



PATIENT

Brady Belanger

SPECIES

Canine

BREED

Chihuahua

SEX

Neutered male

AGE

9 years

WEIGHT

13.3 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

**IMAGING
PERFORMED BY**

Bethany Coe

HOSPITAL NAME

Riverside Animal
Medical Clinic

REFERRING VET

Dr. Coe

INVOICE

32821

DATE

9/8/22

PRESENTING CLINICAL SIGNS

History: Persistent, mild elevations in ALT/ALKP since 6/2022. Not responsive to medical treatment trial with Denosyl and Amoxicillin.

Abnormal PE/Chem/CBC/UA Results: PE WNL. BCS 7/9. History of dermal sebaceous cysts. 6/13/22 (Preanes Panel): ALT 191, ALKP 365. Rest WRI 7/11/22 (Liver panel): ALT 208, ALKP 279. AST/GGT/TBili WRI 8/25/22 (Liver panel): ALT 224, ALKP 370. AST/GGT/TBili WRI

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 was noted. Ureteral papillae were normal.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Mineralization was noted in the kidneys. The left kidney measured 4.11 cm. The right kidney measured 4.81 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 left adrenal gland measured 1.03 x 0.37 cm at the cranial pole and 0.36 cm at the caudal pole. The right adrenal gland measured 1.55 x 0.448 cm at the caudal pole and 0.36 cm at the cranial pole.

Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

Liver

The **liver** was uniform in size to slight enlargement. The contour was unremarkable. The hepatic parenchyma was fairly uniform with mildly increased portal markings. The gallbladder and common bile duct were unremarkable.



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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.

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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.

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Neutered male

ULTRASONOGRAPHIC FINDINGS

Non-specific inflammatory hepatopathy.

AGE

9 years

Reactive hepatopathy.

WEIGHT

13.3 lbs

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The hepatic clinical sonographic presentation is most consistent with Reactive Hepatopathy which is the most common cause of liver enzyme elevation in dogs and cats. The presumption is that gut and other organ antigen stimuli may be causing a low-grade immune response through portal system with which the liver is reacting to causing low-grade enzyme elevations. US-guided FNA could be performed to assess if low grade lymphoplasmacytic inflammation is present that would support this theory. If FNA is performed, please ask the cytologist to emphasize the primary inflammatory cell type. Empirical treatment measures to address this issue can include diet change to hydrolyzed diet, probiotics, deworming, nutraceuticals (SAME, Actigall...), dental exam and cleaning, and potentially antibiotics such as Clavamox. Metronidazole and Tylosin have traditionally been utilized for this purpose but new studies show that both these antibiotics can disrupt the normal intestinal bacterial flora (intestinal dysbiosis) for weeks and up to 4-6 months. Therefore, Metronidazole and Tylosin should be utilized as a last resort if other efforts have not been effective and sonographic organ appearance remains benign.

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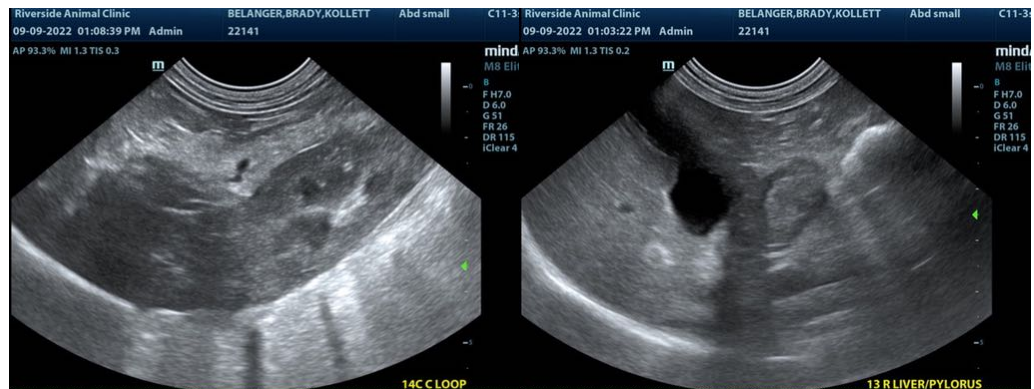
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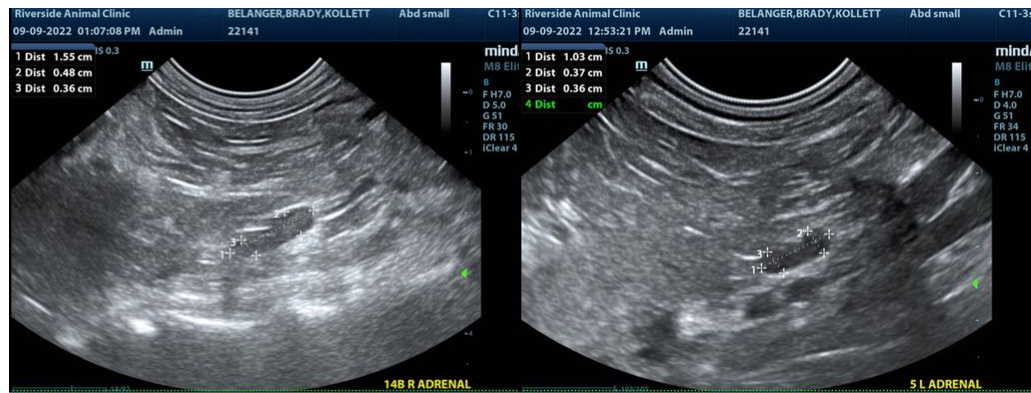
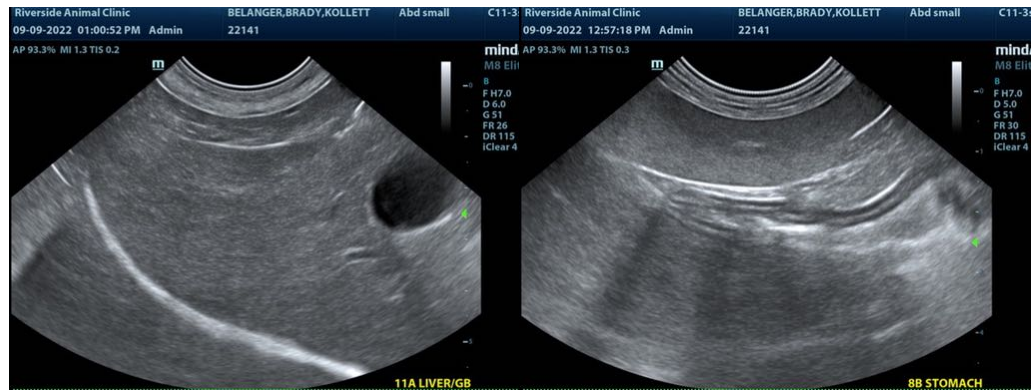
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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