



PATIENT

Peanut Clarke

SPECIES

Canine

BREED

Miniature Pinscher

SEX

Neutered Male

AGE

2 Years 3 Months

WEIGHT

15.1 Pounds

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Gillian Striano-
Kaplan

HOSPITAL NAME

Ramsey VH

REFERRING VET

Dr. Kathy Sevalle

INVOICE

16736

DATE

7/22/22

PRESENTING CLINICAL SIGNS

History: fly-biting episodes starting 7/12 intermittently between the hours of 8PM-9:30PM. Episodes can last up to 45 minutes. Pet started on RX: Kepra 250mg 1/2 T PO TID

Abnormal PE/Chem/CBC/UA Results: Creatinine Kinase: 245H, MCH: 26.2H Pre Bile Acids: 9.2, Post Bile Acids: 47.4H

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 pelvic urethra was imaged 1.0 cm beyond the cystourethral junction.

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 3.82 cm. The right kidney measured 4.12 cm.

Adrenal Glands

The **adrenal glands** were isoechoic to surrounding fat. The left adrenal gland measured 5.0 mm. The right adrenal gland measured 0.6 cm.

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** appeared normal to slightly subnormal in size with minor increased portal markings. Intrahepatic vascular volume appeared adequate. No overt evidence of macroscopic shunting. Intrahepatic shunts are ruled out. Extrahepatic shunts are unlikely, as the visible portal vein appeared normal at 5.0 mm. Intrahepatic vascular volume was normal. The gallbladder and common duct were unremarkable. Given the minor bile acid elevation, portal hypoplasia/microvascular dysphagia is likely in this patient with a history of an inflammatory component given the minor remodeling.

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



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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.

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ULTRASONOGRAPHIC FINDINGS

- Slightly subnormal liver size with increased portal markings

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

FNA or core biopsy of the liver could be considered for further definition, yet the probability of portosystemic shunting is minimal to zero. Screening for underlying Addisons would be warranted with baseline cortisol, given that the adrenal glands appeared isoechoic and the vague clinical signs. A clinical trial of the following diet may prove effective.

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Hepatic Support for Bile Acid Elevation +/- Hepatic Encephalopathy

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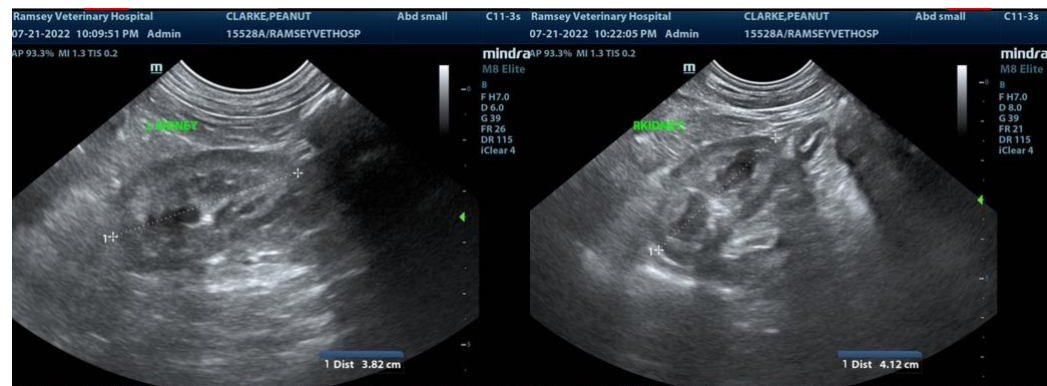
Royal Canin Hepatic Support diet or Hills L/D, Metronidazole (7.5 mg/kg PO bid) over the next 14 days, **Lactulose (Oral: 3.1-3.7 g/5 ml lactulose in a syrup base)** long term to target 2-3 soft stools/day, with a **high-quality protein supplement** of minor amount of **yogurt** or **cheddar cheese**. 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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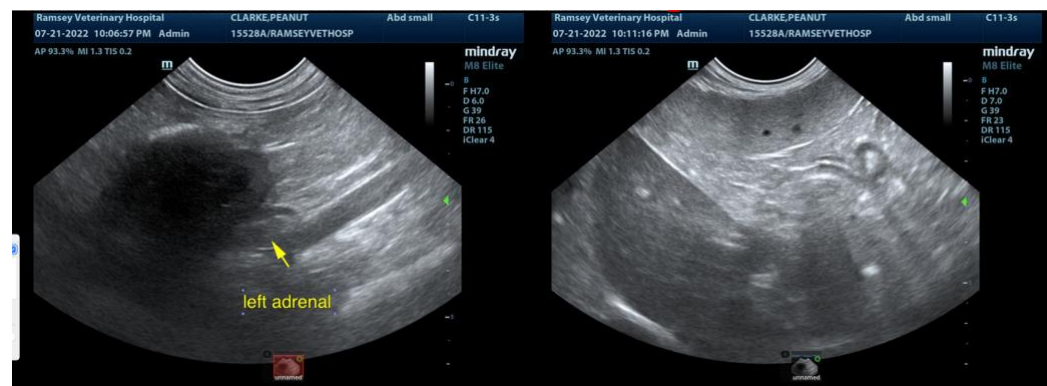


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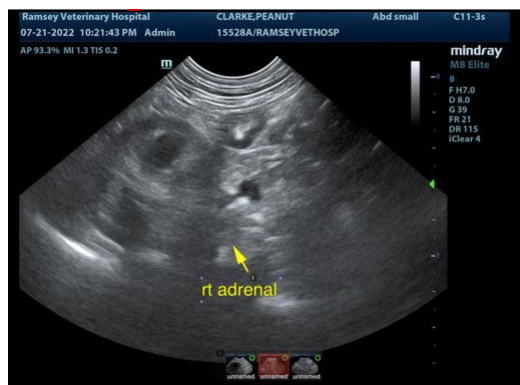
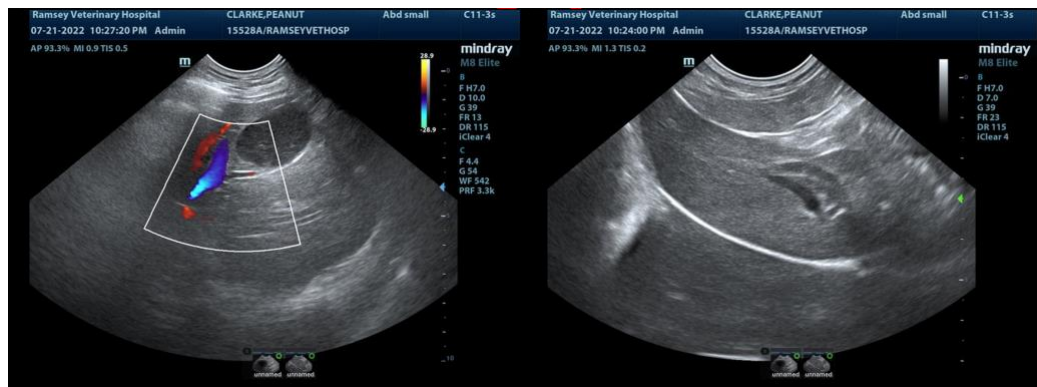
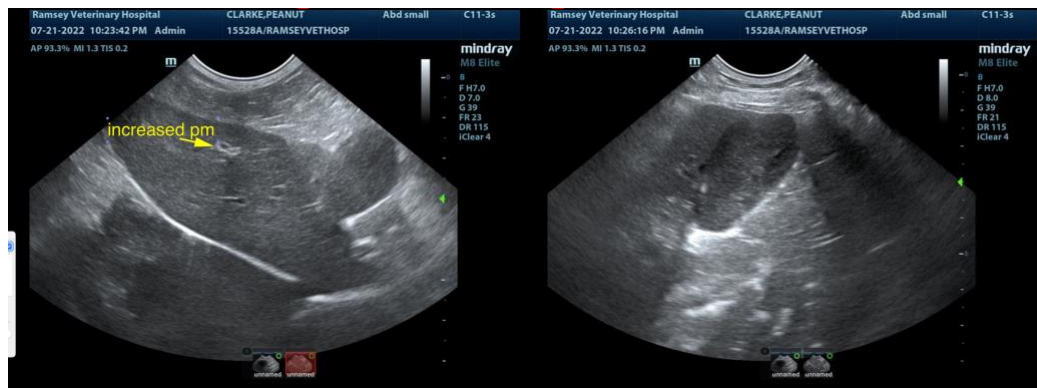
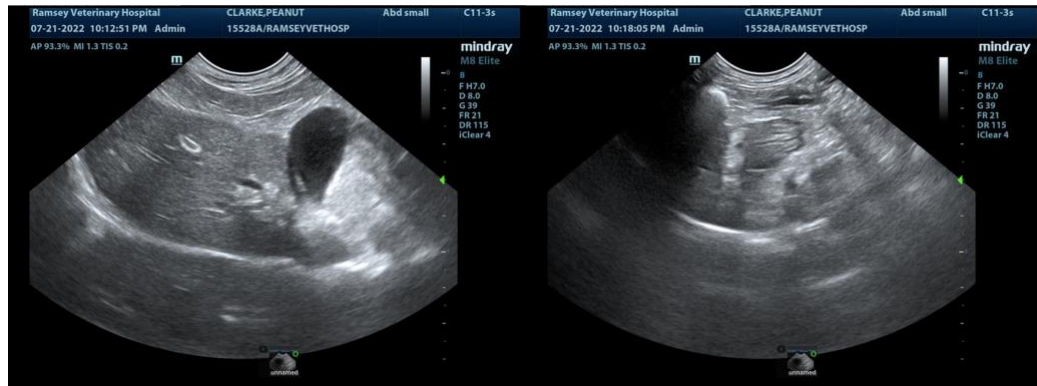
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The information and recommendations provided are based on the images presented by the



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referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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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