



**PATIENT**

Bronson Marovic

**SPECIES**

Canine

**BREED**

Lab Mix

**SEX**

MN

**AGE**

12 years

**WEIGHT**

75.0

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Mavis McCormick

**HOSPITAL NAME**

Lanier AH

**REFERRING VET**

Dr. Mavis McCormick

**INVOICE**

17086

**DATE**

6/13/23

**PRESENTING CLINICAL SIGNS**

He has had those mildly elevated liver enzymes (ALT, ALP) for awhile.

Abnormal PE/Chem/CBC/UA Results: BW done 5/3/23.. CBC redone 6/12. all normal cbc: RBC 5.13, HCT 34.8, Hemoglobin 12.4, reticulocyte hemo 23.9, lymphocytes 0.827, monocytes 0.109, PLT decreased chem: ALT 161, ALP 270, CK 355 T4 1.4 4 dx plus: ehrlichia + (chronic)

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, and cystourethral junction exhibited normal thickness and tone. Anechoic urine was present in the lumen with no evidence of sediment, mineral, or calculi. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The area of the residual prostate was free of overt pathology.

No evidence of pathology in the area of the aortic trifurcation.

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 loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 6.1 cm in length. The right kidney measured 6.3 cm in length.

**Adrenal Glands**

The left adrenal gland was overtly normal in size, position, and shape. The left adrenal gland measured 0.69 cm width at the caudal pole and 0.68 cm width at the cranial pole. The right adrenal gland was not definitively visualized.

**Spleen**

The spleen was normal in size with minor medial capsule asymmetry and generalized mild parenchyma heterogeneity. A solitary, mildly expansive, nonhomogeneous hypoechoic perihilar nodule was present measuring 2.6 cm in diameter.

**Liver/ Gallbladder**

The liver exhibited subjective borderline to possible mild enlargement yet maintained symmetrical capsule contour with generalized nonhomogeneous discreetly nodular hepatic parenchyma. An example of a discreet hepatic nodule measured 2.0 cm in diameter at the mid-liver. 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 presented normal visualized gastric wall layering with a normal wall layer ratio. The lumen of the stomach contained moderate, progressively shadowing ingesta, sonographically suggestive of food. No evidence of mechanical pyloric outflow obstruction was noted.



**PATIENT**

Bronson Marovic

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.

**SPECIES**

Canine

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

**BREED**

Lab Mix

**Pancreas**

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 were evident.

**SEX**

MN

**Free Abdomen**

No overt lymphadenopathy or peritoneal effusion was present.

**AGE**

12 years

**ULTRASONOGRAPHIC FINDINGS**

- Nonhomogeneous / nodular liver - nonspecific, vacuolar hepatopathy, chronic inflammatory / immune-mediated disease, toxic hepatopathy i.e., copper, hyperplasia, hematopoiesis, fibrosis, infiltrative neoplasia (thought less likely) or other hepatopathy
- Sonographically normal gallbladder
- heterogeneous focally nodular spleen - nonspecific, hyperplasia, hematopoiesis, incidental splenitis, early infiltrative neoplasia possible
- Gastric ingesta
- Mild age-related kidneys

**WEIGHT**

75.0

**INTERPRETED BY**

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

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Assuming normal clotting status and using a 25-gauge needle, screening hepatosplenic FNA cytology warranted for further clarification.

**IMAGING PERFORMED BY**

Dr. Mavis McCormick

**HOSPITAL NAME**

Lanier AH

Sonographic monitoring of the liver and spleen for progressive parenchymal / nodular changes along with hepatosupportive medications including Denamarin and Ursodiol due to its antioxidant and immunomodulatory effects within the liver with monitoring of hepatic enzyme levels going forward would be a more conservative approach. Hepatic core surgical biopsy is likely required for a definitive diagnosis.

**REFERRING VET**

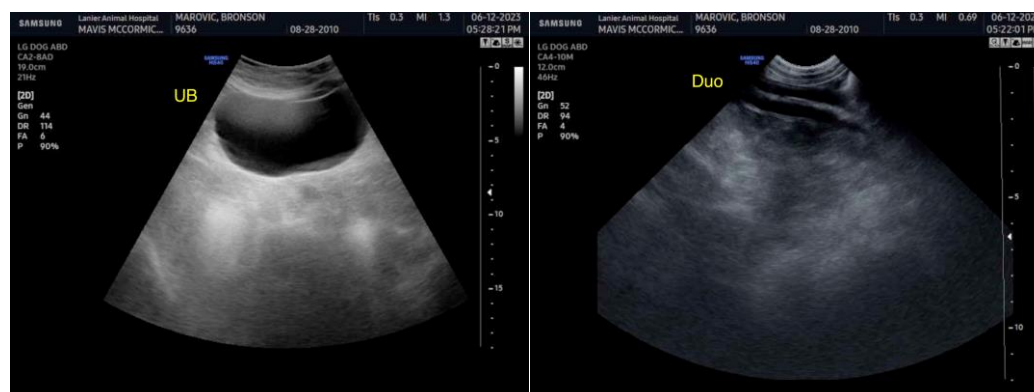
Dr. Mavis McCormick

**INVOICE**

17086

**DATE**

6/13/23





**PATIENT**

Bronson Marovic

**SPECIES**

Canine

**BREED**

Lab Mix

**SEX**

MN

**AGE**

12 years

**WEIGHT**

75.0

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Mavis McCormick

**HOSPITAL NAME**

Lanier AH

**REFERRING VET**

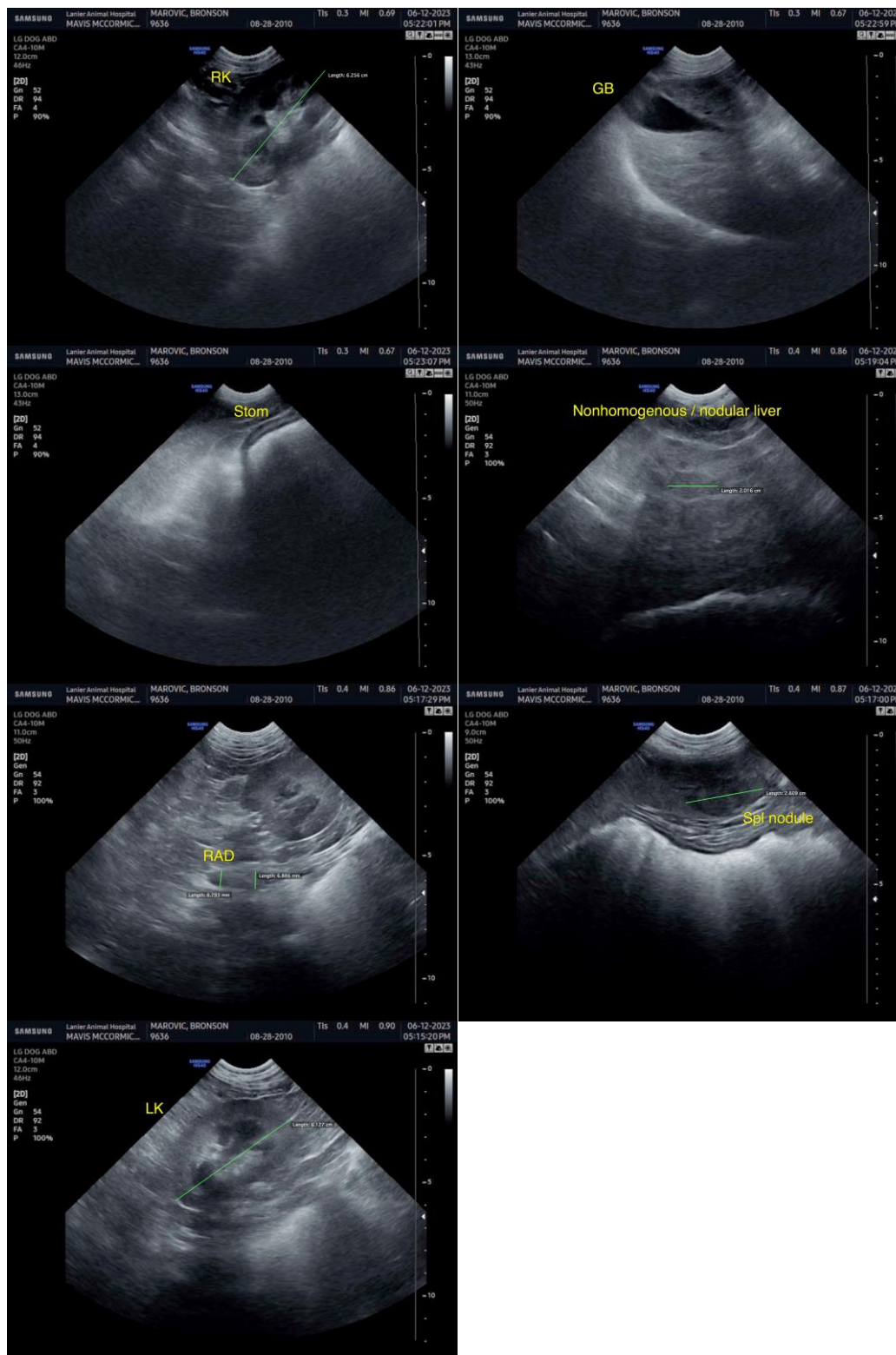
Dr. Mavis McCormick

**INVOICE**

17086

**DATE**

6/13/23



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.



**PATIENT**

Bronson Marovic

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.

**SPECIES**

Canine

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

[info@sonopath.com](mailto:info@sonopath.com)

**BREED**

Lab Mix

**SEX**

MN

**AGE**

12 years

**WEIGHT**

75.0

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Dr. Mavis McCormick

**HOSPITAL NAME**

Lanier AH

**REFERRING VET**

Dr. Mavis McCormick

**INVOICE**

17086

**DATE**

6/13/23