



**PATIENT**

Brady Marchan

**SPECIES**

Canine

**BREED**

Beagle

**SEX**

Neutered Male

**AGE**

5 Years

**WEIGHT**

40 Pounds

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

Midland Park VH

**REFERRING VET**

Dr. John Shokoff

**INVOICE**

40132

**DATE**

8/4/22

**PRESENTING CLINICAL SIGNS**

Patient with history of uncontrolled diabetes (is on insulin) presents for acute lethargy, vomiting, labored breathing, bright pink, mucus membranes, and hyperglycemia. BG upon admit yesterday was 236, BG at 7:40 am this morning was 243. On IVFs, Torb., Cefazolin, Famotadine, and Cerenia. Abnormal PE/Chem/CBC/UA Results: 8/3/22 - USG: 1.024. CHEM: glu 303, SDMA 16, BUN 39, Phos. 7.8, ALT 243, Alk. Phos. 782, Chol. 339, amylase >2500, lipase 5523, Na 142, Cl. 99, TT4 <0.5. CBC: RBC 5.5, HCT 34.5%, lym .4, eos. 0.0. Radiographs appear WNL.

**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 (0.93 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 (6.97 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 (8.02 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 0.63 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 0.66 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 large in size with smooth peripheral margins. The parenchyma is hyperechoic and homogenous in echotexture. 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 primarily anechoic. The cystic and common bile ducts are normal/not visible.



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**Gastrointestinal**

The stomach is mildly dilated with fluid and some mild shadowing material, most consistent with normal ingesta and gas. It measures largely at a normal thickness, but in some areas approaches approximately 1.0 cm in wall thickness 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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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. There is a large amount of shadowing stool in the proximal colon. There is no observed focal or generalized colon wall thickening or loss of layering.

**Pancreas**

The pancreas is large and hypoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. Consistent with mild/moderate pancreatitis.

**Free Abdomen**

There is a scant amount of free abdominal fluid visualized between the liver lobes. There is no evidence of lymphadenopathy. The omentum is hyperechoic around the region of the pancreas.

**ULTRASONOGRAPHIC FINDINGS**

- Hypoechoic pancreas with surrounding hyperechoic mesentery – The pancreatic changes are most consistent with mild/moderate pancreatitis/pancreatic inflammation. Recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.
- Large, hyperechoic liver – The diffuse hepatic changes are non-specific and can be seen with vacuolar hepatopathy, reactive change, nodular hyperplasia or, less likely, inflammatory/immune-mediated disease, infiltrative neoplasia, or other hepatopathy. This is likely consistent with a diabetic hepatopathy.
- Mild subjective gastric wall thickening and fluid dilation – most consistent with gastritis and mild ileus secondary to pancreatitis, but continued monitoring is warranted.
- Hard shadowing material within the proximal colon – This is most consistent with stool, but continued monitoring is warranted, as this should pass with rehydration.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The pancreas appears somewhat inflamed and hypoechoic. It is not terribly prominent, but there is a moderate amount of inflammation in the cranial abdomen. Recommend treatment for pancreatitis as well as rehydration and monitoring/regulating of blood glucose levels with injectable insulins, etc.

The changes in the liver are diffuse and most consistent with a diabetic hepatopathy. If there is



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significant concern for liver dysfunction, consider a liver function test and a fine needle aspirate of the liver.

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The stomach wall appears subjectively thickened and there is some mild fluid dilation. I suspect this is secondary to ileus and the pancreatitis, but continued monitoring is warranted. Additionally, there is significant shadowing within the proximal colon. This would be most consistent with constipation. Correlate with abdominal radiographs and serially monitor this for resolution.

**BREED**

Beagle

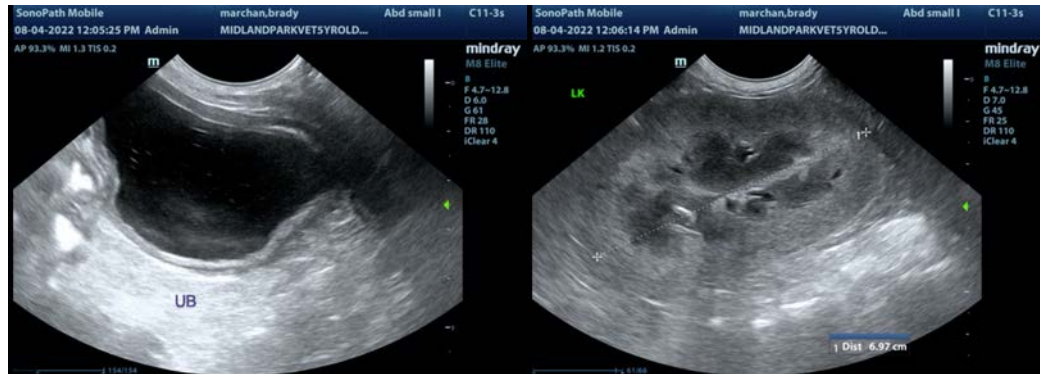
Recommend a urinalysis and urine culture to screen for a urinary tract infection or any other concurrent issues that could be dysregulating this patient.

**SEX**

Neutered Male

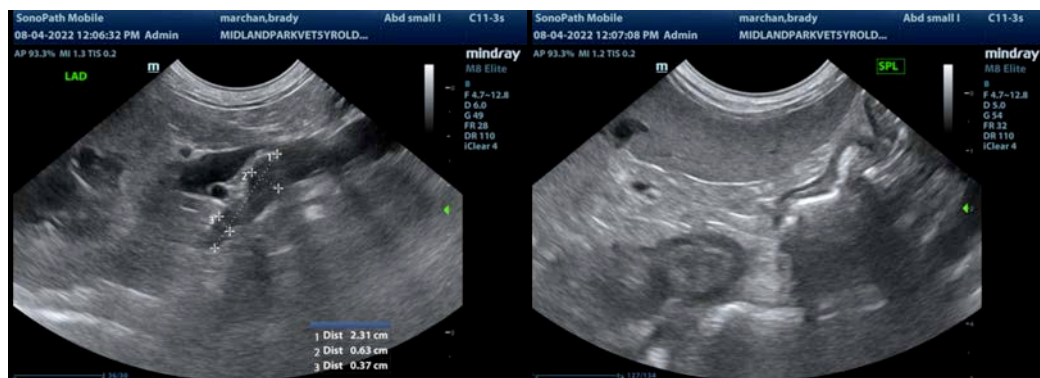
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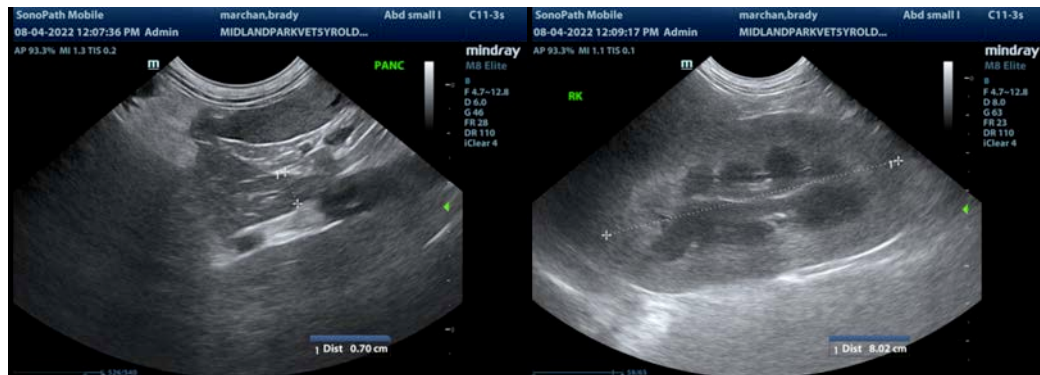


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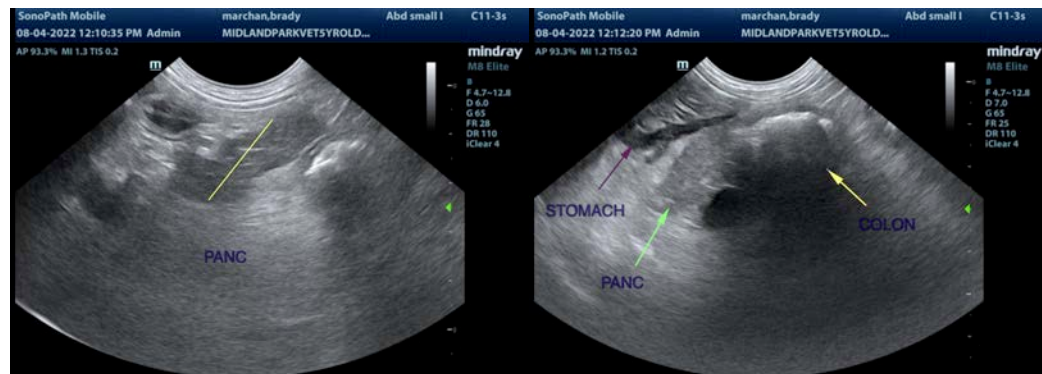
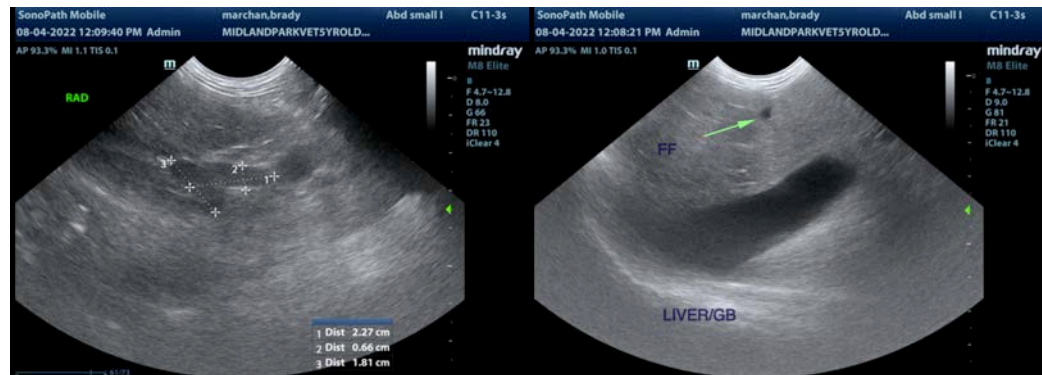
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

kathleen.sennello@sonopath.com