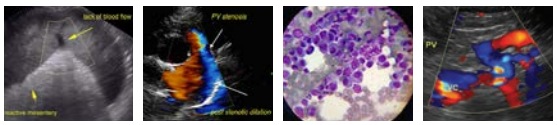
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT
Maple Merkner

SPECIES
Canine

BREED
Australian Shepherd X

SEX
Spayed Female

AGE
7 Years

WEIGHT
40 Pounds

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Jenna Walsh, CVT

HOSPITAL NAME
Amazon Park AC

REFERRING VET
Dr. Jones

INVOICE
43068

DATE
11/30/22

PRESENTING CLINICAL SIGNS

Normal exam, no obvious health concerns, but consistently elevated ALP/ALP over 2 years. Primary Question/Differential to Be Answered in This Exam What does the liver look like?

Abnormal PE/Chem/CBC/UA Results: Last ALT 829/ALP 369 on 11/5; all other chemistries and CBC are normal.

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.

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 right kidney measures 6.2 cm. The left kidney measures 6.6 cm.

Adrenal Glands

The right adrenal gland is normal in size (2.48 cm long x 1.26 cm at the cranial pole and 0.60 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 (2.35 cm long x 0.88 cm at the cranial pole and 0.54 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

Spleen is generally normal in size and shape with a smooth capsular contour. Parenchyma is diffusely nodular in appearance characterized by small discrete hypoechoic nodules. Splenic vasculature appears normal.

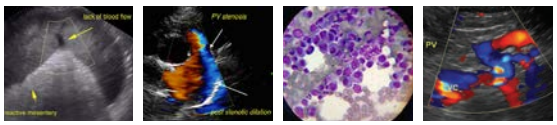
Liver

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. No overt nodules or masses are observed. 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.

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.



PATIENT

Maple Merkner

SPECIES

Canine

BREED

Australian Shepherd X

SEX

Spayed Female

AGE

7 Years

WEIGHT

40 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Amazon Park AC

REFERRING VET

Dr. Jones

INVOICE

43068

DATE

11/30/22

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 free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- The liver's appearance is most consistent with chronic hepatitis with fibrosis and/or early cirrhosis. These changes can occasionally be seen with resolved past inflammatory episodes and should therefore be interpreted in combination with clinical signs and/or associated laboratory changes (including bile acids).

- **Splenic micronodular hyperplasia pattern –** This nodular change is often associated with benign aging nodular hyperplasia. Infiltrative neoplasia, however, including both early hemangiosarcoma as well as round cell neoplasia cannot be ruled out.

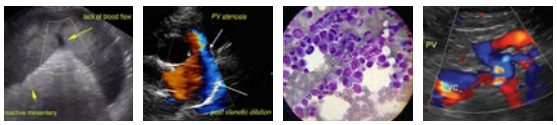
SECONDARY FINDINGS

- Age related kidney changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Bile acid testing and coagulation panel are recommended if bilirubin is normal and if not already evaluated. Testing for Leptospirosis could also be considered if not recently evaluated. Ultimately, pending results, liver sampling (ideally a liver biopsy with copper level assessment) is likely necessary to definitively diagnose the underlying reason for this patient's reportedly increased liver enzymes. A fine needle aspirate could be considered prior to a biopsy if patient's coagulation status is appropriate to try and identify inflammatory cell type, rule out infiltrative round cell neoplasia, etc. However, fine needle aspirate is lower yield than a biopsy, especially with a small versus large liver.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Maple Merkner

SPECIES

Canine

BREED

Australian Shepherd X

SEX

Spayed Female

AGE

7 Years

WEIGHT

40 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Amazon Park AC

REFERRING VET

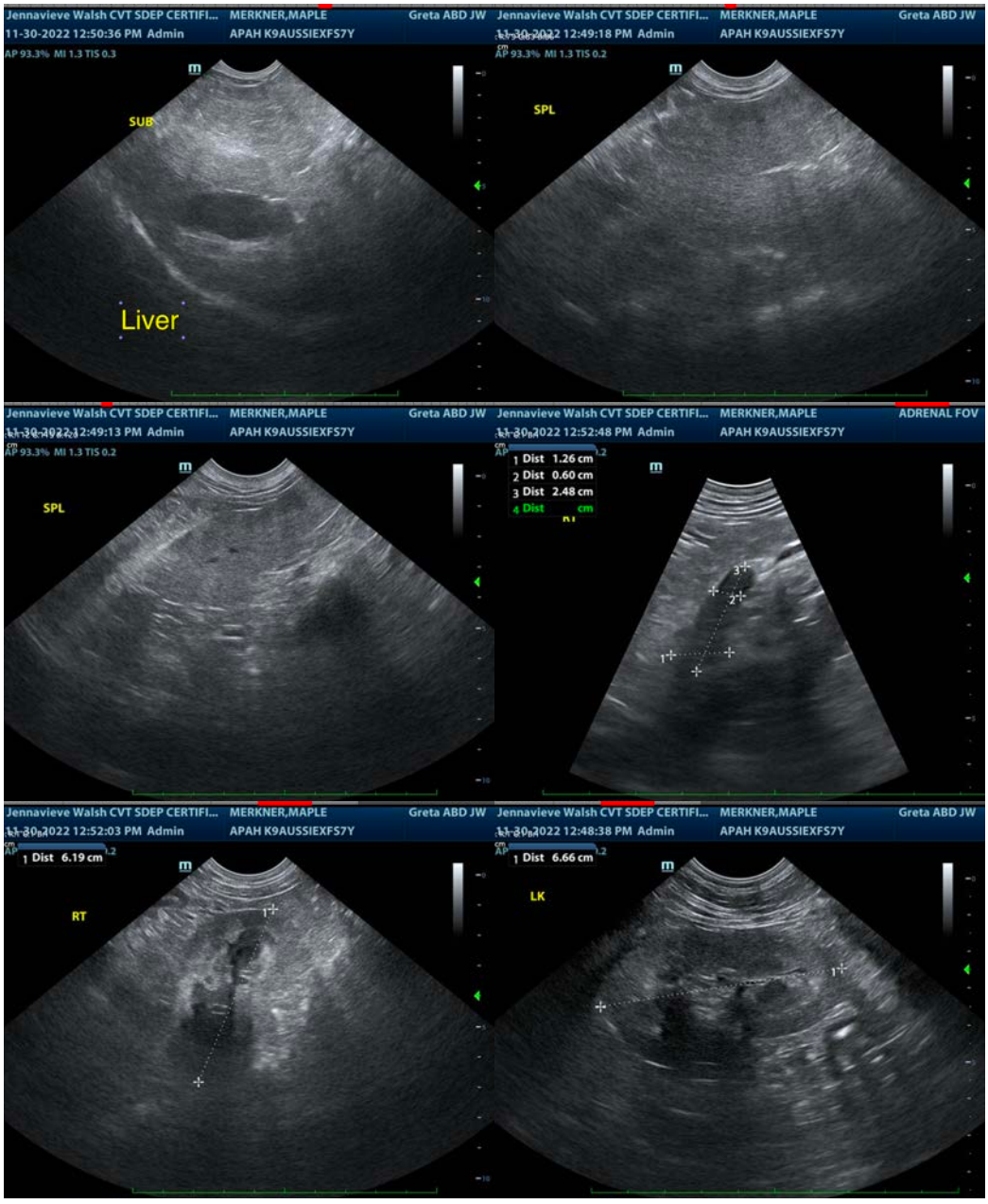
Dr. Jones

INVOICE

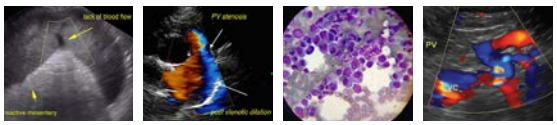
43068

DATE

11/30/22



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com



ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Maple Merkner

SPECIES

Canine

BREED

Australian Shepherd X

SEX

Spayed Female

AGE

7 Years

WEIGHT

40 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Jenna Walsh, CVT

HOSPITAL NAME

Amazon Park AC

REFERRING VET

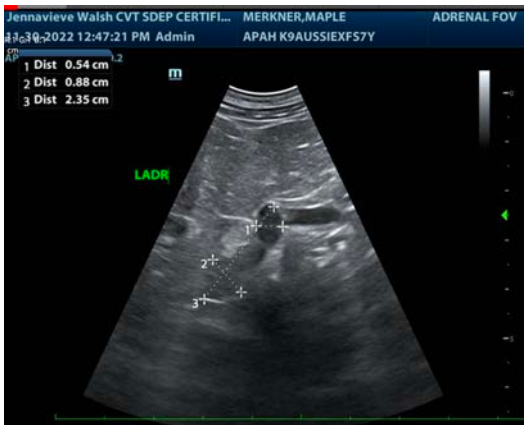
Dr. Jones

INVOICE

43068

DATE

11/30/22



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