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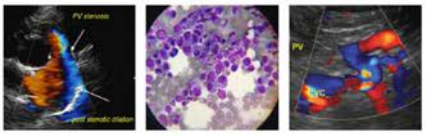

SonoPath
Clinical Sonography & Telecytology
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1-800-838-4268 info@sonopath.com SonoPath.com

**PATIENT**
Sammy Bayoff

**SPECIES**
Feline

**BREED**
DSH

**SEX**
Neutered Male

**AGE**
16 Years

**WEIGHT**
9.14 Pounds

**INTERPRETED BY**
Beth Johnson, DVM DACVIM

**IMAGING PERFORMED BY**
Amy Mayhew, LVT

**HOSPITAL NAME**
SVS Imaging MI

**REFERRING VET**
Dr. Larsen

**INVOICE**
44424

**DATE**
7/27/23

## PRESENTING CLINICAL SIGNS

Vomiting, weight loss, decreased appetite

Abnormal PE/Chem/CBC/UA Results: Previous ultrasound showed pancreatitis (November of 2022)

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, or echogenic sediment observed. A 0.2 cm cystolith is noted along the dependent wall. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of mineral or infarcts observed. The left kidney measures 3.38 cm. Pyelectasia is noted in the left kidney at 0.25 cm in the transverse view. The right kidney measures 3.29 cm. Pyelectasia is noted in the right kidney at 0.22 cm in the transverse view.

### *Adrenal Glands*

The right adrenal gland is normal in size (0.44 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.49 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

### *Spleen*

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

### *Liver*

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

### *Gastrointestinal*

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

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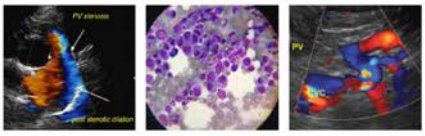

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The visible small intestine demonstrates areas of mildly thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated. The lumen is empty with no evidence of obstruction or foreign material.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

### *Pancreas*

Pancreas is prominent in size with swollen, markedly irregular contour. Parenchyma is heterogenous characterized by hyperechoic tissue remodeling intermixed with ill-defined hypoechoic nodules. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### *Free Abdomen*

There is no evidence of free peritoneal effusion noted in these images.

The mesenteric and pancreaticoduodenal lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

## PRIMARY FINDINGS

- **Pancreatic nodular hyperplasia –** Infiltrative neoplasia cannot be ruled out but is considered less likely. There is no ultrasonographically visible evidence of active inflammation at this time. However, low-grade smoldering chronic pancreatitis cannot be ruled out and should be suspected in the face of appropriate clinical signs.
- **Mild/subtle inflammatory bowel disease (IBD) pattern –** Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No aggressive lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probable, but lymphoma cannot be definitively ruled out without tissue sampling.
- **Reactive mesenteric and pancreaticoduodenal lymph nodes –** infiltrative neoplastic disease cannot be ruled out but is considered less likely.

## SECONDARY FINDINGS

- **Mild gallbladder debris -** Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- **Age related kidneys with mild bilateral pyelectasia –** Differentials for pyelectasia include pyelonephritis, diuresis, congenital malformation or ureteral or lower urinary tract obstruction.
- Small 0.2 cm urinary bladder cystolith

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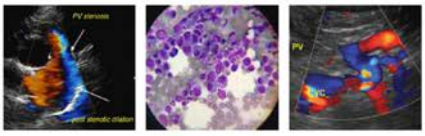

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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

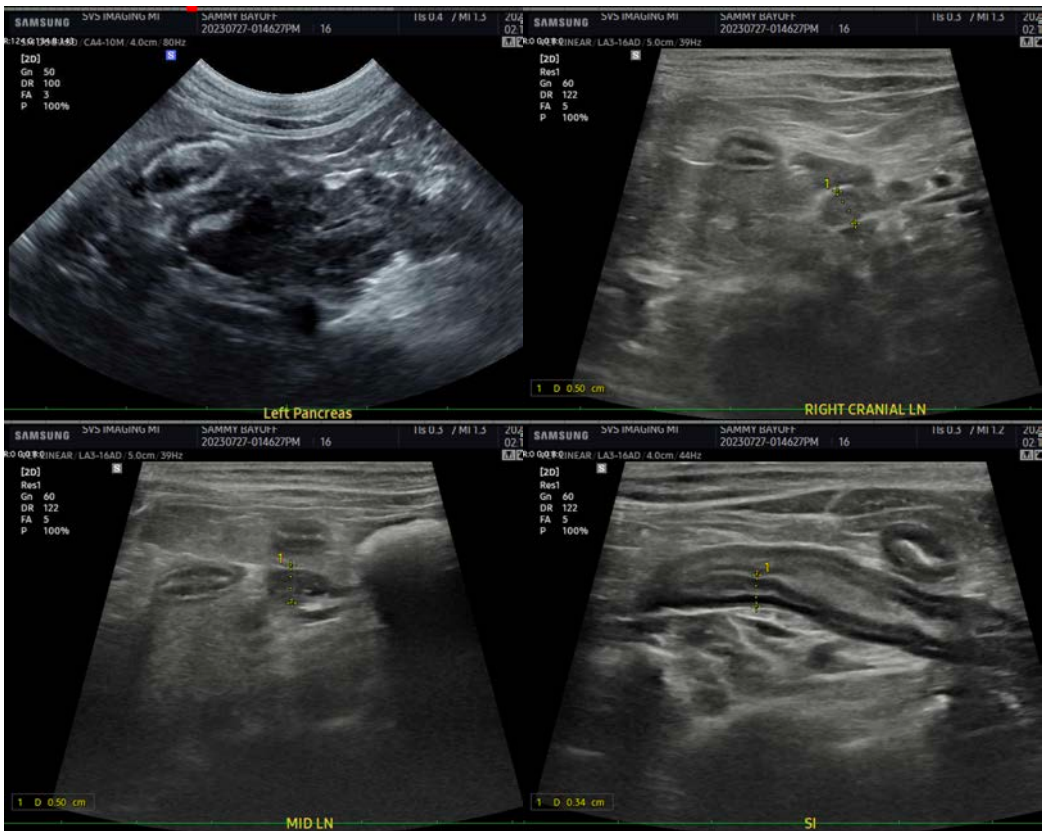
While the appearance of the pancreas trends primarily toward benign, a fine needle aspirate could be considered, given the chronicity of this patient's clinical signs, if patient's coagulation status is appropriate.

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.

Ideally, biopsies of the GI tract, being sure to include ileum if possible, are recommended to definitively diagnose and therefore manage the infiltrative bowel disease.

If biopsies cannot be obtained, empirical therapies could include a probiotic (if diarrhea is present, such as visbiome or proviable), empirical deworming with a 5-day course of Panacur and, if tolerated, a transition in diet, based on trial-and-error response, beginning with a hydrolyzed protein diet. Some patients respond to one brand/version of a hydrolyzed protein diet better than another brand, so several trials may be required.

Additional considerations could include cobalamin supplementation (unless cobalamin level is evaluated and supplementation is not warranted) and prednisolone (if not contraindicated based on patient contraindications, co-morbidities, etc.).



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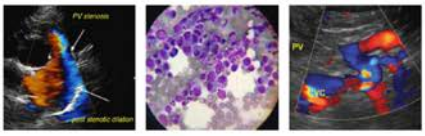

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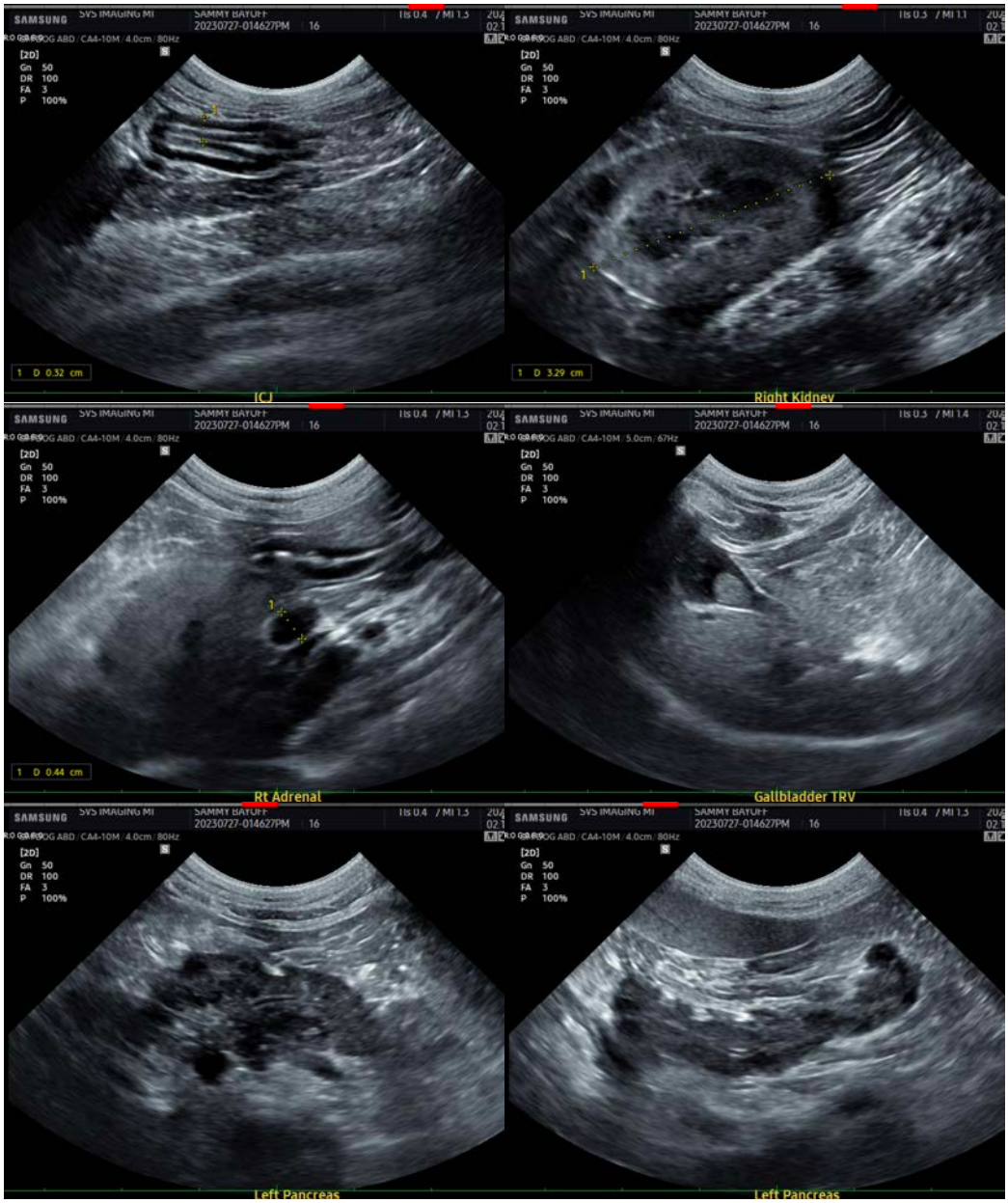

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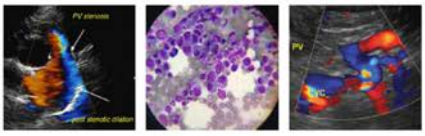

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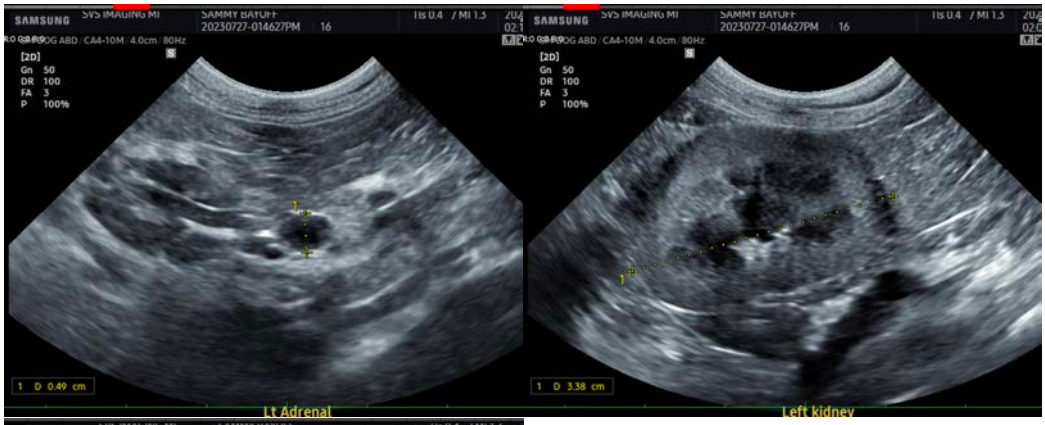



**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**Beth Johnson**, DVM, DACVIM
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