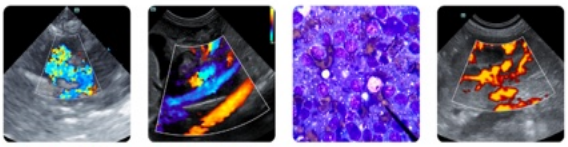


PATIENT

Kaia Ramkishun

SPECIES

Canine

BREED

Yorkie Cross

SEX

Intact female

AGE

1 year

WEIGHT

3.6 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Amanda Stewart

HOSPITAL NAME

Snelgrove VS

REFERRING VET

Dr. Ionnou

INVOICE

75308

DATE

5/11/26

PRESENTING CLINICAL SIGNS

History: No exam concerns, presented for preoperative bloodwork in feb 2026- ALT elevated at 129 (8-75 ref range), stopped treats and was on aventi liver complete and rechecked Feb 24 - ALT at 160, bile acids stim - Pre 3, post 11 (normal) , recheck bloodwork May 4th ALT has increased to 516
Current Medications
None
Abnormal PE/Chem/CBC/UA Results: Values presented for preoperative bloodwork in feb 2026- ALT elevated at 129 (8-75 ref range), stopped treats and was on aventi liver complete and rechecked Feb 24 - ALT at 160, bile acids stim - Pre 3, post 11 (normal) , recheck bloodwork May 4th ALT has increased to 516 Radiographic Findings None taken Primary Question to Be Answered in This Exam PSS vs liver hepatopathy vs other?

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 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 4.29 cm. The left kidney measured 3.66 cm.

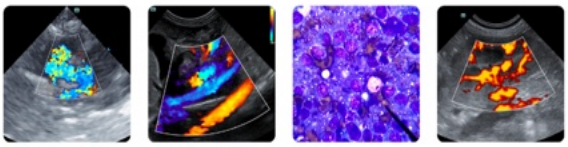
The ovaries were uniform and measured 1.1 x 0.34 cm.

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 1.2 x 0.39 cm at the caudal pole and 0.28 cm at the cranial pole. The right adrenal gland measured 1.0 x 0.6 cm at the cranial pole and 0.33 cm at the caudal 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.



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Liver

The **liver** was moderately subnormal in size with uniform parenchyma. The intrahepatic vascularity was normal. There was no evidence of intrahepatic shunting. The vena cava at the level of the portal hilus measured 0.43 cm. The ratio was 1:1 excluding extrahepatic shunting. The gallbladder and common bile duct were mildly subnormal in size.

Gastrointestinal

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.

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.

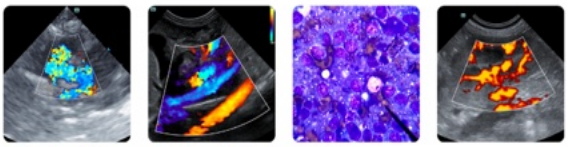
ULTRASONOGRAPHIC FINDINGS

- Normal abdomen with slight microhepatica.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There was no evidence of extrahepatic or intrahepatic shunting. If the bile acids elevate over time, given the normal bile acids at the time of the sonogram. Some level of portal hypoplasia can be present, but is not manifesting at this point. However, structurally the liver appears to be normal other than slight subnormal size. ALT elevations of this type can be simple reactive hepatopathy or low-grade inflammatory hepatopathy of unknown origin or this may be a normal variant for this patient.

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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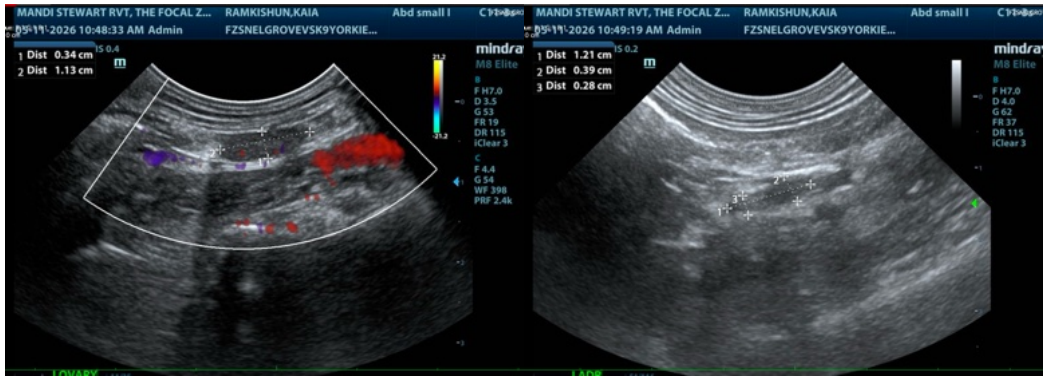
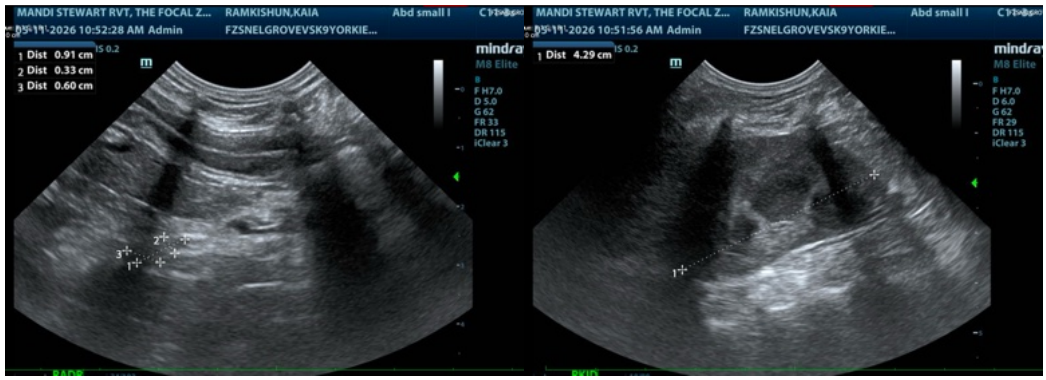
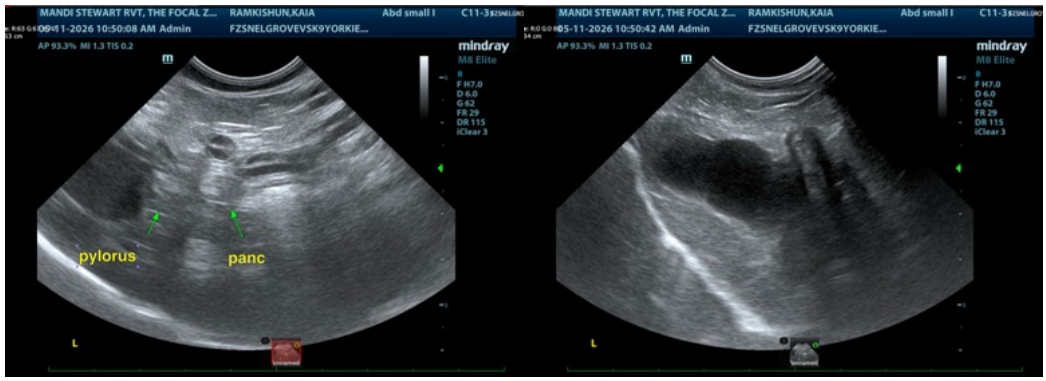
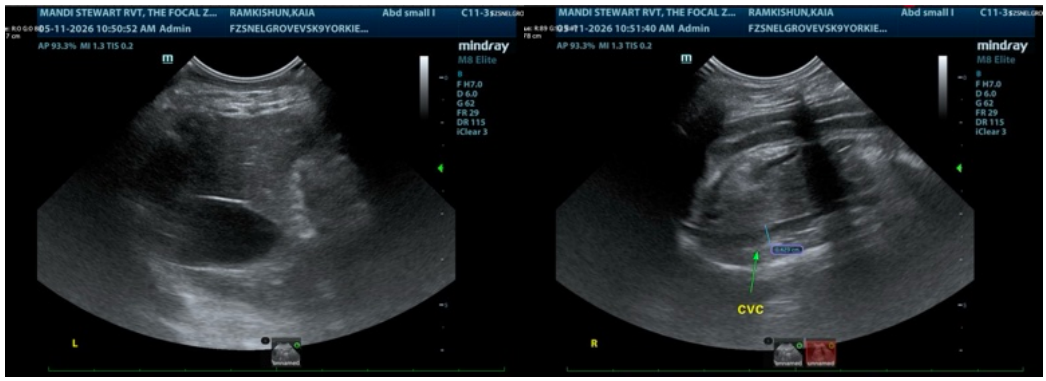
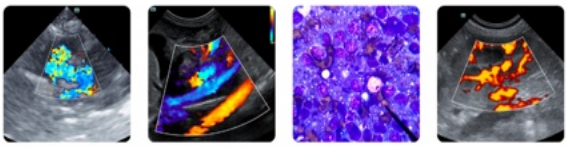








The Focal Zone
FUELED BY SONOPATH VETERINARY ULTRASOUND



Clinical Sonography & Telecytology
Educational Teleconsultation Services™

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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