



**PATIENT**

Luke Sallows

**SPECIES**

Canine

**BREED**

Lab X

**SEX**

Neutered Male

**AGE**

8 Years

**WEIGHT**

37.7 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Massa

**HOSPITAL NAME**

Animal Emergency  
Hospital Volusia

**REFERRING VET**

Dr. Massa

**INVOICE**

45845

**DATE**

3/11/23

**PRESENTING CLINICAL SIGNS**

Presented for chronic diarrhea and coughing for the past month. no improvement on medications. Abnormal PE/Chem/CBC/UA Results: ALP: 788 WBC:40 thousand albumin: 1.7

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

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 minor dependent hyperechoic sand to mineral present. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

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

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. Minor non-obstructive medullary mineral present, primarily in the lateral diverticuli. The left kidney measured 7.7 cm. The right kidney measured 8.5 cm.

**Adrenal Glands**

The adrenal glands were not definitively visualized.

**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 overall normal in size with areas of mild caudal capsule asymmetry. 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 thin walls and primarily anechoic luminal content. Mild hyperechoic gallbladder debris to possible emerging mineral present, primarily in the peripheral gallbladder lumen. no evidence of peripheral gallbladder inflammation. The cystic and common bile ducts were normal.

**Gastrointestinal**

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

The intestinal walls demonstrated intact wall layering and maintained 1:3 muscularis / mucosa ratio. The mucosa exhibited mild decreased echogenicity with occasional mucosal speckling. A segmental to diffuse ileus pattern consisting of mild fluid accumulation in the intestinal lumen was present without obstruction or foreign material.

Normal visible colon wall layers were present with semi-formed feces in lumen.



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**Pancreas**

Luke Sallows

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 was evident.

**SPECIES**

Canine

**Free Abdomen**

**BREED**

Lab X

Intermittent scant pocket of peri intestinal free fluid noted. No vidence of overt lymphadenopathy. No omental masses.

**SEX**

Neutered Male

- Minor urinary bladder sand / mineral

**AGE**

8 Years

- Mild renal medullary mineral
- Hepatopathy exhibiting mild capsule asymmetry and parenchyma remodeling
- Nondistended gallbladder with mild hyperechoic debris / mineral

**WEIGHT**

37.7 kg

- Enteropathy
- Scant peri-intestinal free fluid

**INTERPRETED BY**

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

This patient may be passing small amounts of mineral from the kidneys to the urinary bladder. Urine C/S and UPC if proteinuria, given decreased albumin, is suggested. Vacuolar / reactive hepatopathy, inflammatory hepatopathy, cholecystitis, infiltrative hepatic neoplasia (thought less likely) possible. FNA of the liver warranted for screening cytology. Hepatic function likely normal / adequate if normal BUN, cholesterol, and glucose levels. No overt or visualized evidence of significant gastroenterocolic mural pathology. Dietary intolerance / food allergy, IBD, PLE, occult parasitism, occult Addison's, infectious disease, occult intestinal neoplasia (thought less likely) all potentials. A GI panel (TLI / PLI / B12/ folate), resting cortisol, and fresh fecal analysis is suggested if not done. CBC pathology review is recommended. Some or all of the following could be considered empirically and pending additional diagnostics.

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**PLE Therapy**

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 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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**Metronidazole** (10 mg/kg po bid) with high colony count probiotic (Provable, Visbiome)

**Famotidine** 1 mg/kg lv 1m 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.



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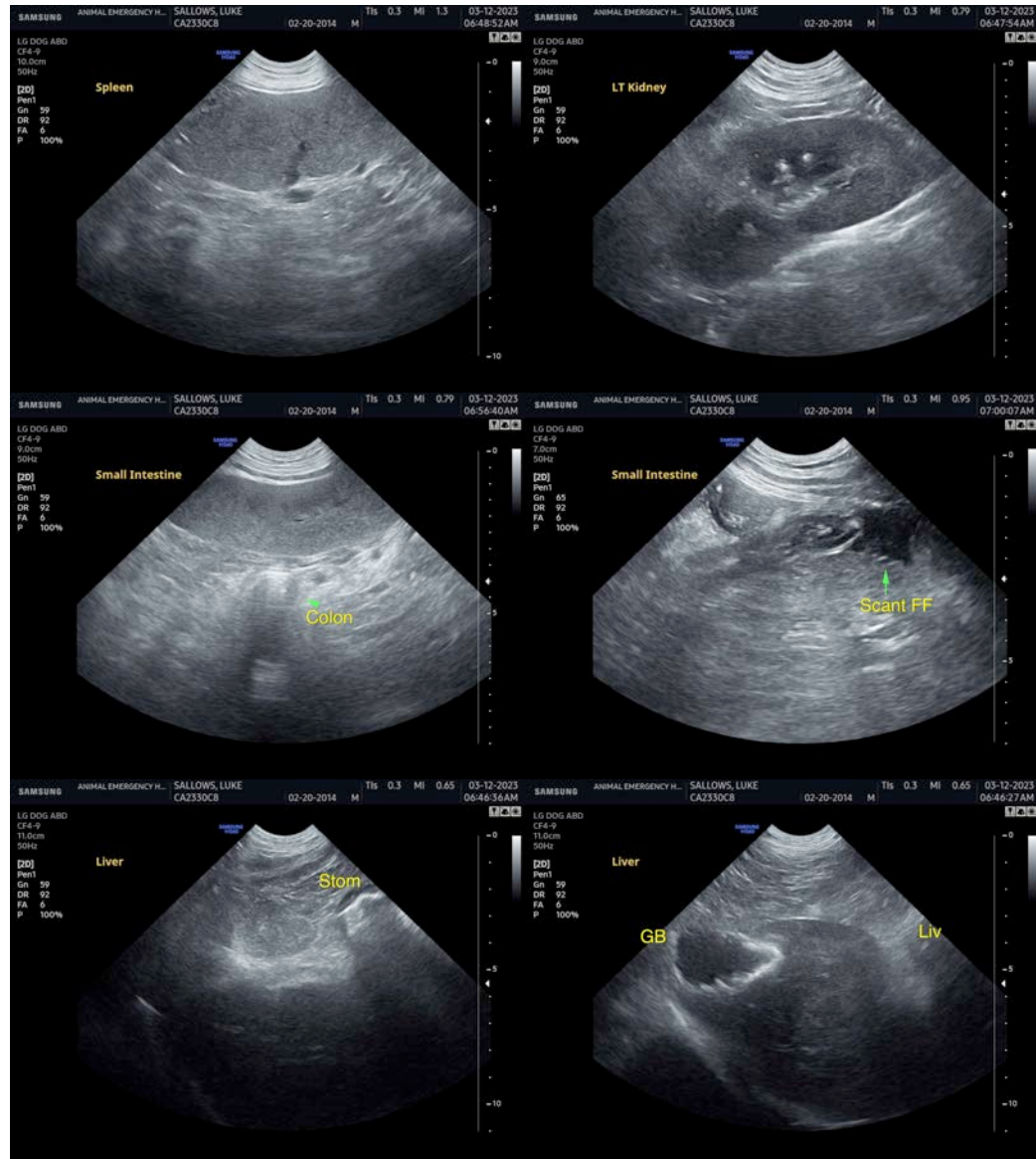
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**Prednisone** or prednisolone 2 mg/kg bid x 3-5 days then 2 mg/kg sid. **Chlorambucil** in refractive severe IBD/alimentary lymphoma cases (monitor cbc for rare bone marrow suppression) 4 mg/m<sup>2</sup> Q 24-48 hours.

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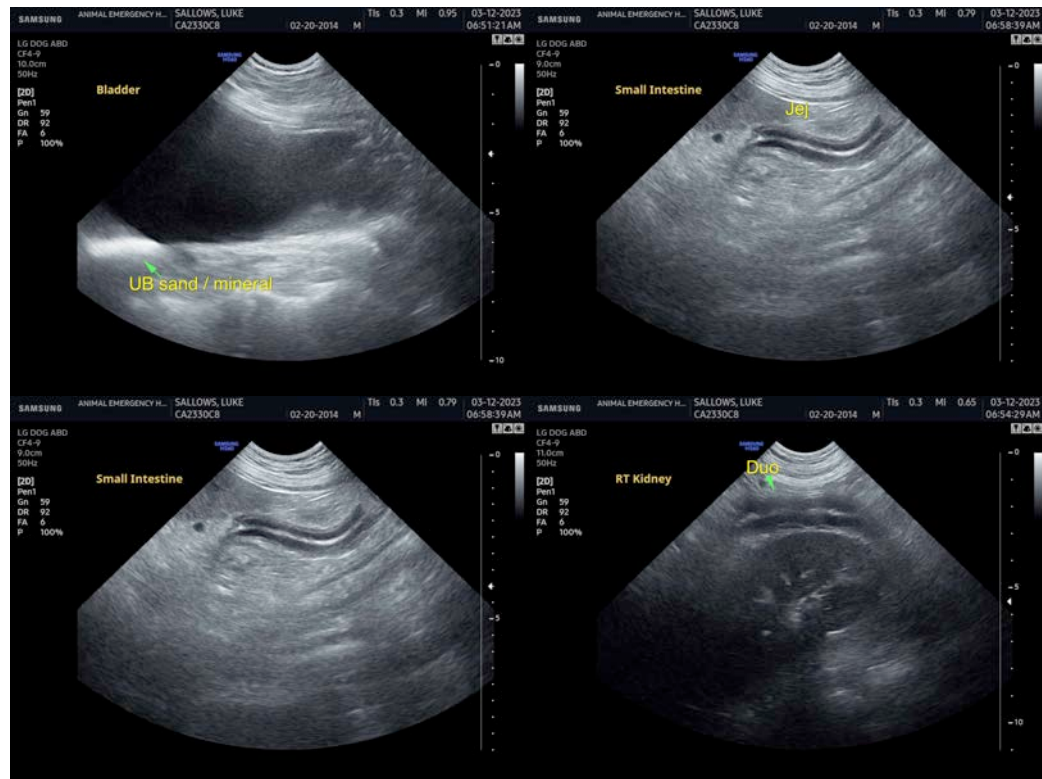
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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