



PATIENT

Ripple Bateman

SPECIES

Canine

BREED

Newfoundland X

SEX

Spayed Female

AGE

8 Years

WEIGHT

106.8 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Amanda Crook – SDEP
Certified Clinical
Sonographer

HOSPITAL NAME

Rivers Edge Pet
Medical Center

REFERRING VET

Dr. Bridget Hayes

INVOICE

24823

DATE

8/19/21

PRESENTING CLINICAL SIGNS

Hx of episodes of confusion, weakness, ataxia and twitching that come and go. 2 seizures today. Had BW done by referring DVM 8/13. Currently weak, dazed. No menace. No CP in 3 limbs. No nystagmus or head tilt. DDX: Enlarged liver palpated. hepatic encephalopathy secondary to liver neoplasia. Abnormal PE/Chem/CBC/UA Results: All liver enzymes severely elevated, especially ALT. Coags are normal today. See Radiographs - Large liver, round mass effect with displacement of stomach.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 4.0 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.

The area of the aortic trifurcation was free of pathology.

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 9.0 cm. The right kidney measured 8.0 cm.

Adrenal Glands

The adrenal glands were uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 3.2 cm length x 0.71 cm at the caudal pole. The left adrenal gland measured 3.5 cm length x 0.84 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

A large, expansive, non-homogeneous to mixed echogenic, mild focally cystic liver mass was present occupying the majority of the left and mid liver lobes, appearing to extend into the area of the right liver lobes and area of the porta hepatis. The mass measured approximately 16-17 cm in diameter, yet likely larger, as the entire mass would not fit into a single viewing window. The mass was located directly adjacent to, yet not overtly impinging upon the gallbladder with no evidence of post-hepatic stasis or obstruction. Subtle regional perihepatic reactive mesentery was present. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach was sonographically normal, yet appeared to be caudally displaced owing to caudal expansion of the hepatic mass.

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.

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



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Pancreas

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The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

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Free Abdomen

No overt lymphadenopathy or perihepatic/peritoneal effusion.

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Rapid view of the heart revealed no evidence of pericardial masses or effusion in the visible window.

SEX

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ULTRASONOGRAPHIC FINDINGS

- Large, expansive, non-homogeneous hepatic mass involving the majority of the left, mid and right parenchyma

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Although sampling is required for further clarification and potential definitive diagnosis, the hepatic mass is most consistent with neoplasia such as adenocarcinoma or other. Potential for non-neoplastic etiology is considered unlikely. Assuming normal clotting status, hepatic FNA or biopsy may be considered. However, sonographically, complete resection of the hepatic mass is likely precluded owing to its size, involvement of multiple liver lobes, and subjective extension into the area of the porta hepatis. No overt evidence of secondary intrahepatic shunt, although this possibility cannot be definitively excluded. Empirically, some or all of the following protocol may be considered. 3-view chest radiographs recommended.

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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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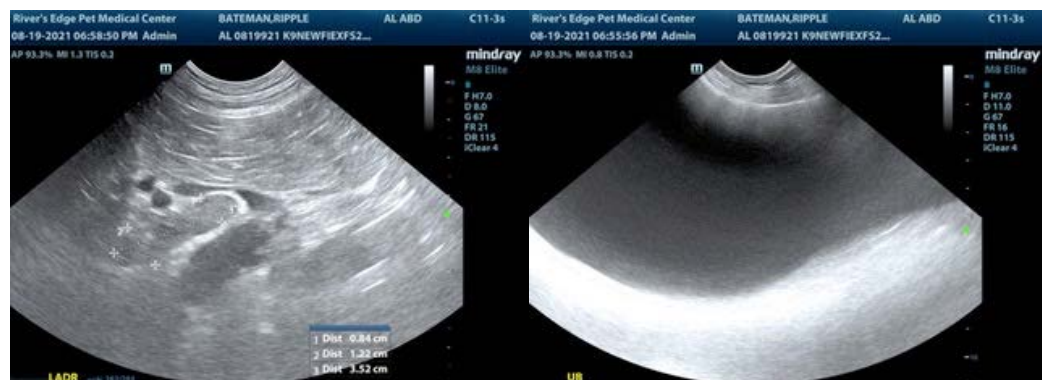
Dr. Bridget Hayes

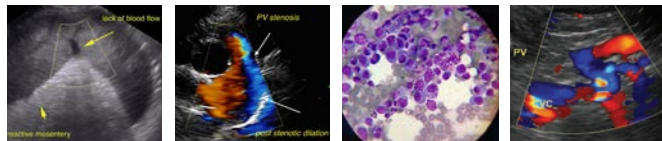
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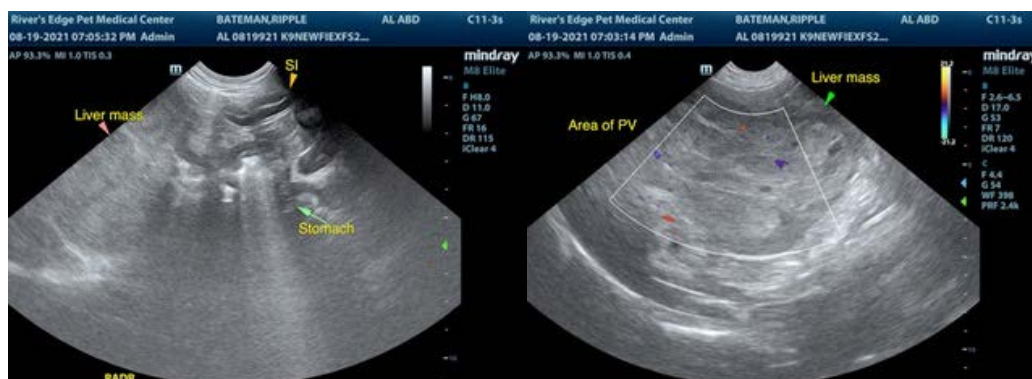
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

SPECIES

Canine

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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info@SonoPath.com

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