



**PATIENT**

Chester Jorstad

**SPECIES**

Canine

**BREED**

Beagle

**SEX**

Neutered male

**AGE**

9 Years

**WEIGHT**

9.2 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Erin Wicks

**HOSPITAL NAME**

Shores VEC

**REFERRING VET**

Dr. Lupole

**INVOICE**

24527

**DATE**

8/11/21

**PRESENTING CLINICAL SIGNS**

Presented at our hospital for AUS. Started having loose stool approx 2mo ago. Then 2 weeks ago lost a ton of weight, vomiting occasionally (not uncommon for pet), took to ER, enlarged liver and high liver values, tx outpatient with meds, then 2 weeks later started on antibiotic and became weak, couldn't walk, very painful, took to rdvm and liver values were even higher, rec AUS. Dx protein losing enteropathy. Previous Health Concerns: no Current Medications/Supplements/OTC: Metronidazole, Gabapentin, Prednisone, liver supplement Hepato Appetite/When did they eat last: early this am Diet: boiled chicken, rice but was on hydrolyzed protein  
Abnormal PE/Chem/CBC/UA Results: Painful on abdominal palpation. ER prev bloodwork 7/19/21: CBC wnl eos mildly increased, Lytes: NA 153; Chem: ALB 1.4; Chol 58; BUN 7.8 ER rads 7/19/21: some gas in SI no distention, gas si on L abdomen on VD, fluid filled GI on R abdomen on VD, incidental but at first made it look like a mass effect. Liver marginally large, no obstruction or mass seen. RDVM bloodwork 8/2/21: ALT 477; AlkP 141; NA 162; Chl 121; PSL 19; WBC 16.9 4DX - negative

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 4.93 cm. The right kidney measured 5.24 cm.

**Adrenal Glands**

The **adrenal glands** were not visualized.

**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

**Liver**

The **liver** presented heterogenous parenchyma with increased portal markings and coarse architecture. Slight undulating capsular contour was noted. The gallbladder and common bile duct were unremarkable. This is consistent with chronic inflammatory hepatopathy.

**Gastrointestinal**

The **gastrointestinal tract** revealed diffuse, hyperechoic fogging or overlay throughout the small intestine as well as areas of mucosal striations and speckling. This striation + fogging effect appeared to exclusively affect the mucosal layer with the submucosa, muscularis and serosa left in-tact. Reactive mesentery was present associated with the serosa indicative of active inflammation. This is most



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consistent with protein losing enteropathy/lymphangectasia. Full thickness biopsies or endoscopy guided biopsies would be ideal to confirm. No obstructive disease or obvious suspicion of neoplasia.

**Pancreas**

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The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

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**ULTRASONOGRAPHIC FINDINGS**

- Intestinal mucosal fogging – suspect protein losing enteropathy
- Mild degenerative renal changes
- Mild degenerative hepatic changes with inflammatory component

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

If no significant proteinuria is present, then protein losing enteropathy is likely. FNA of the liver warranted. No evidence of neoplasia. Maldigestion panel, three view chest radiographs and full CNS examination is recommended to examine for occult disease that could be responsible for the weight loss. Evaluation for competitive eating environments should also be considered. If no significant proteinuria is present, then the following protocol may prove effective. However, examination of other cavities for neoplasia would be warranted such as the chest and CNS.

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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 (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.

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

**Famotidine** 1 mg/kg Iv 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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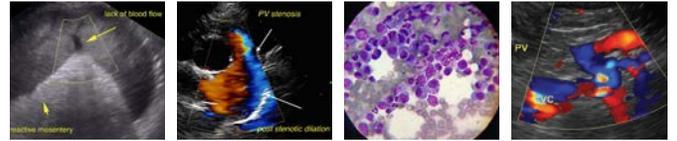
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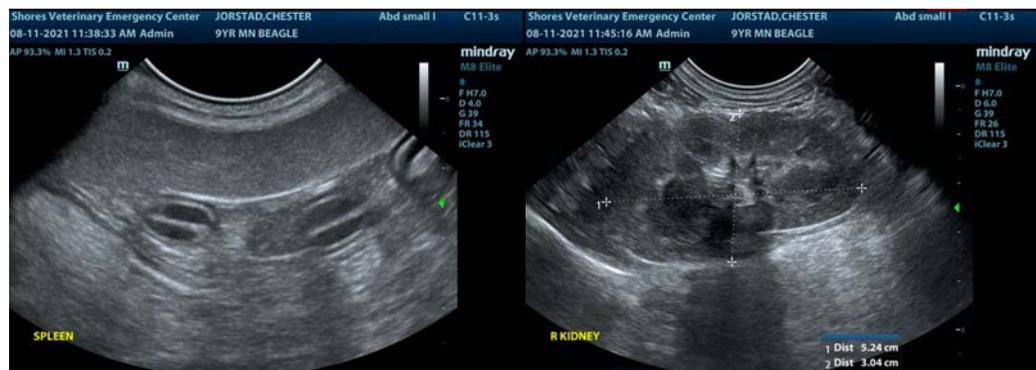
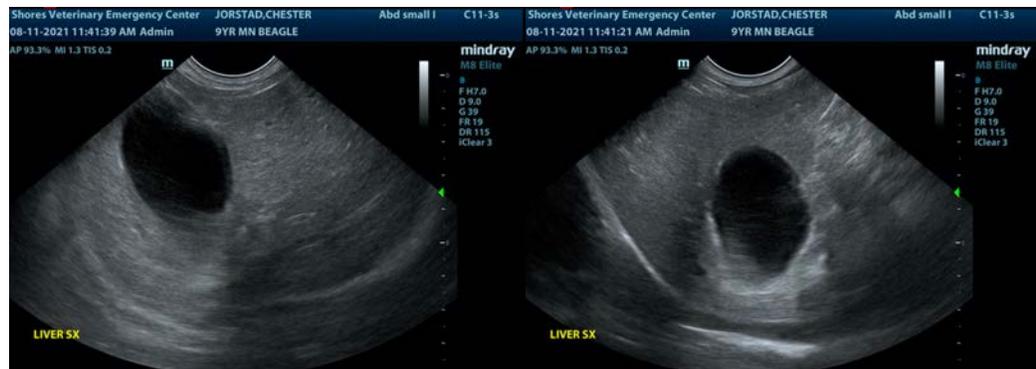
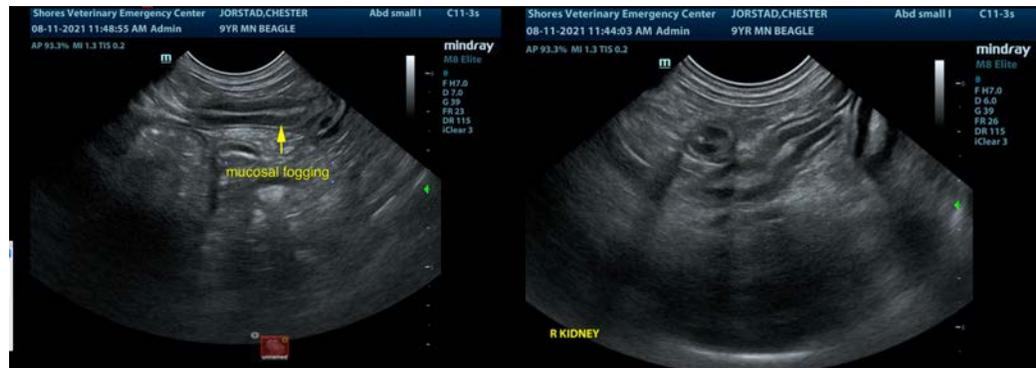
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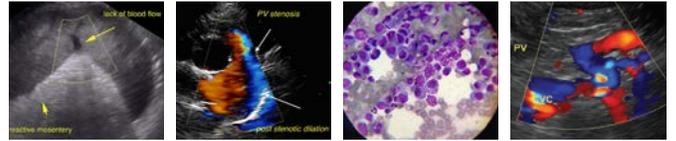
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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.

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**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
[info@SonoPath.com](mailto:info@SonoPath.com)

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