



PATIENT

Abby Frazier

SPECIES

Canine

BREED

German Shepherd Mix

SEX

Spayed Female

AGE

12 Years

WEIGHT

56 Pounds

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

**IMAGING
PERFORMED BY**

Griffin

HOSPITAL NAME

Northside VH

REFERRING VET

Griffin

INVOICE

17944

DATE

10/28/22

PRESENTING CLINICAL SIGNS

History: Patient presented for a dental cleaning in 9/2022 and pre anesthetic bloodwork revealed increased liver values

Abnormal PE/Chem/CBC/UA Results: 9/2022 CHEM: T. bili 3.3, ALT 216, TP 9.1, ABL 4.6- treated with clavamox, metronidazole and denamarin 10/24/2022 CHEM: T. bili 5.2, ALT >2000, TP 10.1, ALB 5.2, K+ 6.1, CHOL 240

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized, and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 4.6 cm. The left kidney measured 5.4 cm.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 1.0 cm at the cranial pole and 0.66 cm at the caudal pole. The left adrenal gland measured 0.66 cm at the cranial pole and 0.66 cm at the caudal pole.

Spleen

The **spleen** presented discrete and diffuse hypoechoic micronodular parenchyma. The capsule was generally smooth without noticeable impingement from within the spleen or from pathology in the adjacent abdomen. The splenic vasculature demonstrated normal volume without signs of congestion or significant contraction. These changes are consistent with age related benign nodular hyperplasia. However, early hemangiosarcoma, lymphoma or mast cell neoplasia could not be entirely ruled out. Fine needle aspirate or biopsy following coagulation panel would be ideal especially if any weight loss is an issue. Otherwise, follow up ultrasound in 3-4 weeks to track these changes would be a more conservative approach. Cranial folding of the spleen was noted.

Liver

The **liver** revealed an expansive isoechoic hepatoma type nodule deriving from the caudate process, appears to be subjectively benign. The nodule measured 12.1 cm in circumference. The body of the liver revealed increased portal markings, coarse architecture and mild irregular contour, consistent with cholangiohepatitis. The gallbladder and common bile duct were unremarkable.

Gastrointestinal



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Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

SPECIES

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Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

BREED

German Shepherd Mix

ULTRASONOGRAPHIC FINDINGS

SEX

- Cholangiohepatitis liver pattern with hepatoma type nodule at the caudate process
- Micronodular hyperplasia splenic pattern with splenic fold

Spayed Female

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

AGE

12 Years

Underlying leptospirosis or other inciting causes of cholangiohepatitis should be considered. FNA of the spleen is indicated. No overt evidence of neoplasia. FNA or core biopsy of the general liver, as well as the caudate nodule is recommended, yet the caudate nodule is likely benign hepatoma or nodular hyperplasia- minor potential for carcinoma.

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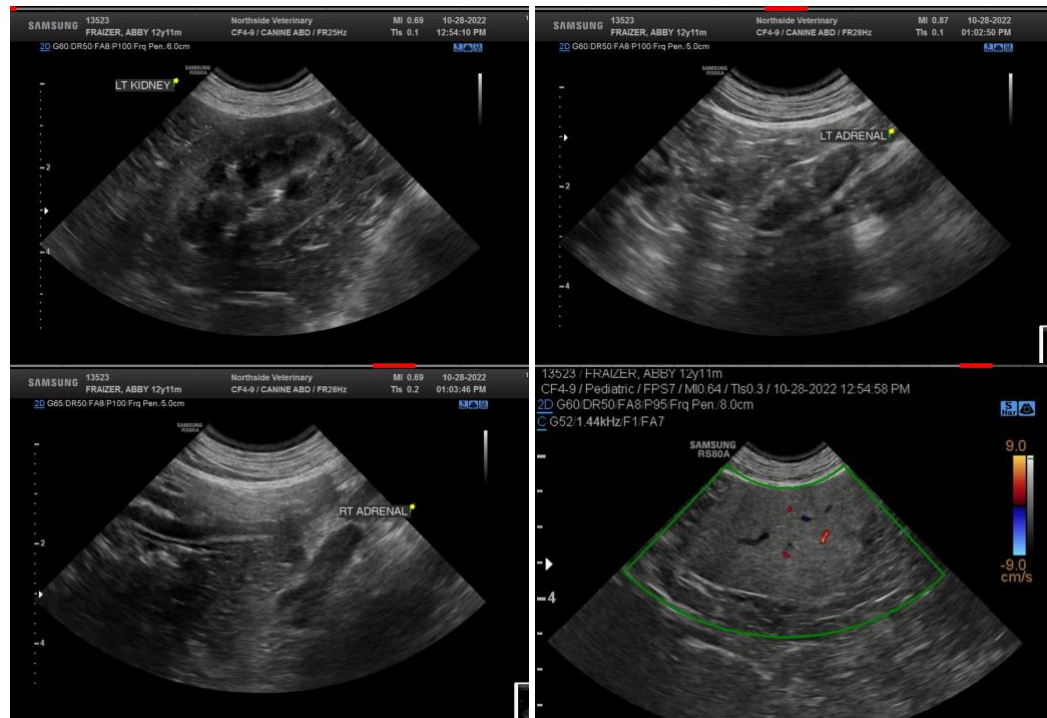
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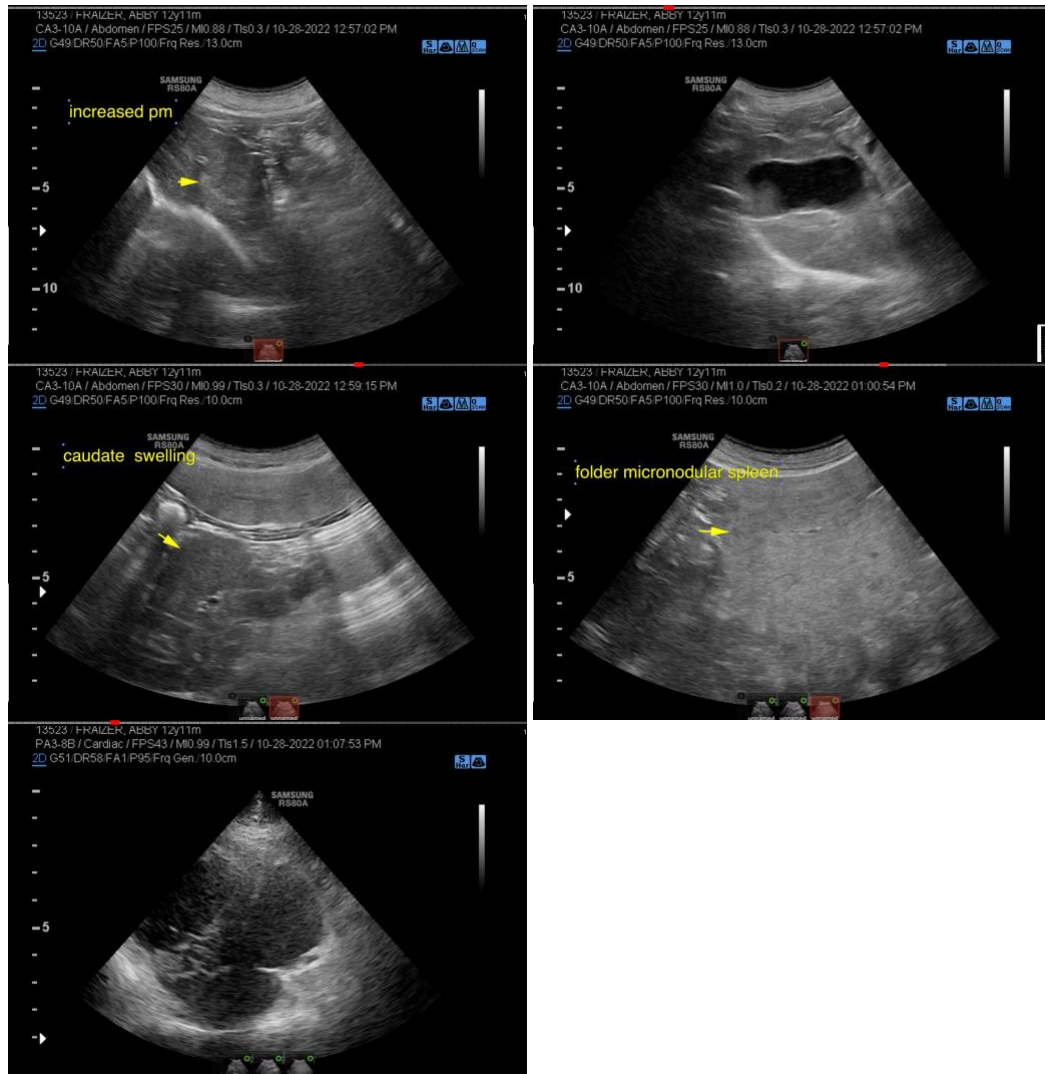
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
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