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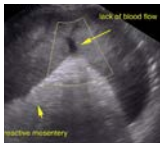
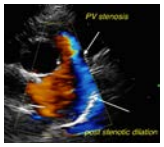
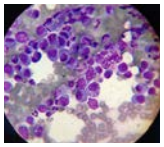
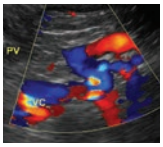

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1-800-838-4268 info@sonopath.com

PATIENT
Hannalor Kauffman

SPECIES
Canine

BREED
Labrador Retriever

SEX
Spayed Female

AGE
7 Years

WEIGHT
101 Pounds

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Dr. Jack Reese

HOSPITAL NAME
Willow Run VC

REFERRING VET
Dr. Jack Reese

INVOICE
39115

DATE
6/29/22

PRESENTING CLINICAL SIGNS

Chronic history of mild liver enzyme elevations (ALP, ALT). Patient asymptomatic at home, recent wellness check revealed slight elevation in enzymes. Recommended ultrasound as next step. Currently taking Denamarin.
Abnormal PE/Chem/CBC/UA Results: ALT 138 (10 - 125 U/L) ALP 1,332 (23 - 212) U/L

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is moderately distended. It has a normal uniform wall thickness (<0.2 cm). Contents include primarily anechoic fluid combined with both gravity dependent and suspended echogenic non-shadowing debris within the fluid. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (7.76 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 or mineral. Several small chronic infarcts noted in the right kidney. A hyperechoic band parallel to the corticomedullary border is present.

The left kidney is normal in size (7.35 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. A hyperechoic band parallel to the corticomedullary border is present

Adrenal Glands

The right adrenal gland is normal in size (0.43 cm at the cranial pole and 1.0 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 (0.58 cm at the cranial pole and 0.65 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The spleen is subjectively large in size with a mildly swollen but smooth capsule. Parenchyma is normal and homogenous in echogenicity and echotexture. No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

The liver is subjectively enlarged with irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. A more discrete rounded, emerging mass-like appearance to the caudal right liver noted, measuring 4-5 cm in diameter and containing a more marked heterogeneous/nodular appearance than the diffuse changes described above. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

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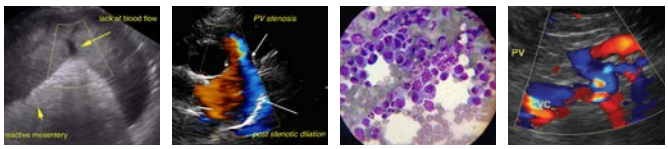

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Gastrointestinal

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 peritoneal effusion. There is no apparent lymphadenopathy.

PRIMARY FINDINGS

- Liver Nodular Hyperplasia – 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.
- More rounded emerging mass-like appearance to the right caudal liver – Differentials still include benign changes such as nodular hyperplasia versus benign liver tumor such as adenoma, hepatoma, etc. However, infiltrative neoplasia such as round cell neoplasia or hepatocellular carcinoma are also considered possible.

SECONDARY FINDINGS

- Urinary bladder debris
- Bilateral Medullary Rim Sign - of unknown clinical significance and can be a normal variant. Medullary rim sign(s) should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc.
- Chronic infarcts in right kidney

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Recommendations for this patient include:

- Testing for Leptospirosis if not already evaluated.
- Fine needle aspirate of the liver is recommended if patient's coagulation status is appropriate.
- Ultimately, pending results of cytology and improvement versus progression of liver enzymes, a liver biopsy with copper analysis may be warranted in the future to definitively diagnose the cause of this patient's increased liver enzymes.

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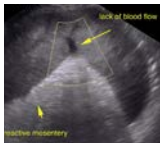
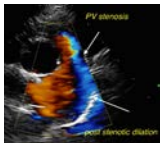
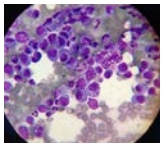
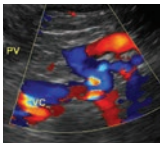

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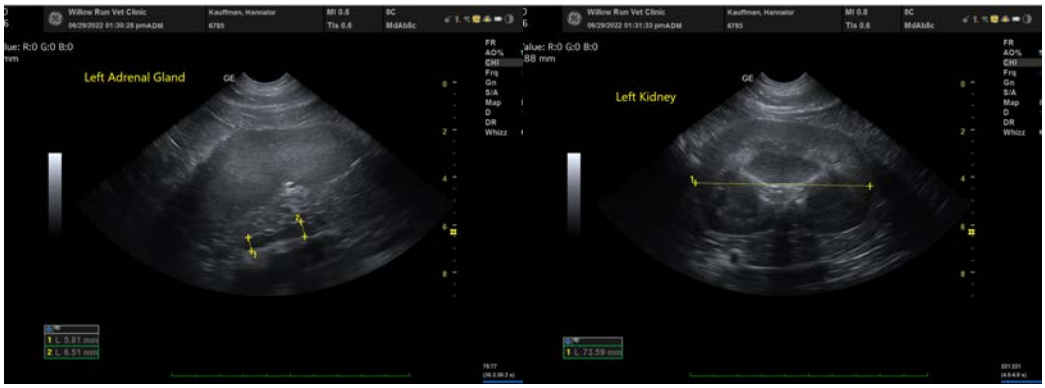

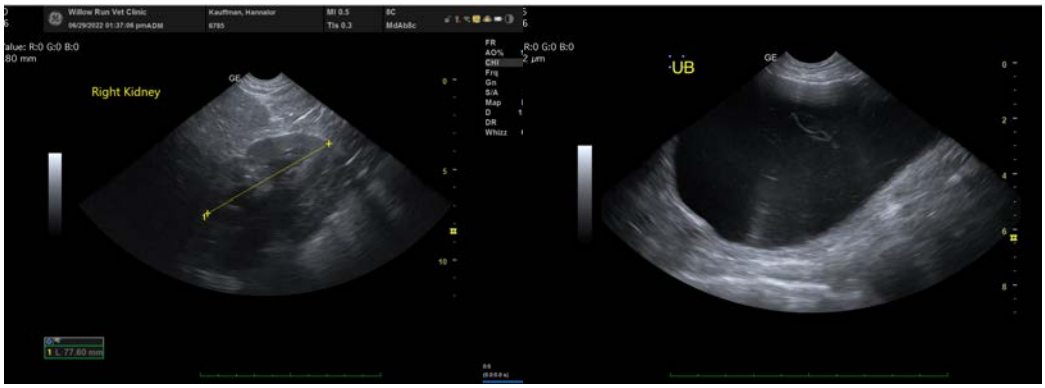

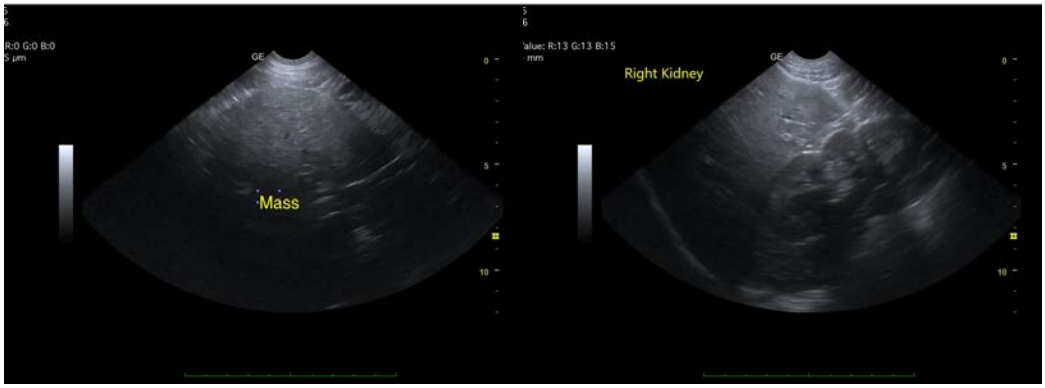

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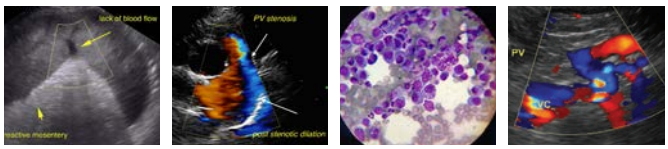

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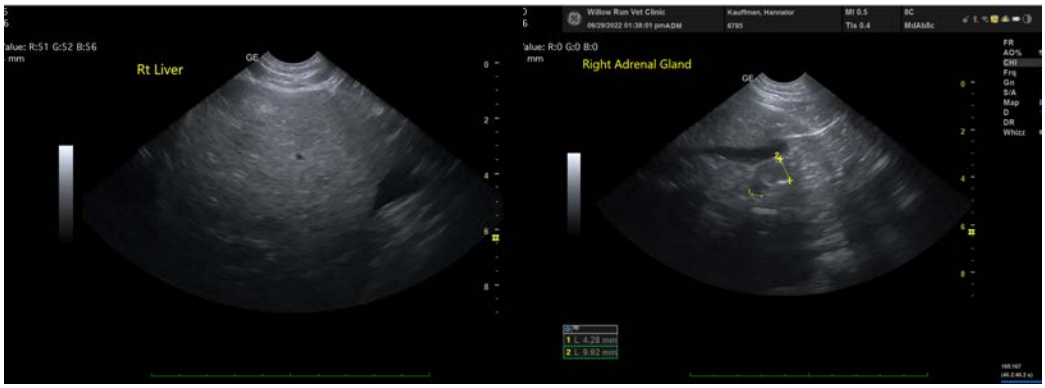

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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