



PATIENT PRESENTING CLINICAL SIGNS

Tsunami Marks Liver enzymes found to be elevated on routine blood work done this October 2022. Recheck bloods showed liver enzymes even higher; dog recently in heat.

SPECIES Abnormal PE/Chem/CBC/UA Results: SGPT 2955, SAP 1135. U/A: 2+ bili., cort./creat. 15, USG 1.043. PLTs 253, HCT 58%, PCV/TP 6.0.
Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

BREED *Urinary System*

Doberman Pinscher 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.

SEX

Intact Female The right kidney is normal in size (5.93 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.

AGE

7 Years The left kidney is normal in size (5.87 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.

WEIGHT

70 Pounds *Adrenal Glands*
The right adrenal gland is normal in size (2.78 cm long x 1.22 cm at the cranial pole and 0.87 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

INTERPRETED BY

Beth Johnson, DVM DACVIM The left adrenal gland is normal in size (2.59 cm long x 0.66 cm at the cranial pole and 0.76 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

IMAGING PERFORMED BY

Spleen

Kelly Vazquez 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.

HOSPITAL NAME

Liver

North Haledon VC The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. The portal vein to aorta ratio is mildly decreased at 0.62 cm, which is of unknown clinical significance in an adult dog without other findings consistent with portosystemic shunting. This number can be falsely decreased if patient was sedated with Dexdomitor.

REFERRING VET

Dr. Mansfield

INVOICE

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.

43105

DATE

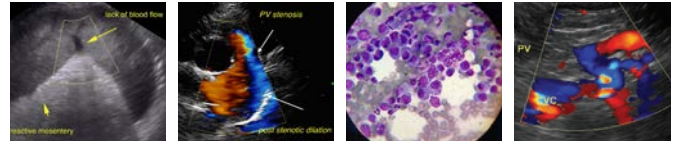
Gastrointestinal

12/1/22

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.



PATIENT	There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.
Tsunami Marks	
SPECIES	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.
Canine	
BREED	The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.
Doberman Pinscher	
SEX	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.
Intact Female	
AGE	Free Abdomen There is no evidence of free peritoneal effusion noted in these images.
7 Years	The medial iliac lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.
WEIGHT	The uterus and ovaries are visualized without evident pathology.
70 Pounds	
INTERPRETED BY	ULTRASONOGRAPHIC FINDINGS
Beth Johnson, DVM DACVIM	<ul style="list-style-type: none"> • Reactive medial lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely. • Decreased portal vein to aorta ratio – This is of unknown clinical significance and can be falsely decreased if the patient received Dexdomitor. • Gallbladder debris - 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.
IMAGING PERFORMED BY	INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS
Kelly Vazquez	An obvious cause for the reported increased liver enzymes is not identified in these images. Microscopic disease such as Leptospirosis, bacterial cholangiohepatitis, chronic active hepatitis, copper-associated hepatotoxicity, other hepatotoxicity, infiltrative neoplasia (considered unlikely), etc. cannot be definitively ruled out.
HOSPITAL NAME	Testing for Leptospirosis is recommended. Bile acids are recommended, if tbili is not increased. An empirical course of antibiotics and hepatic nutraceuticals may be tried empirically; however, ultimately, tissue sampling is likely warranted. FNA of the liver can be performed to assess inflammatory cell type, rule in/out round cell neoplasia, etc. If round cell neoplasia is not diagnosed, a liver biopsy (including copper level assessment) may be required to definitively diagnose the underlying hepatopathy.
North Haledon VC	
REFERRING VET	
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PATIENT

Tsunami Marks

SPECIES

Canine

BREED

Doberman Pinscher

SEX

Intact Female

AGE

7 Years

WEIGHT

70 Pounds

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HOSPITAL NAME

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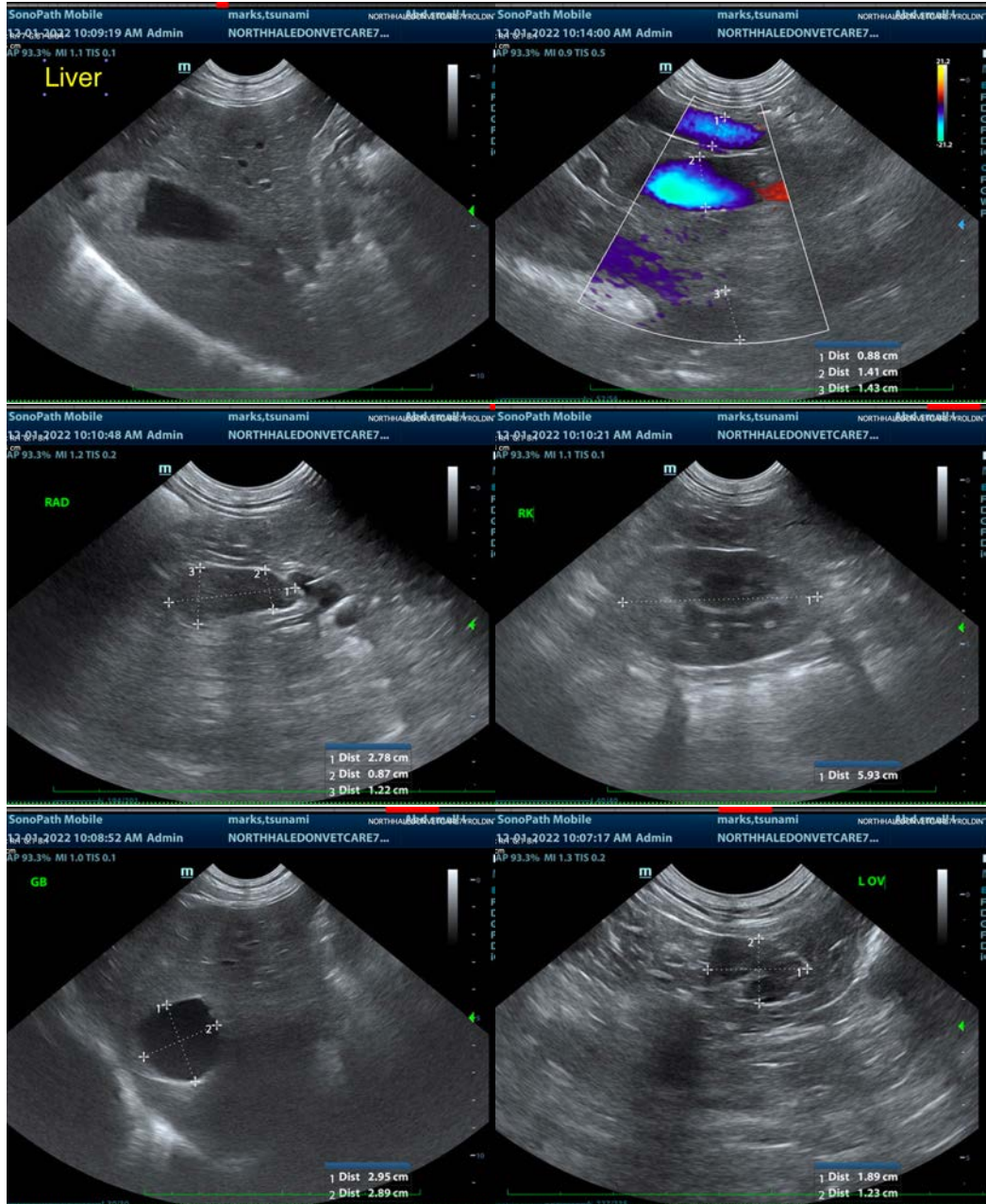
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SPECIES

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Doberman Pinscher

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Intact Female

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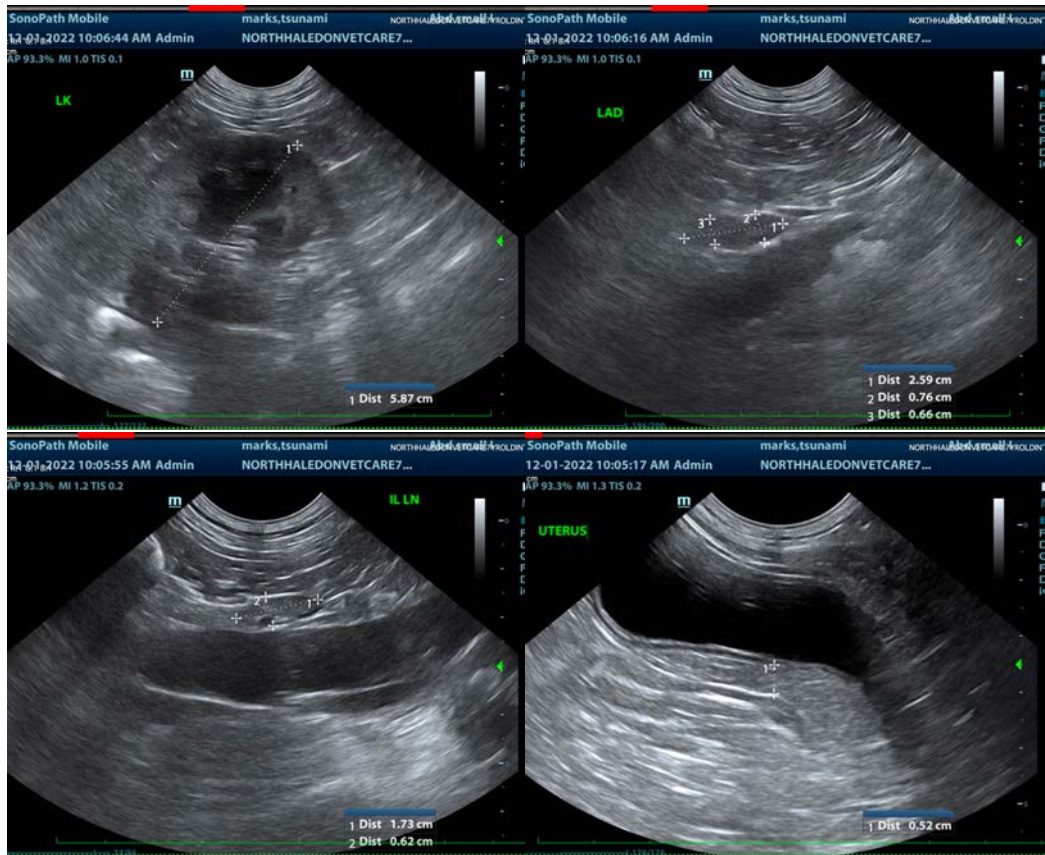
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
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