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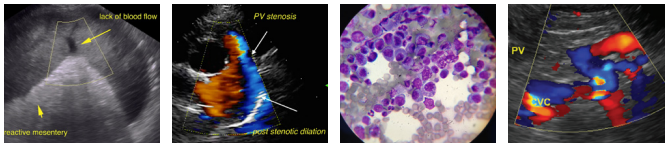

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Betty Senior Dog Rescue

SPECIES

Canine

BREED

Maltese X

SEX

Spayed Female

AGE

12 Years

WEIGHT

9.8 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Dr. Jessica Bailes

HOSPITAL NAME

All Creatures Great & Small

REFERRING VET

Dr. Jessica Bailes

INVOICE

43144

DATE

12/1/22

PRESENTING CLINICAL SIGNS

Adopted by rescue 11/22; prior to adoption was evaluated for lethargy, poor appetite, vomiting and diarrhea; picky appetite continued @ time of exam here but no vomiting or diarrhea noted. Prior hx of UTI's - no inappropriate urination noted now but Pu/PD noted. Prior hx of cough - was on temaril P chronically but no cough noted @ time of adoption so not currently on temaril P Prior hx of soft tissue sarcoma removed from lumbar spine 3/22 - no evidence of re - occurrence as of exam here. Abnormal PE/Chem/CBC/UA Results: Dental disease, thin haircoat on PE, otherwise NSF BW: CHEM: increased ALT (122), increased ALP (1279), increased GGT (37), increased PSL (174) CBC: mild non - regenerative anemia (HCT = 34%), thrombocytosis (612), neutrophilia (10873) w/ mild toxic changes TT4: decreased @ 0.7 HWAG: negative Urine collected today for evaluation - pending.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (0.60 cm). Mucosa is hyperechoic and irregular. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal 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, mineral or infarcts observed. The right kidney measures 4.64 cm. The left kidney measures 3.83 cm.

Adrenal Glands

The right adrenal gland is normal in size (1.61 cm long x 0.72 cm at the cranial pole and 0.46 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (1.64 cm long x 0.36 cm at the cranial pole and 0.35 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

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. Multifocal mineral foci are noted. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is mildly overdistended with a moderate amount of non-dependent, mildly aggregated/inspissated sludge. Hypo to anechoic cystic areas are noted between the gallbladder sludge and luminal wall. The wall is otherwise smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion.

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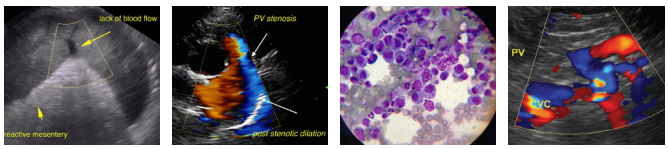

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Gastrointestinal

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.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

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

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. 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 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

- **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.
- **Spleen mineralization –** This is a benign change but can be associated with endocrinopathies, especially hyperadrenocorticism.
- **Hyperechoic hepatomegaly -** This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.
- **Emerging mucocele –** 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. The non-dependent nature of this sludge combined with the cystic areas are suggestive, however, of possible emerging cystic mucosal hyperplasia or early gallbladder mucocele.
- **Reactive mesenteric lymph nodes –** infiltrative neoplastic disease cannot be ruled out but is considered less likely.

SECONDARY FINDINGS

- Age related kidney changes

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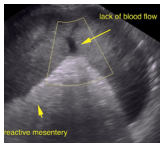

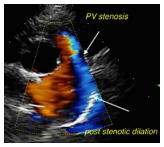

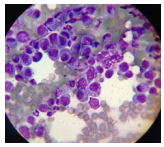
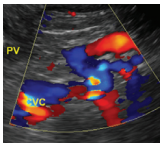

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

As is reportedly already pending, a urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

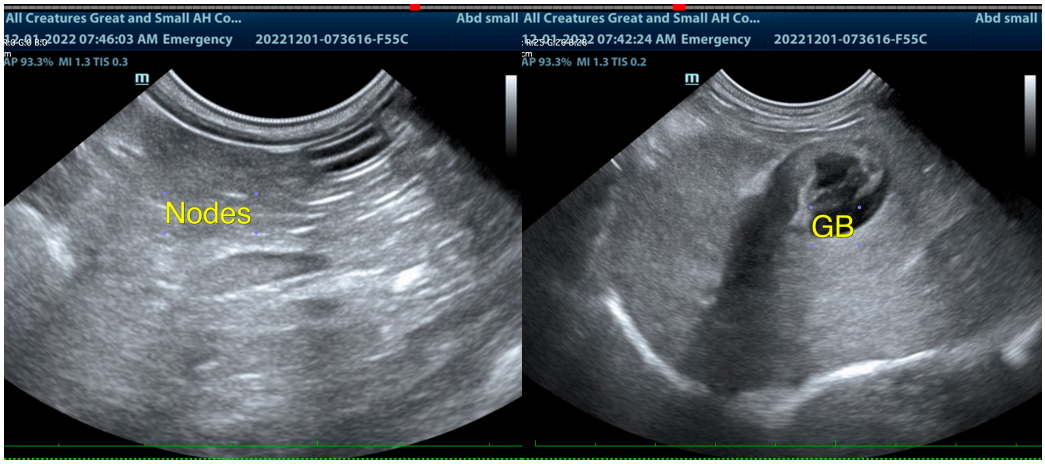
Given this patient's reported gastrointestinal signs combined with mesenteric lymphadenopathy, etc., a fecal exam (if not already evaluated) is recommended, as well as a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory.

Depending on when this patient's Temaril P was discontinued, some of the liver enzyme changes as well as the ultrasound changes, PU/PD, etc. may all still be residual iatrogenic hyperadrenocorticism caused by the Temaril P. However, if the patient has been off of Temaril P for a while, true pituitary hyperadrenocorticism could be a differential or the reported changes and PU/PD. Having said that, hyperadrenocorticism typically does not result in a picky appetite.

Differentials for the picky appetite include an underlying gastrointestinal or pancreatic disease, which is being investigated with a GI panel, or potentially, if the Temaril P was discontinued abruptly after being administered for some time, the patient's decreased appetite could be secondary reaction to a cortisol deficiency, or given the gallbladder changes, due to an emerging mucocele.

Empirical medical management of the emerging mucocele could be tried with hepatic nutraceuticals, including Ursodiol, broad-spectrum antibiotics, etc., and/or, if concurrent nausea, cranial abdominal pain, etc. are present, more aggressive intervention in the form of a cholecystectomy may be warranted.

In the meantime, additional empirical therapeutic recommendations include empirical deworming with a 5-day course of Panacur as well as symptomatic therapy in the form of antiemetics, gastroprotectants, appetite stimulants, and a probiotic such as Visbiome or Proviable, in addition to, if tolerated once the patient is eating well again, a diet transition based on trial-and-error response.



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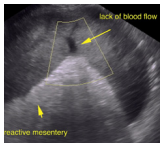

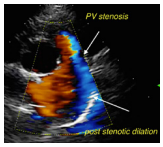

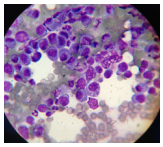
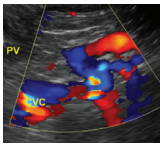

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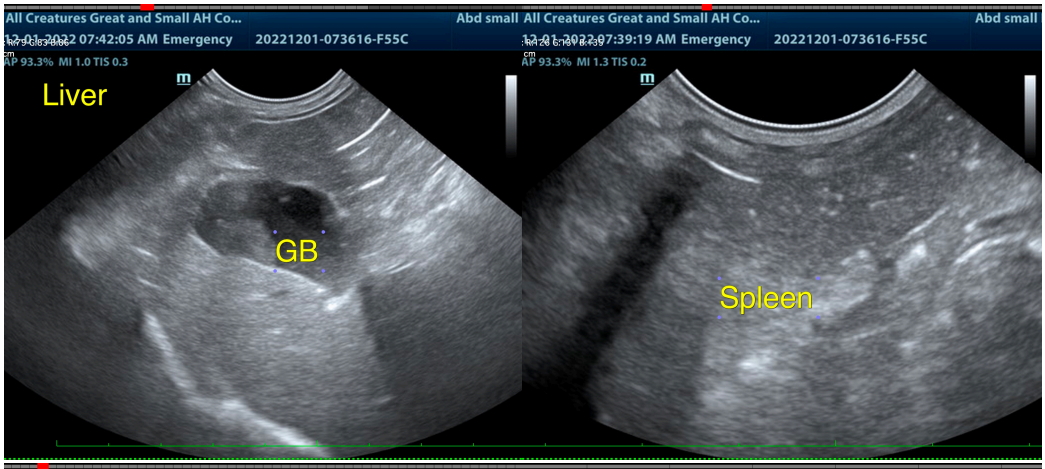

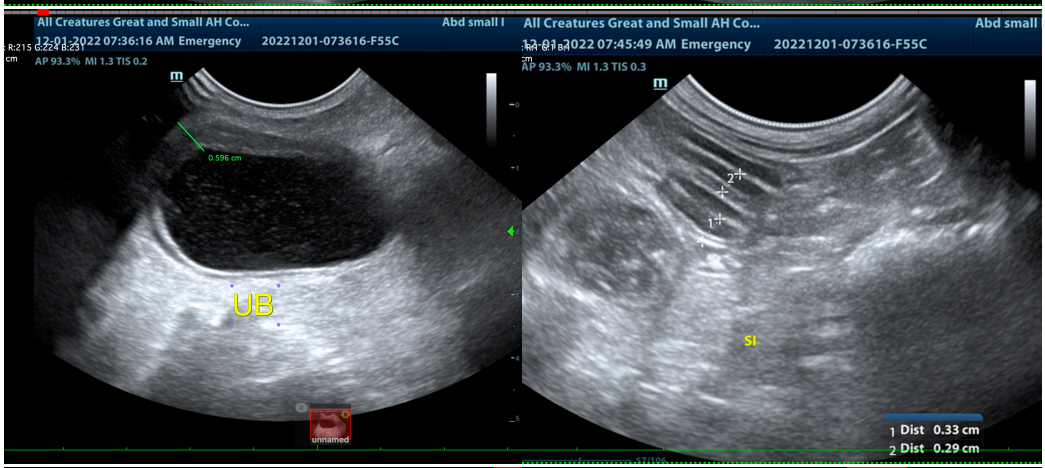

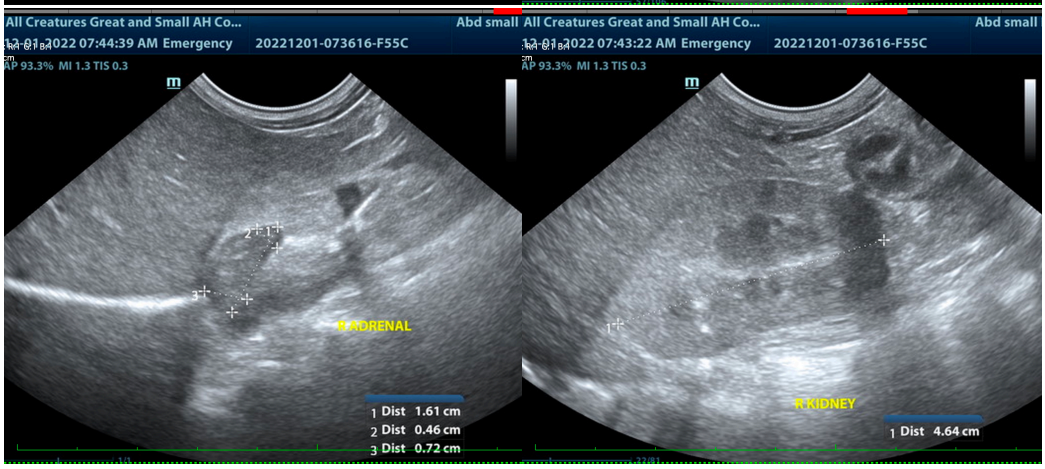

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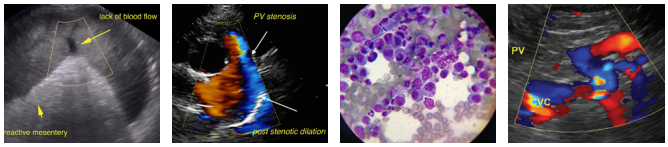

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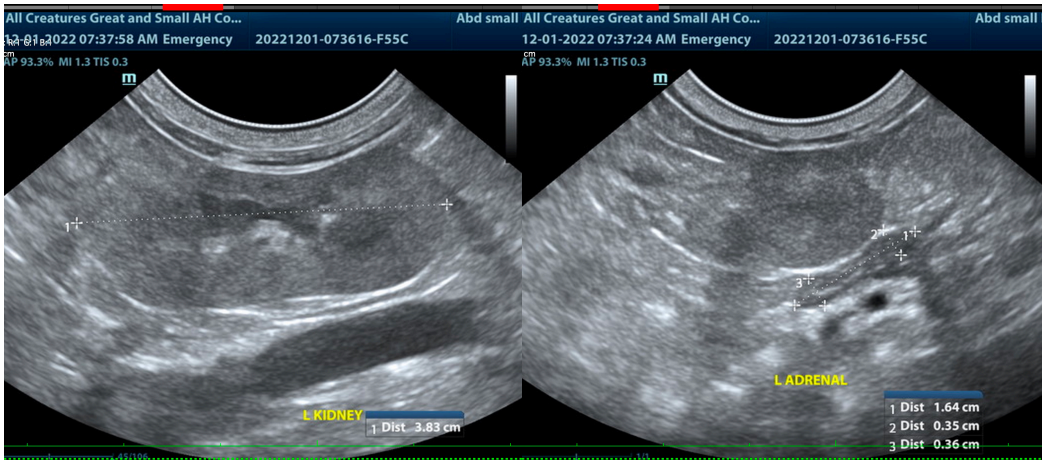

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
Beth.Johnson@sonopath.com