



## PATIENT

Luna Ballivian

## SPECIES

Canine

## BREED

Yorkshire Terrier

## SEX

Spayed Female

## AGE

10 Years

## WEIGHT

3 Pounds

## INTERPRETED BY

Eric Lindquist, DMV,  
DABVP (CFM), Cert.  
IVUSS

## IMAGING PERFORMED BY

Dr. Mayra Sanchez

## HOSPITAL NAME

Sunset AH

## REFERRING VET

Dr. Mayra Sanchez

## INVOICE

35884

## DATE

2/19/26

## PRESENTING CLINICAL SIGNS

- Acute onset of seizures
- Started on Levetiracetam and some improvement
- Liver enzyme elevation and bile acids elevated
- Abnormal PE/Chem/CBC/UA Results: PE: dental disease, hx of DJD CBC: NAF Chem: ALT 133 SBA: Pre 43.6, post 120.3 4Dx: Negative x 4 Radiographs: small L kidney, R kidney mineralization

## 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 were 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 minor 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. Mineralization was present in the kidneys. The left kidney measured 2.7 cm. The right kidney measured 2.9 cm.

### *Adrenal Glands*

The **right adrenal gland** was 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 right adrenal gland measured 0.4 cm.

The region of the **left adrenal gland** was imaged and revealed no evident pathology.

### *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 were noted.

### *Liver*

The **liver** was mildly subnormal in size with coarse architecture and increased portal markings. A moderate amount of hepatic remodeling was noted. The gallbladder and common bile duct were unremarkable. No evidence of posthepatic obstruction. The portal vein measured 0.29 cm. The vena cava measured 0.4 cm. There is no overt evidence of portosystemic shunting, however, cannot rule out a potential azygous shunt.

### *Gastrointestinal*



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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

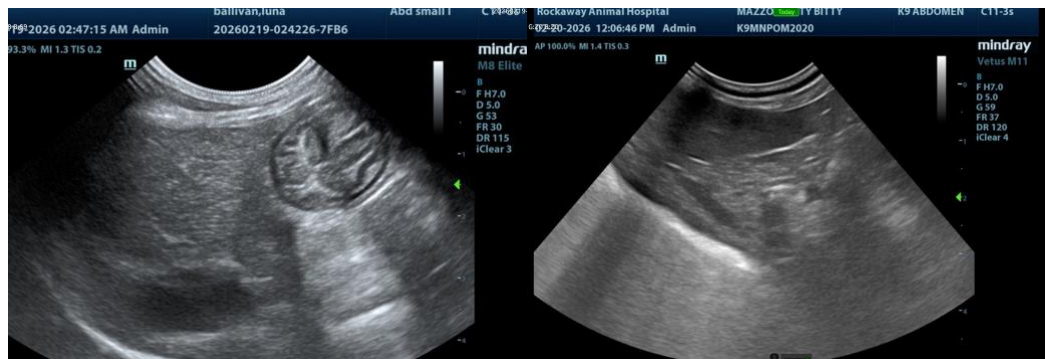
- Moderate amount of hepatic remodeling. Portal hypoplasia/microvascular dysplasia is possible.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

CT evaluation would be ideal.

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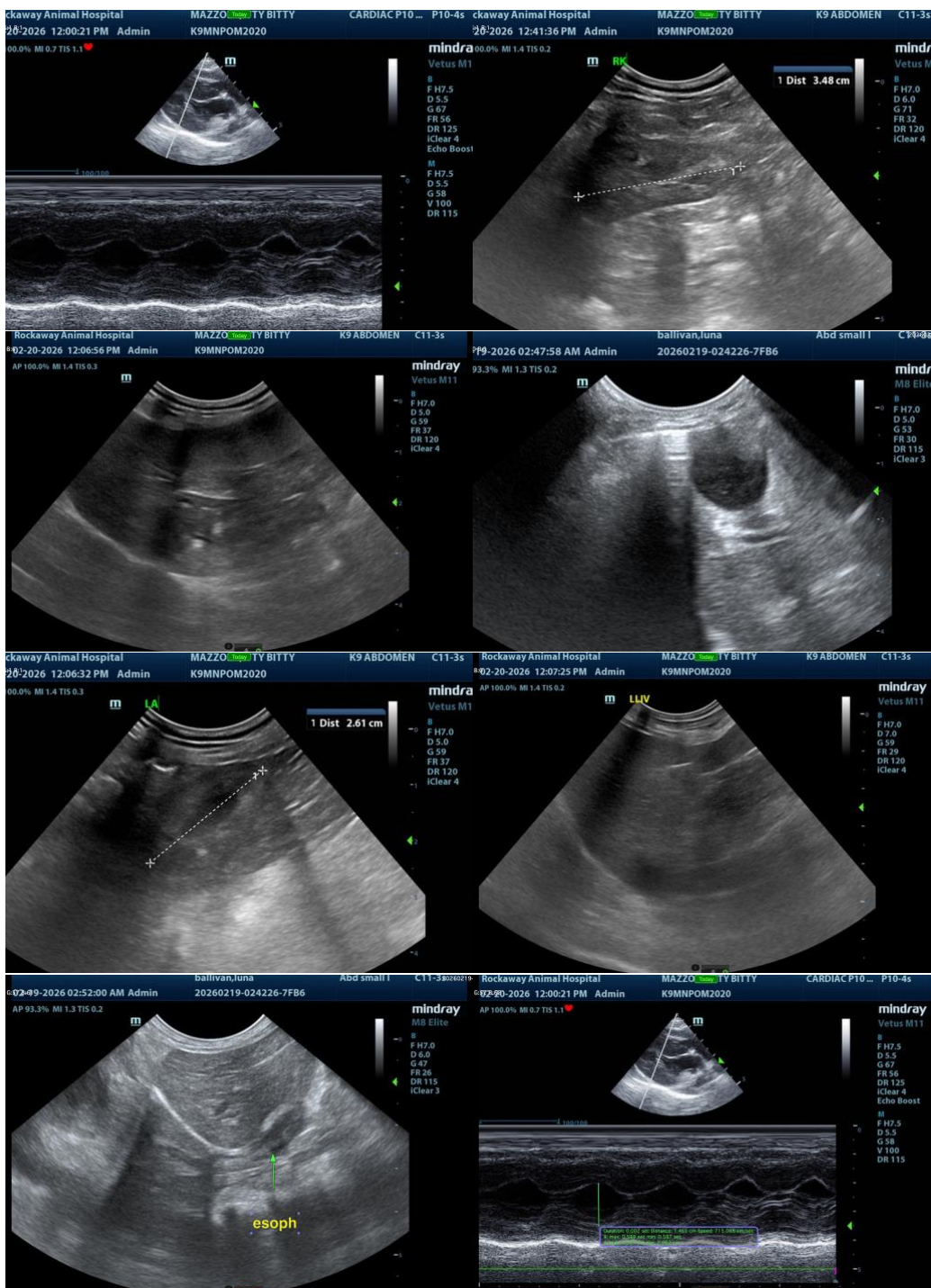
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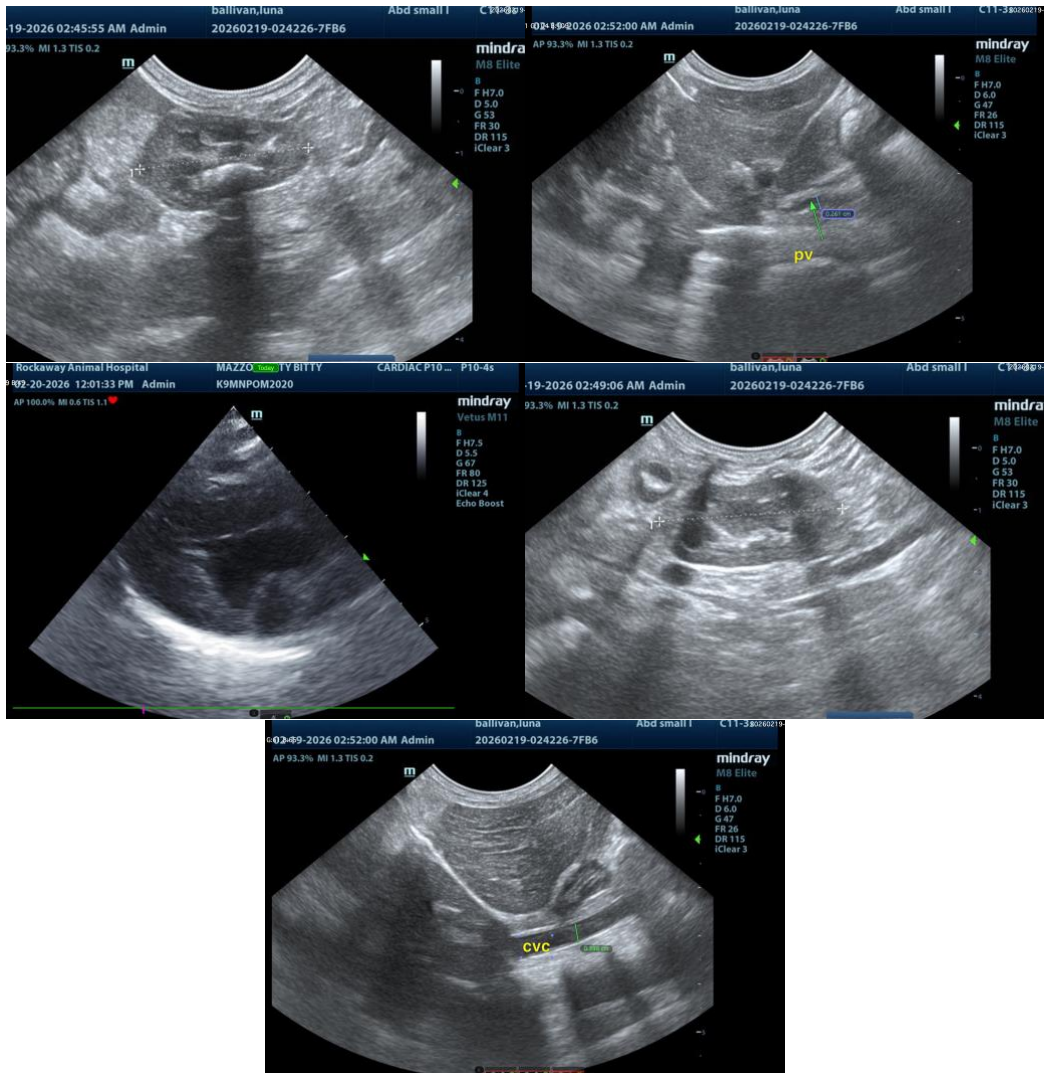
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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(CFM), Cert. IVUSS,  
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[info@SonoPath.com](mailto:info@SonoPath.com)