**DATE PRESENTING CLINICAL SIGNS**

2/7/23

3-5 days of bloody very watery diarrhea, vomiting, ADR, lethargy, inappetence. Potentially ate something he shouldn't have that workers left behind at the property about a week ago. Maybe food or something with aluminum foil. Progressive hypoalbuminemia is of a major concern at this time. Appetite and attitude have improved some with inpatient therapy.

**PATIENT**

Otto Wyatt

**SPECIES**

Canine

**BREED**

German Shepherd

**SEX**

Neutered Male

**AGE**

10/25/12

**WEIGHT**

109 Pounds

**INTERPRETED BY**

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

**HOSPITAL NAME**

Pleasantville AH

**REFERRING VET**

Dr. Gounaris

**INVOICE**

44810

Current Medications: lactated ringers IV, hetastarch IV, cerenia IV, pantoprazole IV, sucralfate PO, metronidazole PO, ampicillin sulbactam IV

Lab Results: albumin 0.9, mild BUN elevation, neutrophilia major findings

Radiographs: initial rads show severe gas pattern small intestine, metallic opacity stomach; follow up rads show improvement with gas patten and decrease in amount of metallic opacity in the stomach.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Stephanie Warga RDCS, RVT.

**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 normal in size (1.29 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (7.75 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 (8.92 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 0.79 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 0.49 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 and the echotexture is homogenous. The splenic capsule is smooth with no visible irregularities. Rare discrete focal hyperechoic, perivascular parenchymal abnormalities are present. The appearance of these lesions is most consistent with benign splenic myelolipomas. The blood flow through the hilus and splenic parenchyma appears normal.

### ***Liver***

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

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

### ***Gastrointestinal***

The stomach contains a large amount of ingesta. 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 relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.47 cm. Jejunum wall measures 0.38 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 normal and isoechoic to surrounding 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, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

## **ULTRASONOGRAPHIC FINDINGS**

- Hyperechoic foci visualized within the splenic parenchyma near the hilus - Findings are most consistent with benign myelolipomas.
- Moderate gallbladder debris - The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.
- Large amount of ingesta within the gastric lumen - Findings are most consistent with a recent meal. Ingested foreign material cannot be excluded as a possibility.

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The lesions observed on today's scan are relatively mild. The material within the gallbladder is likely an incidental finding, as are the hyperechoic lesions in the spleen, although continued monitoring is warranted of both of these areas.

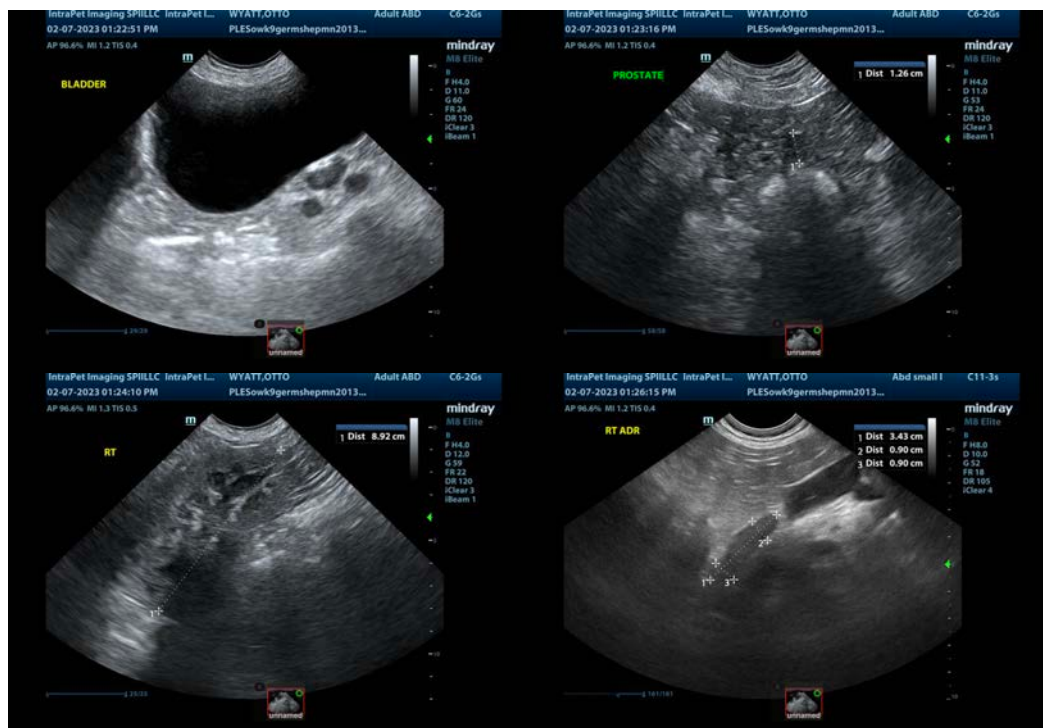
The severe hypoalbuminemia reported on the lab work is surprising, given the lack of ascites and lack of significant bowel changes. Consider a recheck of this value just to confirm. If this is confirmed, consider a

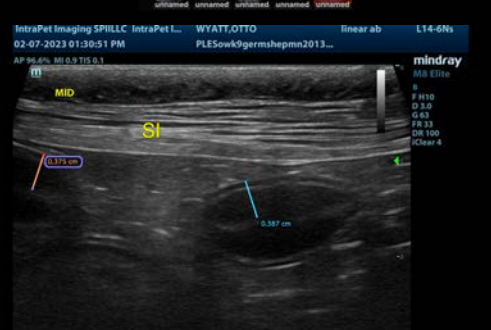
urine protein to creatinine ratio and liver function test to confirm there is not additional protein loss from other sources. No focal lesions are visualized associated with the GI tract, but given the severe hemorrhagic diarrhea reported, this should be the primary source of the hypoalbuminemia.

- Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks)
- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.
- Recommend parasite screening and empirical therapy (if not already done).
- Recommend chronic probiotic therapy.

Based on the description of the symptoms, this sounds like mixed bowel diarrhea (large and small bowel?). If this is chronic in nature, upper and lower GI endoscopy could be considered.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.





**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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