



**PATIENT**

Tuula Walters

**SPECIES**

Canine

**BREED**

Golden Retriever

**SEX**

Spayed Female

**AGE**

11 Years

**WEIGHT**

69.4 Pounds

**INTERPRETED BY**

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING  
PERFORMED BY**

Dr. Sarah Green

**HOSPITAL NAME**

Healing Spirit

**REFERRING VET**

Dr. Sarah Green

**INVOICE**

35731

**DATE**

2/17/22

**PRESENTING CLINICAL SIGNS**

Presented due to recent lethargy and weight loss.  
Abnormal PE/Chem/CBC/UA Results: CBC: WBC= 18.49 (6-17) K/uL, neutrophil=15,930 (3000-12000) /uL, RBC=4.10 (5.5-8.5) M/uL, HGB=8.1 (12-18) g/dL, HCT=26.57 (37-55) %, MCHC=30.5 (31-39) g/dL, platelets=39 (165-500) K/uL CHEM: ALP=725 (20-150) U/L, ALT=738 (10-118) U/L, cholesterol=332 (125-270) mg/dL Clin. path review confirmed moderate non regenerative anemia, marked thrombocytopenia aspiration of free fluid revealed hemorrhagic effusion

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (5.2 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.4 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The region of left adrenal (Cranial to left renal artery) is unremarkable but the adrenal is not distinctly visualized. No evidence of a mass effect.

The region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect.

**Spleen**

The spleen is large in size. The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There are numerous hypoechoic nodules/masses visualized within the splenic parenchyma and along the margins, deforming the capsule. One is visualized measuring 1.2 cm in diameter. Another measures 3.2 cm in diameter.

**Liver**

The liver is large in size and irregular in shape. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are multiple large, expansile, semi-cavitated mass effects involving the liver. Normal liver is somewhat difficult to visualize. These mass effects are very large, measuring >2.5 cm x 6.0 cm and 6.8 cm x 9.2 cm. They coalesce to either be multilobulated large masses or multiple smaller masses. There is free fluid surrounding the liver.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.



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***Gastrointestinal***

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The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

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The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.)

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Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

***Pancreas***

**AGE**

11 Years

The area of the pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

***Free Abdomen***

**WEIGHT**

69.4 Pounds

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

**ULTRASONOGRAPHIC FINDINGS**

**INTERPRETED BY**

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

- Large, mottled spleen with numerous hypoechoic masses – There are several, non-cavitated, hypoechoic splenic nodules visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis. These lesions are concerning for a neoplastic process based on the deviation of the splenic capsule and concurrent hepatic masses visualized.

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- Large, cavitated, hypoechoic splenic masses – The majority of the liver is associated with these very large mass effects, which appear larger than the area of identifiable liver. Concern is high for a neoplastic process, as there are nodules in the spleen as well. Recommend fine needle aspirate.

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- Echogenic free abdominal fluid – Based on the history, this is concerning for hemorrhage.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**REFERRING VET**

Dr. Sarah Green

The liver is severely nodular and associated with very large mass effects. Additionally, there are numerous mass effects associated with the spleen. These findings are concerning for an underlying neoplastic process, as there is free fluid present as well, which is concerning for possible hemorrhage. Consider a fine needle aspirate of the liver mass and liver nodules, and consultation with a veterinary oncologist, as the possibility for surgical resection may be limited, although this would need to be confirmed with either contrast CT scan or exploratory surgery. Recommend 3-view thoracic radiographs.

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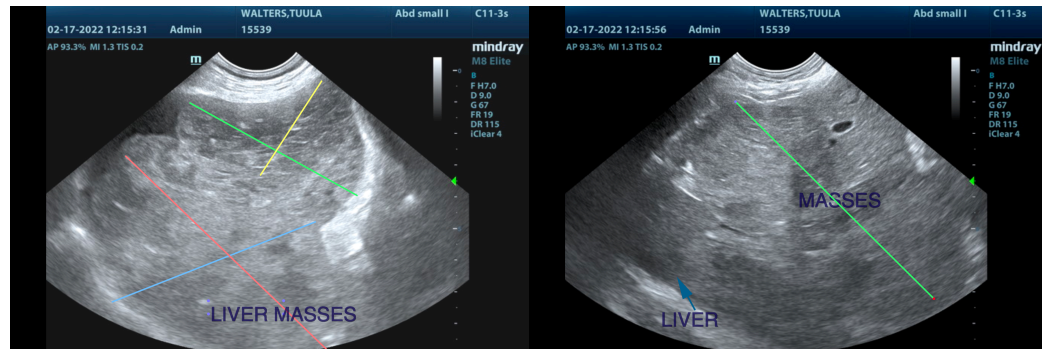
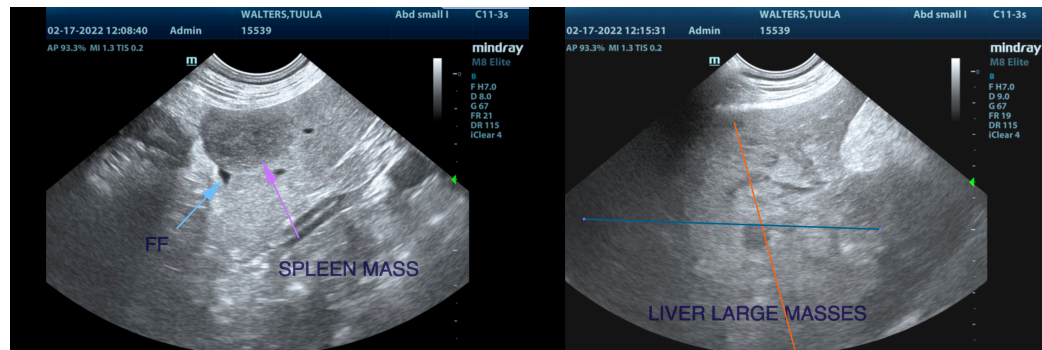
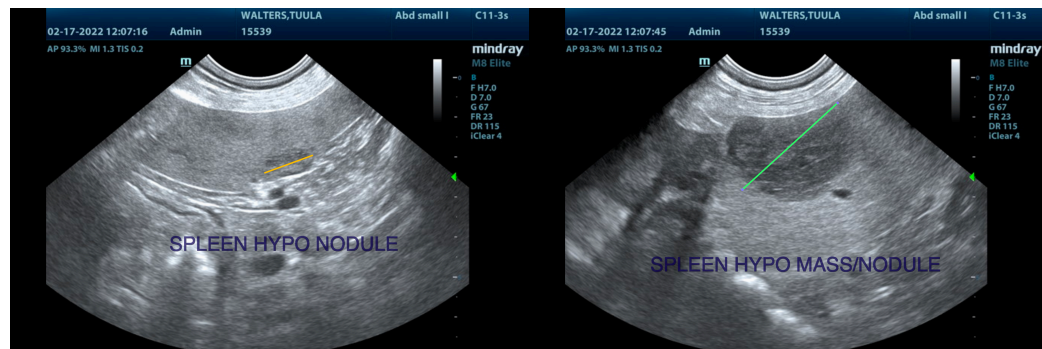
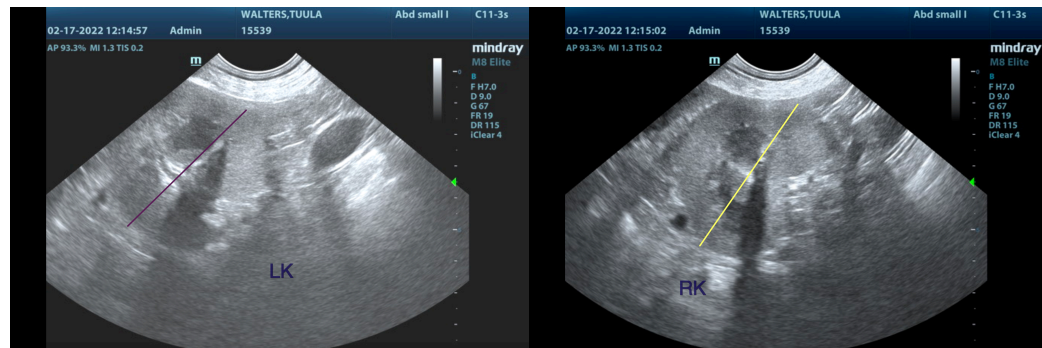
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

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