

PATIENT

Savannah Varela

SPECIES

Canine

BREED

Miniature Schnauzer

SEX

Spayed Female

AGE

13 Years

WEIGHT

17.2 lbs

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Gabriel Ferrer, DVM

HOSPITAL NAME

Pulse: Pet Ultrasound

REFERRING VET

Dr. Nidia Alvarez

INVOICE

74070

DATE

3/31/26

PRESENTING CLINICAL SIGNS

Px presented as a referral for an abdominal ultrasound due to Hx of chronic pancreatitis and regurgitation. Owner reports that Px has suffered with recurrent episodes of pancreatitis since 2021. Px is currently taking Famotidine 20mg PO SID. Px has a history of kidney stones and was on Urinary S/O diet but rDVM recently made a change to Low-fat diet. Owner reports that even when Px has pancreatitis she still has a hearty appetite. Px has 3 meals a day, is very food motivated, and consumes her food very rapidly. Weight loss reported, Px's normal weight is around 20lbs but has been around 16lbs - 17lbs recently. No vomiting or diarrhea reported recently

Abnormal PE/Chem/CBC/UA Results: Bloodwork attached below for your reference

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately distended with primarily anechoic contents and a very small, occasional amount of echogenic non-shadowing debris. The apical urinary bladder wall is diffusely thick, measuring 0.31 cm thick, with a more focal 0.40 cm x 0.80 cm similar appearing thick area along the dorsal apex. Diffusely, the mucosa is hyperechoic and irregular. No cystoliths are observed. The 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 pyelectasia or infarcts observed. Left kidney measured 4.83 cm. Right kidney measured 4.83 cm. Pinpoint non-obstructive nephroliths are noted bilaterally.

Adrenal Glands

The right adrenal gland is normal in size (0.41 cm at cranial pole and 0.45 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.41 cm at cranial pole and 0.49 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

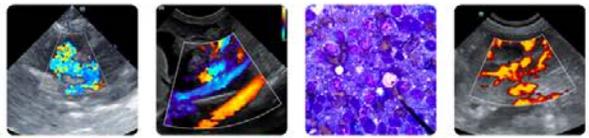
Spleen

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

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is moderately heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. 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. There is an approximately 2.2 cm shadowing, mineral, non-visibly obstructive density, consistent with a possible cystolith or pile of mineral/sand 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.



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Gastrointestinal

The stomach is largely normal in thickness with a subjectively mildly prominent muscularis layer and some mucosal speckling. Otherwise, normal layering is present. The lumen of the stomach is empty with no evidence of obstruction or foreign material.

The bowel wall is diffusely mildly thick, with the jejunum measuring 0.51 cm thick and the duodenum measuring 0.71 cm thick, with some areas of mildly prominently 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 of the small intestine 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

The observed pancreas appears appropriately isoechoic to surrounding omental fat. The capsule is mildly irregular in shape. Parenchyma is mildly heterogenous and coarse. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

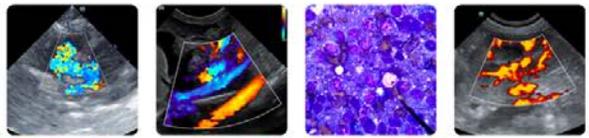
Free Abdomen

There is no visible free peritoneal effusion noted in these images.

Mesenteric and medial iliac 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

- Mild/emerging 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 loss of layering or distinct characteristics of malignancy are present. Therefore, differentials cannot be further ranked without tissue sampling.
- The gastric wall changes represent similar diagnostics as the small bowel, with both benign inflammatory differentials as well as infiltrative neoplasia, while considered less likely, unable to be definitively ruled out without tissue sampling.
- Pancreatic age-related remodeling/Chronic pancreatitis – Mild irregularities are consistent with benign age-related change. Low-grade smoldering chronic pancreatitis cannot be ruled out and should be suspected in the face of appropriate clinical signs.
- Reactive mesenteric and medial iliac lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.
- Moderately heterogenous liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.



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- Moderate 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. A non-visibly obstructive cholecystolith is suspected.
- Chronic Cystitis - Urinary bladder wall changes are most consistent with chronic cystitis. Infiltrative neoplasia cannot be ruled out but is considered less likely give the location and diffuse nature of the changes. *The focal slightly thicker area could represent a benign inflammatory process or emerging infiltrative neoplasia.

SECONDARY FINDINGS

- Age related kidney changes with pinpoint non-obstructive nephroliths bilaterally.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A full general metabolic health screen is recommended to include CBC/Chem panel and electrolytes.

Urinalysis and, if indicated based on urinalysis results, urine culture is recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

Additionally, submission of urine to look for BRAF gene mutation is recommended.

A routine fecal/giardia exam is recommended if not recently evaluated.

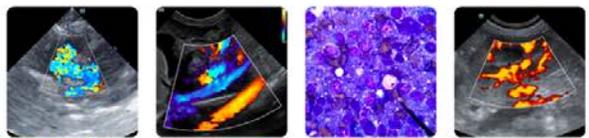
A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

A fecal enteropathogen PCR panel to Texas A&M GI Laboratory could be considered for further evaluation of possible infectious disease. Contact lab for recommendations on how long to discontinue antibiotics (if indicated) prior to obtaining a stool sample for submission.

A baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

In the meantime:

- Supportive/symptomatic medical management of clinical signs is recommended, including anti-emetics, gastroprotectants (+/- sucralfate, especially with any history of hematemesis), an appetite stimulant and fluid therapy if indicated, etc.
- Additionally, empirical deworming with a 5-day course of Panacur is recommended.
- A full course of empirical Helicobacter triple therapy could be considered.
- A probiotic, such a visbiome or proviable, may be helpful.
- Finally, if tolerated, a transition in diet could be considered, based on trial-and-error response with some options to consider including a gastrointestinal biome diet vs a hydrolyzed protein diet



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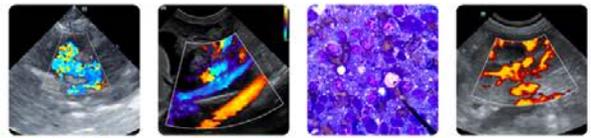
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(sometimes several trials with different brands are necessary) vs an easy to digest, bland or low-fat diet vs other.

Pending results of the above workup combined with patient's response to empirical clinical management, ultimately biopsies of the GI tract, being sure to include ileum, if possible, may be necessary for a definitive diagnosis and therefore to further guide medical management.





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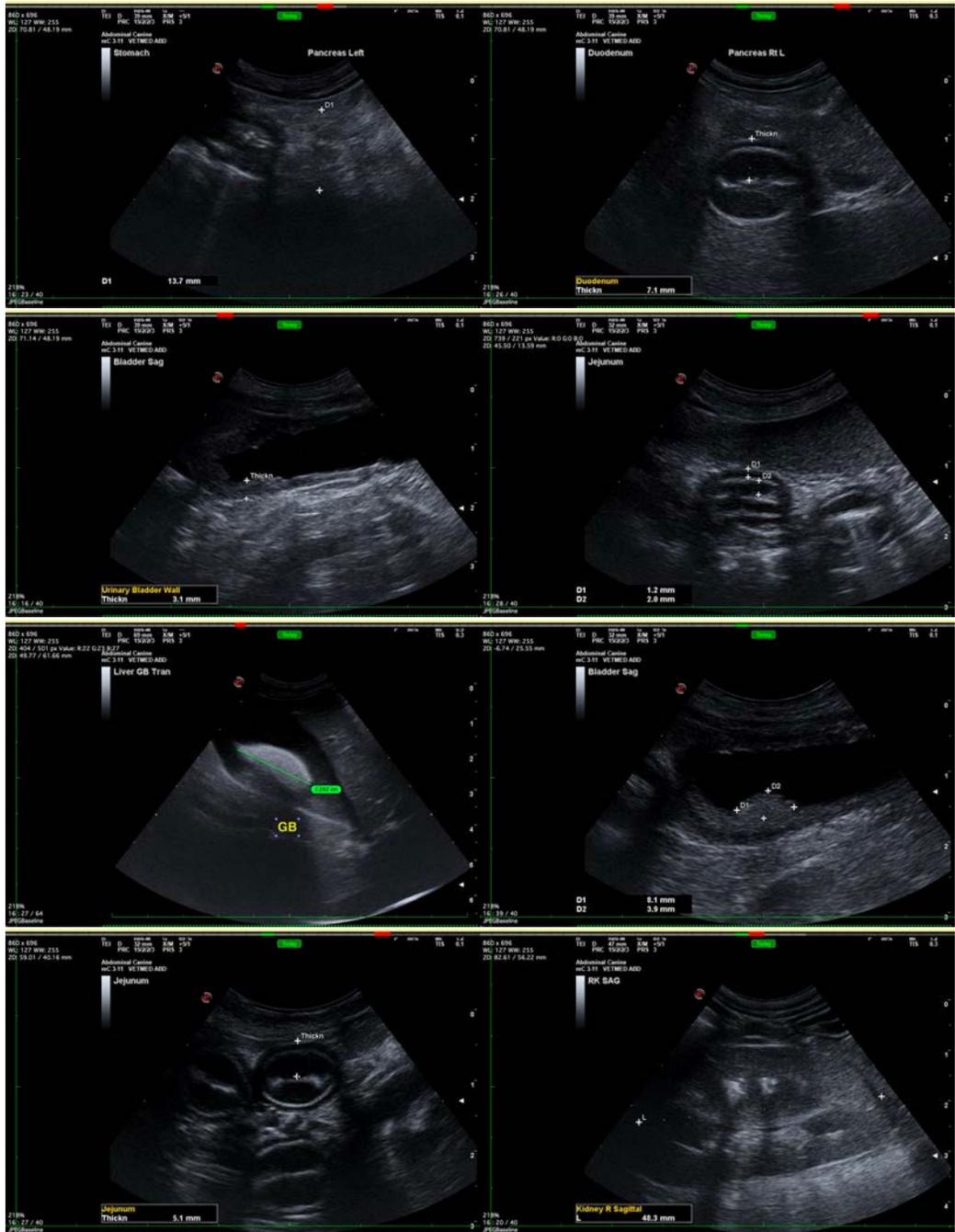
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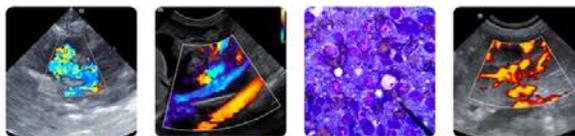
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
info@sonopath.com