

**PATIENT**

Henry Levy

**SPECIES**

Canine

**BREED**

Pug

**SEX**

MN

**AGE**

5yr

**WEIGHT**

25lb

**INTERPRETED BY**R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)**IMAGING PERFORMED BY**

Sarah Pender CVT

**HOSPITAL NAME**

SVS Imaging QC

**REFERRING VET**

Dr. Oliver

**INVOICE**

11737ag

**DATE**

09/27/2022

**PRESENTING CLINICAL SIGNS**

Weight loss, diarrhea, vomiting. Patient is bright and alert, but has been having watery diarrhea and at times cannot keep any food down. Dog does not have a history of dietary indiscretion, so I am not thinking that dog has a GI FB. Abdomen is not painful.

Abnormal PE/Chem/CBC/UA Results: Low total protein 4.6, ALB low at 2.5. CBC - ok, HCT ok @46%. Ab rad images submitted to Idexx - suspect infiltrative GI disease in SI loops, but rads could not definitely rule out GI FB (I do not suspect a GI FB)

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

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with focal small dependent calculus to mineral measuring 0.4 cm was present. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

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 4.8 cm in length. The right kidney measured 4.5 cm in length.

The area of the aortic trifurcation was free of pathology.

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

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.37 cm width at the caudal pole and 2.2 cm length. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.31 cm width at the caudal pole and 1.8 cm length.

**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**

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 with echogenic, mobile nonmineralized biliary sludge. The cystic duct and common bile ducts were normal without evidence of dilation.

**Gastrointestinal**

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The stomach presented wall thickening secondary to echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. The gastric body wall measured 0.42 cm width. Mild gastric distension with primarily anechoic fluid was present.

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The small intestine presented intact yet prominent to thickened wall layering with thickened duodenojejunal mucosa. Concurrent duodenojejunal mucosal hyperechoic striations to fogging were present. No evidence of loss of intestinal wall layering or intestinal masses. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material. The duodenum measured 0.54 cm in width. The jejunum measured 0.50 cm in width.

**BREED**

Pug

Normal visible colon wall layers were present with apparent semi formed to soft feces in lumen.

**Pancreas****SEX**

MN

The pancreas base and right limb exhibited mild prominent size with rounded to swollen contour. Mild non-homogeneous to hypoechoic parenchyma compared to the adjacent omental fat was present. The visible pancreatic duct was normal.

**Free Abdomen****AGE**

5yr

No overt lymphadenopathy was present.

Peri-intestinal hyperechoic mesentery and scant peri-intestinal free fluid were present.

**WEIGHT**

25lb

**ULTRASONOGRAPHIC FINDINGS**

- Mild hypomotile gastritis
- Enteropathy exhibiting generalized duodenojejunal mucosa hyperechoic striations to fogging
- Mildly prominent to hypoechoic pancreas base/right limb

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**Secondary**

- Gallbladder debris (non-mucocele)
- Focal small dependent cystic calculus/mineral

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Sonographically the appearance of the small bowel is consistent with IBD or possible PLE given the decreased ALB and generalized panhypoproteinemia. Infiltrative small intestinal neoplasia is considered less likely yet cannot be definitively excluded. Potential for concurrent low-grade pancreatitis is possible. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended. Intestinal biopsies would be required for a definitive diagnosis and may be considered with ALB levels >2.0. No evidence of GI foreign material or mechanical obstruction. Some or all of the following protocol may be considered empirically.

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Part or all of this protocol may be considered based on your clinical impression of the patient:

**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**

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.

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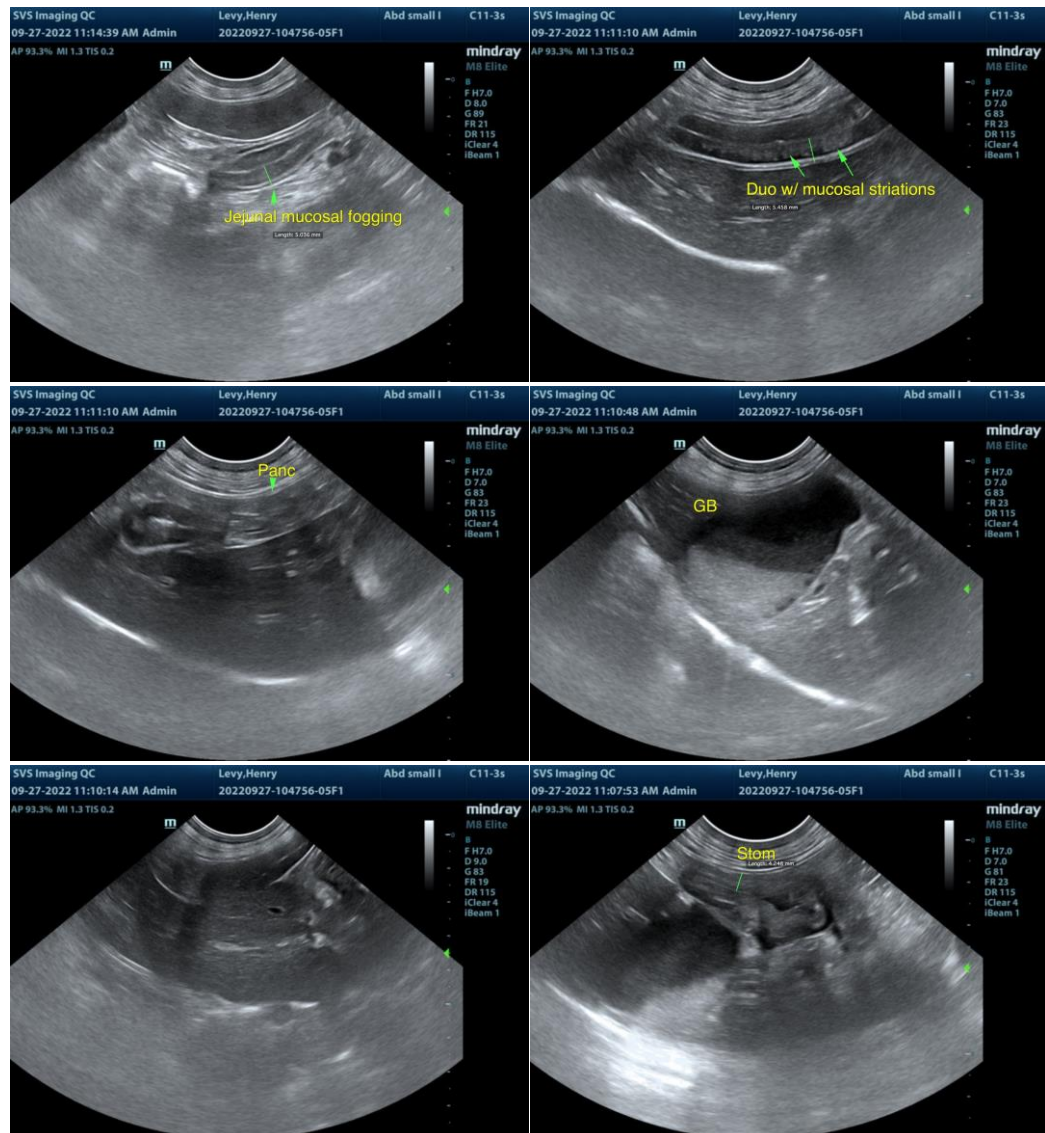
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**Metronidazole** (10-20 mg/kg po bid)  
**Famotidine** 1 mg/kg lv Im po dc Sid /bid  
**Sucralfate** 0.5-1 g po tid dogs, 0.5 g bid cats in slurry **Or Misoprostol** 1-5 ug/kg po tid  
**Diet:** Highly digestible high quality protein, low fiber, low fat diet (< 15% of dry matter). Hydrolyzed protein or novel protein. Purina HA or Royal Canine HP or similar.  
**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/m<sup>2</sup> Q 24-48 hours.  
**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.





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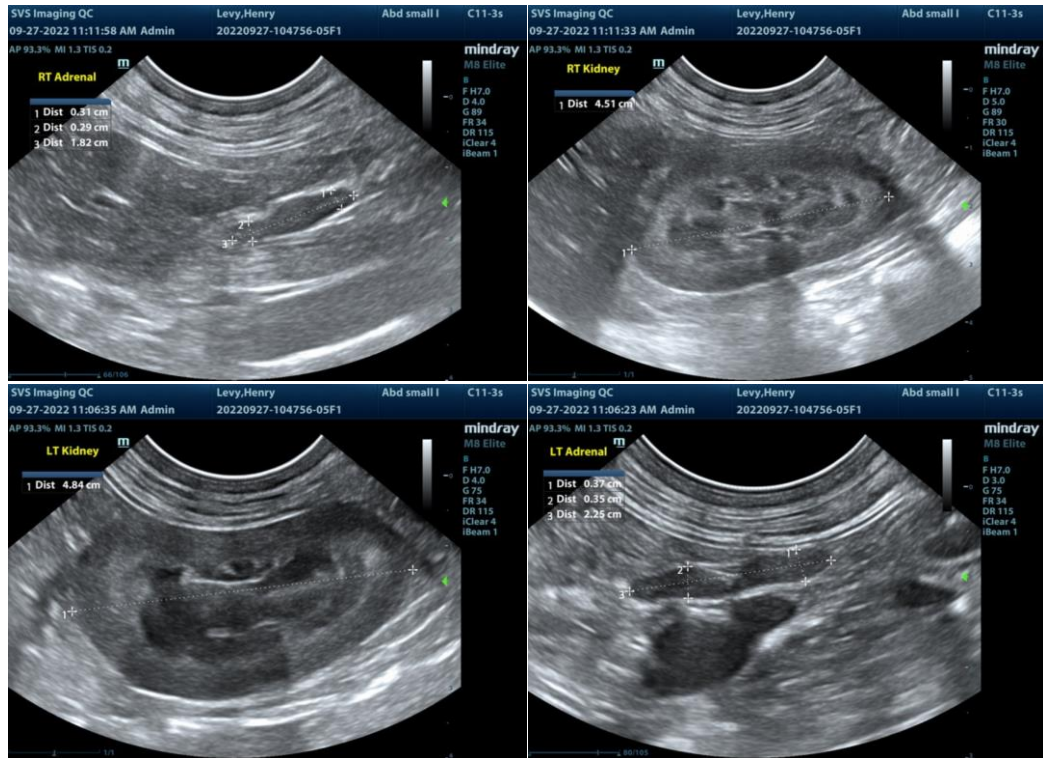
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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

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