

**PATIENT**

Wrigley Goss

**SPECIES**

Canine

**BREED**

Puggle

**SEX**

NM

**AGE**

11 years

**WEIGHT**

33 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Sarah Pender, CVT

**HOSPITAL NAME**

SVS Imaging QC

**REFERRING VET**

Dr. Scout Josey

**INVOICE**

14639

**DATE**

8/17/22

**PRESENTING CLINICAL SIGNS**

Presented for inappetence and weight loss in June 2022 Owner complains of increased respiratory effort in the evening He is more labored in the evening (46-50 BPM) per O Better in the morning once the meds have began working (28-32 BPM) per O O doesnt go on long walks any longer that could induce an event only small play in the yard Dog currently only on Enalapril and Carprofen. O does not think there is much improvement. Was on Furosemide and owner stopped because of no improvement.

Abnormal PE/Chem/CBC/UA Results: Mild left sided heart murmur. Increased respiratory rate and effort. Abdomen tense but nonpainful on palpation. On radiographs, appeared to have enlarged heart (14.6 VHS). Subjective enlargement of the left ventricular and the left atrium of the heart. Possible pulmonary congestion although unclear. Mild hepatomegaly. On bloodwork, appears to have several abnormalities including regenerative anemia, leukocytosis with neutrophilia, and hypothyroid. ALP 294. Suspected chronic slow blood loss, possibly due to an abdominal tumor. Possible slightly jaundice at time of scan.

**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 was noted.

No evidence of pathology was noted in the area of the residual prostate.

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 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 5.8 cm in length. The right kidney measured 5.9 cm in length.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.8 cm length x 0.67 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.3 cm length x 0.50 cm width at the caudal pole.

**Spleen**

The spleen was overall normal in size with mild generalized splenic parenchyma heterogeneity. Several mildly expansive hypoechoic to nonhomogeneous nodules, as well as intermittent small uniform hyperechoic nodules, were present in the spleen. An example of a mildly expansive hypoechoic nodule measured 1.2 cm in diameter. An example of a uniformly hyperechoic nodule measured 0.47 cm.

**PATIENT*****Liver/ Gallbladder***

Wrigley Goss

The liver exhibited mild to moderate enlargement with normal structure and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of hepatic congestion. The gallbladder was non-distended in size containing anechoic content with moderate congealed yet nonorganized nondependent luminal debris. The gallbladder walls and peripheral gallbladder were sonographically normal without evidence of overt inflammatory criteria. The cystic and common bile ducts were normal.

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***Gastrointestinal***

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

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.

***Pancreas***

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

***Free Abdomen***

No overt lymphadenopathy or peritoneal effusion was present.

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**ULTRASONOGRAPHIC FINDINGS**

- Hepatomegaly exhibiting mild nonuniform parenchyma
- Moderate congealed gallbladder debris - potential emerging to early gallbladder mucocele
- Variably echogenic splenic nodules - nonspecific
- Mild age-related kidneys
- Sonographically unremarkable gastrointestinal tract

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The hyperechoic splenic nodules are most likely consistent with benign myelolipomas. The hypoechoic to nonhomogeneous splenic nodules were more nonspecific with multiple etiologies including hyperplasia, hematopoiesis, small hematomas, splenitis, and Infarction, while the potential for nodular neoplastic criteria cannot be excluded.

The overall hepatic presentation is most likely consistent with benign hepatopathy / hepatomegaly with primary considerations for vacuolar hepatopathy with parenchymal remodeling, indistinct areas of nodular hyperplasia, and hematopoiesis.



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Assuming normal clotting status, hepatic parenchymal and hypoechoic splenic nodule FNA using a 25-gauge needle could be considered for further assessment. Sonographic monitoring of the splenic nodules would be a more conservative approach.

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Hepatosupportive medications including Denamarin and Ursodiol are suggested with monitoring for evidence of increasing cholestasis. Potential early to emerging gallbladder mucocele is suspected which at times has been associated with hypothyroidism. No overt evidence of post hepatic obstructive criteria was noted at this time. Recheck sonogram for a reassessment of the gallbladder is recommended if evidence of increasing cholestasis.

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A GI panel to include PLI/TLI/Cobalamin/Folate as well as three view chest radiographs and neurological / musculoskeletal examination are recommended to assess for or rule out occult disease which may cause weight loss.

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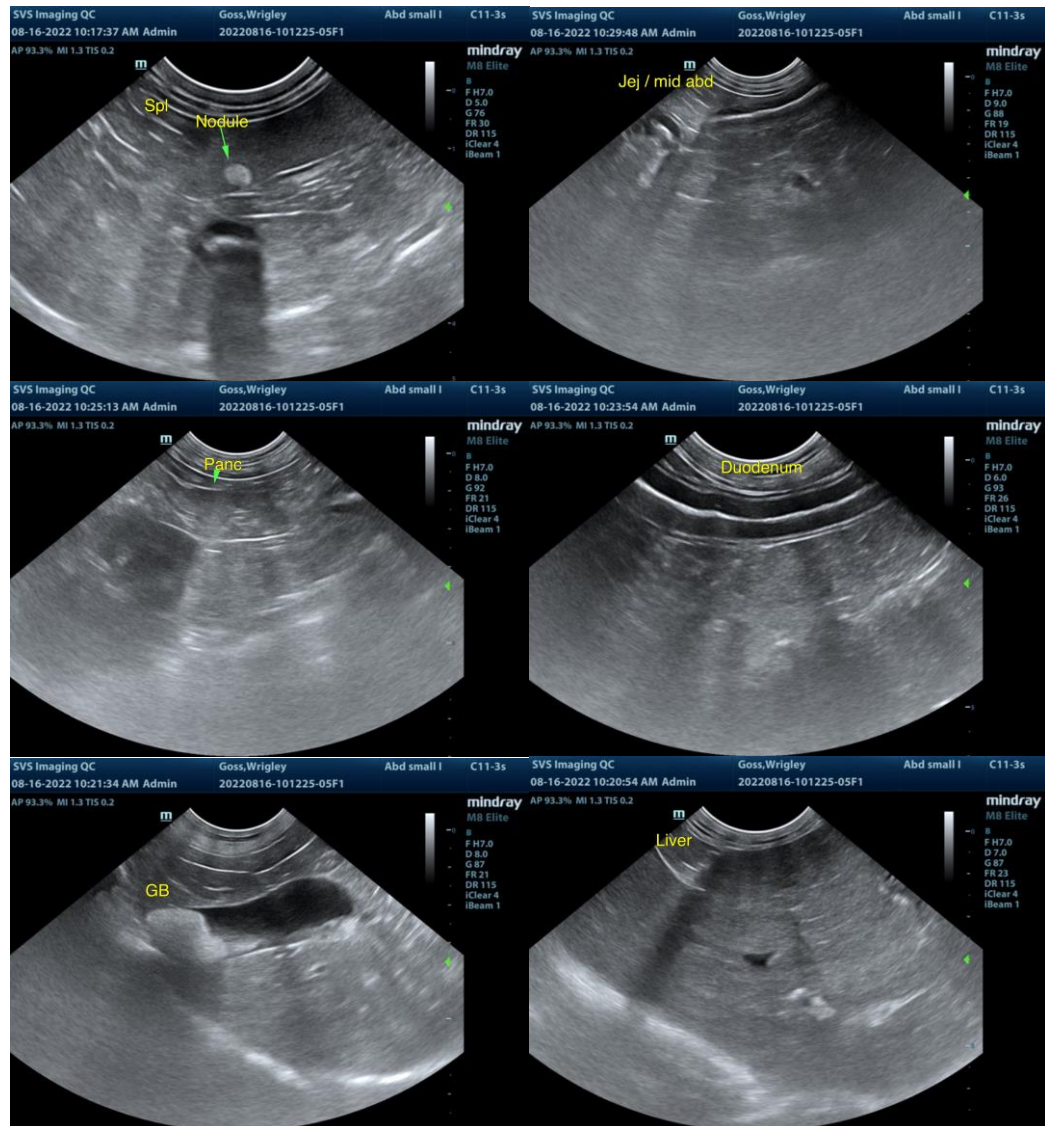
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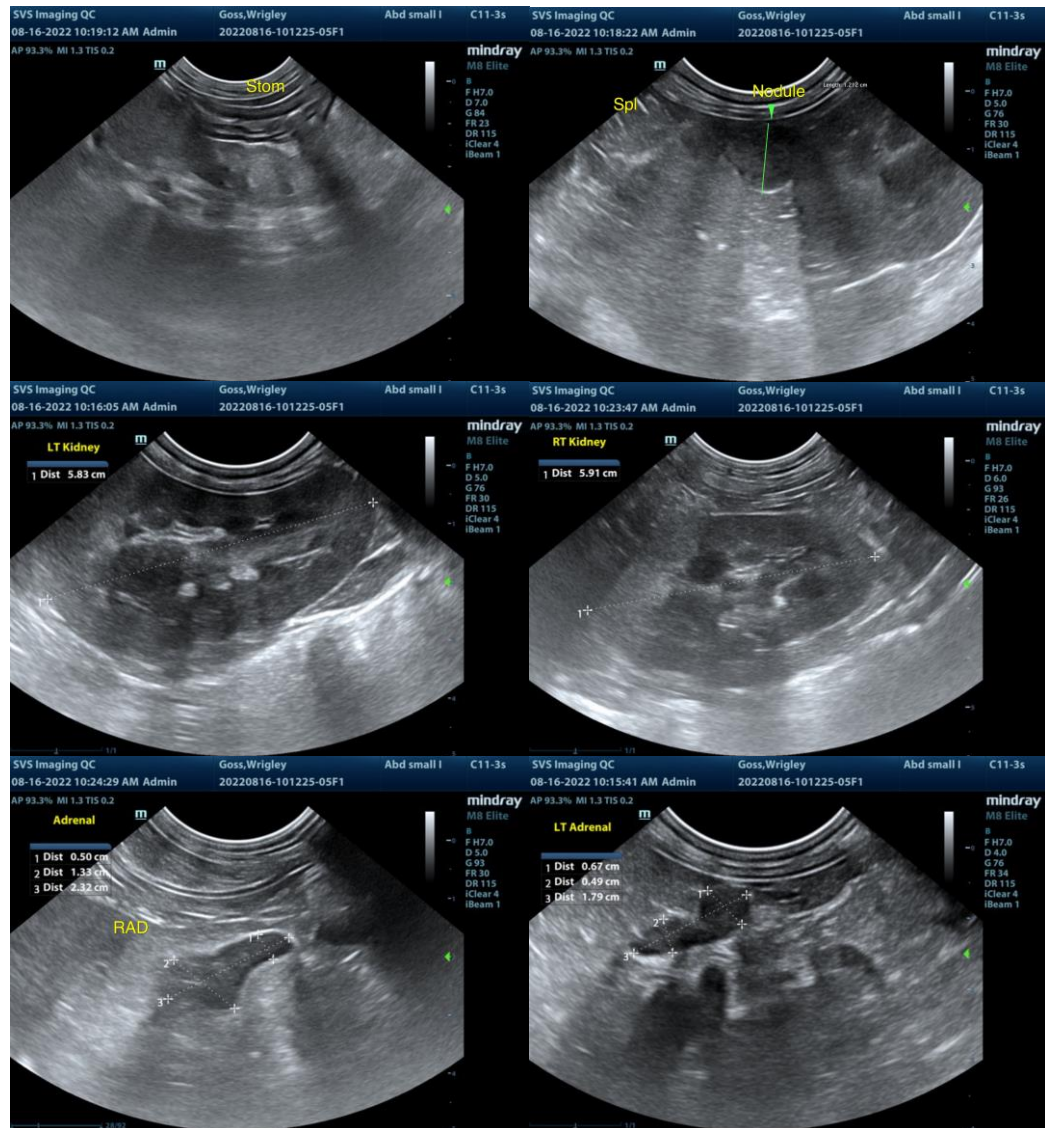
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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