



**PATIENT**

Casanova Hovis

**SPECIES**

Canine

**BREED**

Chihuahua Mix

**SEX**

Neutered male

**AGE**

14 years

**WEIGHT**

16 lbs

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Ashley Whitesell

**HOSPITAL NAME**

Dickson AC

**REFERRING VET**

Dr. Levine, Ironton AH

**INVOICE**

42911

**DATE**

2/21/23

**PRESENTING CLINICAL SIGNS**

History: Went to ER 2/12 ADR vomiting and history of elevated liver values, painful on abd palpation. concern for pancreatitis.

Abnormal PE/Chem/CBC/UA Results: x-ray showed splenic mass, ALT 794, Alk phos 477, clinical signs have improved

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

Urinary bladder is only mildly distended (empty). Visible contents are anechoic. Urinary bladder wall is unable to be fully assessed for pathology without further distension. No visible masses or cystoliths are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface. If there are urinary signs and/or concern for urinary bladder pathology, reassessment after complete filling is recommended.

Prostate (neutered) is normal in size, echotexture and echogenicity for a neutered male.

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 measured 4.1 cm and the right kidney measured 4.2 cm.

**Adrenal Glands**

Left adrenal gland is normal in size (0.38 cm at cranial pole and 0.51 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (0.38 cm at cranial pole and 0.49 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

**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). Multi-focal, well demarcated, hyperechoic, homogenous nodules are noted. Additionally there is an approximately 1.0 cm heterogenous nodule with a hyperechoic center and hypoechoic rim. This is characteristic of "target lesion". There was also mild, capsular bulge.

**Liver**

Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. No focal nodules or masses are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as 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.



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**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.

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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.

**BREED**

Chihuahua Mix

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

**SEX**

Neutered male

**Pancreas**

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

**AGE**

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**Free Abdomen**

There is no evidence of free peritoneal effusion noted in these images.

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There is no apparent lymphadenopathy noted in these images.

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**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

- **Hypoechoic hepatomegaly** - This appearance is consistent with an acute hepatopathy or acute cholangiohepatitis. Infiltrative neoplasia (round cell neoplasia) should also be considered.
- **Heterogenous splenic nodule** with a concerning target lesion appearance. This nodule may represent a benign lesion such as a cyst or hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc. However, infiltrative neoplasia or even malignant neoplasia can have a target lesion appearance and cannot be ruled out. 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.
- **Gallbladder debris (canine)** - 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.

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**Secondary Findings**

- **Age related renal changes.**

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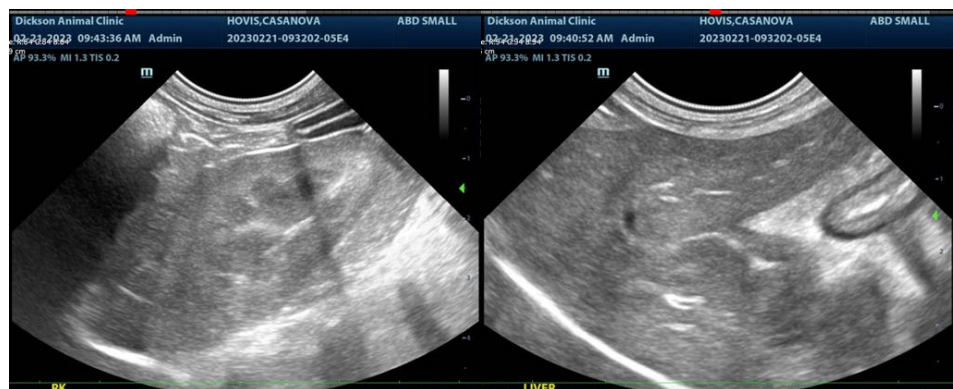
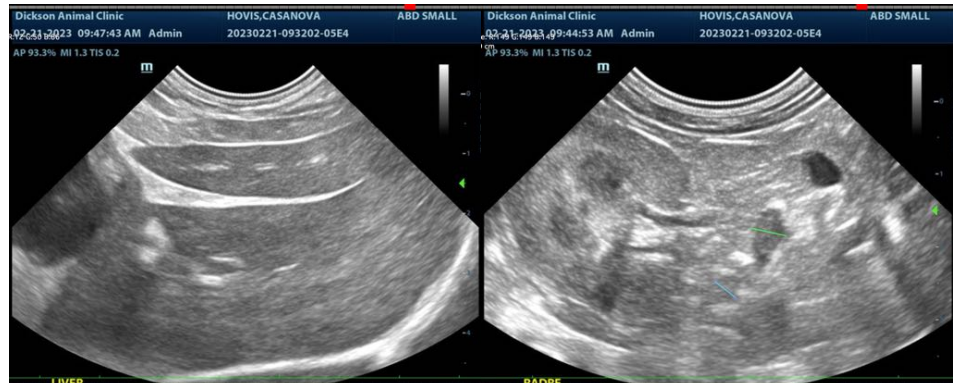
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

1. 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.
2. FNA of the liver and splenic nodular recommended if the patient's coagulation status is appropriate. Additionally pending results testing for Leptospirosis can be considered.
3. In the meantime, in addition to supportive medical management of clinical signs hepatic nutraceuticals +/- broad spectrum antibiotics are recommended with monitoring of liver enzymes for improvement. Again pending diagnosis if improvement is noted the antibiotics should be continued until values either normalize or plateau, however, if improvement is not noted then antibiotics should not be continued long term.





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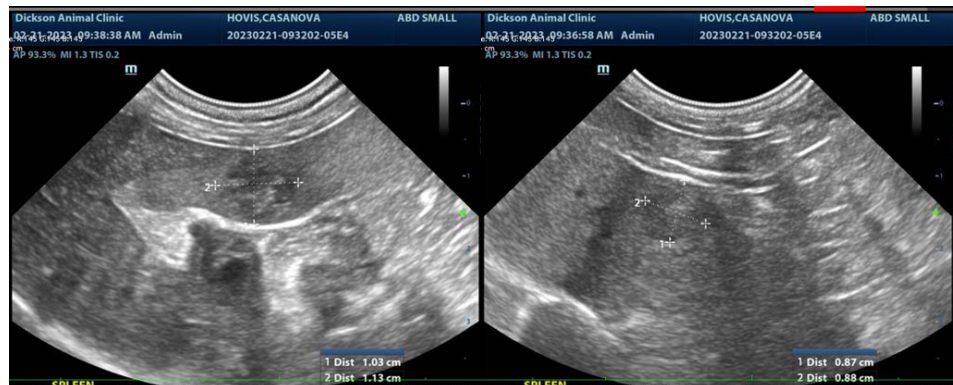
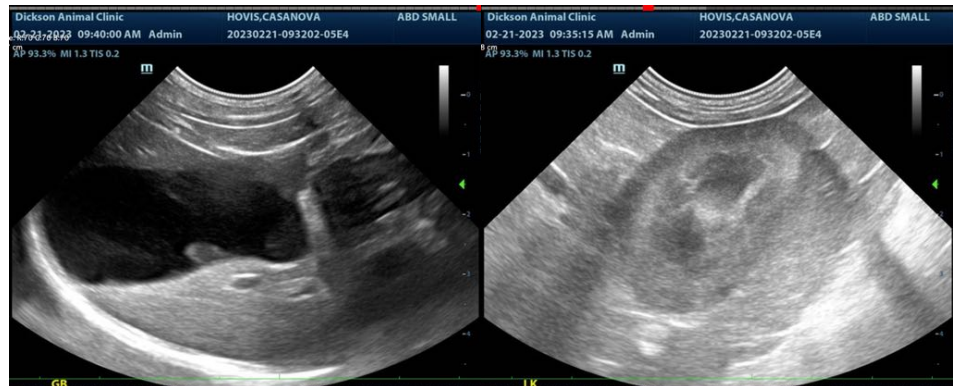
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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