



**PATIENT**

Ruby Cox

**SPECIES**

Canine

**BREED**

Lab

**SEX**

Spayed Female

**AGE**

13 Years

**WEIGHT**

30 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Callihan

**HOSPITAL NAME**

Pacific Crest Mobile

**REFERRING VET**

Dr. Callihan

**INVOICE**

36500

**DATE**

3/28/22

**PRESENTING CLINICAL SIGNS**

HX: Chronic hx of GERDs, and esophagitis. Has had intermittent regurge and vomiting ( vomit consisting on yellow bile and no food). E/D fine. Normal U/D. Vomited 4 times friday. hasn't had an episode in 2 months. History GDV surgery 07/2021, has had ongoing trouble with regurg/vomiting since As of 3/25/22 On sucralfate Q8, and cerenia Q24, and omeprazole Q12h Diet: EN Low fat Medications: Galliprant 60 mg q24 Proin 75 mg q12 Gabapentin 100mg q12 Omeprazole 20mg Q24 Also takes Fish oil, dasaquin and probiotics  
Abnormal PE/Chem/CBC/UA Results: Alert and responsive, BCS 5/9, ambulatory no lameness; H/L: wnl; Abd not distended or tender Chem 17 slight elev ALKP and else normal including TT4

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 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.

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 loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 7.1 cm. The right kidney measured 7.0 cm.

**Adrenal Glands**

An indistinct, isoechoic nodule was present in the cranial pole of the left adrenal gland with mild associated symmetrical capsule expansion. The nodule did not exhibit signs of mineralization or vascular invasion. The nodule measured 2.1 cm x 2.1 cm in diameter. The overall left adrenal gland measured 3.2 cm length x 2.1 cm at the cranial pole and 0.87 cm at the caudal pole.

A uniform, mildly hyperechoic, non-mineralized nodule was present in the cranial pole of the right adrenal gland with mild associated symmetrical capsule expansion. The nodule did not exhibit signs of mineralization or vascular invasion. The nodule measured 1.9 cm x 1.5 cm in diameter. The overall right adrenal gland measured 2.7 cm length x 1.5 cm at the cranial pole and 0.54 cm at the caudal pole.

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

**Liver**

The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non distended in size with mild, non-dependent yet non-organized biliary sludge. The cystic duct and common bile ducts were normal without evidence of dilation.



**PATIENT**

***Gastrointestinal***

Ruby Cox

The stomach presented intact wall layering with a normal wall layer ratio. Mild retained echogenic fluid and chyme present.

**SPECIES**

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.

Canine

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

**BREED**

***Pancreas***

Lab

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

**SEX**

***Free Abdomen***

Spayed Female

No overt lymphadenopathy or peritoneal effusion was present.

**AGE**

**ULTRASONOGRAPHIC FINDINGS**

13 Years

- Bilateral nodular adrenal glands with secondary to concurrent mild cranial bilateral adrenomegaly
- Mild retained gastric ingesta/chyme – suspect low-grade gastritis and gastric hypomotility.
- Benign mild hepatomegaly
- Mild gallbladder debris (non-mucocele)
- Mild pancreatic parenchymal remodeling – suspect age related pancreatic changes and incidental, potential for low-grade chronic pancreatic inflammation.

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**INTERPRETED BY**

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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

Considerations for the bilateral adrenal nodules may include functional versus non-functional adenomas, hyperplasia, lipogranulomas, with potential for unilateral or bilateral emerging adrenal masses (i.e., pheochromocytoma, adenocarcinoma, or other) with potential for mixed pathologies. Screening blood pressure to assess for evidence of hypertension, which may allude to a pheochromocytoma is recommended. Given the lack of reported clinical signs suggestive of adrenal hyperfunction, these nodules may be non-functional. Adrenal workup would be recommended if clinical signs of adrenal hyperfunction develop. Sonographic monitoring of the nodules for evidence of progression with initial recheck in 4-6 weeks would be ideal.

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Continued medical therapy for GERD, esophagitis and mild gastritis warranted. In addition to gastroprotectants, smaller more frequent feeding of a bland or hypoallergenic diet with late PM feeding (if evidence of overnight or first thing AM bilious vomiting).

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Correlation of the pancreatic presentation with spec cPL could be considered.

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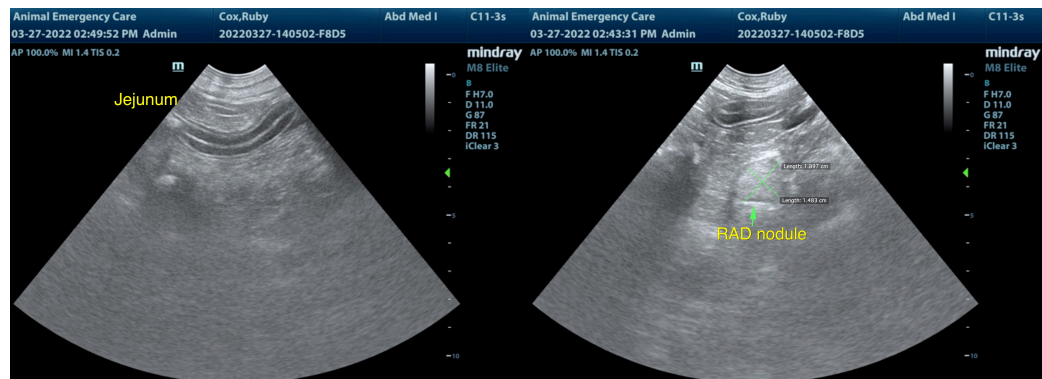
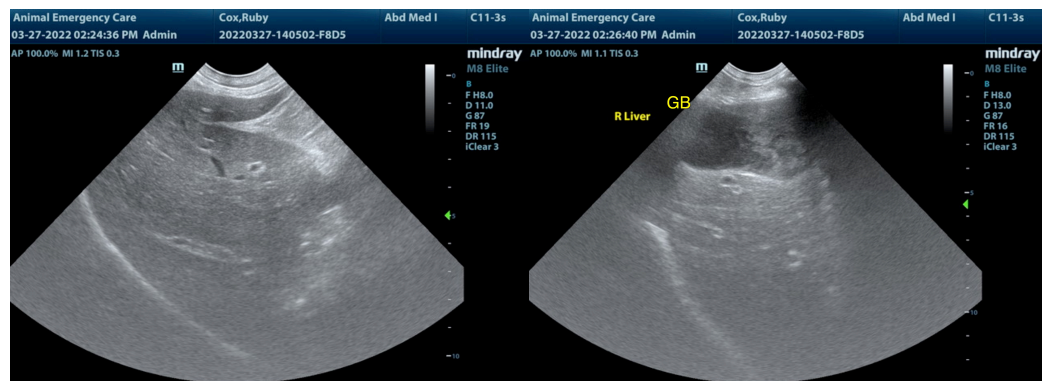
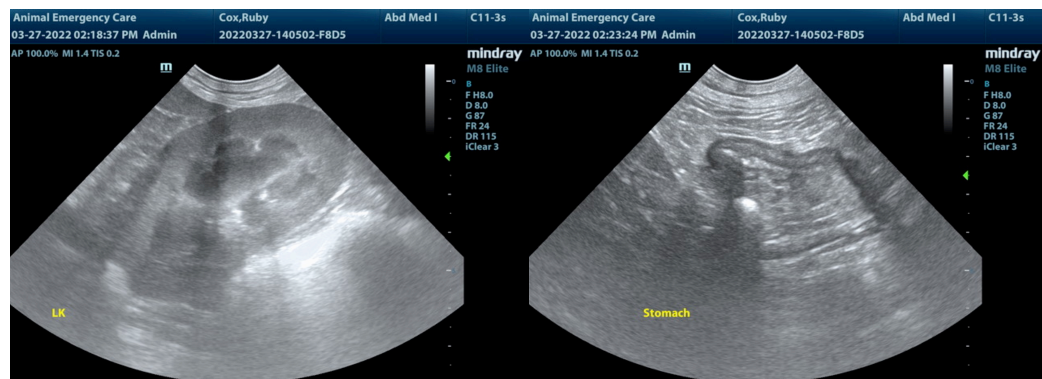
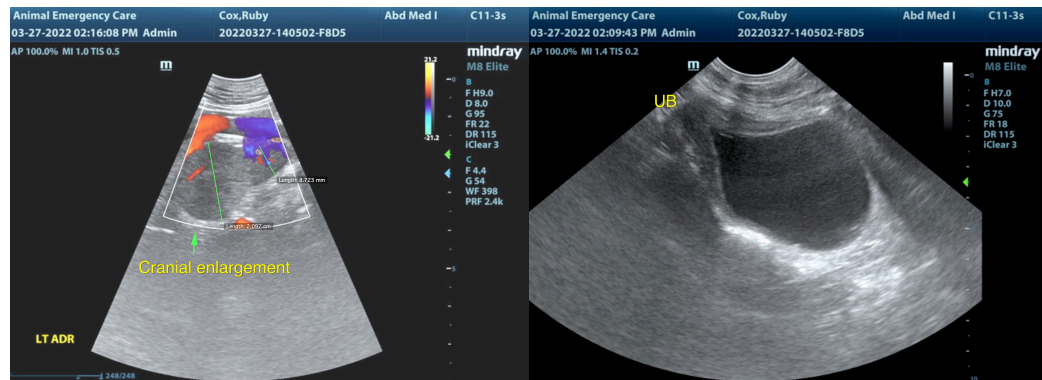
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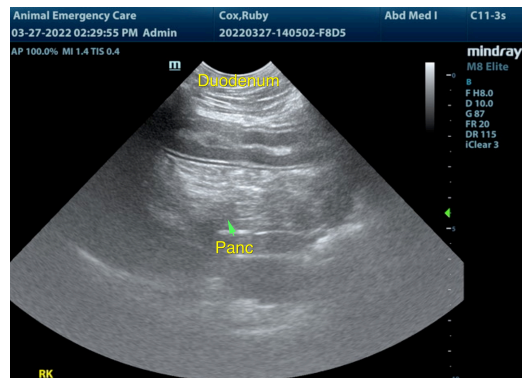
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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