

**DATE**

4/26/22

**PRESENTING CLINICAL SIGNS**

Ascites.

Current Medications: None listed.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: STAT Requested by DVM.

Imaging Performed By: Rachel Brillhart, RDMS.

**PATIENT**

Woody Malozi

**SPECIES**

Canine

**Urinary System**

The **urinary bladder** is well distended with anechoic contents. The wall is smooth and regular. No abnormalities are noted with the trigone or proximal urethra, and there is no evidence of sediment, cystoliths, polyps or a mass.

**BREED**

Saluki

**Kidneys**

The **left** kidney measures 6.98 cm. The capsule is smooth and its overall architecture, including the definition of the cortico-medullary junction, is well preserved. Occasional mineralizations are observed, without signs of nephroliths or pyelectasia. Intrapelvic fat is noted. Blood flow is excellent. It is difficult to assess the echogenicity of the surrounding mesentery due to the large amount of ascites.

The **right** kidney measures 7.25 cm. Findings are similar to the left kidney.

**SEX**

Neutered male

**AGE**

6/1/17

**Aortic bifurcation/trifurcation**

No obvious abnormalities observed.

**WEIGHT**

68 lbs

**Adrenal Glands**

The **left** adrenal gland measures 0.60 cm at the cranial pole, 0.56 cm at the caudal pole and 2.65 cm in length. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

**INTERPRETED BY**

Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

The **right** adrenal gland measures 0.85 cm at the cranial pole, 0.81 cm at the caudal pole and 2.99 cm in length. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

**HOSPITAL NAME**

Animal Medical Center  
of Bel Air

**Spleen**

The spleen is within normal limits in size, architecture, and echogenicity, however, it has a diffuse miliary echotexture. The capsule is smooth. The vessels are within normal limits in size and their direction is normal, however, perfusion appears decreased when evaluated with colour Doppler. A thrombus is not visualized.

**REFERRING VET**

Dr. Chaudry

**Liver**

Microhepatica is present as per the sonographer, which was noted at the time of the study. Normal hepatic parenchyma is not visualized, i.e. it is replaced by a severely heterogeneous echotexture, composed of hypoechoic nodules of variable size. Liver borders vary between smooth and irregular depending on the lobe. It is not possible to determine if a portal systemic shunt is present.

**INVOICE**

99496

The gallbladder (GB) wall is mildly hyperechoic and thicker than what is considered normal (1.8 mm). A moderate to marked amount of free floating echogenic material is present within the GB. It is not abnormally distended. It is surrounded by ascites. The cystic and common bile ducts cannot be followed due to the ascites, however, there are no obvious signs of an obstruction.

### ***Gastrointestinal***

The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

The small intestinal wall thickness is within normal limits and the definition of the wall layers is preserved. Abnormally dilated loops of bowel are not observed.

The colonic wall is not thickened and mural detail is considered normal.

There are no obvious signs of a mass, foreign body, infiltrative disease or an obstruction in the gastrointestinal tract.

### ***Pancreas***

The pancreas is diffusely hyperechoic. This finding is difficult to interpret as it may be due to the fibrosis secondary to previous episodes of pancreatitis or due to the contrast created by the ascites. There are no obvious signs of neoplasia.

### ***Other***

#### ***Lymph nodes***

A hypoechoic nodule is observed within the mesentery. It measures 0.67 cm in diameter x 1.35 cm in length. This structure may be a lymph node. It is not suggestive of neoplasia.

There are no signs of carcinomatosis or lymphomatosis of the abdominal wall.

### ***Abdominal effusion***

A marked amount of anechoic effusion is present. Echogenic material floating within ascites observed in certain views, suggestive of proteinaceous material. Fibrin is noted within the ascites.

### ***Heart***

No obvious abnormalities are observed.

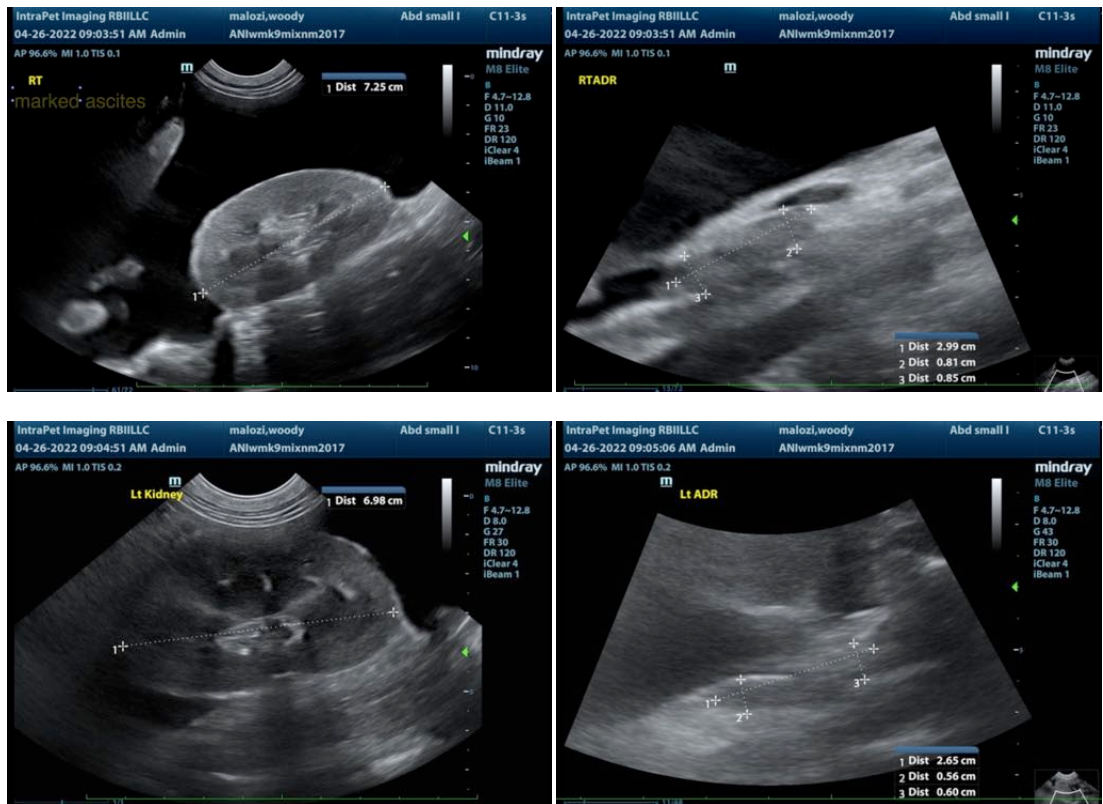
## **ULTRASONOGRAPHIC FINDINGS**

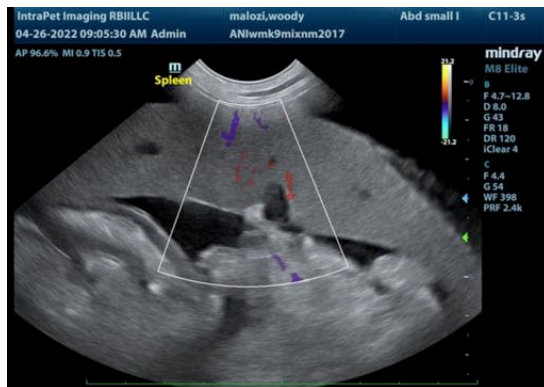
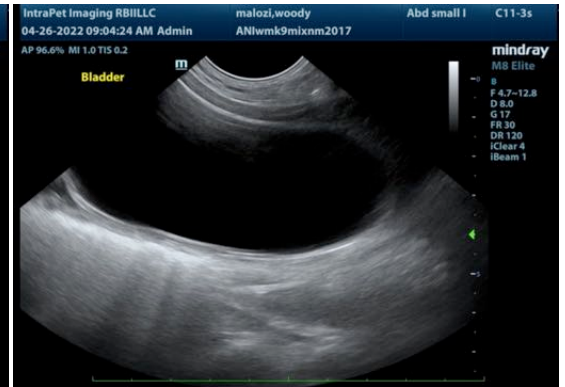
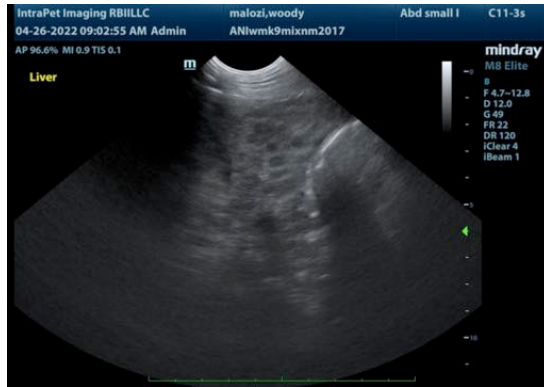
- Microhepatica with a severely heterogeneous liver composed of multiple hypoechoic nodules. It is not possible to determine if a portal systemic shunt is present due to the large amount of ascites. Based on the size and appearance of liver, as well as the presence of ascites, cirrhosis with secondary portal hypertension are suspected. A portal systemic shunt or other congenital hepatic abnormality cannot be excluded. Neoplasia is considered less likely, however, a fine needle aspirate or hepatic biopsy would be required to obtain a definitive diagnosis. Obtaining a history regarding changes in behaviour following meals is recommended.
- The presence of sludge in the gallbladder is most likely clinically insignificant, however, some dogs may show clinical signs of gastroesophageal reflux disease (GERD), therefore, obtaining a history regarding signs of GERD from the client is suggested. A cholecystitis cannot be excluded.
- The mottled appearance of the spleen may be due to extramedullary hematopoiesis and mild splenitis, as well as decreased blood flow if portal hypertension is present. Infiltrative disease, such as lymphoma, mast cell tumour or histiocytic sarcoma, is considered less likely, however, a fine needle aspirate would be required to exclude the latter with certainty.

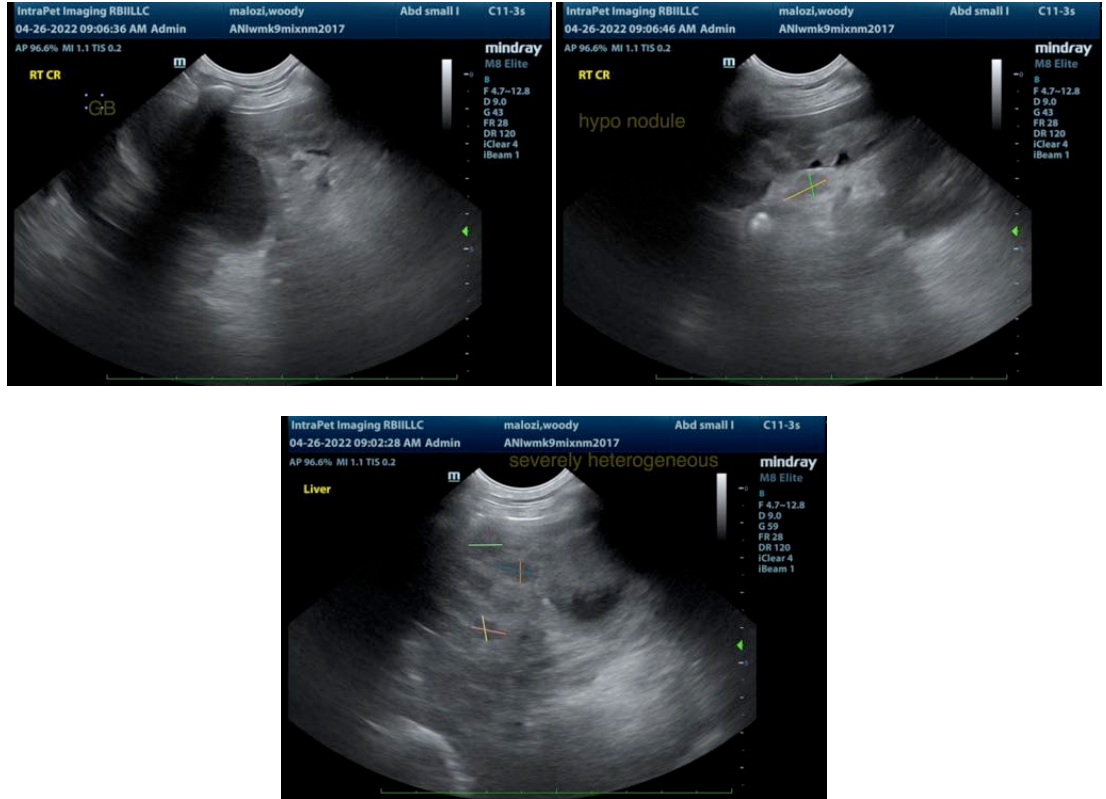
### INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A fine needle aspirate or hepatic biopsy is required to obtain a definitive diagnosis. The fine needle aspirate will help exclude neoplasia, while the biopsy will confirm a diagnosis of cirrhosis and presence of a vascular disease, such as a PSS. Unfortunately, if a PSS is present, the ascites suggests portal hypertension and surgical treatment is not an option. Medical management may, however, be pursued, with the goal of maintaining a good quality of life.

Briefly, treatment would consist of a hepatic diet or a vegetarian diet (fish may be tried as well). A hepatoprotectant), lactulose, +/- metronidazole or neomycin, vitamin E, vitamin Bs, spironolactone to control the ascites. Other drugs, such as telmisartan or ursodeoxycholic acid, may be used, but consultation with an internist is suggested.







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.

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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