



**PATIENT PRESENTING CLINICAL SIGNS**

Sookie Shaughnessy

History: Chronic liquid diarrhea for the past 8 weeks. No response to tylosin or metronidazole and diet change. Appetite is ok, no vomiting, or weight loss noted.

**SPECIES**

Abnormal PE/Chem/CBC/UA Results: Abdominal distension PCV 41 TP 3 Fecal: negative cbc/chem: pending Texas GI panel: pending

Canine

**BREED**

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

Yorkie

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 was noted. Ureteral papillae were normal.

**SEX**

Intact female

**AGE**

7 years

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The left kidney measured 2.68 cm. The right kidney measured 3.4 cm.

**WEIGHT**

4 lbs

**Adrenal Glands**

**INTERPRETED BY**

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient.

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Lanz

**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 was noted.

**HOSPITAL NAME**

New Holland VH

**REFERRING VET**

Dr. Lanz

**Liver**

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

**INVOICE**

42905

**DATE**

2/21/23



<b>PATIENT</b>	<b><i>Gastrointestinal</i></b>
Sookie Shaughnessy	The <b>gastrointestinal tract</b> 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 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.
<b>SPECIES</b>	
Canine	
<b>BREED</b>	<b><i>Pancreas</i></b>
Yorkie	The <b>pancreas</b> was mildly heterogenous, yet enhanced owing to the ascites. This is largely an artifact. There was no evidence of significant primary disease.
<b>SEX</b>	
Intact female	<b><i>Free Abdomen</i></b>
<b>AGE</b>	A large amount of free fluid was noted in the abdomen.
7 years	
<b>WEIGHT</b>	<b>ULTRASONOGRAPHIC FINDINGS</b>
4 lbs	Mucosal fogging throughout the intestinal tract and ascites.
<b>INTERPRETED BY</b>	<b><u>INTERPRETATION OF THE FINDINGS &amp; FURTHER RECOMMENDATIONS</u></b>
Eric Lindquist, DMV DABVP, Cert. IVUSS	Assuming that the albumin levels are less than 1.5, which would justify third spacing of fluid owing to protein losing enteropathy. Given that no other overt cause of the ascites is present such as passive congestion, the only other position is underlying obstructive neoplasia, yet there was no significant lymphadenopathy present. Therefore, the most logical deduction is that this is a protein losing nephropathy patient, but must be justified by an albumin level of less than 1.5 at the time of the sonograph. If that is not noted than an occult neoplasia may be playing a role and abdominocentesis with cytopsin is recommended. There was no evidence of reproductive pathology noted.
<b>IMAGING PERFORMED BY</b>	Part or all of this protocol may be considered based on your clinical impression of the patient:
Dr. Lanz	<b>OBJECTIVE: keep albumin levels &gt; 2 g/dl, avoid thromboembolism and cavitary effusions, monitor concurrent PLN (Wheaton Terrier PLE/PLN) and liver disease:</b>
<b>HOSPITAL NAME</b>	<b>Plasma</b> 10 mL / kilogram IV over 4 hours
New Holland VH	Or <b>Human albumin</b> 2 ml/kg/h over 10 hours. Total daily volume 20.l/kg/day
<b>REFERRING VET</b>	<b>And Colloids/Hetastarch</b>
Dr. Lanz	10 to 20 mL per kilogram per day and dogs
<b>INVOICE</b>	10 to 15 mL per kilogram per day cats
42905	(Can bolus first 1/3 of dose over 15 minutes)
<b>DATE</b>	& maintain on LRS maintenance otherwise.
2/21/23	<b>Metronidazole</b> (10-20 mg/kg po bid)
	<b>Famotidine</b> 1 mg/kg iv Im po dc Sid /bid
	<b>Sucralfate</b> 0.5-1 g po tid dogs, 0.5 g bid cats in slurry <b>Or Misoprostol</b> 1-5 ug/kg po tid
	<b>Diet:</b> 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.



**PATIENT**

Sookie Shaughnessy

**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.

**SPECIES**

Canine

**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.

**BREED**

Yorkie

**SEX**

Intact female

**AGE**

7 years



**WEIGHT**

4 lbs



**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

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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.



**PATIENT**

Sookie Shaughnessy

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.

**SPECIES**

Canine

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
info@SonoPath.com

**BREED**

Yorkie

**SEX**

Intact female

**AGE**

7 years

**WEIGHT**

4 lbs

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