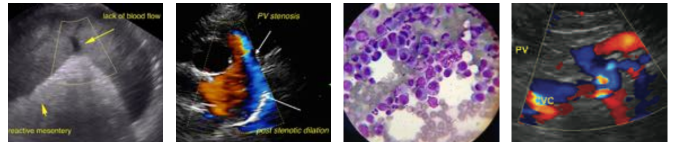
SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com

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

PATIENT

Whistler McClellan

SPECIES

Canine

BREED

Flat Coated Retriever

SEX

Male

AGE

9 years

WEIGHT

35.5 lbs

INTERPRETED BY

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

IMAGING PERFORMED BY

Dr. Holmes

HOSPITAL NAME

Cedarview AH

REFERRING VET

Dr. Holmes

INVOICE

DATE

4/29/22

PRESENTING CLINICAL SIGNS

Whistler was referred for an abdominal ultrasound. He presented with a distended hard pendulous abdomen, uncomfortable on palpation, pale MM membranes, reduced energy (not overly lethargic), decreased appetite (but still eating) and muffled heart sounds. rads uploaded preformed at referring clinic
Abnormal PE/Chem/CBC/UA Results: CBC - RBC low with HCT at 22 and responsive rule out immune-mediated or blood loss - no evidence of agglutination on smear or spherocytes Biochemistry - mild low glucose and mild increase amylase - not significant IMO (Liver enzymes normal)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is well distended with anechoic contents. The wall is smooth and regular. No abnormalities are noted with the trigone or proximal urethra, and there is no evidence of sediment, cystoliths, polyps or a mass. A trivial amount of anechoic fluid is observed ventral to the urinary bladder.

Prostate

The prostate measures 3.07 cm in diameter (within normal limits for an intact male). It is mildly heterogeneous with different degrees of hyperechogenicity and the occasional, very small anechoic lesion. The most likely cause of these findings is benign prostatic hyperplasia.

Kidneys

The **left** kidney measures 7.10 cm. The capsule is smooth and its overall architecture, including the definition of the cortico-medullary junction, is preserved. Mineralizations of the diverticulae are present, without evidence of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 6,46 cm. The capsule is smooth and its overall architecture, including the definition of the cortico-medullary junction, is preserved. Mineralizations of the diverticulae are present, without evidence of nephroliths or pyelectasia. Mineralizations are also present within the cortex. The surrounding mesentery is not hyperechoic.

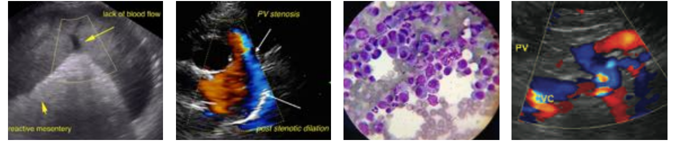
Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

The **left** adrenal gland is not visualized.

The **right** adrenal gland measures 0.57 cm in diameter. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.



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Spleen

The spleen is displaced caudally. The capsule is smooth. Multiple pinpoint and punctate hyperechoic foci are scattered haphazardly throughout the parenchyma. The foci are most consistent with mineralizations, however, fat and fibrosis cannot be excluded. Perivascular cuffing is present which is not considered clinically significant.

Liver

Severe hepatomegaly is present. The liver borders are rounded, with some lobes irregular and scalloped. A mass effect is observed in the left liver lobe, which is markedly heterogeneous with hypo and anechoic nodules of variable size, as well as hyperechoic foci dispersed amongst the nodules. Target lesions are observed.

Another abnormal region of the liver containing a multiple nodules also contains a cavitary lesion in the center of the mass. The mass measures at least 12.9 cm in diameter. The anechoic, cystic lesion shows fibrin floating within it, suggestive of recent hemorrhage.

The hepatic vessels that are visualized do not show obvious abnormalities.

No abnormalities are observed with the gallbladder.

Gastrointestinal

A large amount of ingesta, fluid and gas are present within the lumen of the stomach, which is being compressed by the hepatic mass. A severe ileus of the stomach is present.

The gastric wall is within normal limits in thickness and the wall layers are well defined.

The small intestinal wall thickness, including the duodenum, is within normal limits and the definition of the wall layers is preserved. Abnormally dilated loops of bowel are not observed.

The colonic wall is not thickened and mural detail is considered normal.

Pancreas

No overt abnormalities are observed with the echogenicity or echotexture of the parenchyma of the left limb.

Only a small portion of the right limb is visualized; no obvious abnormalities are observed.

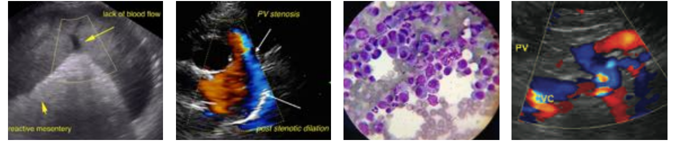
Other

Lymph nodes

A lymph node in the region between the stomach and spleen is enlarged, measuring 1.05 cm in diameter x 2.31 cm in length. It is homogeneous.

Abdominal effusion

A trivial amount of anechoic fluid is observed ventral to the urinary bladder.



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ULTRASONOGRAPHIC FINDINGS

- A markedly heterogeneous hepatic mass, measuring at least 13 cm is observed. It appears to be involving the left and middle liver lobes. Cavitary lesions and target lesions are present, in addition to a large cystic lesion with fibrin floating within the cystic lesion. The latter is suggestive of recent hemorrhage. Differential diagnoses for the hepatic mass include an adenocarcinoma, carcinoma, cystic adenocarcinoma, and hemangiosarcoma.

- The splenic changes are suggestive of nodular or lymphoid hyperplasia. Extramedullary hematopoiesis is also suspected due to the anemia, as a result of recent hemorrhage. There are no obvious signs of metastatic disease.

- The mildly enlarged lymph node noted in the left cranial quadrant is suggestive of reactive hyperplasia, however, infiltrative disease must also be considered.

- The changes observed with the prostate are most likely due to benign prostatic hyperplasia.

- The trivial amount of anechoic fluid observed ventral to the urinary bladder is likely due to recent hemorrhage.

- The renal abnormalities observed are subtle and most likely due to age-related degeneration.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Further diagnostics will depend on how the clients would like to proceed.

Although a fine needle aspirate may be performed, it should be done judiciously, as it may be difficult to control hemorrhage if the tumour ruptures (due to insertion of the needle into necrotic tissue). A 25 gauge needle is suggested with use of capillary action rather than "active suction" of syringe and needle. However, one option is to perform a fine needle aspirate of the enlarged lymph node.

A CT scan of the abdomen and thorax may be performed to determine if surgical resection of the mass is possible and whether pulmonary metastases are present, respectively, i.e. far more sensitive and specific compared to thoracic radiographs.

If further diagnostics are not pursued, treatment with steroids to help decrease secondary inflammation *OR* non-steroidal anti-inflammatories, such as meloxicam or deracoxib, for its anti-neoplastic activity, respectively. Yunnan baiyo or tranexamic acid may help decrease the risk of hemorrhage.

Referral to a board certified oncologist is recommended to discuss diagnostic and therapeutic options.

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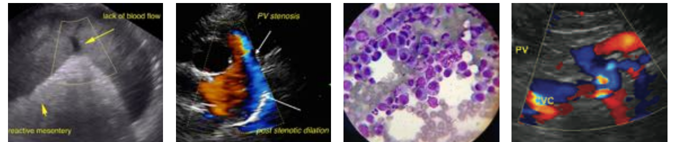

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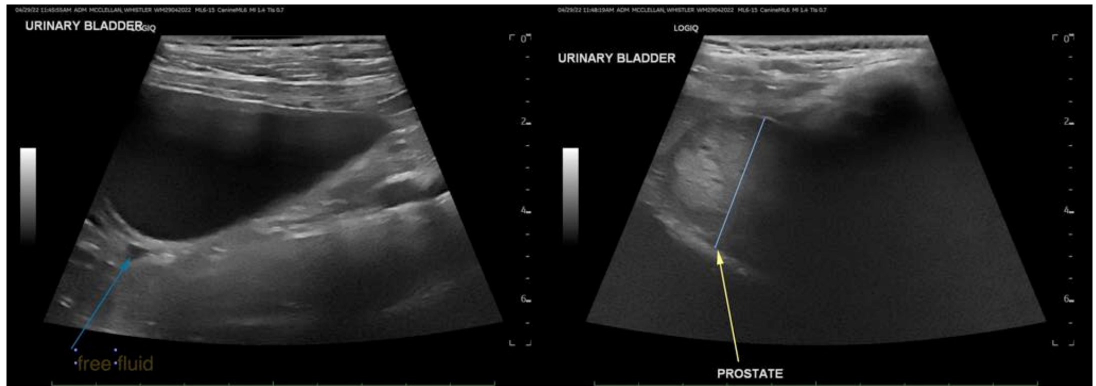

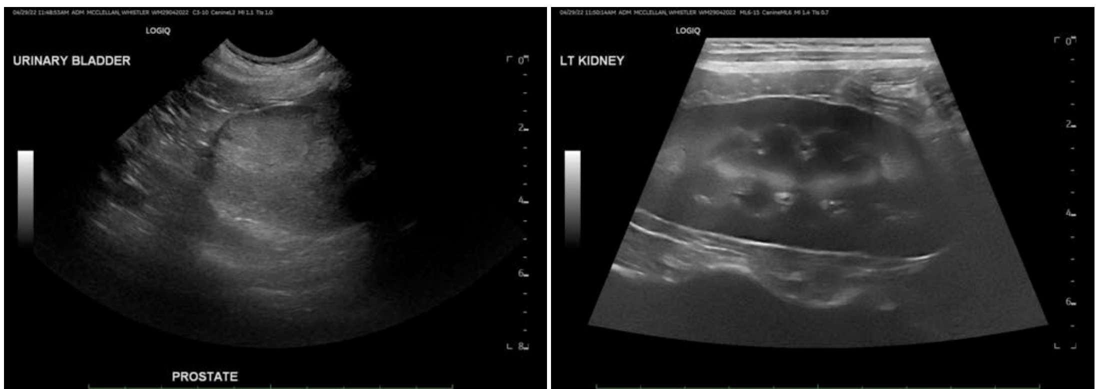

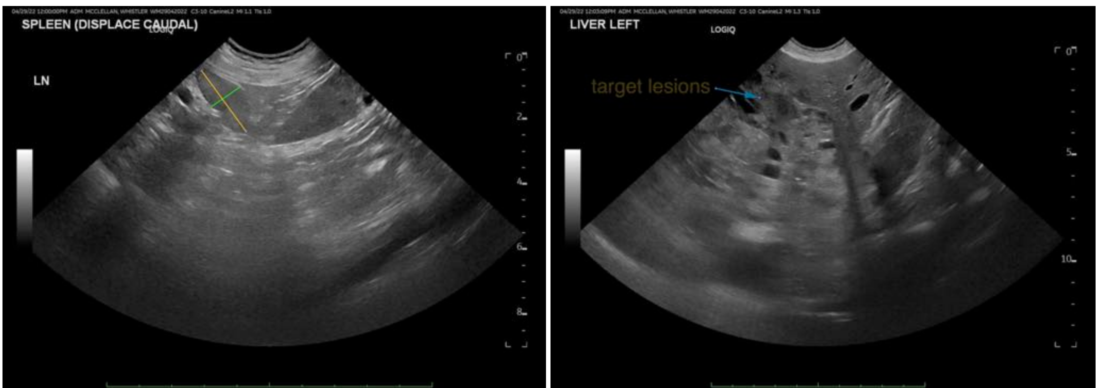

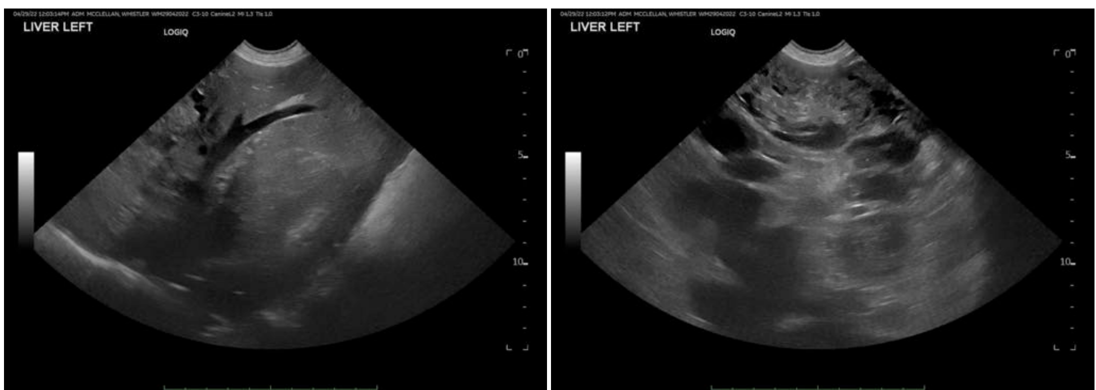

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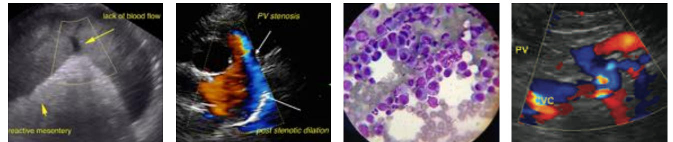

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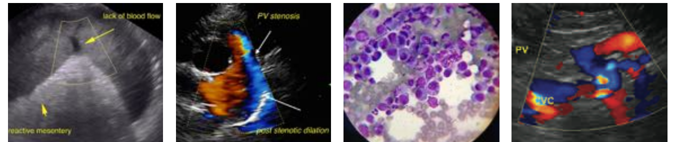

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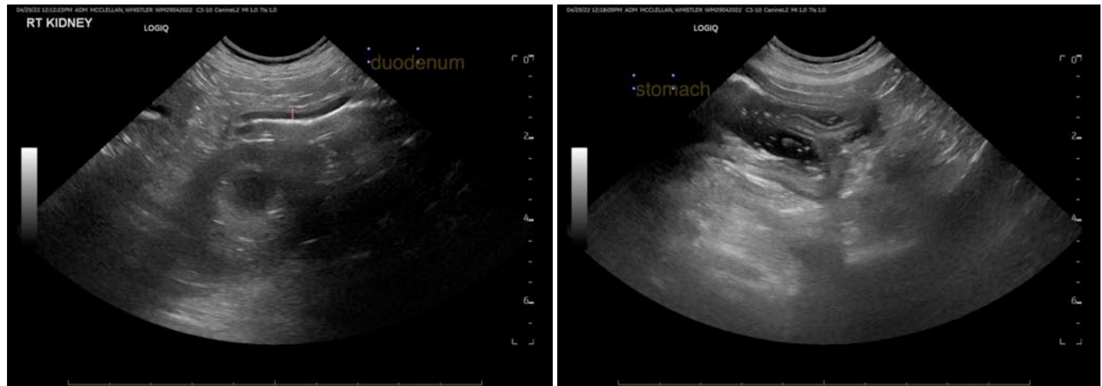

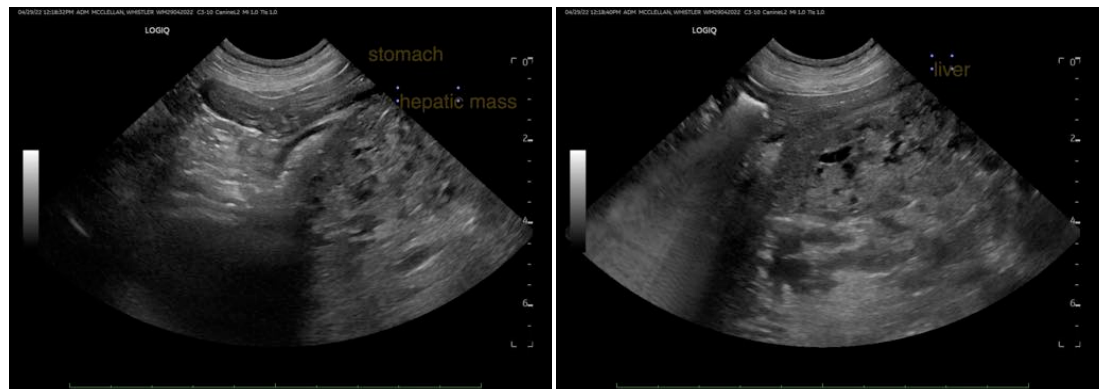

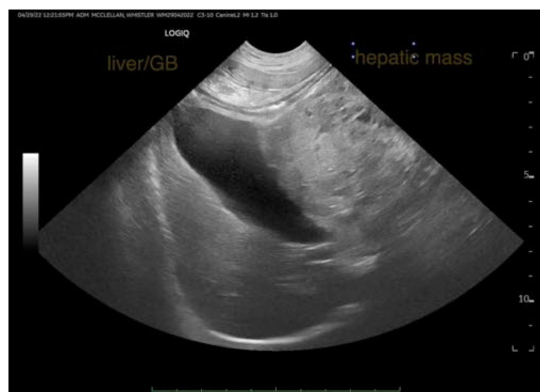

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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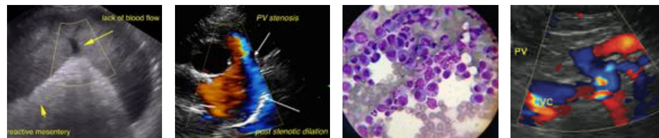

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