

PATIENT

PRESENTING CLINICAL SIGNS

Miss Frizzle MacRae

History: Pre-anesthetic bloodwork ALT was 5x higher than normal level, two other litter mates also have high ALT but no workup performed. No meds. Concerned if significant or liver shunt?
Abnormal PE/Chem/CBC/UA Results: N/A

SPECIES

Canine

BREED

Havanese

SEX

Intact female

AGE

11 months

WEIGHT

3.85 kgs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUS

IMAGING PERFORMED BY

Crystal Hill, RVT

HOSPITAL NAME

Lynden AC

REFERRING VET

Dr. Babcock

INVOICE

42662

DATE

11/22/22

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 3.5 cm. The left kidney measured 2.86 cm.

Adrenal Glands

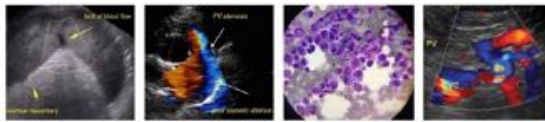
Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 1.27 x 0.33 cm at the caudal pole and 0.27 cm at the cranial pole. The right adrenal gland measured 1.15 x 1.02 cm at the cranial pole and 0.45 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.

Liver

The **liver** was mildly subnormal in size. The portal vein to vena cava ratio was 1:1 with normal branching of the portal vein. Both measured 0.4 cm in width. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.



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Gastrointestinal

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There was some residual chyme and gas was noted in the **stomach**, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. 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

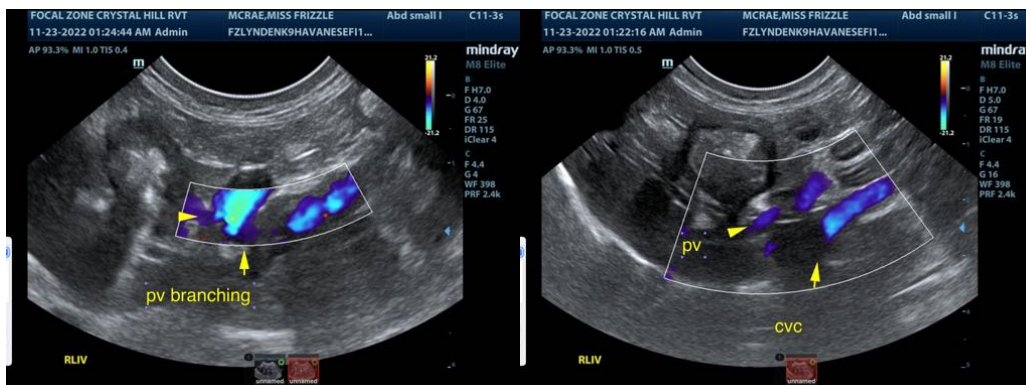
The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

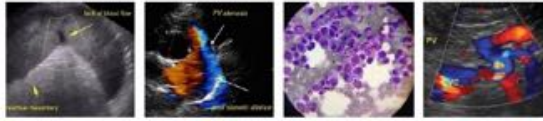
ULTRASONOGRAPHIC FINDINGS

Mild microhepatica, possible portal hypoplasia/microvascular dysplasia.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The hepatic pattern would necessitate core liver biopsy for definition. Bile acid profile is recommended. The ALT elevations are owing to non-specific, inflammatory hepatopathy. There is no evidence of macroscopic shunting. Diet change to a hydrolyzed diet can be considered. Leptospirosis titers are indicated to rule out subclinical disease. Ampicillin and Metronidazole trial over a 7-10 day period can also be considered with reassessment of the ALT values.





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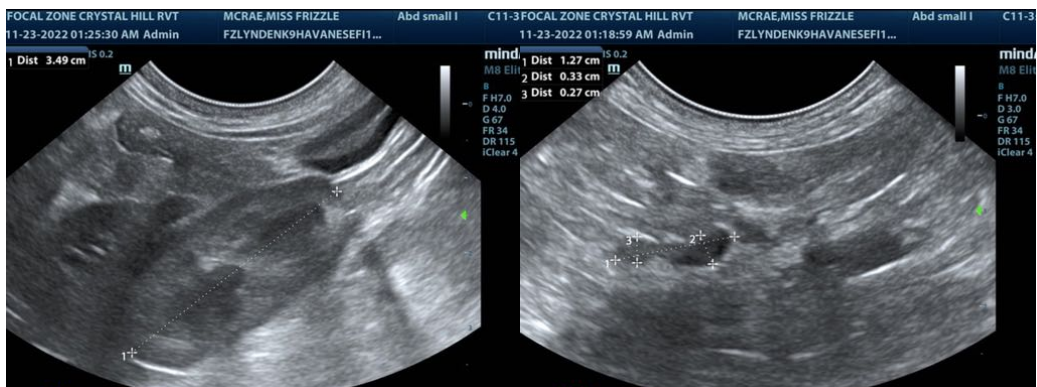
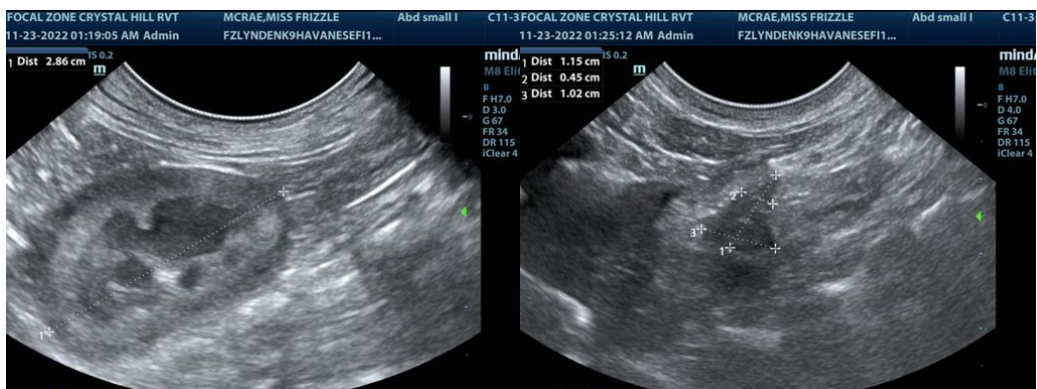
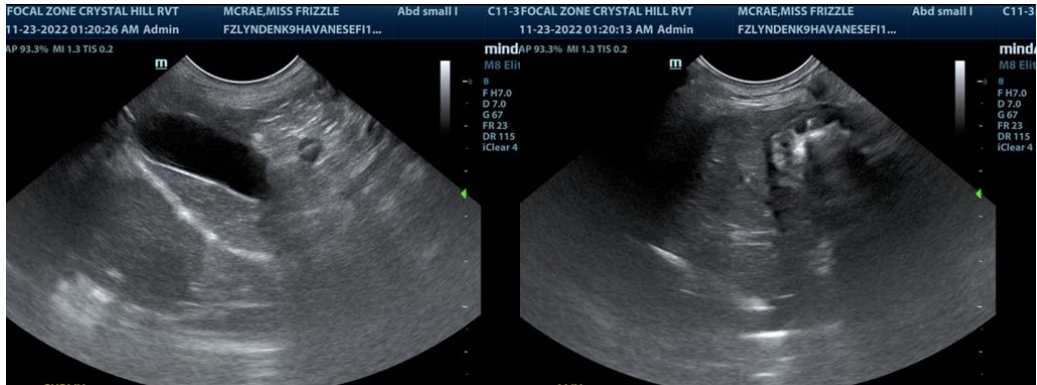
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
Eric.Lindquist@SonoPath.com