



PATIENT	PRESENTING CLINICAL SIGNS
<p>Skippy Holm</p>	<p>History: Presenting due to Hx of protein losing enteropathy of unknown cause. Chronic weight loss and illness x 3 weeks, with sudden development of moderate pulmonary edema (suspect cardiogenic) yesterday. Moderate diarrhea (liquid, bright yellow) and polyuria with urinary incontinence. Patient developed mild dyspnea yesterday. P very dehydrated. Has been on IVF at home. O concerned that P is going into DIC P is very lethargic right now. P ate 1.4 cup chicken and rice last night. Current Treatments: -- Lasix 50 mg/mL -- give 0.2 mL IV QID -- Dex SP 4 mg/mL -- give 0.2 mL IV q 24 hours -- Diagal 2 tubes dispensed -- Panacur 3.9 mL total dispensed -- B12 1000 mcg/mL: 2 mL SQ -- Cerenia 1 mg/kg IV, then 16 mg PO q 24 hours -- Hill's ID low fat -- Metronidazole; unknown dosing * Patient was fasted at midnight. * Positive murphy pain sign with imaging over the region of the R pancreatic limb</p>
<p>SPECIES</p> <p>Canine</p>	<p>Abnormal PE/Chem/CBC/UA Results: PE: -- thin, evidence of weight loss with mild cachexia. -- Severe periodontal disease and halitosis. Tacky mm's, pink and slightly injected. -- audible 3rd heart sound with grade IV/VI holosystolic L sternal murmur. No dyspnea. No obvious crackles/wheezes. -- Moderate pain on abdominal palpation. No obvious fluid wave. -- Unkempt coat. -- MPLs bilateral -- No lymphadenomegaly 6/24/22: -- BG: 53 mg/dL (74-143) -- BUN: 49 mg/dL (7-27) -- Ca: 6 mg/dL (7.9-12) -- TP: 3.6 g/dL (5.2-8.2) -- ALB: 1.5 g/dL (2.3-4) -- GLOB: 2.1 g/dL (2.5-4.5) -- ALP <10 U/L (23-212) -- CHOL: 48 mg/dL (110-320) -- AMYL: 2041 U/L (500-1500) -- K: ** -- Thoracic rads obtained due to crackles appreciated and mild dyspnea: Collapsing trachea, mild cardiomegaly and pulmonary edema reported. No obvious pleural effusion 6/23/22: -- Fecal O&P: Pos Ag for hookworm, but unlikely active infection as patient has never traveled out of the region of PNW and repeat Fecal O&P/Giardia was NEG -- GI Panel: * Spec cPL: 136 (0-200) * TLI 40 ug/dL (5-35) * Cobalamin <150 ng/L (284-836) * Folate 12.1 ug/L (4.8-19) -- ACTH stim: * Pre: 2.4 ug/dL * Post 14.5 ug/dL 6/20/22: CBC: -- HCT: 39% (wnl) -- LYMPH: 960/uL (1050-5100) UA (cysto): -- pale, yellow, clear, USG: >1.033 NEG for protein, remainder of sediment is inactive CHEM: -- BUN: 51 mg/dL -- Ca: 7.4 mg/dL -- TP: 3.9 g/dL -- ALB: 1.6 g/dL -- GLOB: 2.4 g/dL -- ALP< 10 U/L -- CHOL: 61 -- AMYL: 1537 U/L 6/4/22: CHEM -- BUN: 93 mg/dL -- PHOS: 2.3 mg/dL -- ALB (wnl): 2.8 g/dL -- GLOB (wnl): 3.2 g/dL -- Tbili: 1.8 mg/dL (0-0.9) -- AMYL: 2206 U/L</p>
<p>BREED</p> <p>Yorkshire Terrier</p>	<p>SEX</p> <p>MN</p>
<p>AGE</p> <p>7 yr</p>	<p>WEIGHT</p> <p>2.4 kg</p>
<p>INTERPRETED BY</p> <p>R. McKenzie Daniel, DVM, DABVP (Canine and Feline)</p>	<p>ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN</p> <p>Urinary System</p> <p>The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.</p> <p>The area of the aortic trifurcation was free of pathology.</p>
<p>IMAGING PERFORMED BY</p> <p>Patti Mayfield DVM</p>	<p>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 loss of corticomedullary symmetry and definition expected for the age of the patient. Mild bilateral pyelectasia was present. A small cortical cyst was noted in the left kidney. The left kidney measured 3.7 cm in length. The right kidney measured 3.6 cm in length.</p>
<p>HOSPITAL NAME</p> <p>East Bend Animal Hospital</p>	<p>REFERRING VET</p> <p>Dr. Jamie Thurk</p>
<p>INVOICE</p> <p>10956ag</p>	<p>No overt pathology in the area of the residual prostate.</p> <p>Adrenal Glands</p> <p>The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.50 cm width at the caudal pole and 0.51 cm width at the cranial pole. The</p>
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PATIENT

Skippy Holm

right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.58 cm width at the caudal pole and 0.69 cm width at the cranial pole.

Spleen

SPECIES

Canine

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.

BREED

Yorkshire Terrier

Liver

SEX

MN

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 thin walls and primarily anechoic luminal content with minor particulate luminal debris potentially secondary to fasting and is not clinically significant. The cystic and common bile ducts were normal.

AGE

7 yr

Gastrointestinal

WEIGHT

2.4 kg

The stomach presented intact yet mildly prominent wall layering with a normal wall layer ratio. The lumen of the stomach contained minor retained anechoic fluid suggestive of some degree of gastric stasis with no signs of ileus, obstruction or foreign material. The gastric body wall measured 0.40 cm in width.

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DVM, DABVP
(Canine and Feline)

The small intestine presented intact yet generalized prominent wall layering owing to propensity for prominent muscularis layer. Generalized subtle to mild small intestinal mucosal fogging along with minor areas of nonobstructive jejunal ileus were present. The lumen of the small intestine was empty with no signs of masses, obstruction or foreign material. The duodenum wall measured 0.50 cm in width. The jejunum wall measured 0.38 cm in width.

The colon exhibited mildly prominent wall layering containing semi formed to soft feces. The descending colon wall measured 0.20 cm in width.

IMAGING PERFORMED BY

Patti Mayfield DVM

Pancreas

The left limb, right limb, and base of the pancreas presented hypoechoic to heterogeneous echogenicity compared to adjacent omental fat. Mild asymmetrical capsule margination was present with mild variable parenchymal swelling and regional mild peripancreatic reactivity to generalized hyperechoic mesentery consistent with likely mesenteric reactivity. Intermittent small pockets of scant peritoneal free fluid were present.

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Free Abdomen

REFERRING VET

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No omental masses were noted.

Intermittent small pockets of scant peritoneal free fluid were present.

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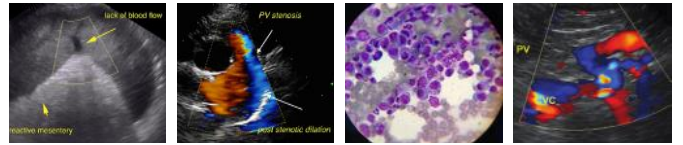
- Chronic PLE intestinal pattern with minor gastric and segmental jejunal hypomotility
- Probable concurrent milds pancreatitis
- Generalized hyperechoic reactive mesentery, intermittent small pockets of scant free fluid
- Mild bilateral pyelectasia

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PATIENT	INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS
<p>Skippy Holm</p> <p>SPECIES</p> <p>Canine</p> <p>BREED</p> <p>Yorkshire Terrier</p> <p>SEX</p> <p>MN</p> <p>AGE</p> <p>7 yr</p> <p>WEIGHT</p> <p>2.4 kg</p> <p>INTERPRETED BY</p> <p>R. McKenzie Daniel, DVM, DABVP (Canine and Feline)</p> <p>IMAGING PERFORMED BY</p> <p>Patti Mayfield DVM</p> <p>HOSPITAL NAME</p> <p>East Bend Animal Hospital</p> <p>REFERRING VET</p> <p>Dr. Jamie Thurk</p> <p>INVOICE</p> <p>10956ag</p> <p>DATE</p> <p>06/25/2022</p>	<p>Overall the appearance of the small intestine given the patient history is consistent with chronic PLE. Considerations may include chronic IBD (which may be a top differential diagnosis), lymphangiectasia, while the possibility of infiltrative intestinal neoplasia cannot be excluded although thought less likely. Some degree of pancreatic inflammation is suspected yet the appearance of the pancreas was not consistent with significant active or necrotizing pancreatitis. The pancreatic inflammation is suspected to be a secondary comorbidity in this presentation. The bilateral pyelectasia may be owing to IVF therapy, mild to early chronic renal changes or pelvic scarring.</p> <p>Hospitalization with appropriate supportive care for PLE and low grade pancreatitis which may include as needed PLE therapy, plasma expanders, placement of a NG tube to maintain enterocyte health and cobalamin supplementation. Some or all of the following protocol may be considered once the patient is stabilized.</p> <p>Part or all of this protocol may be considered based on your clinical impression of the patient:</p> <p>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/m² Q 24-48 hours. Cobalamin (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.</p> <p>A guarded prognosis is indicated.</p>



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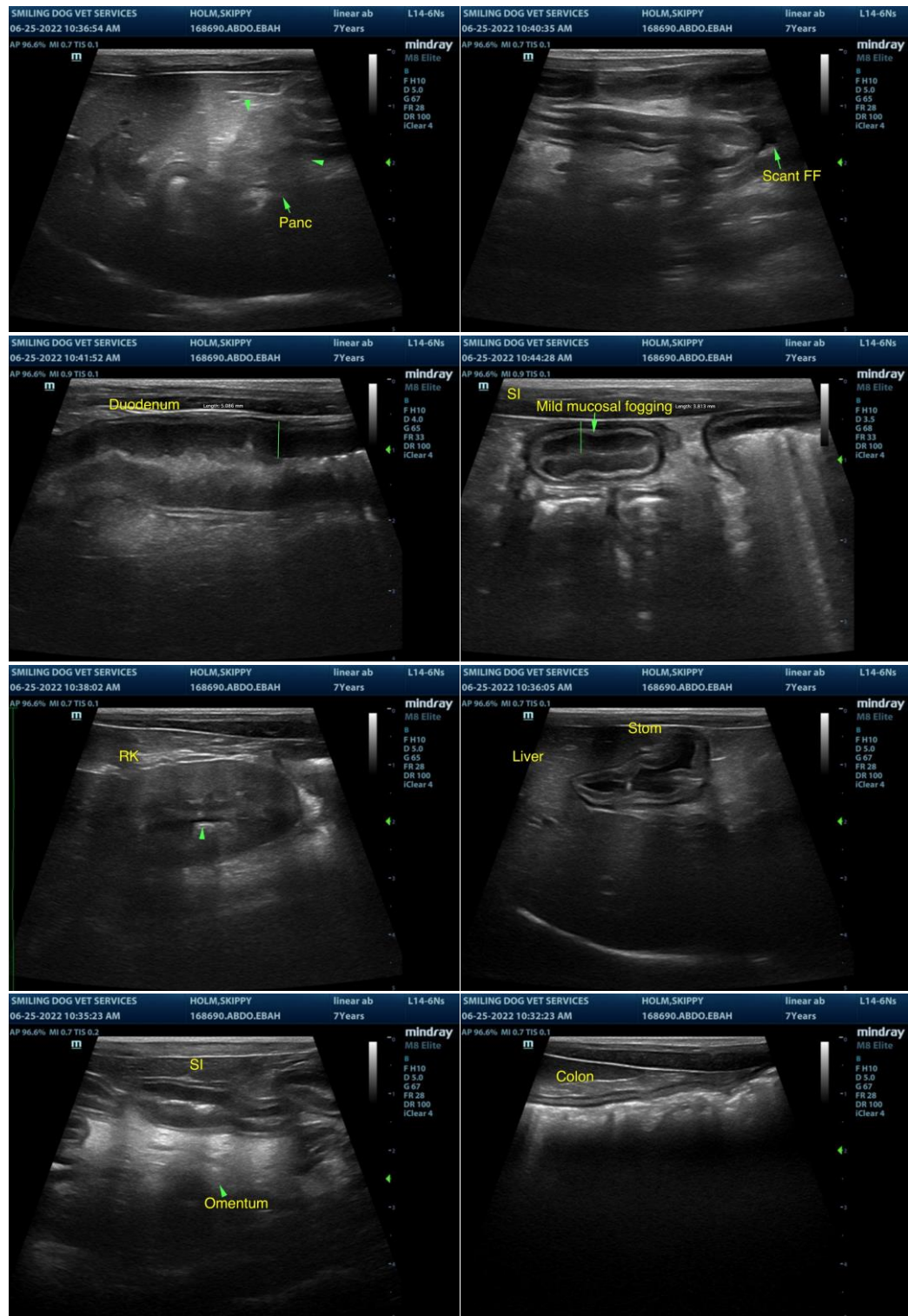
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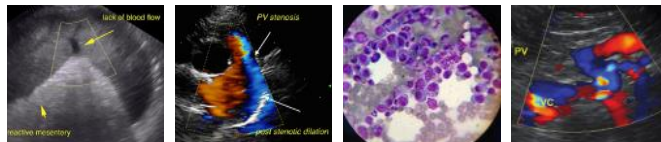
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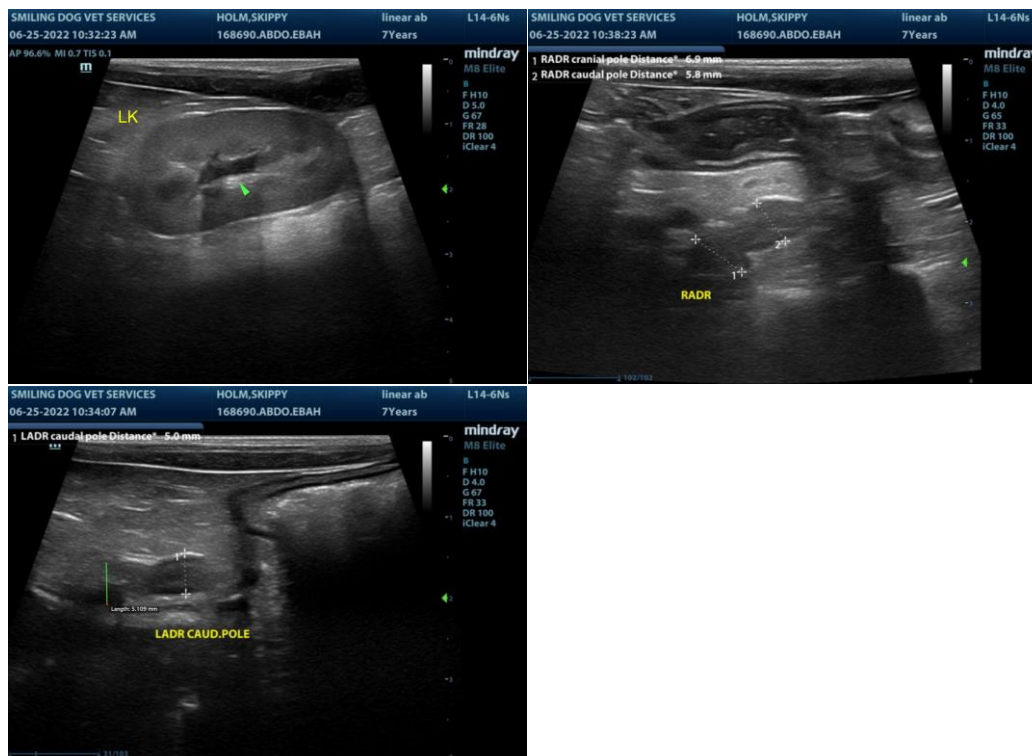
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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