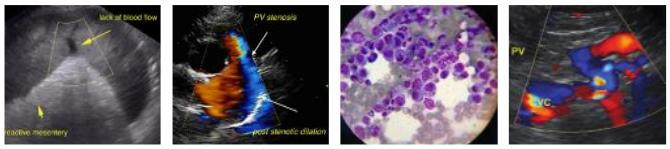
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Gunner Shope

SPECIES

Canine

BREED

Puggle

SEX

Neutered Male

AGE

11 Years

WEIGHT

56 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Meghan Myers, VMD

HOSPITAL NAME

Hershire AH

REFERRING VET

Meghan Myers, VMD

INVOICE

16392

DATE

6/29/22

PRESENTING CLINICAL SIGNS

History: off/on decreased appetite. Abnormal liver enyzmes found on routine senior blood testing. Elevated liver values first found May 17th, started on amoxi, metro, denamarin and ursodial for 30 days. Recheck blood work showed improvement in some values, worsening in others- see below.

Abnormal PE/Chem/CBC/UA Results: Albumin: 2.6 (2.7-3.9) - was 3.4 Glob: 4.2 (2.4-4) - was 4.4 ALT: 217 (18-121) - was 808 AST: 70 (16-55) - was 208 ALP: 807 (5-160) - was 356 Total Bilirubin: 0.5 (0-0.3) - was <0.1 Bilirubin Unconjugated: 0.3 (0-0.2) - was 0 Bilirubin Conjugated : 0.2 (0-0.1) - was 0.1 CK: 302 (10-200) BUN: 10 (9-31) : was 18 Cholesterol: 135 (131-345) : was 178

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The prostate is unable to be visualized but the area is examined without evident pathology.

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 left kidney measures 4.8 cm. The right kidney measures 5.2 cm.

Adrenal Glands

Left adrenal gland is normal in size (0.42 cm at cranial pole and 0.49 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

The right adrenal gland is unable to be well visualized.

Spleen

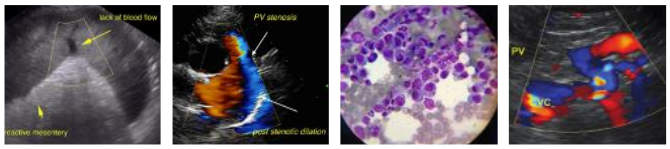
Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). Multifocal well-demarcated hyperechoic homogenous nodules are noted. Splenic vasculature appears normal.

Liver

Liver is normal to subjectively small in size with slightly undulating or scalloped capsular contour or margins. Patchy ill-defined areas of increased echogenicity are present with reduced visualization of vessels. The heterogeneous parenchyma demonstrates an almost lacey/moth-eaten pattern with nodular change and an emerging mass in the caudal mid liver.Visible vasculature and biliary tree appear normal without distension or congestion.

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.

Gastrointestinal



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The visible stomach wall is normal in thickness 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. 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 and layering. Contents are consistent with normal formed feces and gas.

Pancreas

Pancreas is prominent (enlarged) in size and mildly irregular in shape with a slightly undulating contour. Parenchyma is coarse in echotexture and heterogenous to hypoechoic in echogenicity.

Free Abdomen

There is a scant amount of anechoic free fluid noted. No appreciable lymphadenopathy.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Hepatic Fibrosis Pattern – This appearance is most consistent with chronic hepatitis with fibrosis and/or early cirrhosis. Given the more nodular/mass-like appearance of the liver than is typically seen with fibrosis, infiltrative neoplasia, including round cell neoplasia versus other is also considered a possibility.

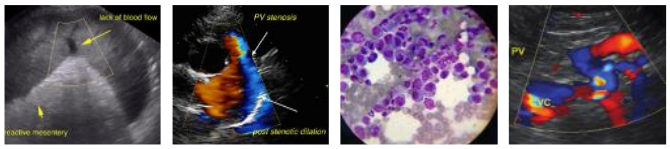
Secondary Findings

- Chronic active pancreatitis
- Hyperechoic splenic nodules – most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.
- Age-related kidney changes
- Urinary Bladder debris

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Recommendations for this patient include:

1. Bile acids are recommended if not recently evaluated
2. Testing for Leptospirosis could be considered
3. A coagulation panel is warranted given the suspicion, based in the reported chemistry panel results, for decreased liver function and if coagulation status is appropriate, a fine needle aspirate of the liver is recommended to further investigate possible. infiltrative disease such as neoplasia.



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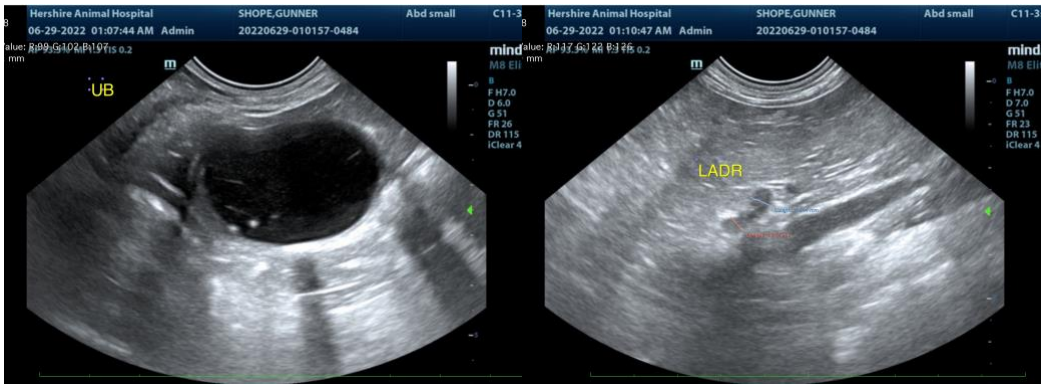
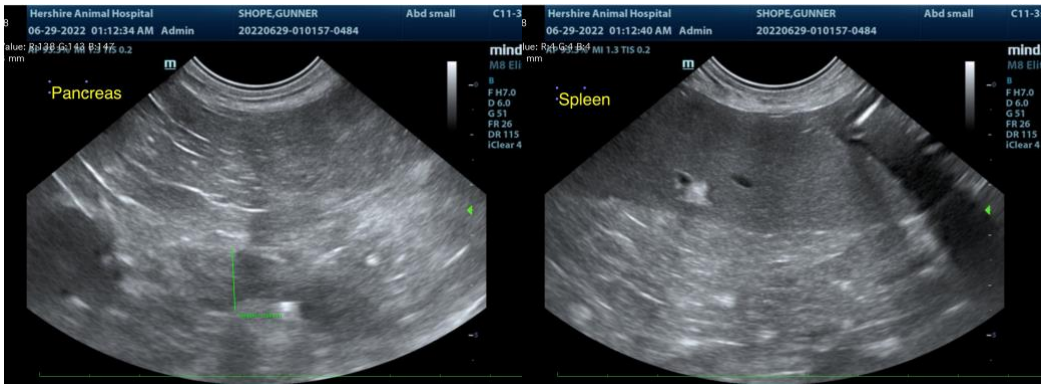
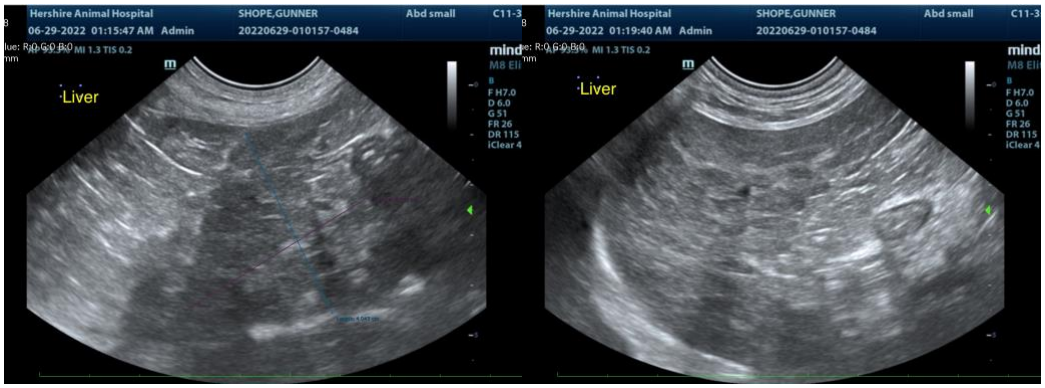
4. Finally, pending the above results, given the mildly low albumin, if it can't be attributed to decreased liver function, a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

5. Ultimately, if a diagnosis is not obtained cytologically, a liver biopsy is recommended.







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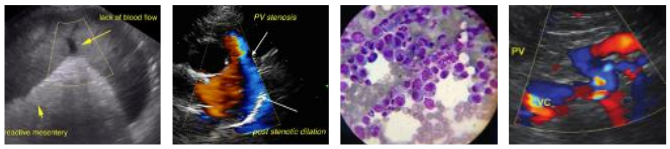

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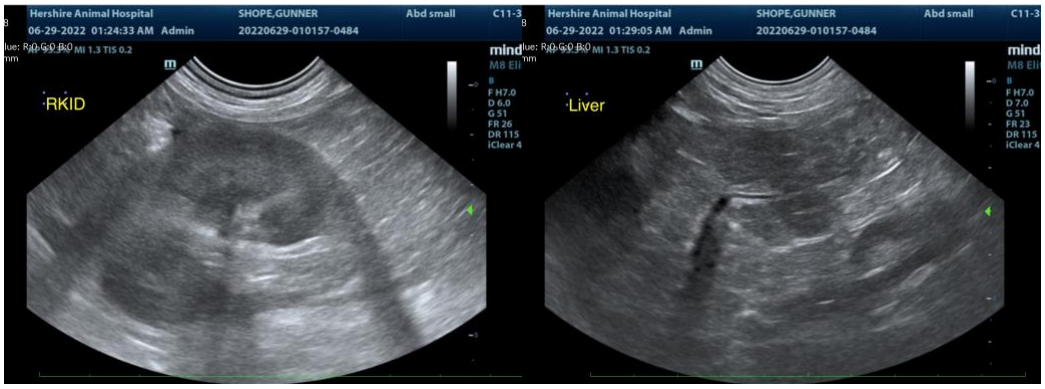

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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