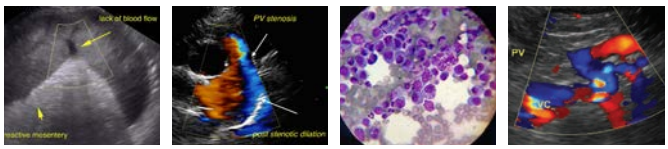
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT
Izzy Samuels

SPECIES
Canine

BREED
Mini Schnauzer

SEX
Spayed Female

AGE
12 Years

WEIGHT
24.6 Pounds

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Dr. Reyes

HOSPITAL NAME
Mobile Vet Ultrasound

REFERRING VET
Dr. Beltran

INVOICE
44021

DATE
1/6/23

PRESENTING CLINICAL SIGNS

Pet had a splenectomy in 2021, hematoma on biopsy. On recent bw, pet has a new mild decrease in he hct. Also had 5 seizures recently but doing better after Phenobarbital was started. Owner is concerned about distended abdomen and increased water intake, possible after phenobarbital.

Abnormal PE/Chem/CBC/UA Results: Hct: 34.5 Rbc: 4.6 Plt: 902 Na: 135 Bun: 50 Tp: 13.7 Alb: 4.6 Glob: 9.1 Calcium: 15.0 Phosp: 7.0 Alkp: 758 Chol: 1085 Trig: 2355 T4: < 0.5

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (5.6 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (5.2 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

The right adrenal gland is unable to be well visualized.

The left adrenal gland is normal in size (0.55 cm at the cranial pole and 0.64 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The spleen has been previously removed.

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 moderately distended with anechoic bile as well as moderate 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 visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

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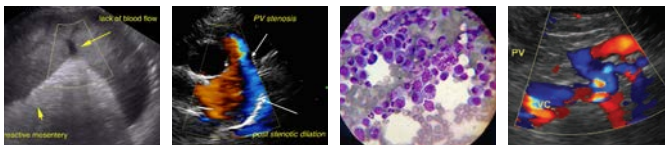

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The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine 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.

In the cranial abdomen, in the area of both the hepatic lymph nodes as well as the pancreaticoduodenal lymph nodes, there are approximately 2.0 cm in diameter cystic structures noted, believed to be cystic lymph nodes.

PRIMARY FINDINGS

- **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.

- **Cystic cranial abdominal (hepatic and pancreaticoduodenal) lymph nodes –** Differentials include reactive lymphadenopathy as well as infiltrative neoplasia and cannot be differentiated without tissue sampling.

SECONDARY FINDINGS

- **No spleen** – Previously removed.

- **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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given this patient's reported hypercalcemia and hyperglobulinemia, infiltrative neoplasia is suspected with lymphoma and multiple myeloma being top differentials, but other neoplasia including anal gland adenocarcinoma, etc. are also possible. Therefore, to gather more information about the hyperglobulinemia and hypercalcemia, recommendations include serum electrophoresis as well as a malignancy panel to include PTH, PTHrP, and ionized calcium.

In the meantime, given the cranial abdominal lymphadenopathy, a fine needle aspirate of the liver as well as the lymph nodes (if they can safely be reached and patient's coagulation status is appropriate) could be considered. Or alternatively, that step could be pursued when and if the malignancy panel suggests hypercalcemia of malignancy versus hyperparathyroidism versus other.

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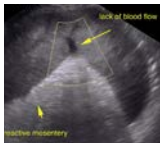
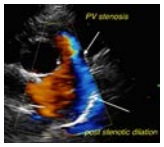
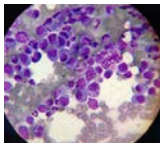
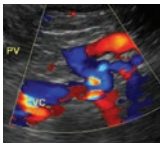

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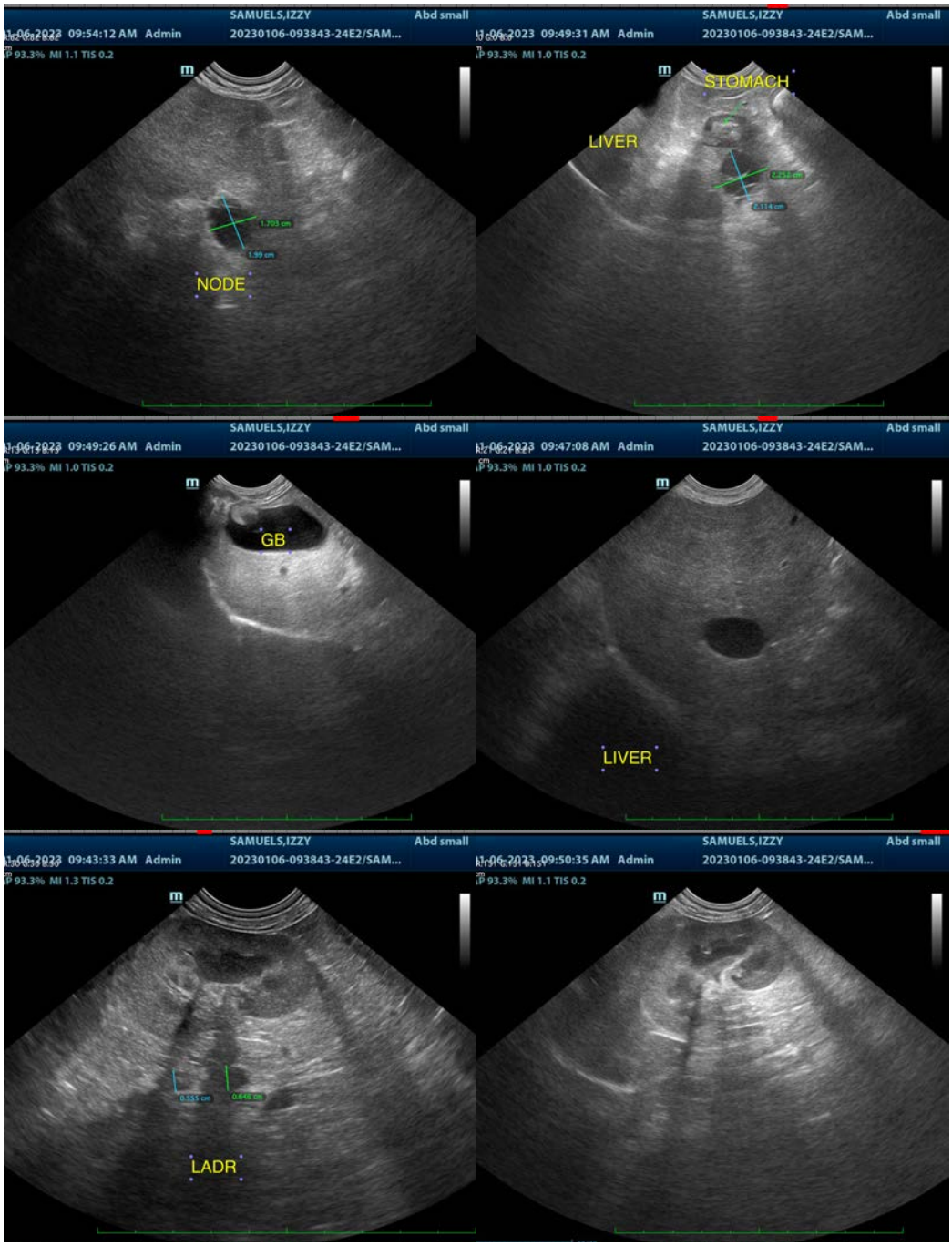
Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.



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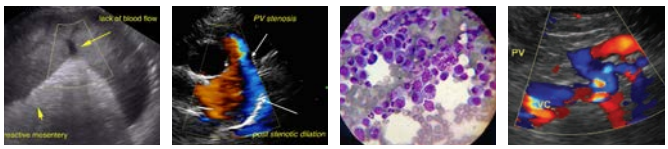

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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