess for improvement.
- Other diagnostic/therapeutic considerations include the following:
  1. Fecal evaluation for ova and Giardia
  2. Prophylactic deworming with Fenbendazole at 50 mg/kg once a day for 5 days is recommended. Repeat above protocol in 3 weeks.
  3. A resting cortisol level to screen for hypoadrenocorticism. If resting cortisol level is  $< 2.0$  mcg/dL, an ACTH stimulation test is recommended
  4. Pre- and post-prandial serum bile acids to evaluate for occult hepatic dysfunction.
  5. Limited antigen diet trial, if not already performed.
  6. Consider empirical treatment for small intestinal bacterial overgrowth with a 4-week course of tylosin (in lieu of metronidazole).
  7. Depending on the results of the above diagnostics/therapeutics, endoscopic or surgical gastrointestinal biopsies may be necessary to get a definitive diagnosis. If the patient is to undergo anesthesia, three view thoracic radiographs are recommended to assess cardiopulmonary status.





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.

**Andrea Nicastro**, DVM, Diplomate DACVIM (Small Animal Internal Medicine)  
info@SonoPath.com