



**PATIENT PRESENTING CLINICAL SIGNS**

**Kirby Espejo** History: started having seizures on 5/3 - went to emergency vet Current Medications Keppra 1.2ml dose of 100mg/ml strength - every 8hrs

**SPECIES** Abnormal PE/Chem/CBC/UA Results: very high liver enzymes

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED** *Urinary System*

**Boston Terrier** The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted. Aortic trifurcation was normal.

**SEX**

Spayed Female

**AGE**

12 Years

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Pinpoint areas of medullary mineral noted. The left kidney measured 4.4 cm in length. The right kidney measured 4.4 cm in length.

**WEIGHT**

16.8 Pounds

**Adrenal Glands**

The left adrenal gland was indistinctly visualized yet without overt pathology, subjectively measuring 0.67 cm at the caudal pole.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.40 cm width at the caudal pole and 0.39 cm width at the cranial pole.

**IMAGING PERFORMED BY**

Jenna Walsh, CVT

**Spleen**

The spleen was not visualized owing to previous splenectomy. Several nonspecific yet subjectively benign or reactive omental lymph nodes were present in the area of the previous spleen, an example measured 0.68 cm in diameter.

**HOSPITAL NAME**

Whole Pet VC

**Liver**

The liver revealed subjective normal size with maintained symmetrical capsule contour and normal hepatoportal vascular volume. Maintained uniform parenchyma echotexture and subjective normal parenchyma echogenicity was present. No masses or nodules were noted.

**REFERRING VET**

Dr. DeMarco

The gallbladder was non-distended. The gallbladder walls were mildly prominent to isoechoic in appearance. Primarily anechoic content with mild dependent sediment present. The cystic and common bile ducts were normal.

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15057

**Gastrointestinal**

**DATE**

5/6/22

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.



**PATIENT**

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

Kirby Espejo

Normal visible colon wall layers were present with apparent formed feces in lumen.

**SPECIES**

***Pancreas***

Canine

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

**BREED**

***Free Abdomen***

Boston Terrier

No evidence of peritoneal effusion or omental masses.

**SEX**

**ULTRASONOGRAPHIC FINDINGS**

Spayed Female

- Mild chronic renal changes
- Nonspecific hepatopathy- subjectively benign
- Mildly prominent to isoechoic gallbladder walls with mild luminal sediment- potential mild cholecystitis

**AGE**

12 Years

**WEIGHT**

16.8 Pounds

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**INTERPRETED BY**

The overall appearance of the liver was nonspecific yet without overt evidence of hepatic or hepatobiliary neoplastic criteria. Depending on the type and degree of hepatic enzyme elevation, considerations may include metabolic, vacuolar or inflammatory hepatopathy/hepatitis. No overt evidence of a portosystemic shunt given normal subjective hepatoportal vascular volume and lack of urinary calculi. Pre- and post-prandial bile acids recommended to assess hepatic functionality.

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Overall, an obvious cause of recent seizure activity within the abdominal cavity was not definitively evident. Hepatosupportive medications +/- appropriate antibiotics, if clinical concern for infectious disease and monitoring of hepatic response would be reasonable. A thorough neurological examination recommended, if not done. If clinically indicated, some or all of the following protocol could be considered.

Jenna Walsh, CVT

**HOSPITAL NAME**

**Hepatic Support for Bile Acid Elevation +/- Hepatic Encephalopathy**

Whole Pet VC

**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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Whole Pet VC

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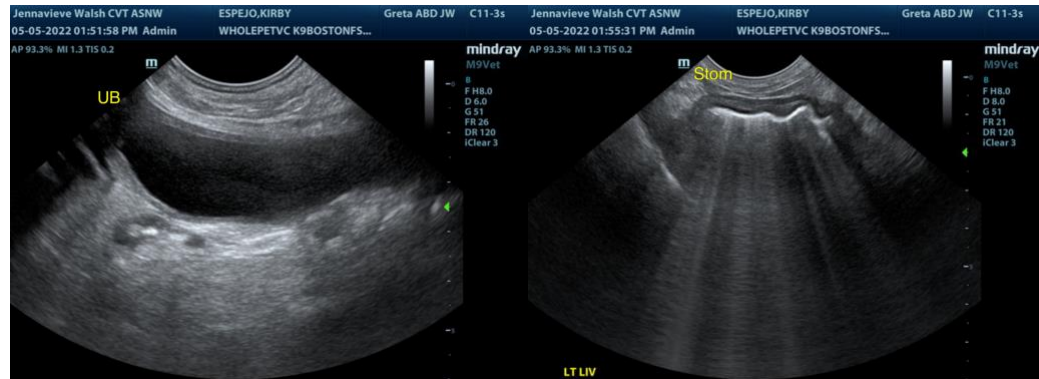
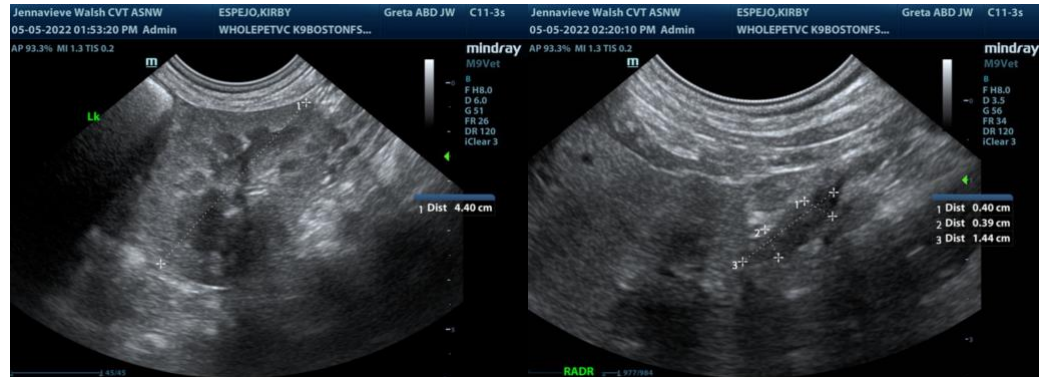
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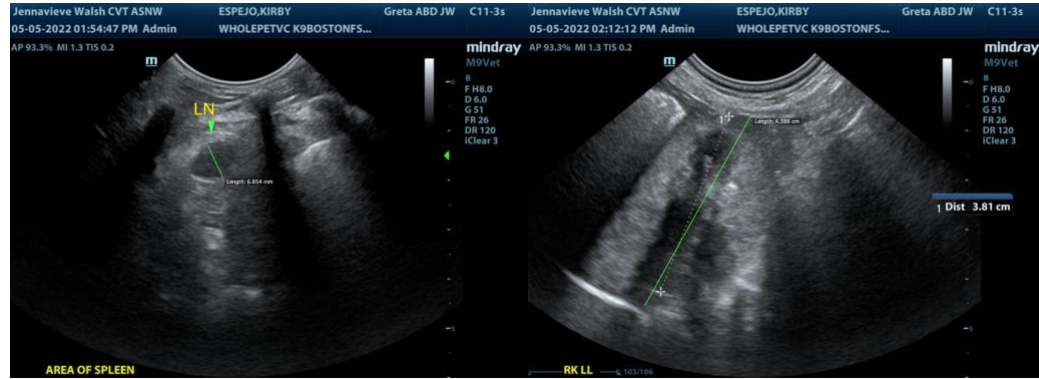
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**  
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