



**PATIENT**

Candy Townley

**SPECIES**

Canine

**BREED**

Shih Tuz

**SEX**

Spayed Female

**AGE**

11 years

**WEIGHT**

11.1 lbs

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Reese

**HOSPITAL NAME**

Willow Run VC

**REFERRING VET**

Dr. Reese

**INVOICE**

91154

**DATE**

8/11/21

**PRESENTING CLINICAL SIGNS**

History: Recheck study - doing well at home; previously noted splenic mass and gastric wall defect (ulcer, early mass)

Mild anemia Mild hypoproteinemia

**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 (3.9 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. The patient has pinpoint, non-obstructive nephroliths. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal. There is a 0.54 cm cortical cyst evident.

The right kidney has a normal shape and size (3.7 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. Non-obstructive pinpoint nephroliths were noted. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.5 cm at the caudal pole It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.42 cm at the caudal pole It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**Spleen**

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There is a 1.33 x 0.78 cm hypoechoic nodule evident in the tail of the spleen (this appears stable previous measurement 1.3 x 0.9 cm). Additionally, there are hyperechoic focal lesions that are consistent with benign myelolipomas.

**Liver**

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear



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normal. No focal nodules or cystic lesions are observed. The gallbladder was mildly over distended with suspended and dependent debris, yet not to the level of emerging mucocele. However, the sludge appears to be mildly excessive. No adjunctive inflammation was noted.

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**Gastrointestinal**

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The stomach contains minimal luminal contents. It generally measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. In these areas the distinction of the gastric wall is adequate and there is no pressure reduced peristaltic activity. There is a focal mass effect/gastric wall lesion evident in the fundic region of the stomach. This mass measured 1.5 x 2.1 cm. It involves the gastric wall and there is loss of layering at its attachment. This mass appears somewhat stable in size (previous measurements 1.7 cm). 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 uniform diameter with minimal fluid distension. Wall appears subjectively, mildly increased. The duodenum measures 0.47 cm and the jejunum measures 0.41 cm and 0.35 cm. Bowel loops follow a typical curvilinear path with distinct wall layering. 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.

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**Pancreas**

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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**

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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.

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**ULTRASONOGRAPHIC FINDINGS**

**PRIMARY FINDINGS:**

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- Gastric wall mass. This mass is concerning for a cancerous process (carcinoma, round cell neoplasia, etc.). Due to the reduced distinction in wall layering at its attachment point a benign polyp or severe ulceration cannot be excluded, but is less likely.
- Hypoechoic splenic nodule. There is a non-cavitated, hypoechoic splenic nodule visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis. Unfortunately due to the thin walled nature of this lesion there is a small chance for rupture and hemorrhage.

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- Decreased corticomedullary distinction in both kidneys with pinpoint, non-obstructive nephroliths and rare cortical cysts. Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. The hyperechoic mineralized foci observed at the corticomedullary junction of the left/right kidney are consistent with small, non-obstructive nephroliths.

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**SECONDARY FINDINGS:**

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- Subjectively thickened small intestine with normal intact wall layering. The mild small intestinal wall changes may be a normal variant in this patient or could be consistent with an inflammatory process (e.g., inflammatory bowel disease).

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- A moderate amount of gallbladder sludge. The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

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- Heterogenous liver. The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. This can also be consistent with an age related change.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

I am concerned about the gastric wall mass as I feel it is a likely source for the anemia and hypoalbuminemia. Consider evaluation of CBC for parameters that would indicate an iron deficiency anemia. Additionally, you can measure iron levels to determine if supplementation is indicated. Options moving forward regarding this mass are either surgical evaluation to determine if it can be removed with biopsies or upper gastrointestinal endoscopy to biopsy, but this will not be therapeutic. Depending on the clinical status of this patient's renal disease it would seem reasonable to go to surgery to remove the splenic nodule and attempt to remove the gastric lesion. I recommend a referral to a board certified veterinary surgeon for this as sometimes gastric masses are more extensive than they appear on ultrasound. I recommend three view thoracic radiographs. I recommend concurrent acid reduction and Sucralfate. Keep in mind that the BUN elevation may be artificially elevated due to gastrointestinal hemorrhage. I recommend blood pressure evaluation, urine protein to creatinine ratio, etc. This scan does not show progression of the previously identified abnormalities. All recommendations noted in the previous report are still recommended, but today's study more clearly delineates the gastric mass and consideration for removal with splenectomy.

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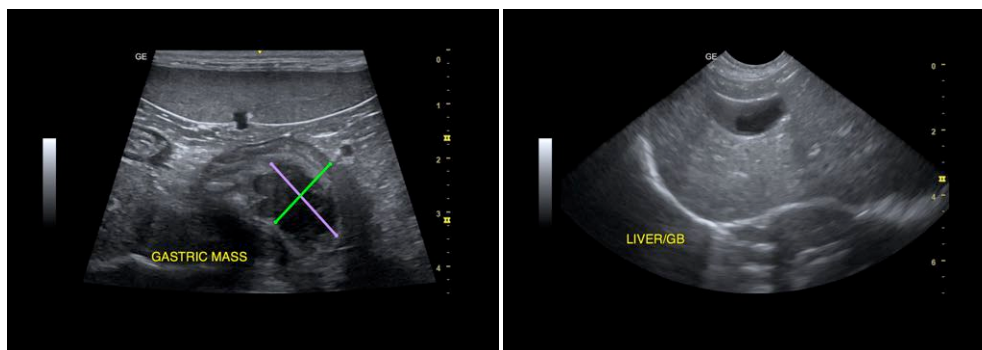
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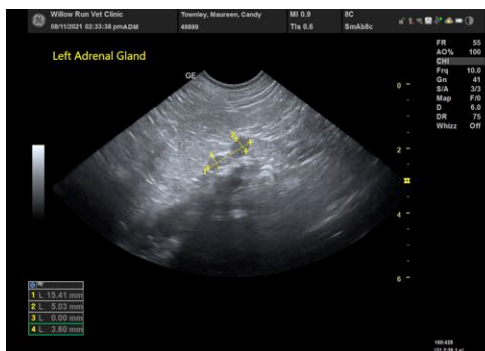
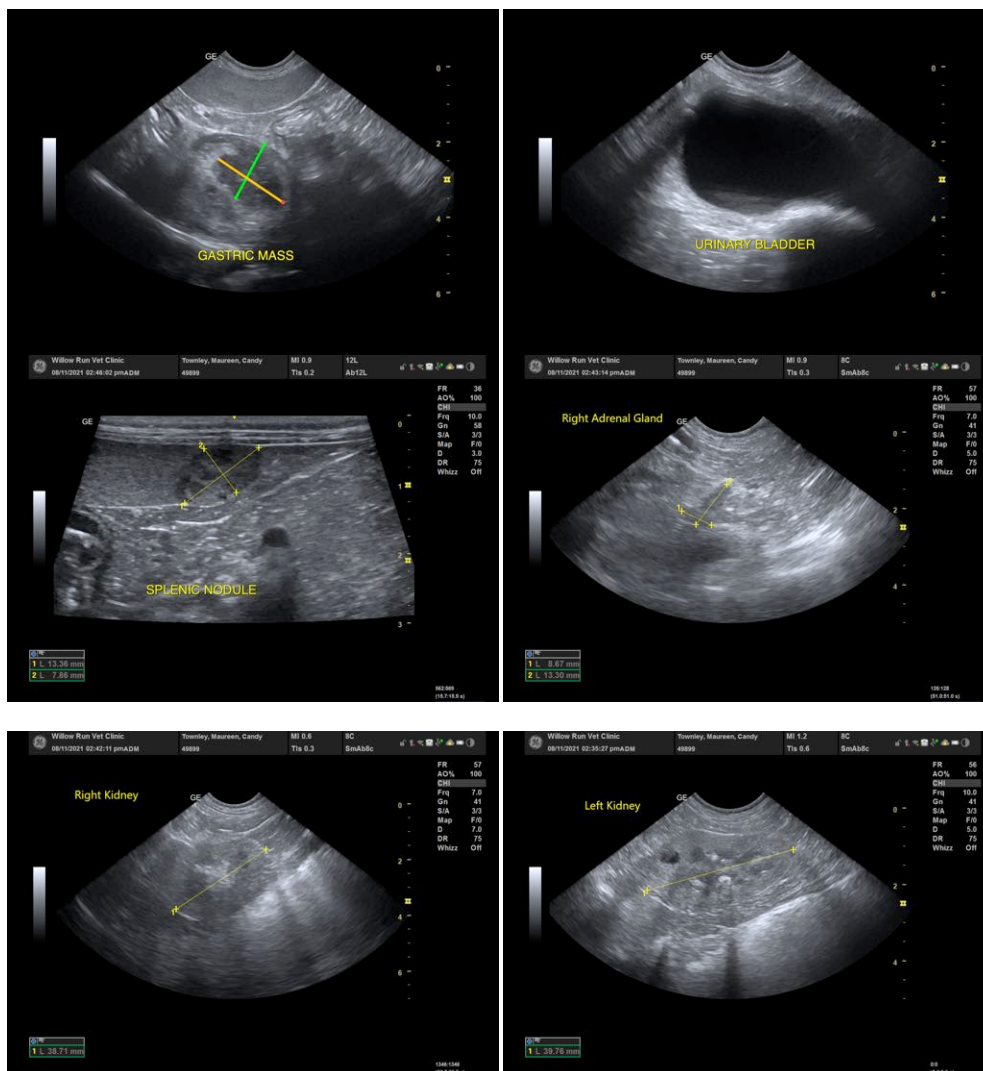
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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