

**PATIENT PRESENTING CLINICAL SIGNS**

Griffen Hayden

History: Chronic IBD, last flareup three months ago, no diarrhea currently. Recently became PUPD, hypoproteinemic, dependent edema. Urinalysis high pH, low USG, culture negative but dog is less PUPD after injn of convenia

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: marked hypoproteinemia, low USG with high pH

**BREED**

Yorkie

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder was mildly subnormal in size owing to lack of urine distention yet without overt pathology. Mild anechoic urine was present without evidence of sediment or calculi. The urethra was normal to a depth of 3.0 cm. Aortic trifurcation was normal.

**SEX**

Neutered Male

No overt pathology in the area of the residual prostate.

**AGE**

11 Years

Normal size and margination was 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 3.4 cm in length. The right kidney measured 3.6 cm in length.

**WEIGHT**

3.3 kg

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.6 cm length x 0.63 cm at the caudal pole.

**INTERPRETED BY**

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

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 1.3 cm length x 0.38 at the caudal pole.

No evidence of adrenal neoplastic criteria.

**IMAGING**

**PERFORMED BY**

Crystal Hill

**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.

**HOSPITAL NAME**

Preston AC

**Liver**

**REFERRING VET**

Dr. MacDonald

The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion.

**INVOICE**

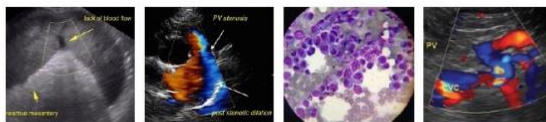
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The gallbladder was non distended in size with moderate nondependent yet nonorganized gallbladder debris. The gallbladder walls were normal without evidence of inflammatory changes, as well as no evidence of peripheral gallbladder inflammation. The cystic duct and common bile ducts were normal without evidence of dilation.

**DATE**

3/24/22

**Gastrointestinal**



**PATIENT**

Griffen Hayden

The stomach presented intact yet subjective mild prominent wall layering. The lumen of the stomach was empty. No evidence of retained ingesta, fluid or foreign material.

**SPECIES**

Canine

The small intestine presented intact wall layering and primarily maintained 1:3 muscularis/mucosa ratio. Discreet segmental duodenojejunal mucosal speckling was present. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material. The jejunum wall measured 0.28 cm. The duodenum wall measured 0.42 cm.

**BREED**

Yorkie

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

***Pancreas***

The pancreas was normal in size and contour with heterogeneous to mildly hyperechoic parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

**SEX**

Neutered Male

**ULTRASONOGRAPHIC FINDINGS**

**AGE**

11 Years

- Mild chronic renal changes
- Vacuolar hepatopathy pattern- subjectively benign
- Moderate gallbladder debris (non-mucocele)
- Pancreatic parenchymal remodeling, potential for chronic-to-chronic active pancreatitis
- Enteropathy, exhibiting discreet segmental mucosal speckling- may suggest chronic inflammatory bowel disease.

**WEIGHT**

3.3 kg

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Given the patients history, concern for protein losing enteropathy in light of marked hypoproteinemia. Intestinal protein loss is considered likely, if no evidence of proteinuria and with apparent normal hepatic function. Intestinal biopsies required for definitive diagnosis yet would be contraindicated if albumin levels <2.0. Empirically, some or all of the following protocol with as needed gastrointestinal support may be considered based on the clinical impression of the patient. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended.

**IMAGING PERFORMED BY**

Crystal Hill

**PLE Therapy**

**HOSPITAL NAME**

Preston AC

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

**REFERRING VET**

Dr. MacDonald

**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**

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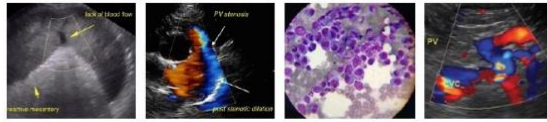
10 to 20 mL per kilogram per day and dogs  
10 to 15 mL per kilogram per day cats  
(Can bolus first 1/3 of dose over 15 minutes)  
& maintain on LRS maintenance otherwise.

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**Metronidazole** (10-20 mg/kg po bid)

**Famotidine** 1 mg/kg lv 1m po dc Sid /bid



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**HOSPITAL NAME**

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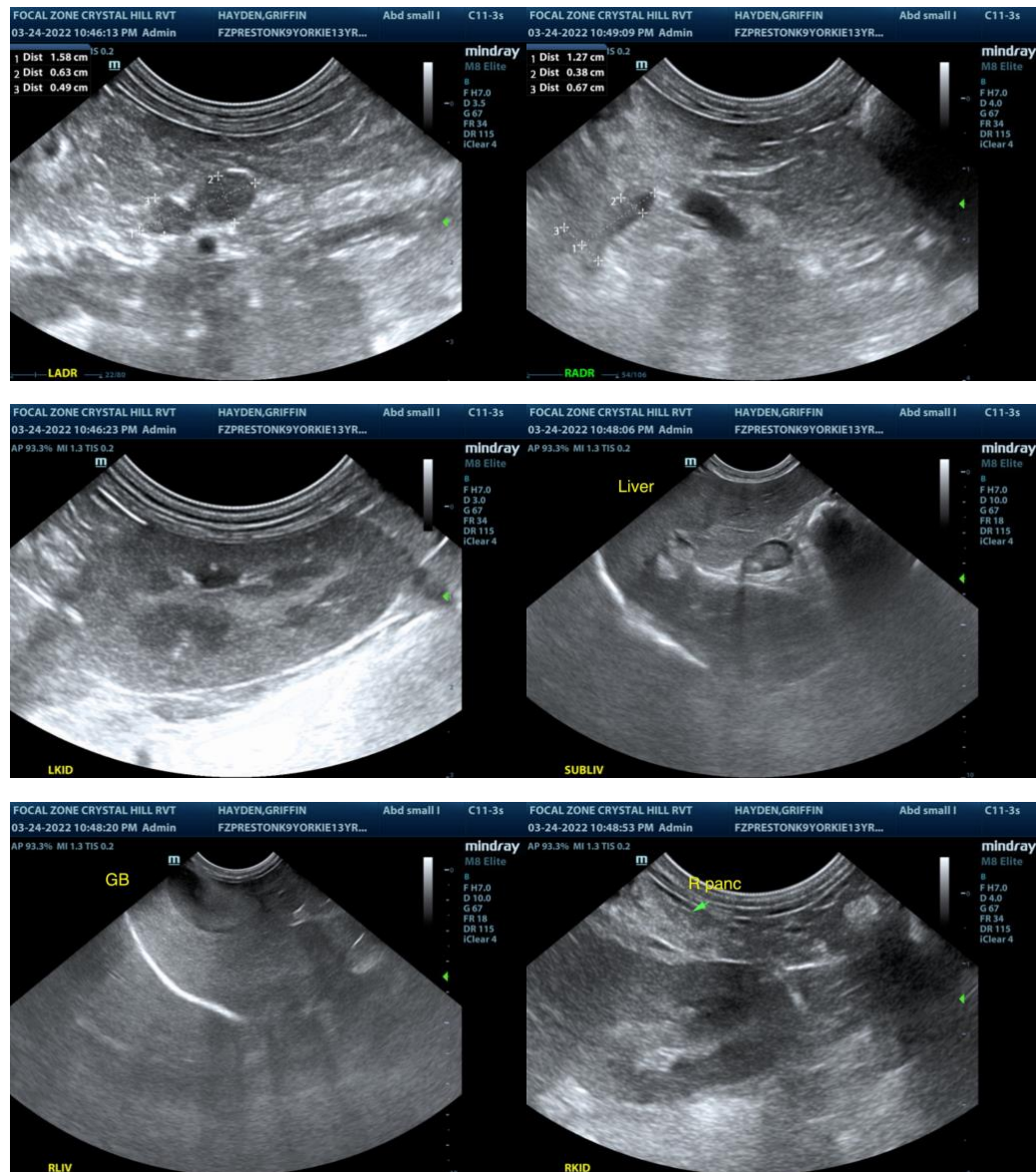
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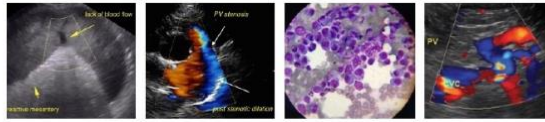
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**Sucralfate** 0.5-1 g po tid dogs, 0.5 g bid cats in slurry **Or Misoprostol** 1-5 ug/kg po tid  
**Diet:** Highly digestible high quality protein, low fiber, low fat diet (< 15% of dry matter). Hydrolyzed protein or novel protein. Purina HA or Royal 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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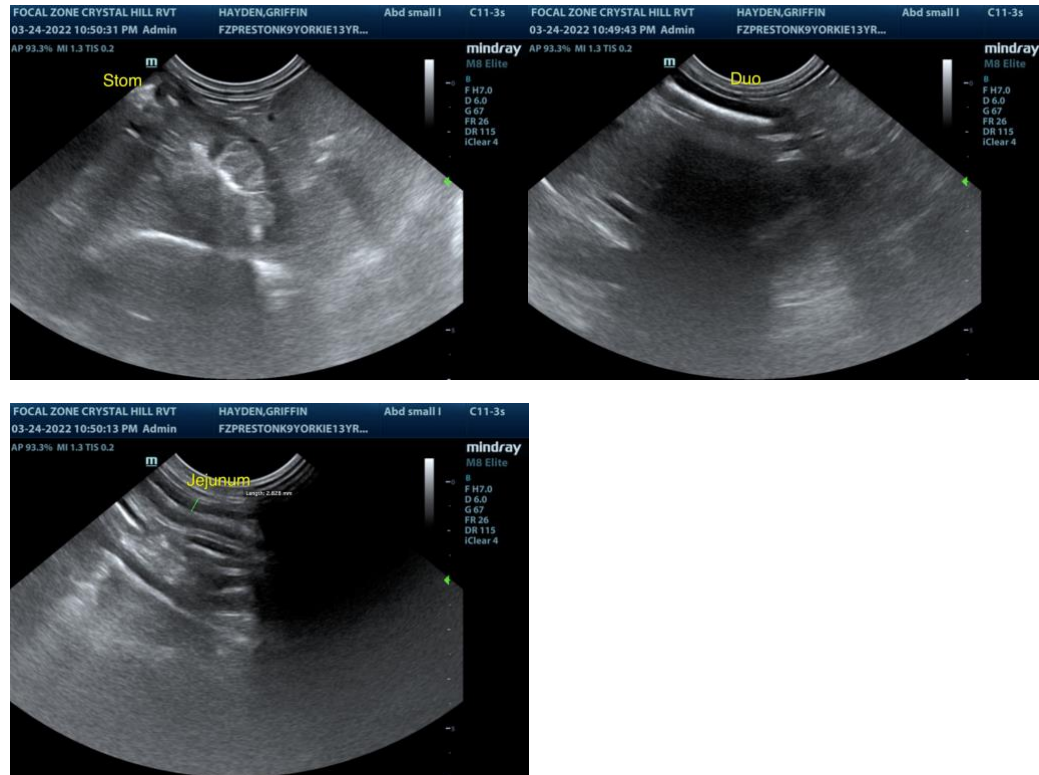
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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