SonoPath
Clinical Sonography & Telecytology
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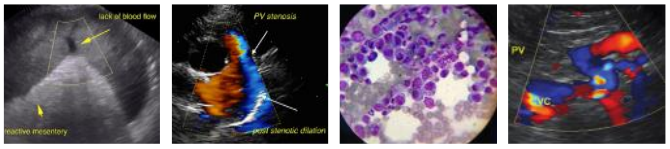


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Panzer Stockton

SPECIES

Canine

BREED

Rottweiler

SEX

MN

AGE

8 years

WEIGHT

40 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Patti Mayfield DVM

HOSPITAL NAME

Highland VH

REFERRING VET

Rachel Poet DVM

INVOICE

17280

DATE

7/19/23

PRESENTING CLINICAL SIGNS

P has had diarrhea for > 1 year, and now losing weight. After every time he eats, he wants to go outside. After every time he eats, he has a BM. Last firm BM was two to three weeks ago when they first switched to Fresh pet. Then switched back to runny again. Some days it is just very watery. Sometimes has a shape to it. P has been having accidents in the house. By the back door. P is not sleeping through the night. No hematochezia and profound flatulence reported. Occasional vomiting and intermittent appetite. P has had only minimal success with metronidazole, probiotics and HP diet (for over 2 months). P has been started on injectable Vitamin B

Abnormal PE/Chem/CBC/UA Results: PE: — muscle atrophy, sunken globes OU, pendulous and soft abdomen appreciated. GI panel: — cobalamin <150 (284-836) — remainder wnl CHEM: — SDMA 15 (h) — ALB 1.9 (l) — Ca 8.3 (l) — CK 223 (h) T4: wnl CBC: wnl Cardio pet proBNP: 1095 (h) 4DX + HW: NEG UA: — neg for protein, USG >1.050 ** uncertain if fecal has been performed **

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 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 was noted.

The residual prostate was free of pathology.

No evidence of pathology in the area of the aortic trifurcation.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 7.5 cm in length. The right kidney measured 8.1 cm in length.

Adrenal Glands

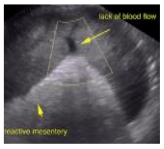
The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 2.2 cm length x 0.46 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.0 cm length x 0.60 cm width at the caudal pole.

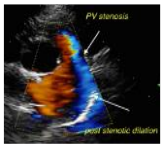
Spleen

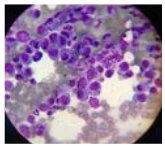
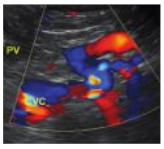
The spleen was normal in size exhibiting a finely textured homogeneous parenchyma with intermittent mildly expansive well demarcated uniform hypoechoic splenic nodules. An example of a splenic nodule measured 0.83 cm in diameter. No splenic masses were noted.

Liver/ Gallbladder

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





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normal in appearance without signs of congestion. The gallbladder was non-distended in size containing primarily anechoic content with mild, non-dependent, nonorganized, hyperechoic gallbladder sediment. 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 contained mild, nonshadowing ingesta, sonographically consistent with food without signs of obstruction or foreign material.

The small intestine presented generalized intact variably prominent wall layering owing to propensity for mildly prominent muscularis and segmental mucosa layer. Segmental to generalized primarily mild increased mucosal echogenicity was present with subtle mucosal speckling to subtle hyperechoic mucosal striations. The duodenum wall measured 0.55 cm width. The jejunum wall measured 0.50 cm width.

Normal visible colon wall layers were present with semi-formed to soft fecal matter.

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 were evident.

Free Abdomen

Mild volume anechoic peritoneal effusion was present with primarily peri intestinal reactive omentum. No obvious evidence of significant omental lymphadenopathy was noted.

ULTRASONOGRAPHIC FINDINGS

- Enteropathy exhibiting increased mucosa echogenicity / mucosa speckling - consistent with PLE criteria
- Semi-formed / soft fecal matter in colon
- Normal volume liver
- Minor gallbladder sediment (non-mucocele)
- Sonographically normal bilateral kidneys
- Nonspecific splenic nodules - benign etiology, i.e., hyperplasia, hematopoiesis, focal splenitis, or similar suspected, minor potential for emerging splenic nodular neoplastic criteria
- Mild volume peritoneal effusion and peri intestinal reactive omentum

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Considerations for the small intestine may include inflammatory bowel disease, and lymphangiectasia, with the potential for infiltrative enteropathy (neoplasia or other). Intestinal biopsies would be necessary for a definitive diagnosis yet likely contraindicated at this stage given albumin levels <2.0.

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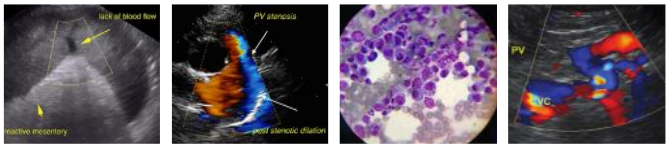

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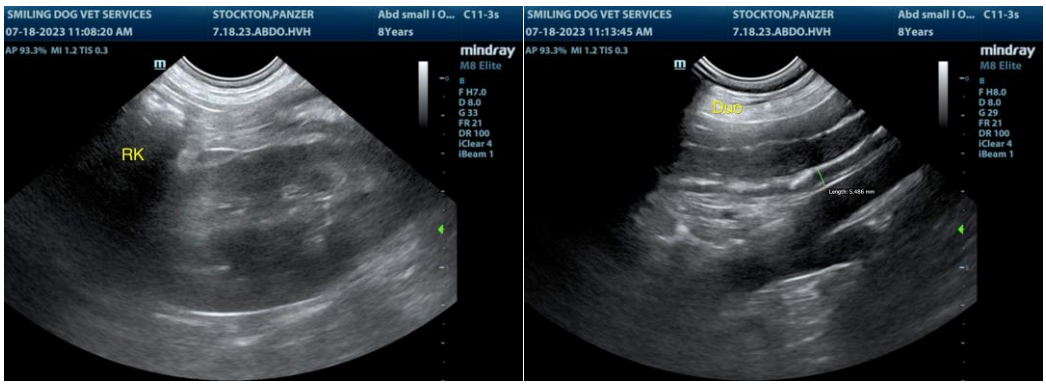
PLE therapy with as-needed GI support, dietary therapy, and recently initiated cobalamin supplementation, given subnormal cobalamin levels, with an assessment of clinical response is recommended. Some or all of the following protocol may be considered. Empirical deworming, i.e., Panacur 50 mg/kg PO SID for 5 consecutive days with potential repeat protocol in 3 weeks is suggested even if fecal testing is negative. Assuming normal clotting status, an FNA cytology of a splenic nodule using a 25-gauge needle could be considered for further assessment, whereas sonographic monitoring of the splenic nodules for evidence of progression would be a more conservative approach.

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
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.



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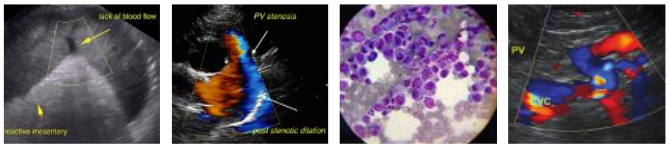

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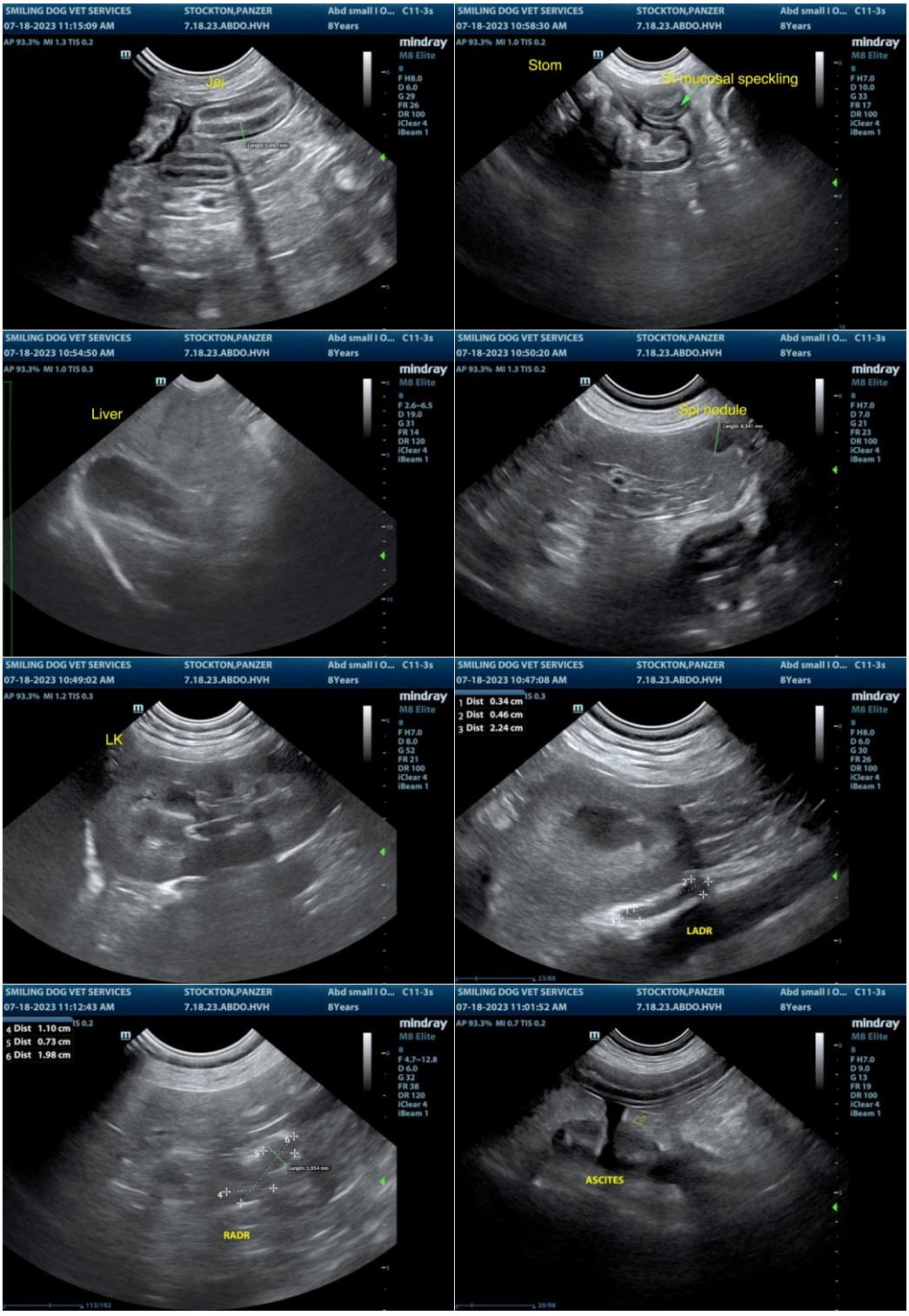

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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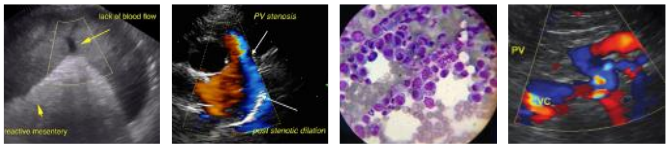

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Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)
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