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Clinical Sonography & Telecytology
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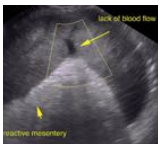
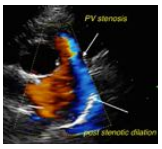
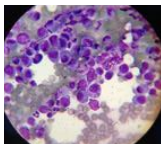
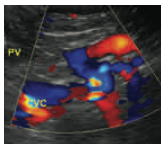

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1-800-838-4268 info@sonopath.com

PATIENT
Ben Williams

SPECIES
Canine

BREED
Miniature Schnauzer

SEX
Neutered male

AGE
11 years

WEIGHT
13.4 lbs

INTERPRETED BY
Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Carissa Rhoades

HOSPITAL NAME
Elizabeth AH

REFERRING VET
Dr. Anderson

INVOICE
97094

DATE
3/22/22

PRESENTING CLINICAL SIGNS

History: Elevated liver enzymes on Pre-dental lab work. Dog is acting fine at home but very hungry and has begun having pica. Six months ago he was having digestive issues, ultrasound pointed to the gall bladder, biopsies when it was removed revealed inflammatory disease there and IBD. Hydrolyzed protein diet has helped.
Abnormal PE/Chem/CBC/UA Results: PE: Stage II Dental Disease, Sclerosis normal for age, remainder normal. Labs: Bile Acids Today: Pre: 164 umol/L, Post: >180 UA: SG 1.034, pH 5.0, 1 mg/dL Bilirubin CBC: N Chem: ALT 639 U/L, AST 147 U/L, GGT 17 U/L, Triglycerides 246 mg/dL, Creatine Kinase 371 U/L Normal: cPL, BNP, T4, Free T4, HELA, Fecal

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 this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The right kidney measured 5.05 cm. The left kidney measured 4.83 cm.

Adrenal Glands

The left **adrenal gland** was imaged from the right side and measures 1.33 x 0.67 cm at the caudal pole and 0.62 cm at the cranial pole. The right adrenal gland measured 0.8 cm at the cranial pole and 0.5 cm at the caudal pole and 1.5 cm in length.

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** revealed increased portal markings with coarse architecture and mild subnormal size. This is consistent with chronic cholangiohepatitis. The region of the gallbladder fossa was unremarkable with no residual pathology.

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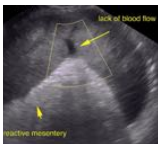

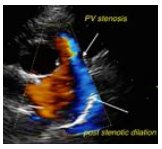

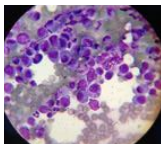
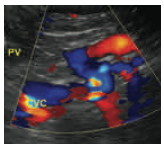

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Gastrointestinal

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.

Free Abdomen

Slight free fluid was noted in the abdomen and may be owing to portal hypertension.

ULTRASONOGRAPHIC FINDINGS

Chronic cholangiohepatitis pattern.

Slight amount of free fluid.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Bile acid profile and core liver biopsy is indicated for further definition. Leptospirosis titers are indicated if not already performed. There was no evidence of neoplasia.

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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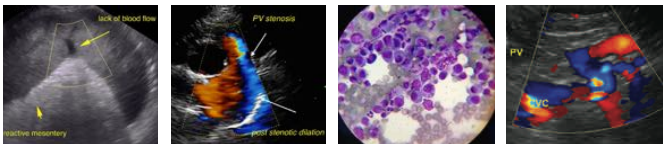

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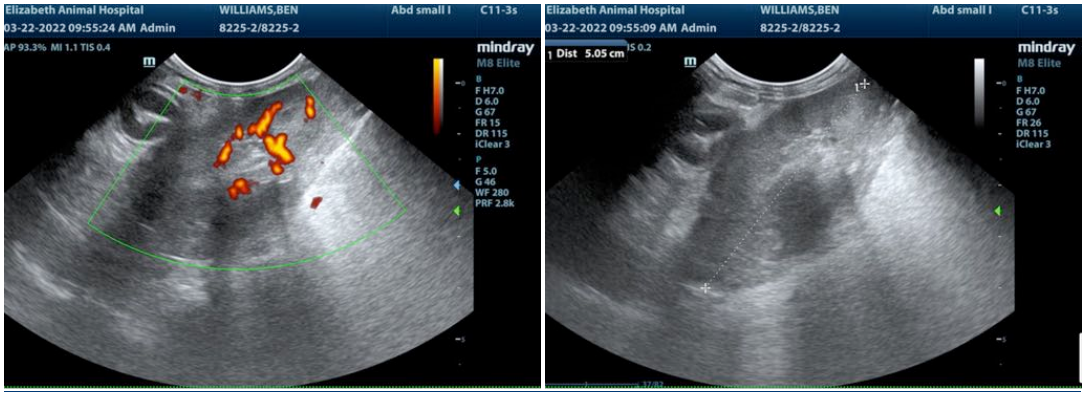

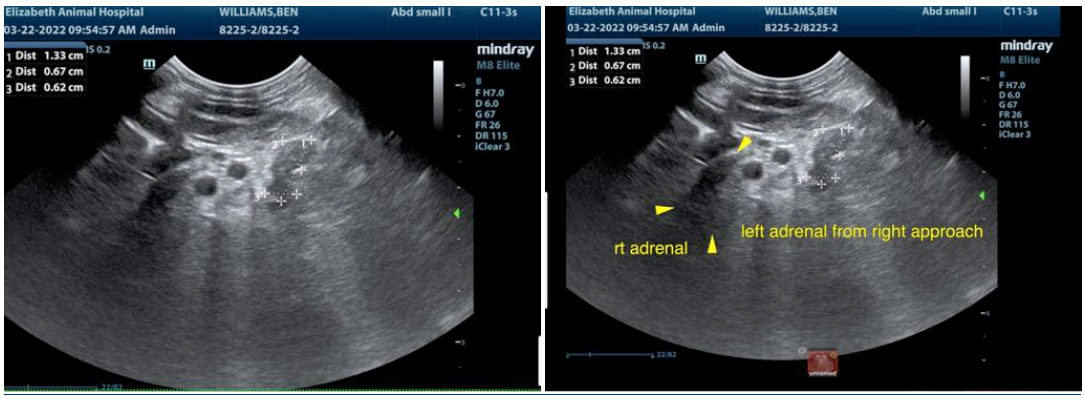

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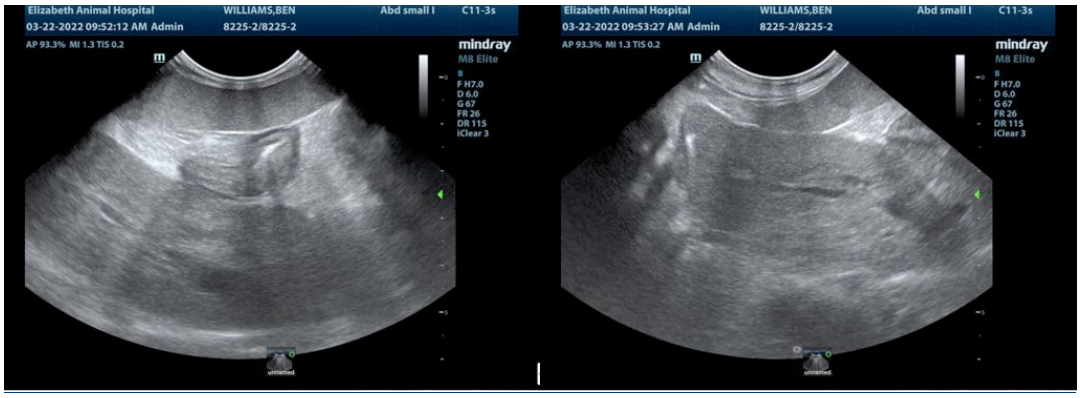

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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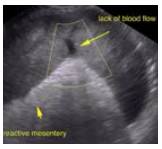

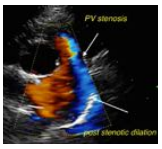

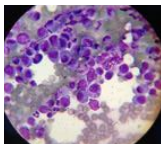
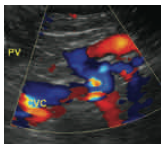

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