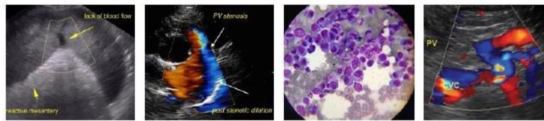


PATIENT
Leilani Meyerhofer

SPECIES
Canine

BREED
Daschund

SEX
FS

AGE
13.5yr

WEIGHT
5.5kg

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

IMAGING PERFORMED BY
Crystal Hill

HOSPITAL NAME
Preston Animal Clinic

REFERRING VET
Dr. Gerritsen

INVOICE
10972ag

DATE
06/24/2022

PRESENTING CLINICAL SIGNS

History: Increased respiratory effort, RR of 60 respirations per minute. Abdomen bloated with slight fluid wave. Ongoing diarrhea, last 2 weeks. Thoracentesis produced 35ml of clear fluid. Fluid was determined to be transudate, with low cellularity and protein. No bacteria. Ddx: heart failure (DCM), PLE (lymphangiectasis, IBD, neoplasia), other neoplasia See lab results and radiographs, dx of pleural and peritoneal effusion secondary to PLE. Prednisone 7.5mg PO SID until recheck; Metronidazole 50mg/ml - 2.2ml PO BID for 10 days.

Abnormal PE/Chem/CBC/UA Results: Please see attached radiographs, bloodwork and fecal results. 3 views; L and R lateral and VD of both chest and abdomen. Mineral components (structure of apical skeleton) are WNL. Distinct scalloping pattern on all views of the lungs, lungs are somewhat deflated and the edges of the lobes are more defined than they should be, but the lungs themselves have a normal opacity. Heart is overlapped by floating lungs, VHS appears to be approx. 8 (WNL), however not very visible on VD. Abdomen shows liver caudally displaced by distended food filled stomach. A small gas cap is noted at the top of the stomach, likely from aerophagia. Intestines appear inflamed (more twisted than usual) with a small gas pattern throughout, colon has stool. Scant fluid appreciated in the peritoneal space.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 cm 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.

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 moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Bilateral small cortical cysts were noted. The left kidney measured 4.5 cm in length. The right kidney measured 4.8 cm in length.

The area of the aortic trifurcation was free of pathology.

Adrenal Glands

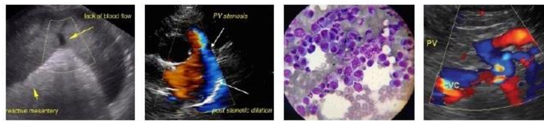
The bilateral adrenal glands were mildly prominent in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.79 cm width in the cranial pole and 2.0 cm. The right adrenal gland measured 0.48 cm width in the cranial pole and 1.4 cm.

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 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



PATIENT

Leilani Meyerhofer

SPECIES

Canine

BREED

Daschund

SEX

FS

AGE

13.5yr

WEIGHT

5.5kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Preston Animal Clinic

REFERRING VET

Dr. Gerritsen

INVOICE

10972ag

DATE

06/24/2022

normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content with moderate debris. 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 empty with no signs of ileus, obstruction or foreign material.

The small intestine exhibited intact yet prominent to mildly thickened wall layering owing to prominent mucosa layer. Generalized mild mucosal fogging with segmental intermittent hyperechoic mucosal was present. No evidence of loss of intestinal wall layering or intestinal masses was present. The SI wall measured up to 0.50 cm in width. Generalized mild hyperechoic mesentery with small pockets of scant peri intestinal to peritoneal free fluid were noted.

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

Pancreas

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.

Free Abdomen

No overt lymphadenopathy was present.

ULTRASONOGRAPHIC FINDINGS

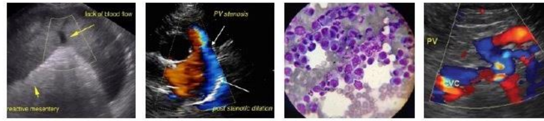
- PLE intestinal pattern
- Generalized mild reactive mesentery and small pockets of scant free fluid
- Mild gallbladder debris-incidental
- Sonographically unremarkable liver-no evidence of hepatic congestion
- Bilateral chronic renal changes with cortical cysts

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The intestinal presentation is consistent with PLE given the persistent diarrhea and panhypoproteinemia. Considerations may include IBD or lymphangiectasia, with infiltrative neoplasia considered less likely. Intestinal biopsies would be required for a definitive diagnosis yet contraindicated if ALB level is <20. Some or all of the following protocol may be considered empirically.

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 cavitary 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



PATIENT

Leilani Meyerhofer

SPECIES

Canine

BREED

Daschund

SEX

FS

AGE

13.5yr

WEIGHT

5.5kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Preston Animal Clinic

REFERRING VET

Dr. Gerritsen

INVOICE

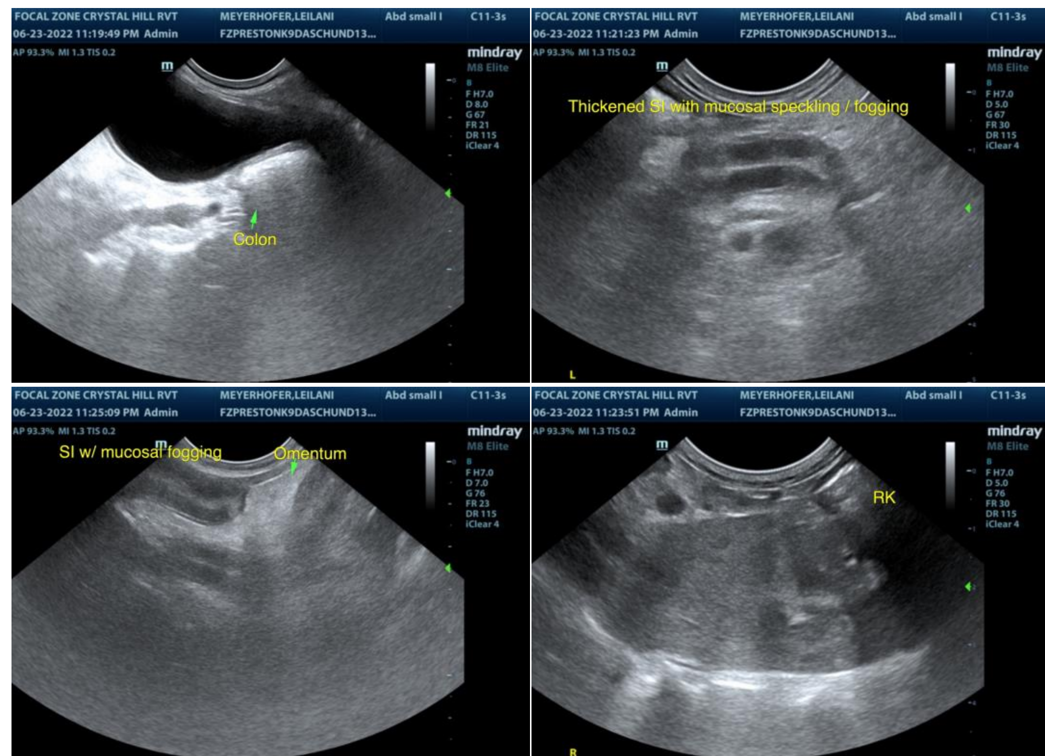
10972ag

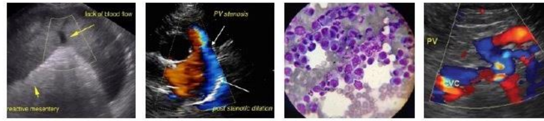
DATE

06/24/2022

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^2 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.

A UA to rule out concurrent proteinuria is suggested if not done.





PATIENT

Leilani Meyerhofer

SPECIES

Canine

BREED

Daschund

SEX

FS

AGE

13.5yr

WEIGHT

5.5kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

Preston Animal Clinic

REFERRING VET

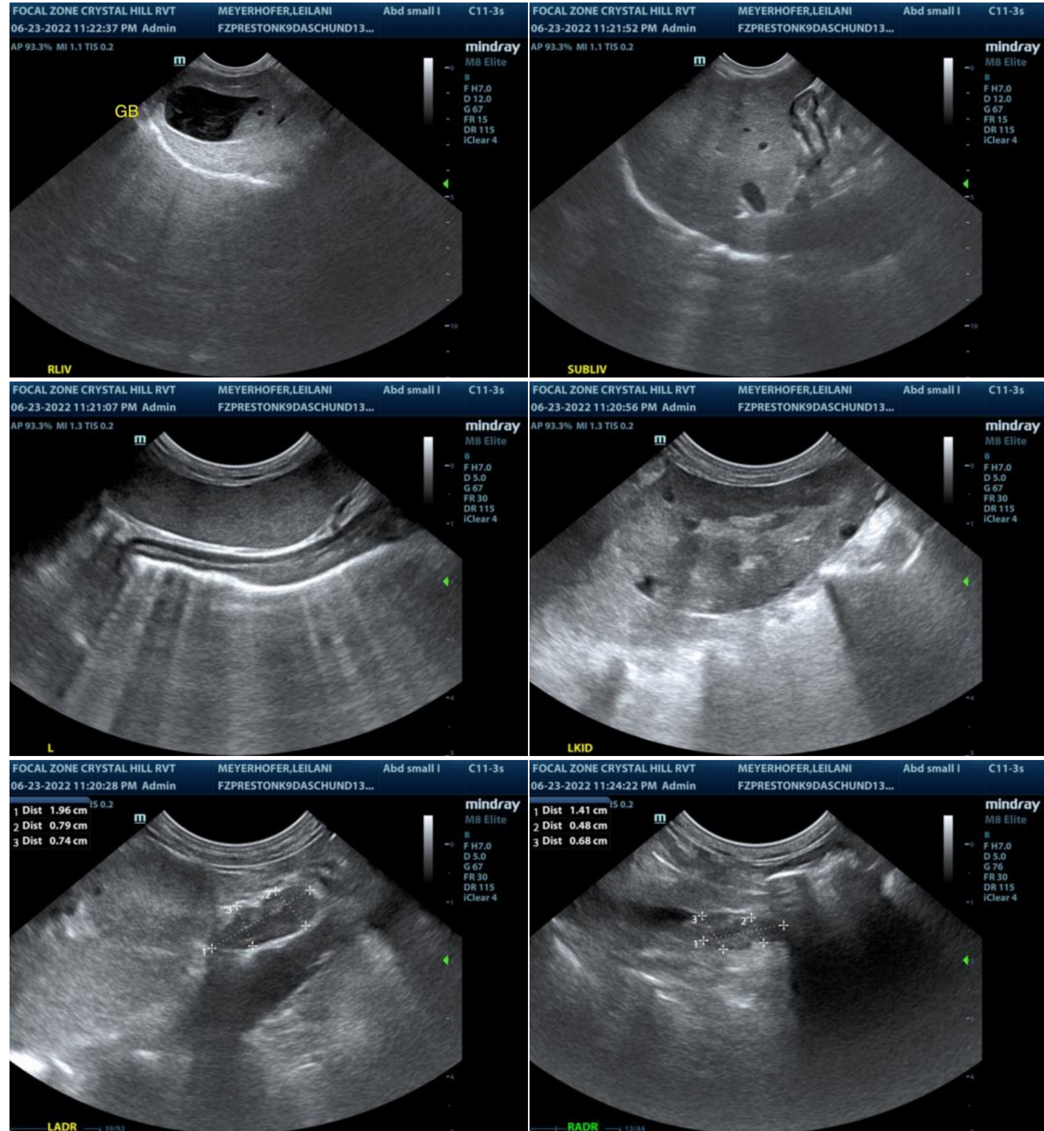
Dr. Gerritsen

INVOICE

10972ag

DATE

06/24/2022



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)

info@SonoPath.com