

PATIENT

Dexter Potter

SPECIES

Canine

BREED

Chihuahua

SEX

Neutered male

AGE

6 years

WEIGHT

5.8 lbs

INTERPRETED BY

Eric Lindquist, DMV,
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Banfield South Eugene

REFERRING VET

Dr. Wright

DATE

6/20/22

Invoice
31077

PRESENTING CLINICAL SIGNS

Pet presented fasted for sedated AUS to investigate mild elevated ALT and significantly elevated Bile Acids. No clinical signs reported by O. Wt: 5.8 lbs / 2.63 kgs, BCS: 4/9 GEN: BAR, TPR - WNL (see screens), CRT < 2 sec, pink, moist MM, well hydrated sweet boy, very anxious with restraint. EYES/EARS: clear OU. canals clean, tympanic membranes intact AU. N/T: no nasal discharge, no sneezing, no cough on tracheal palpation. ORAL: Grade 2/4 dental calc INTEG: no lesions or ectoparasites appreciated. LN: peripheral LNs are normal in size, shape, consistency. GI/UG: soft non-painful abdomen on palpation. external genitalia is normal in appearance. M/S: no lameness or abnormalities appreciated. NEURO: appropriate mentation, no deficits appreciated, or spinal pain. HEART/LUNGS: normal rhythm with no murmurs or arrhythmias heard. Strong Femoral pulses. Lungs clear bilaterally
Abnormal PE/Chem/CBC/UA Results: ABNORMAL Laboratory Findings 6/1/22: - ALT 284 mg/dL High - Fasted Bile acids: 102.3 umol/L HIGH - Post-prandial Bile acids - 146.7umol/L HIGH Current Medications Butorphanol administered IM in hospital

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.

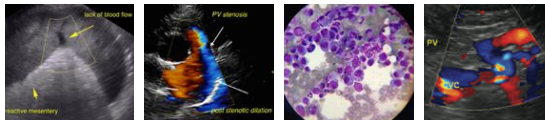
The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The left kidney measured 3.6 cm. The right kidney measured 3.69 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 1.74 x 0.44 cm at the caudal pole and 0.42 cm at the cranial pole. The right adrenal gland measured 1.95 x 0.42 cm at the caudal pole and 0.62 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.



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Liver

The **liver** was mildly subnormal in size with slightly increased portal markings. The gallbladder and common bile duct were unremarkable. The portal vein to vena cava ratio was 1:1 with no evidence of portosystemic shunting. Microhepatia is present.

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

Microhepatia likely primary portal hypoplasia or microvascular dysplasia. No evidence of macroscopic shunts.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

FNA of the liver can be considered for further definition of inflammatory cell type. Core biopsy could be considered for further definition. Otherwise, the following protocol can be empirically utilized.

Hepatic Support for Bile Acid Elevation +/- Hepatic Encephalopathy

Royal Canin Hepatic Support diet or Hills L/D, Metronidazole (7.5 mg/kg PO bid) over the next 14 days, **Lactulose** (Oral: 3.1-3.7 g/5 ml lactulose in a syrup base) long term to target 2-3 soft stools/day, with a **high-quality protein supplement** of minor amount of **yogurt** or **cheddar cheese**. Monitor bile acids, with attention paid to dropping albumin, BUN or cholesterol. **SAME** and nutraceuticals as needed. **Ursodiol** (10-15 mg/kg p.o. q24h) can be considered as hepatoprotectant and to enhance bile flow. **Zinc** serum level keep between 200–500 ug/dl. If deficient then Tx zinc acetate 1-3 mg/kg/day. Gastrointestinal protectants are recommended if the patient is anorexic.



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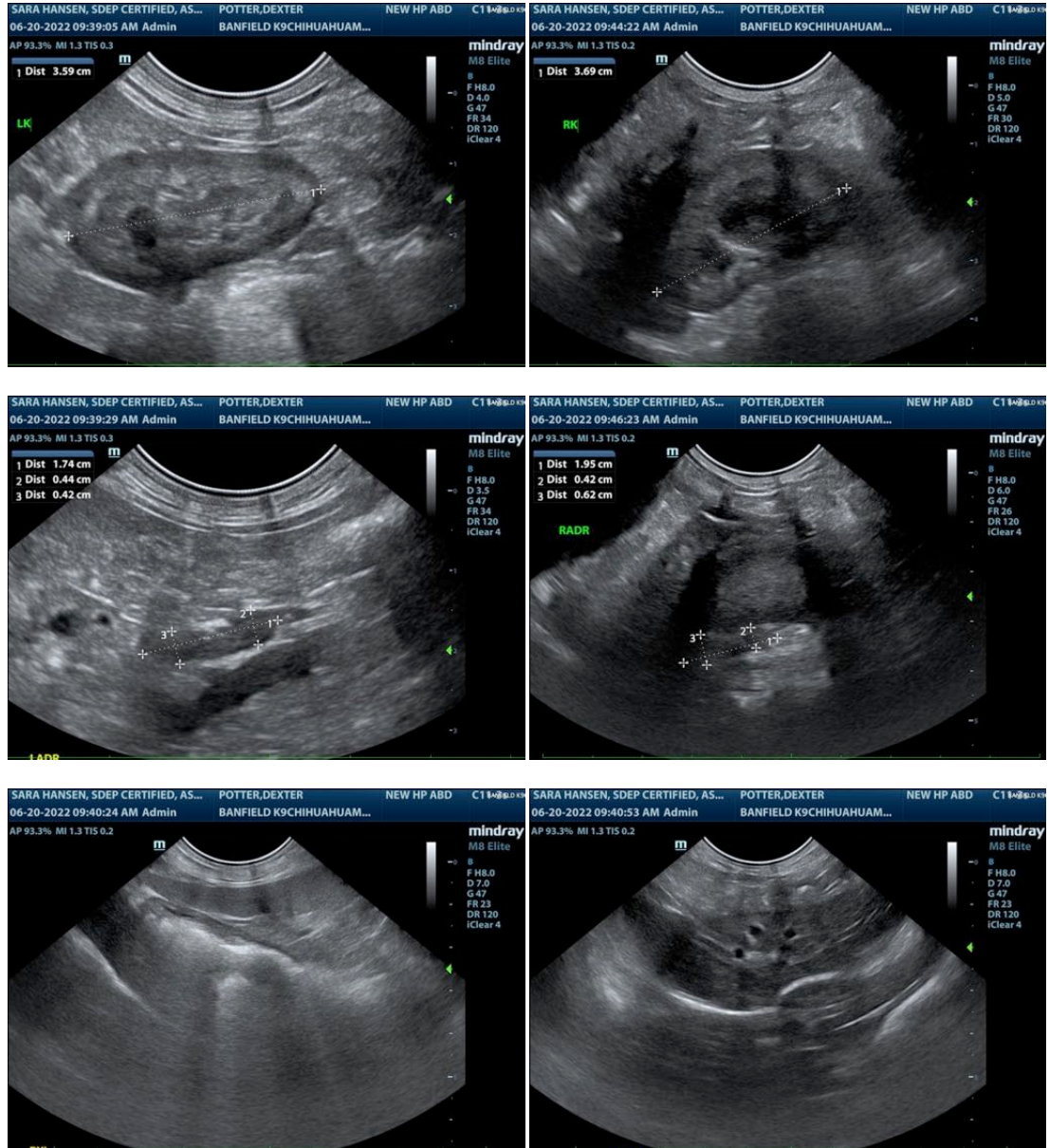
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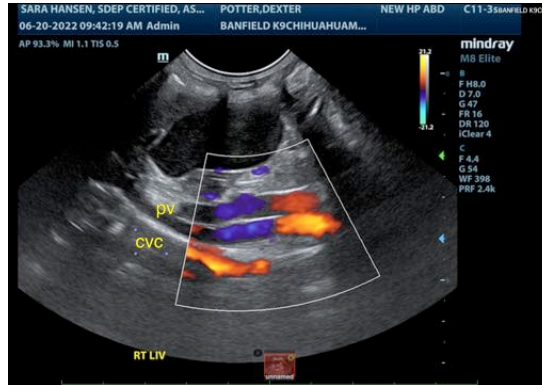
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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