IMAGING PERFORMED BY

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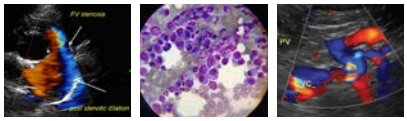

SonoPath

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DATE

3/21/23

PATIENT

Dallis Warrick

SPECIES

Canine

BREED

German Shepherd

SEX

Intact Male

AGE

12/13/21

WEIGHT

78.5 Pounds

INTERPRETED BY

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

HOSPITAL NAME

Greenbrier Vet Clinic

REFERRING VET

Dr. Dellinger

INVOICE

46041

PRESENTING CLINICAL SIGNS

Chronic diarrhea x 5months. P clinically normal but thin.

Current Medications: Panacur x5d, Metronidazole 500mg BID and, Amoxicillin 800mg BID x 14d, Weekly B12 inj started 2/5/23, Tylosin powder 100gr- 1/8 tsp BID started 2/5/23
Lab Results: 1/11/23- Increased WBC, neutrophilia on CBC. 1/16/23- Improved CBC- WBC normal, slight neutrophilia. 2/4/23- Gi panel- Low cobalamin
Date of Previous IntraPet Ultrasound: No previous.
Sedation: IV Torb and DexDomitor.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The prostate is large in size (2.76 cm x 3.84 cm in the transverse view) but has a regular shape with smooth external margins. The parenchyma is hyperechoic and mildly heterogenous but no discrete focal lesions are present. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (6.32 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (7.77 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.49 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.70 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, and hypoechoic with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with mild to moderate fluid distension. Wall thickness is increased. Bowel loops follow a typical curvilinear path. Some areas have reduced detail of wall layering. Duodenum wall measures 0.27 cm. Jejunum wall measures 0.47 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is prominent and mildly mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is a significant mesenteric lymphadenopathy with round hypoechoic lymph nodes measuring 0.91 and 1.16 cm in diameter, and 1.5 cm x 3.38 cm in diameter, particularly around the mesenteric root. The omentum is mildly hyperechoic around the prominent lymph nodes.

Other

Both testicles are visualized and appear within normal limits.

ULTRASONOGRAPHIC FINDINGS

- Large, hyperechoic, heterogeneous prostate – Findings are consistent with benign prostatic hypertrophy +/- prostatitis.
- Prominent, mottled pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Hypoechoic, heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. In the absence of liver enzyme elevations, this could be within normal limits for this individual.
- Thickened small intestine – The mild small intestinal wall changes may be a normal variant in this patient or could be consistent with an inflammatory process (e.g., inflammatory bowel disease).
- Mesenteric lymphadenopathy – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

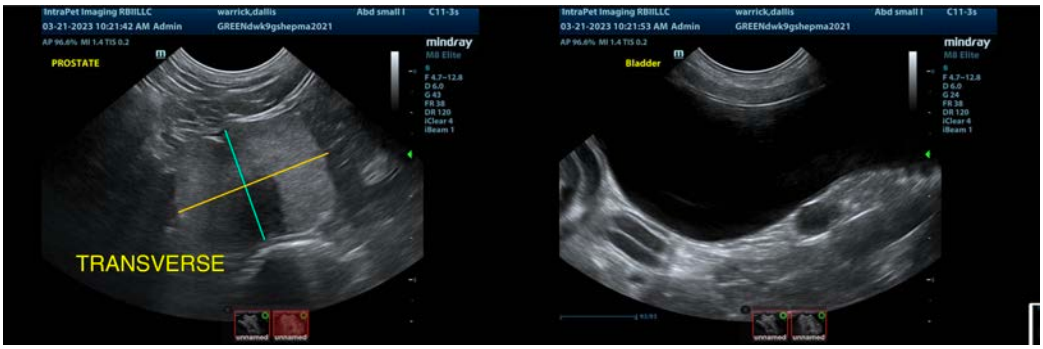
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

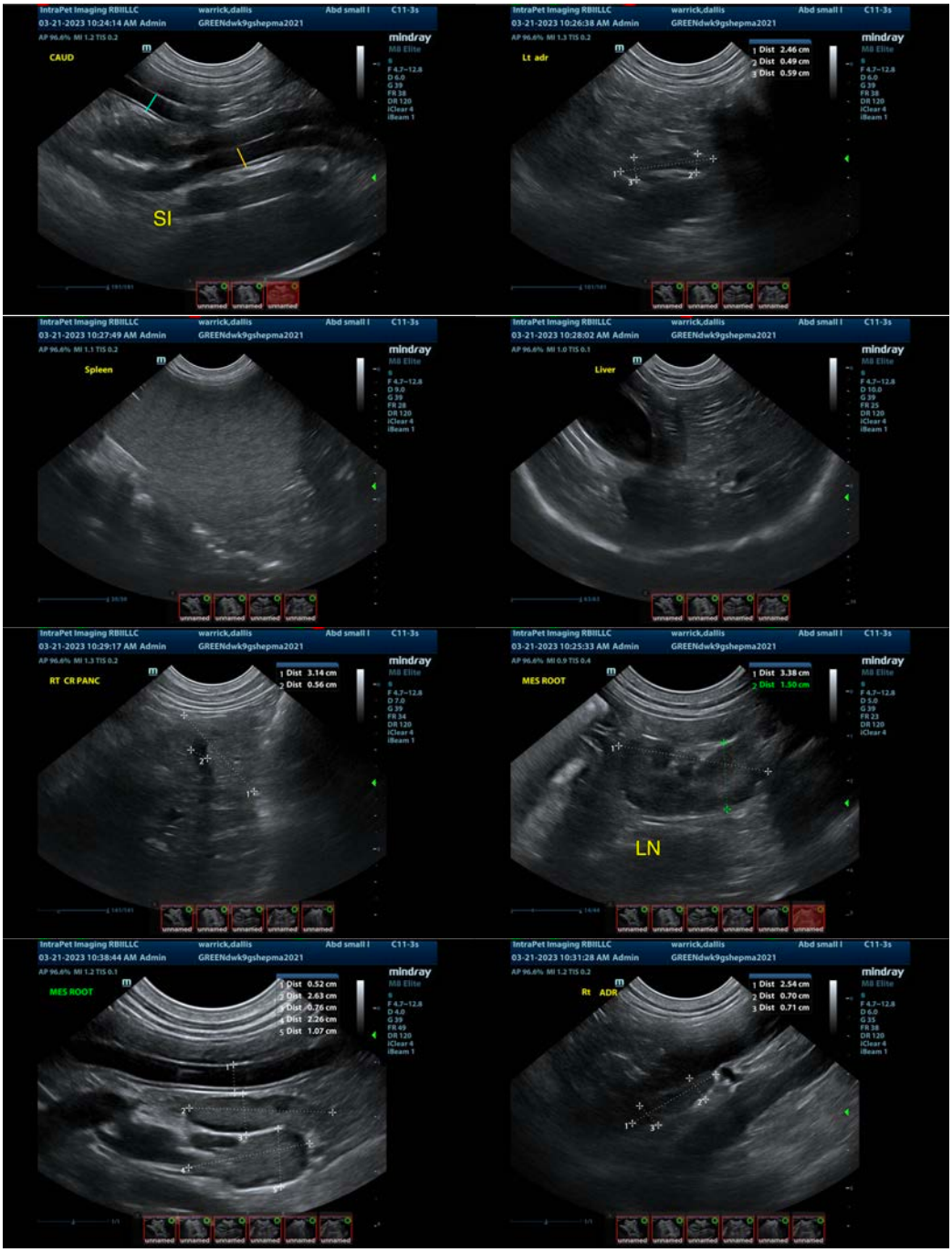
The small intestine appears somewhat thickened with intact layering and some areas of mild to moderate fluid distention. Additionally, there is a mild to moderate mesenteric lymphadenopathy present. These findings most likely reflect inflammatory change in the small intestine, although an underlying neoplastic or infectious process cannot be ruled out. In a young German Shepherd, the most likely differentials to consider would be food allergy/dietary intolerance, dysbiosis, GI parasitism, exocrine pancreatic insufficiency, less likely IBD, or neoplasia. Consider the following:

- Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks)
- A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function (I believe this has already been done).
- Recommend chronic pre- and probiotic therapy.
- Recommend parasite screening and empirical therapy (if not already done).
- If symptoms persist despite these changes, then you could consider obtaining GI biopsies.
- Additionally, you could consider a fine needle aspirate of a mesenteric lymph node. I suspect it would be reactive, but it would be nice to rule out any evidence of neoplastic change.

The spleen is subjectively mildly mottled. I suspect this could be normal in this individual. If there is concern for possible round cell neoplasia, then consider a fine needle aspirate of the spleen. Additionally, the pancreas is somewhat prominent but does not appear overtly inflamed.

The changes in the prostate are most consistent with benign prostatic hypertrophy +/- prostatitis. Recommend a urinalysis and culture and consider neutering in the future to prevent progression of the prostatic changes observed.

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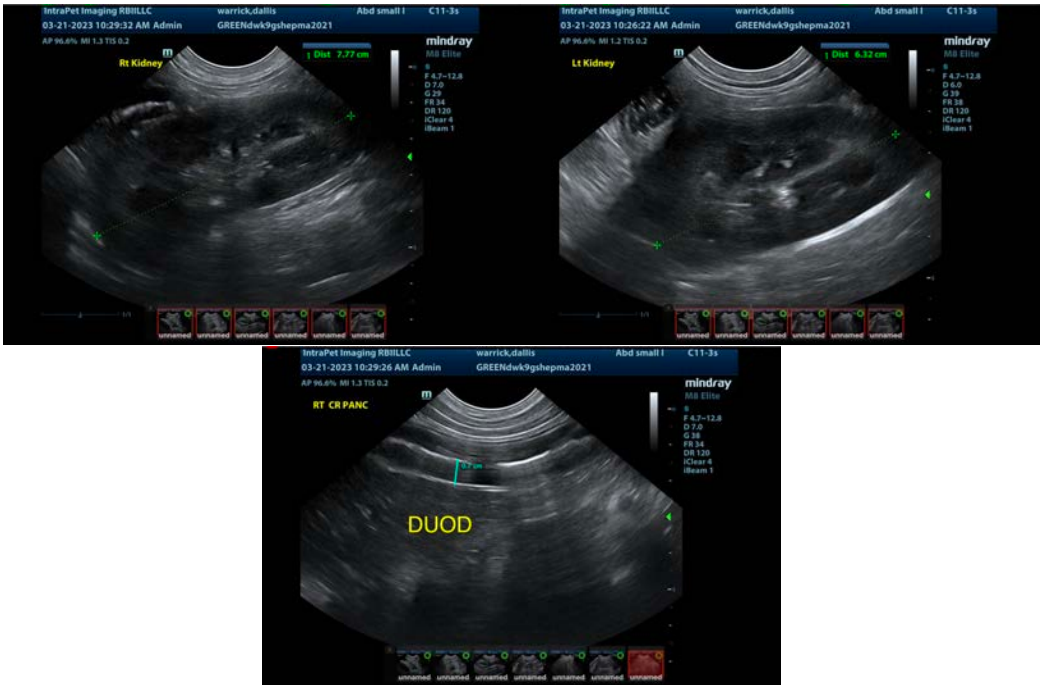

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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