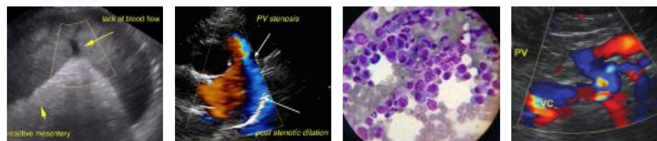
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

**PATIENT**

Milo Rodriguez

**SPECIES**

Canine

**BREED**

Goldendoodle

**SEX**

MN

**AGE**

2 years 6 mo

**WEIGHT**

11.9

**INTERPRETED BY**

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

**IMAGING PERFORMED BY**

Dr. Michael Roppolo

**HOSPITAL NAME**

Pennsauken Animal Hospital and Urgent Care

**REFERRING VET**

Dr. Michael Ropolo

**INVOICE**

17117

**DATE**

9/1/22

## PRESENTING CLINICAL SIGNS

3–4-month history of recurrent vomiting/diarrhea/anorexia episodes roughly 1 month apart. Each episode responded to supportive GI treatment.

Abnormal PE/Chem/CBC/UA Results: PE reveals 2-3% dehydration, gassy intestines, and soft stool on rectal. SDMA (H 15), K (L 3.8), CHOL (H 377), AMYLASE (H 2878), LIPASE (H 863). 4dx negative. Fecal negative. UA showed NSF.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of – cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The residual prostate was symmetrically normal in size with uniform parenchyma and slight coarse echotexture measuring – cm in diameter.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 5.3 cm in length. The right kidney measured 5.5 cm in length.

### *Adrenal Glands*

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.39 cm width at the caudal pole and 0.39 cm width at the cranial pole.

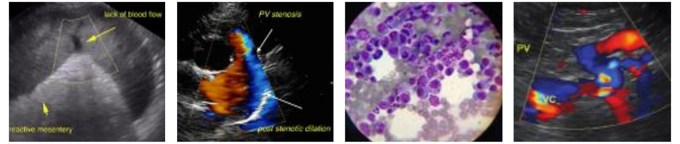
The right adrenal gland was indistinctly visualized owing to gas artifact secondary to the proximal colon, as well as regional mild mesenteric lymphadenopathy. No overt evidence of pathology in the area of the right adrenal gland.

### *Spleen*

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

### *Liver/ Gallbladder*

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion.





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The gallbladder was non distended in size with mild dependent nonorganized debris. No evidence of gallbladder or peripheral gallbladder inflammation. The cystic duct and common bile ducts were normal without evidence of dilation.

### *Gastrointestinal*

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

The small intestine exhibited intact wall layering and primarily maintained 1:3 muscularis/mucosa ratio. Propensity for segmental to generalized mildly prominent intestinal submucosa layer. The lumen of the small intestine was empty with no evidence of mechanical/metabolic small intestinal ileus pattern. The iliac trifurcation was without overt pathology. No evidence of structural pathology, such as loss of intestinal wall layering, intussusception, or other pathology. The duodenum wall measured 0.47 cm. The jejunum wall measured 0.33 cm.

The colon revealed sonographically unremarkable wall layering. The colon contained subjective formed fecal matter, exhibiting subtle progressive distal acoustic shadowing.

### *Pancreas*

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

### *Free Abdomen*

Intermittent small pockets of scant periintestinal free fluid were noted, which may be physiologic, assuming normal albumin levels or possibly secondary to intestinal inflammation.

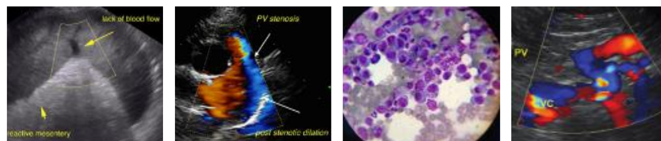
Intermittent, mildly prominent to enlarged mesenteric lymph nodes were present. The lymph nodes were essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). An example of lymph node size measured 1.7 cm x 0.8 cm width.

## ULTRASONOGRAPHIC FINDINGS

- Sonographically unremarkable stomach
- Intact small intestinal wall layering, exhibiting propensity for prominent submucosa
- Mild colitis pattern
- Associated intermittent benign/reactive mesenteric lymph nodes
- Small pockets of scant, primarily periintestinal free fluid

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, no overt evidence of significant gastroenterocolic structural pathology. At times the gastrointestinal presentation may not correlate with recurrent or chronic gastrointestinal signs present. General considerations may include dietary intolerance/food allergy, dysbiosis, occult parasitism, inflammatory bowel disease, low grade to chronic pancreatitis, both of which may present sonographically normal. The small intestine exhibited subtle mural changes, which may suggest primary underlying inflammatory enterocolonopathy, such as IBD. Further assessment may include a GI panel to



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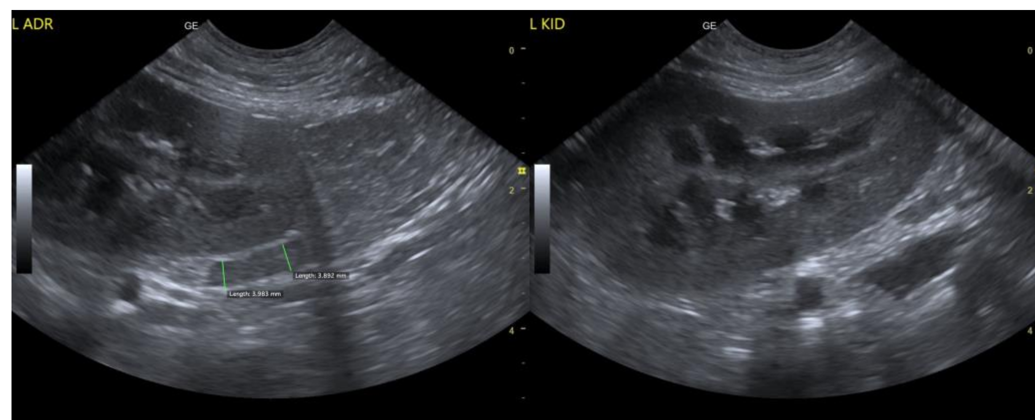
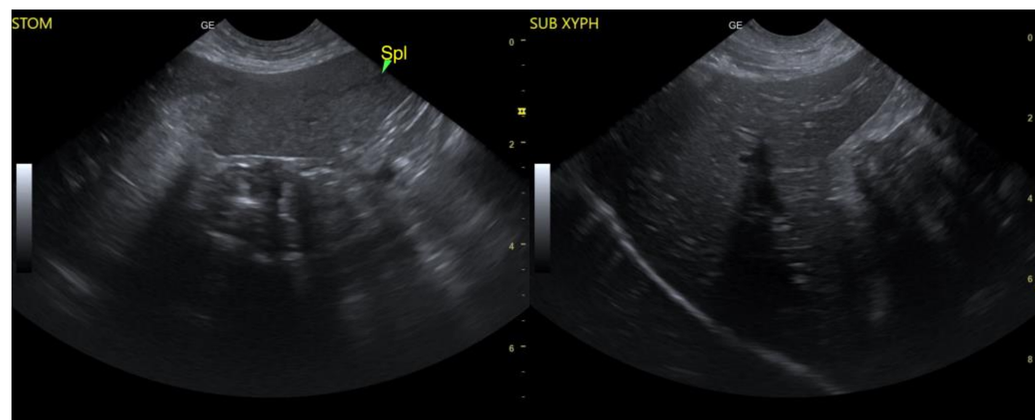
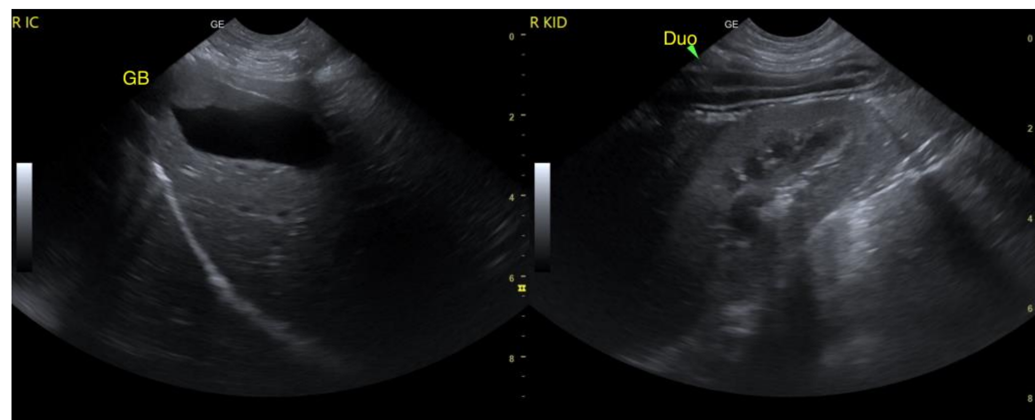
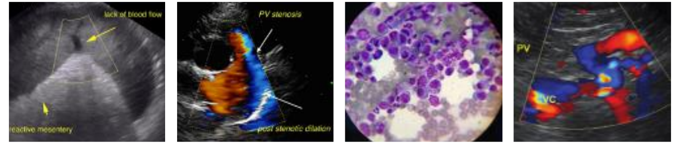
include PLI/TLI/Cobalamin/Folate. Empirically, a hydrolyzed diet trial with potential long term dietary therapy, prophylactic deworming, even with negative fecal testing (i.e., 50 mg/kg PO SID for 5 consecutive days with potential repeat protocol in 3 weeks), high colony count probiotic, such as Proviable, with as needed gastrointestinal support and assessment of clinical response would be reasonable. Although considered unlikely, resting cortisol level to rule out occult Addisons disease may be considered.





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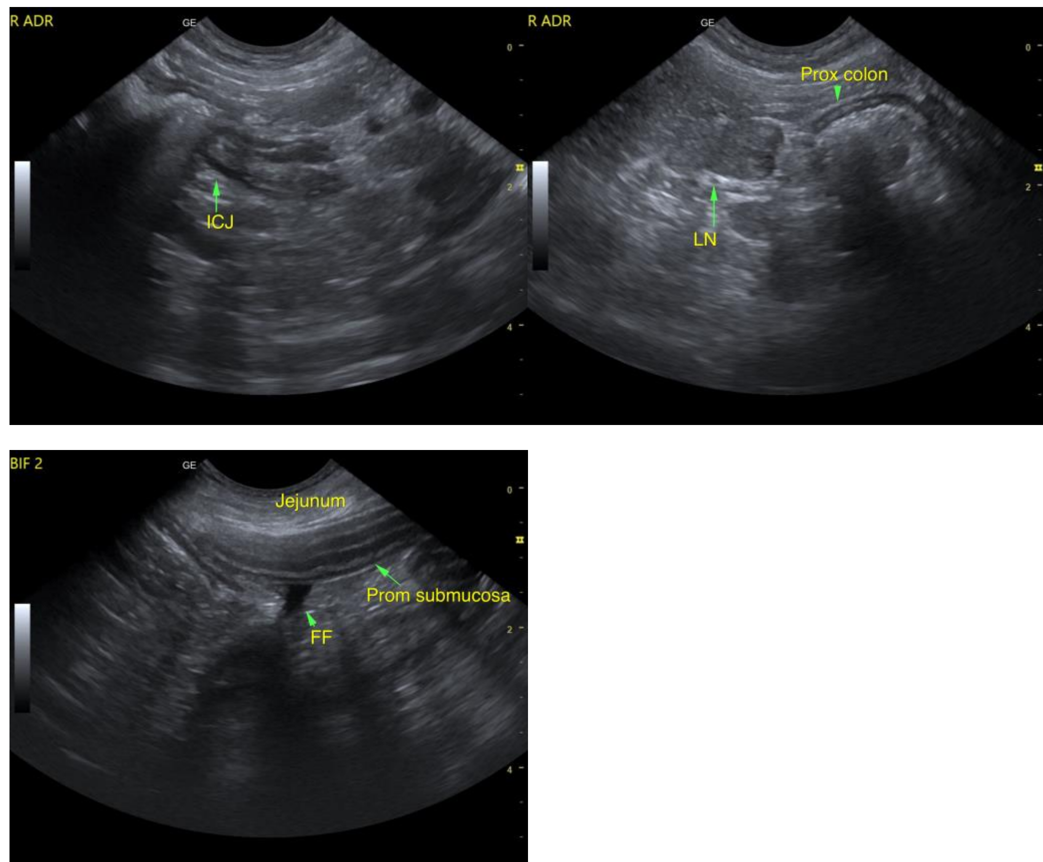


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**
**info@SonoPath.com**