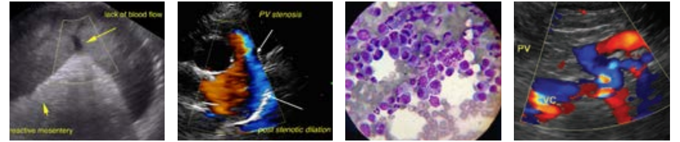

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1-800-838-4268 info@sonopath.com

PATIENT

King Dean

SPECIES

Canine

BREED

Pomeranian

SEX

Neutered Male

AGE

10 Years 7 Months

WEIGHT

14.7 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Dr. Katie Buss

HOSPITAL NAME

Kings Vet Hospital

REFERRING VET

Dr. Katie Freson

INVOICE

43916

DATE

1/4/23

PRESENTING CLINICAL SIGNS

Has been treated for UTI in the past but O said it didn't help/ clear up. He has dropped several pounds since we have last seen him. He was eating normal amounts until probably a month ago. King grazes and is free fed. O switched to wet food only about 3 days ago vs feeding dry only. He has been eating all the canned food. He is drinking a lot and urinating a lot. O thinks this has been ongoing for 4 to 5 months. O has noted the jaundiced color to his eyes since at least Thanksgiving.

Abnormal PE/Chem/CBC/UA Results: Significantly elevated ALT, ALKP (un readable values), GGT, TBILI, cholesterol, elevated globulins, increased RDW, Platelets, PCT, low MCH. ABD rads: mildly rounded liver margins, but not overly enlarged organ. No obvious mass effect noted. Full stomach w/ possible displacement laterally. Icteric over entire body

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 prostate is normal in size (XXcm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The right kidney is normal in size (4.5 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 (4.3 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 in these images.

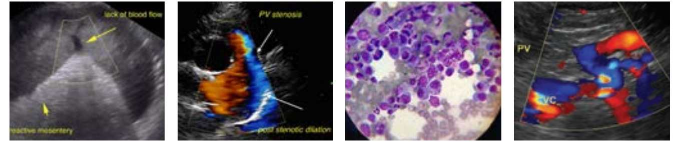
The left adrenal gland is normal in size (0.44 cm at the cranial pole and 0.59 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

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

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. A 2.5 cm round, hypoechoic nodule/mass is noted in the mid liver. Visible vasculature and biliary tree appear normal without distension or congestion.



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The gallbladder is not overly distended in size. However, the wall is thick and hyperechoic, and irregular in appearance. Luminal contents are primarily anechoic with some suspended echogenic debris. There is no evidence of cystic or common bile duct dilation. The wall measures 0.61 cm thick.

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.

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.

There is no apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC 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, especially given the focal discrete nodule/mass described above, and cannot be differentiated without tissue sampling.

- The gallbladder changes are concerning for cholangitis or even potentially an emerging mucocele.

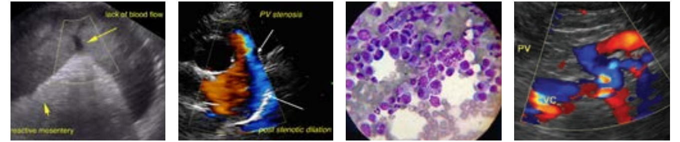
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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.

Given this patient's urinary history, if not recently evaluated, 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 ratio is recommended.

Testing for Leptospirosis is recommended, as is a fine needle aspirate of both the diffuse liver changes and the discrete nodular if patient's coagulation status is appropriate.

Ultimately, an exploratory laparotomy may be warranted for further valuation +/- removal of the gallbladder and liver mass, as well as a liver biopsy if the patient does not improve clinically and liver enzymes don't improve. However, in the meantime, supportive/symptomatic medical management is



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recommended in the form of antiemetics, gastroprotectants, an appetite stimulant if necessary, hepatic nutraceuticals, and broad-spectrum antibiotics.

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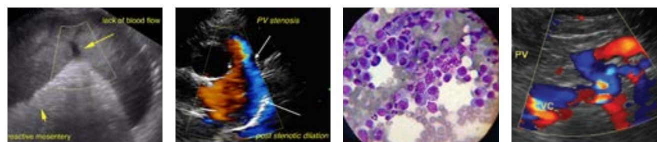

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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