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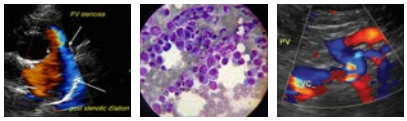

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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DATE

8/3/22

PATIENT

Maple Jenkins

SPECIES

Canine

BREED

Labrador

SEX

Spayed Female

AGE

2/1/12

WEIGHT

97.4 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Westminster VH

REFERRING VET

Dr. Hall

INVOICE

40143

PRESENTING CLINICAL SIGNS

Pet presented 03/2022 for drinking more water than normal. Pet had a little decrease in her appetite at the time as well. Bloodwork was taken and revealed liver enzyme elevations as well as a urinary tract infection. Pet was started on oral amoxicillin and metronidazole while awaiting owner's decision for additional diagnostics. Owner opted to recheck liver chemistry at the end of the antibiotic trial (04/13/22)but unfortunately there was no improvement in these values. Imaging was recommended. Pet was not seen again until 07/21/22 for a lump on her left hindlimb. During this PE a firm mass effect in cranial abdomen near liver/stomach was noted. Pet seemed comfortable and the remainder of the abdomen palpated soft, fluid, non-painful. Imaging was recommended again, radiographs revealed some concerns and so abdominal US was recommended.

Current Medications: Milk Thistle supplement (unknown brand) started by owner--dosage is 2 pills (unknown strength but owner reports it is for 100lbs dog)--started in April we believe. 400mg Gabapentin given PO upon arrival to hospital.
Lab Results: 04/13/22: LIver Chemistry: ALT: 931U/L (18-121); AST: 171U/L (16-55); ALP:1117U/L (5-160); GGT: 26U/L (0-13); Total Bili: 0.9mg/dL (0-0.3); Bili-unconj: 0.5mg/dL (0-0.2); Bili-conj: 0.4mg/dL (0-0.1). 03/30/22: ALT: 799U/L (18-121); AST: 183U/L (16-55); ALP:1326U/L (5-160); GGT: 26U/L (0-13); Total Bili: 1.7mg/dL (0-0.3); Bili-unconj: 0.8mg/dL (0-0.2); Bili-conj: 0.9mg/dL (0-0.1); Lipase: 467U/L (0-250). UA: USG: 1.017; Protein: trace; Bili: 1+; WBCs: 20-30/HPF; RBCs: 10-15/HPF; bacteria: marked rods
Radiographs: Splenomegaly. Suspected hepatic nodules. Suspected small volume peritoneal effusion or peritonitis. Equivocal sternal lymphadenopathy. Increased sternal fat is also considered. Ventral thoracic fat to soft tissue opaque subcutaneous mass. Consider a lipoma with necrosis. A malignant etiology is not ruled out.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

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.

The right kidney is normal in size (7.91 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.

The left kidney is normal in size (7.7 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.

Adrenal Glands

The right adrenal gland is normal in size (3.14 cm long x 0.90 cm at the cranial pole and 0.84 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 (2.96 cm long x 0.82 cm at the cranial pole and 0.75 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 swollen and scalloped undulating capsular contour. Parenchyma is diffusely coarse/mottled, characterized by multifocal coalescing hyperechoic nodules. Splenic vasculature appears normal.

Liver
The liver is subjectively enlarged in size with mildly irregular margins. Parenchyma is markedly mottled/coarse, characterized by multifocal discrete hypoechoic nodules of varying sizes, combined with patchy, ill-defined areas of increased echogenicity, resulting in reduced visualization of vessels. The visible biliary tree appears normal without distention 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.

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
A small amount of anechoic free fluid is present, primarily cranial to the spleen and around the liver.

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- Heterogeneous/nodular liver – This change can be seen with benign disease such as nodular hyperplasia or with chronic inflammatory disease combined with normal aging change. However, given the severity of the change, infiltrative round cell or metastatic neoplasia must also be considered.

- Enlarged, scalloped, nodular spleen – Given that the primary nodules are hyperechoic in appearance, this change could be a combination of benign, reactive splenitis, possibly secondary to immune stimulus combined with benign myelolipomas. However, given the severity of the change, infiltrative neoplasia such as round cell neoplasia, as is seen with lymphoma or mast cell tumor, and/or even metastatic neoplasia have to be considered.

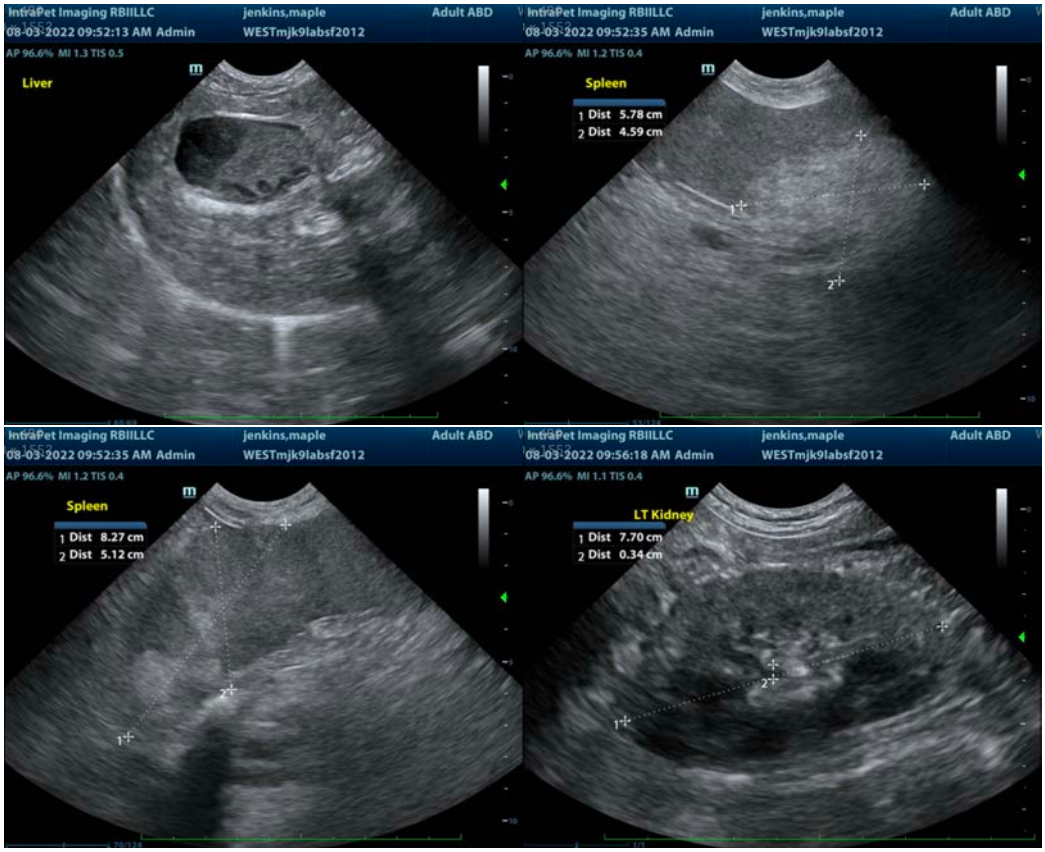
- Small amount of anechoic free fluid.

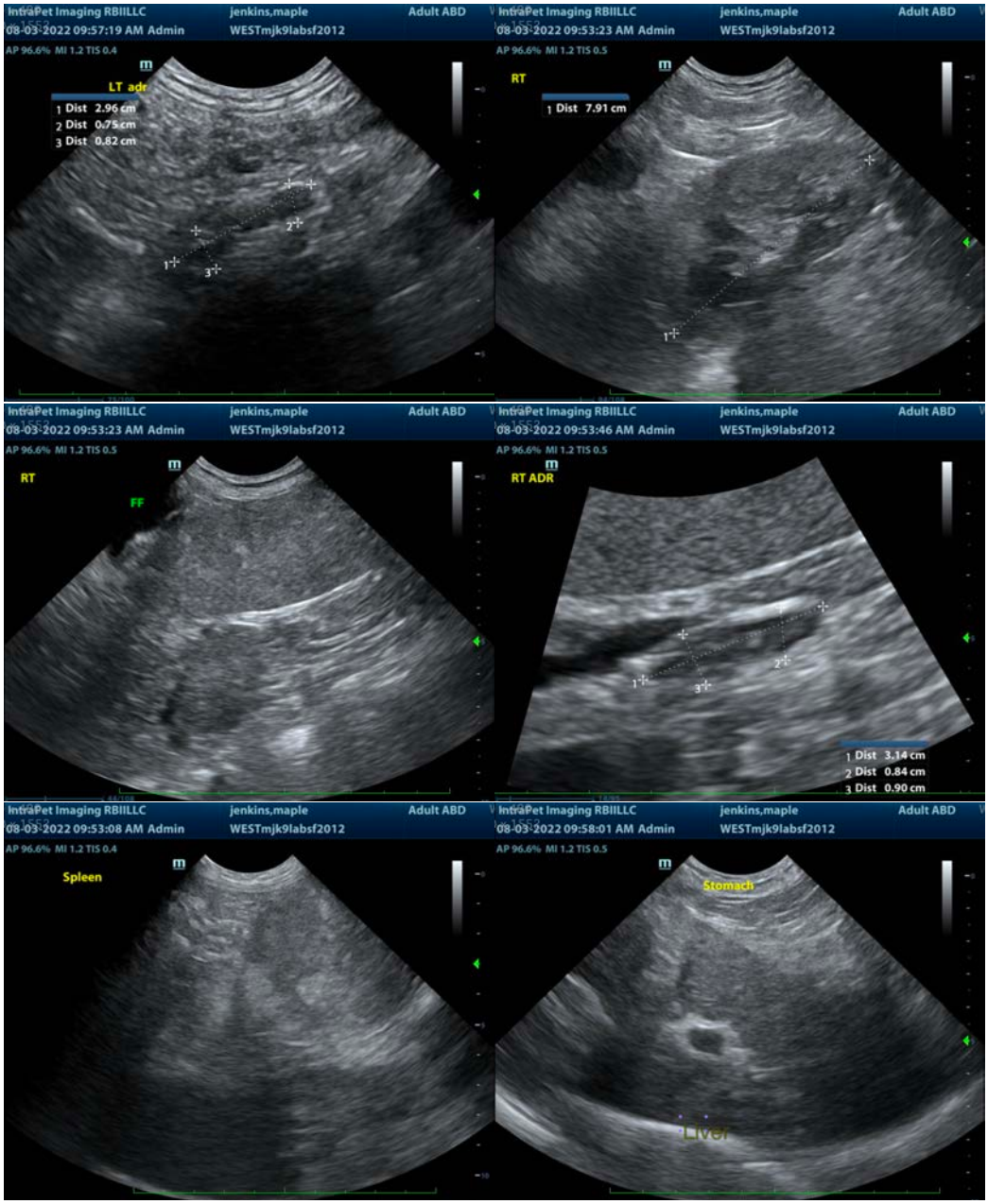
SECONDARY FINDINGS

- **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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Recommendations include a fine needle aspirate of the spleen and liver if patient's coagulation status is appropriate. If a diagnosis cannot be obtained cytologically, an exploratory laparotomy for likely splenectomy as well as liver biopsy are recommended.

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Adult ABD
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LT adr
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2 Dist 0.75 cm
3 Dist 0.82 cm
IntraPet Imaging RBIILLC
jenkins,maple
Adult ABD
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IntraPet Imaging RBIILLC
jenkins,maple
Adult ABD
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3 Dist 0.90 cm
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Spleen
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jenkins,maple
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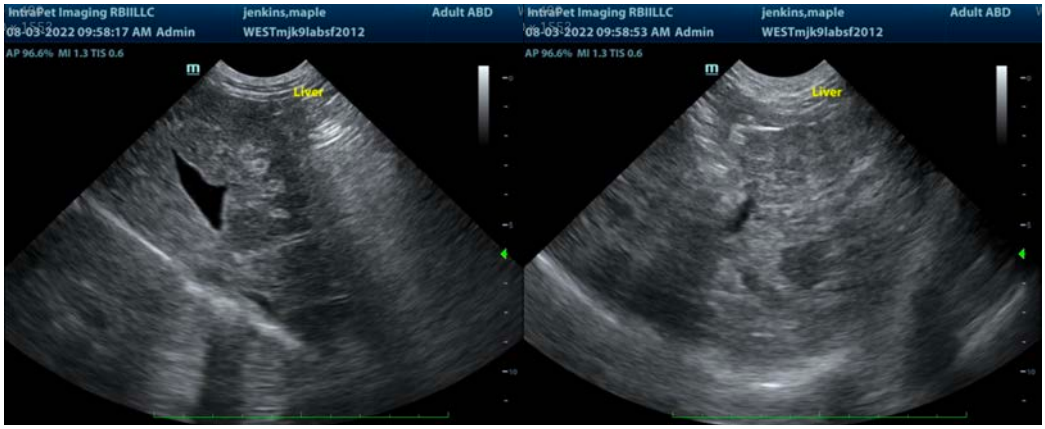
Stomach
Liver



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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