



PATIENT	PRESENTING CLINICAL SIGNS
Luna Jaramillo	On going chronic diarrhea decreased protein , suspected protein losing enteropathy low vit b12 levels negative for fecal canine pcr test low calcium Current Medications gastrointestinal food and probiotics Abnormal PE/Chem/CBC/UA Results: Low protein , calcium
SPECIES	
Canine	
BREED	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
Shep X	
SEX	Urinary System
FS	The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 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.
	No evidence of medial Iliac or sublumbar lymphadenopathy.
AGE	
10 years	Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 7.8 cm in length. The right kidney measured 7.6 cm in length.
WEIGHT	Adrenal Glands
17.5 kg	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.3 cm length x 0.44 cm width at the caudal pole. The right adrenal gland was indistinctly visualized without overt pathology subjectively measuring 0.88 cm width at the caudal pole.
INTERPRETED BY	Spleen
R. McKenzie Daniel, DVM, DABVP	The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease.
IMAGING PERFORMED BY	
Kelly Reschny	
HOSPITAL NAME	Liver/ Gallbladder
Hespeler AH	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. The gallbladder was non-distended in size containing primarily anechoic content with mild, echogenic gallbladder debris. The cystic and common bile ducts were normal. No evidence of gallbladder or peripheral gallbladder inflammatory criteria was noted.
REFERRING VET	
Dr. Bhinder	
INVOICE	
16115	
DATE	
2/10/23	



PATIENT

Gastrointestinal

Luna Jaramillo

The stomach was indistinctly visualized owing to increased perigastric omental artifact. No overt evidence of gastric distention with retained gastric ingesta, fluid, or foreign material.

SPECIES

Canine

The small intestine presented maintained intact wall layering with generalized propensity for mild to variably prominent duodenojejunal mucosa layer. Subtle areas of jejunal increased mucosa echogenicity to mucosal fogging were noted. No evidence of intestinal mechanical / metabolic ileus, visualized loss of intestinal wall layering, or intestinal masses. The duodenum wall measured 0.6 cm width. The jejunum wall measured 0.40 cm width, respectively.

BREED

Shep X

Normal visible colon wall layers were present containing semi formed fecal matter.

SEX

FS

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.

AGE

10 years

Free Abdomen

No evidence of omental masses or significant lymphadenopathy was present. Primarily peri intestinal mild hyperechoic omentum was noted along with scant to mild volume anechoic peritoneal free fluid.

WEIGHT

17.5 kg

ULTRASONOGRAPHIC FINDINGS

- Enteropathy exhibiting intact yet prominent wall layering and segmental subtle jejunal mucosal fogging
- Peri intestinal hyperechoic omentum and scant to mild volume peritoneal free fluid
- Sonographically normal liver - no evidence of structural hepatopathy
- Mild age-related kidneys

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP

IMAGING PERFORMED BY

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the gastrointestinal signs in this patient, assuming no evidence of proteinuria as a contributing factor and without evidence of hepatic pathology, protein-losing enteropathy which may include IBD, lymphangiectasia, infiltrative neoplasia, or other enteropathy is most likely. The decreased cobalamin levels indicate concurrent distal small intestinal disease.

Urinalysis to assess for evidence of proteinuria, if not done, is suggested. Intestinal biopsies would be required for a definitive diagnosis. Some or all of the following protocol including high colony count probiotic such as Provable may be considered.

OBJECTIVE: keep albumin levels > 2 g/dl, avoid thromboembolism and cavitory effusions, monitor concurrent PLN (Wheaton Terrier PLE/PLN) and liver disease:

Plasma 10 mL / kilogram IV over 4 hours

Or **Human albumin** 2 ml/kg/h over 10 hours. Total daily volume 20.l/kg/day

And Colloids/Hetastarch



PATIENT

Luna Jaramillo

10 to 20 mL per kilogram per day and dogs
10 to 15 mL per kilogram per day cats
(Can bolus first 1/3 of dose over 15 minutes)
& maintain on LRS maintenance otherwise.

SPECIES

Canine

Metronidazole (10-20 mg/kg po bid)

Famotidine 1 mg/kg lv Im po dc Sid /bid

Sucralfate 0.5-1 g po tid dogs, 0.5 g bid cats in slurry **Or Misoprostol** 1-5 ug/kg po tid

Diet: Highly digestible high quality protein, low fiber, low fat diet (< 15% of dry matter). Hydrolyzed protein or novel protein. Purina HA or Royal Canine HP or similar.

BREED

Shep X

Prednisone or prednisolone 2 mg/kg bid x 3-5 days then 2 mg/kg sid. **Chlorambucil** in refractive severe IBD/alimentary lymphoma cases (monitor cbc for rare bone marrow suppression) 4 mg/m² Q 24-48 hours.

SEX

FS

Cobalamine (B12) 250-1500 ug/dog weekly x 6 weeks.

Calcium supplementation if necessary.

Aspirin 0.5-1 mg/kg/day **or Clopidrel** (Plavix) 1-5 mg/kg/day.

AGE

10 years

WEIGHT

17.5 kg

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP

IMAGING PERFORMED BY

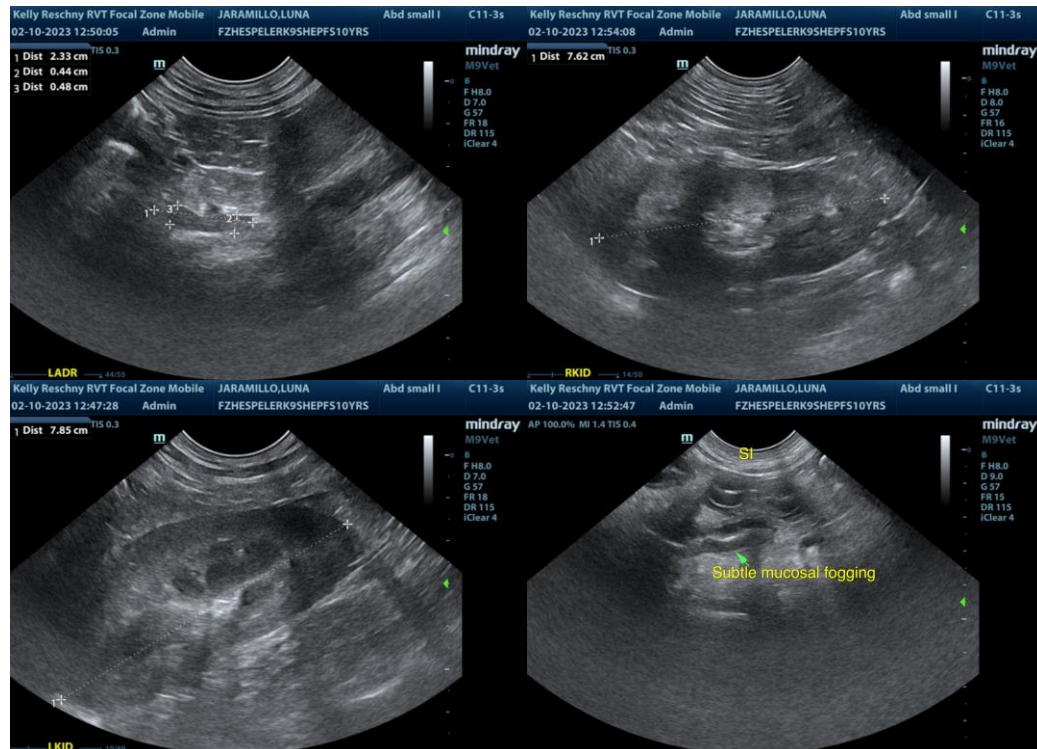
Kelly Reschny

HOSPITAL NAME

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PATIENT

Luna Jaramillo

SPECIES

Canine

BREED

Shep X

SEX

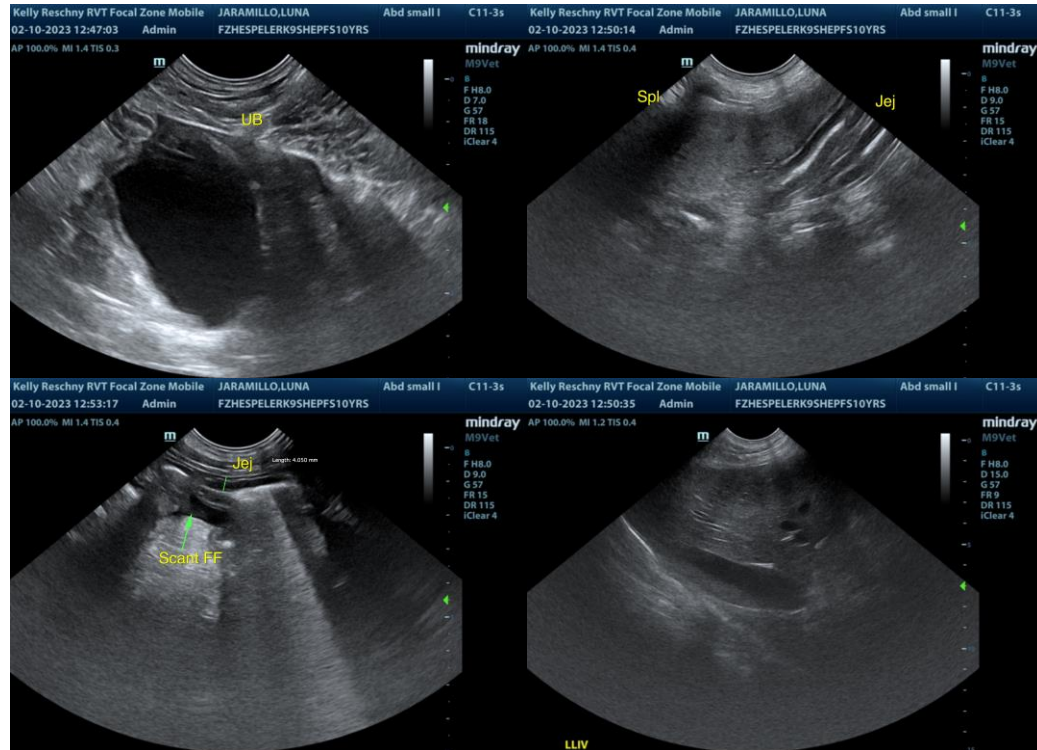
FS

AGE

10 years

WEIGHT

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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)
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