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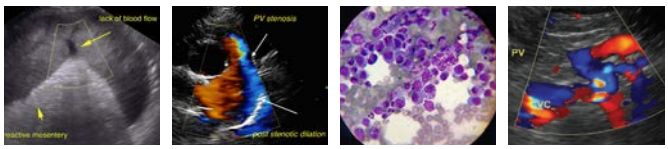

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1-800-838-4268 info@sonopath.com

**PATIENT**
Sasha Morgan

**SPECIES**
Canine

**BREED**
Mixed

**SEX**
Spayed Female

**AGE**
17 Years

**WEIGHT**
5 kg

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

**IMAGING PERFORMED BY**
Dr. Sarah Barthelemy

**HOSPITAL NAME**
Bridgeland Vet Clinic

**REFERRING VET**
Dr. Kelman

**INVOICE**
43817

**DATE**
7/13/23

## PRESENTING CLINICAL SIGNS

Weight loss. Currently undergoing triple therapy treatment for CHF and is doing well with this.

Abnormal PE/Chem/CBC/UA Results: Mild hypercalcemia.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is moderately distended with anechoic urine. The Bladder wall largely appears normal with a smooth mucosal surface. There is a small area in the region of the ureteral papilla where there is some mild irregularity and prominence. This could be consistent with a prominent ureteral papilla or an early focal bladder lesion. The region of the proximal ureter and trigone appears free of any calculi or significant mass lesions. The prominent tissue measures 0.54 cm x 1.16 cm.

The left kidney is normal in size (3.9 cm) but irregular in shape with mild pyelectasia at 0.16 cm. Overall echogenicity is slightly hyperechoic with poor 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 nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.09 cm). Overall echogenicity is slightly hyperechoic with poor 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/borderline “plump” measuring 0.54 cm at the crania pole, 0.85 cm at the caudal pole, and 2.03 cm in length. 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/ “plump” 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 echogenicity with smooth peripheral margins. The parenchyma is diffusely 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 gall bladder lumen is significantly distended. Some areas of the wall appear mildly thickened with adherent debris. There is a large amount of primarily non-organized echogenic debris. There is no evidence of bile duct dilation.

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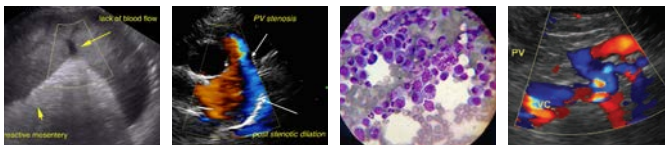

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### *Gastrointestinal*

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 minimal fluid distension. Wall appears subjectively, mildly increased. Bowel loops follow a typical curvilinear path with distinct wall layering. Duodenum wall measures 0.51 cm. Jejunum wall measures 0.37 cm. There is mild mucosal speckling and striations of the duodenum. 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*

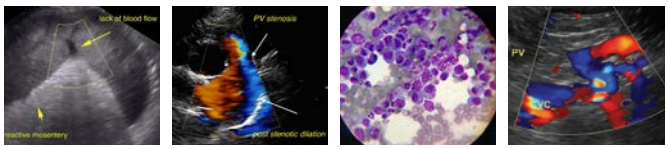
The right limb of the pancreas is prominent, hypoechoic and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### *Free Abdomen*

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is no significant lymphadenopathy noted. A prominent lymph node is visualized at 0.42 cm. The omentum is generally of normal echogenicity, although slightly reactive in the region of the right limb of the pancreas.

### PRIMARY FINDINGS

- Prominent, irregular tissue in the region of the ureteral papilla – This could represent a normal/prominent ureteral papilla or abnormal tissue. Recommend recheck evaluation.
- Prominent, hypoechoic, mottled right limb of the pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- 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.
- Moderately distended gallbladder with a large amount of non-organized intraluminal debris – A large amount of debris is evident in the gall bladder with no evidence of a mucocele or associated inflammation at this time. This could represent an early mucocele or cholestasis, with minimal evidence of associated inflammation at this time. Continued monitoring of labwork and ultrasound are warranted for progression of this lesion. Ursodiol therapy could be considered.
- Diffusely thickened small intestine with mild mucosal speckling noted associated with the duodenum – Bright mucosal speckling has been postulated to represent dilated lacteals or focal accumulations of mucus, cellular debris, etc.. in the mucosal crypts.

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## SECONDARY FINDINGS

- Borderline bilateral adrenomegaly – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended.

- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No large focal mass lesions are visualized to explain the weight loss reported. There is some subjective thickening to the small intestine and mucosal speckling evident. This could be an indicator of underlying small intestinal disease. This could be a source of weight loss, particularly if there is a history of diarrhea or GI upset. Consider a GI panel to Texas A&M for a qualitative PLI, TLI, cobalamin and folate to further evaluate and look for evidence of underlying gastrointestinal disease.

There are age related changes visualized associated with both kidneys. Correlate this with renal values, a urinalysis, culture, and blood pressure evaluation.

There is a large amount of debris visualized in the gallbladder, but the gallbladder wall appears normal in thickness, and there is no surrounding inflammation. If significant liver enzyme elevations are present, you could consider starting Ursodiol and continuing to monitor the gallbladder for progression of this lesion.

The liver is significantly heterogeneous. The significance of this uncertain in the absence of liver enzyme elevations.

The right limb of the pancreas is prominent and somewhat mottled and hypoechoic. Additionally, there is a small amount of reactive mesentery in the region. This could be consistent with mild pancreatic inflammation or with remodeling secondary to previous episodes of pancreatic inflammation.

There is a focal irregularity in the trigone region of the urinary bladder, which is very likely a prominent ureteral papilla. Out of an abundance of caution, I would consider reevaluation of this region in 2-3 months to look for any progression or change that could be concerning.

Consider further evaluation for the hypercalcemia reported by submitting a hypercalcemia of malignancy panel to Michigan State University to evaluate an ionized calcium, PTH, and PTHrP level. Additionally, recommend a rectal exam to palpate for an anal gland mass effect and 3-view thoracic radiographs.

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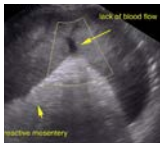
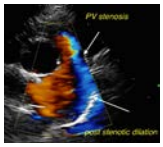
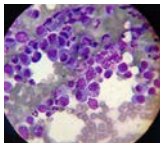
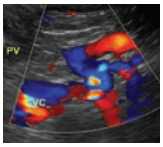

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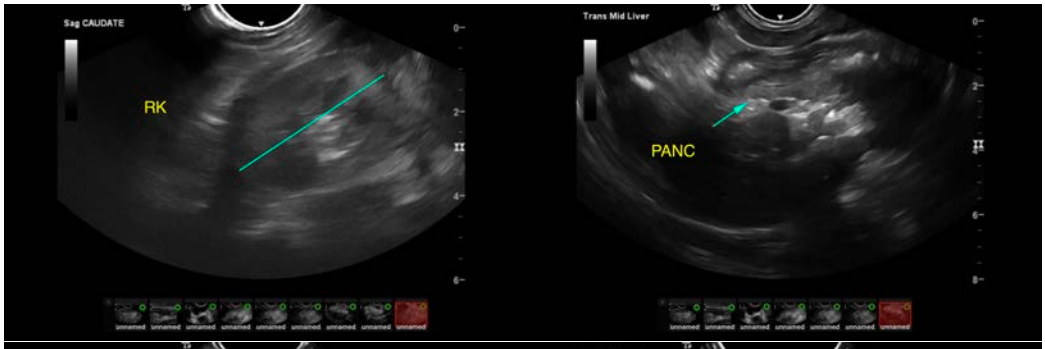


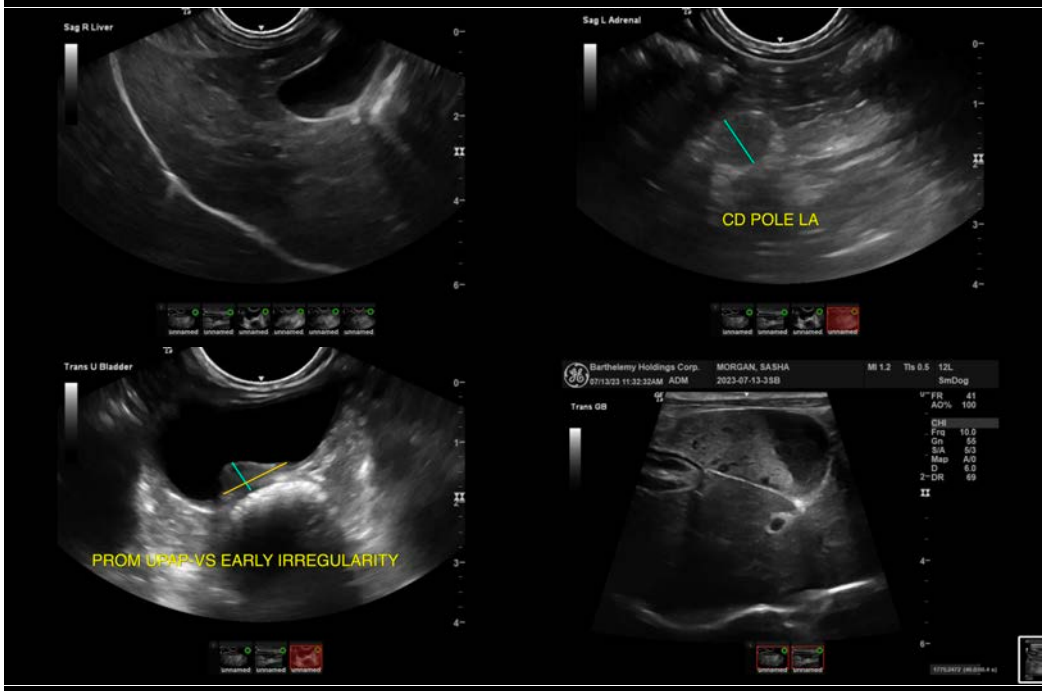


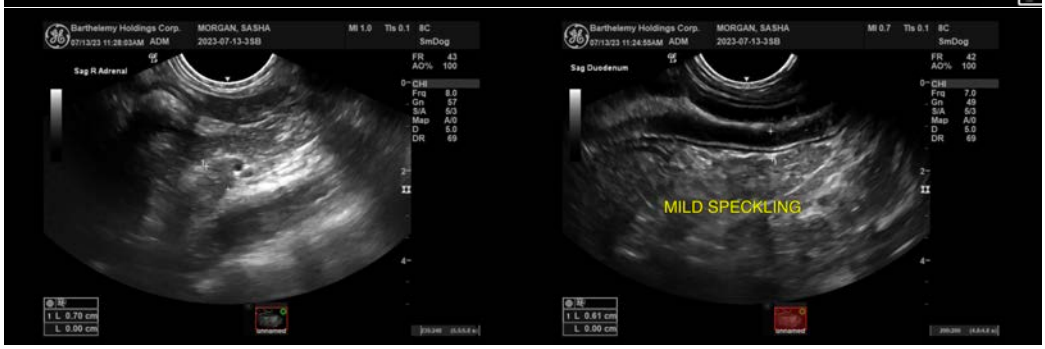

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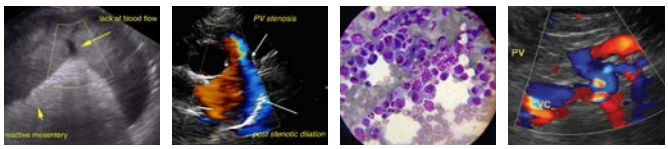

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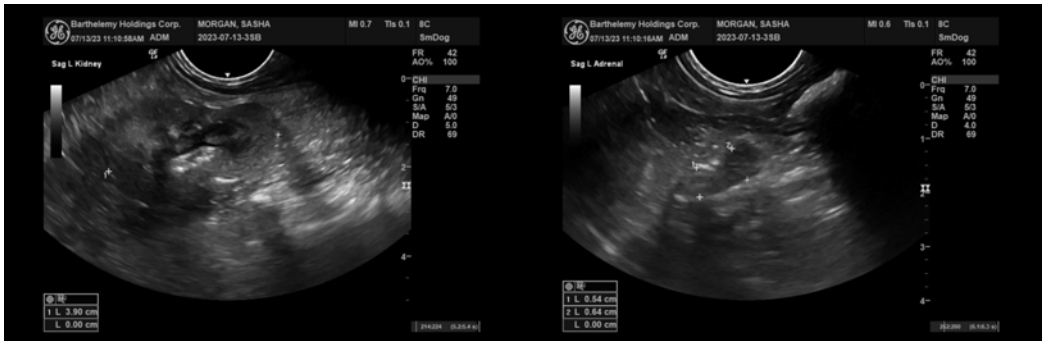


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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)

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