



**PATIENT**

Bonnie Schulz

**SPECIES**

Canine

**BREED**

Westie

**SEX**

Spayed Female

**AGE**

14 Years 9 Months

**WEIGHT**

7.3 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Brian Barnes

**HOSPITAL NAME**

Westview VH

**REFERRING VET**

Dr. Brian Barnes

**INVOICE**

24970

**DATE**

8/24/21

**PRESENTING CLINICAL SIGNS**

Anorexia, Intermittent vomiting  
Abnormal PE/Chem/CBC/UA Results: CBC very slight anemia, HCT 35% (N 37.3-61.7), Chem Urea 14.7 (N 2.5-9.6.) Creat normal SDMA 24 (N 0-14) Snap cPI Normal Xrays: Hypovolemia, Tracheal collapse, Unremarkable abdomen AUS for further evaluation

**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 (4.29 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. Mild pyelectasia noted at 0.23 cm. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (3.5 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. Mild pyelectasia noted at 0.3 cm. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.60 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 0.46 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 not clearly visualized.

**Liver**

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are occasional ill-defined, hyperechoic nodules ranging in size from 0.25-0.75 cm.

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.

**Gastrointestinal**

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. Jejunum wall measured 0.32 cm. 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**

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.

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**Free Abdomen**

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is a mild lymphadenomegaly present. Occasional prominent mesenteric lymph nodes are observed, the largest measuring 0.74 cm x 1.35 cm. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is generally of normal echogenicity.

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**PRIMARY FINDINGS**

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- Decreased corticomedullary distinction in both kidneys with mild bilateral pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the left/right kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.

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- Heterogeneous liver with ill-defined, hyperechoic nodule – 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. The findings are relatively benign appearing and favor the likelihood of age related changes.
- Mild mesenteric lymphadenopathy – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

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**SECONDARY FINDINGS**

- Unable to visualize the spleen – The spleen could be relatively small or isoechoic to the liver and difficult to visualize. Additionally, if this pet was adopted at an older age, it is possible that the spleen has been removed.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The ultrasonographic lesions were relatively benign appearing today. An obvious cause for the recent vomiting and anorexia is not observed. If metabolic evaluation is relatively normal, then consider primary GI causes for the symptoms including GI parasitism, dietary indiscretion, mild pancreatitis, bacterial dysbiosis, food allergy, IBD, and less likely intestinal neoplasia.

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In older patients with more chronic symptoms, I would most strongly consider food allergy, IBD, and intestinal neoplasia.



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-Recommend diet trial with a novel protein/hydrolyzed prescription diet

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-Recommend GI panel for evaluation of B12 levels etc. (start empirical B12 while waiting for results)

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-If symptoms are progressing consider obtaining GI biopsies

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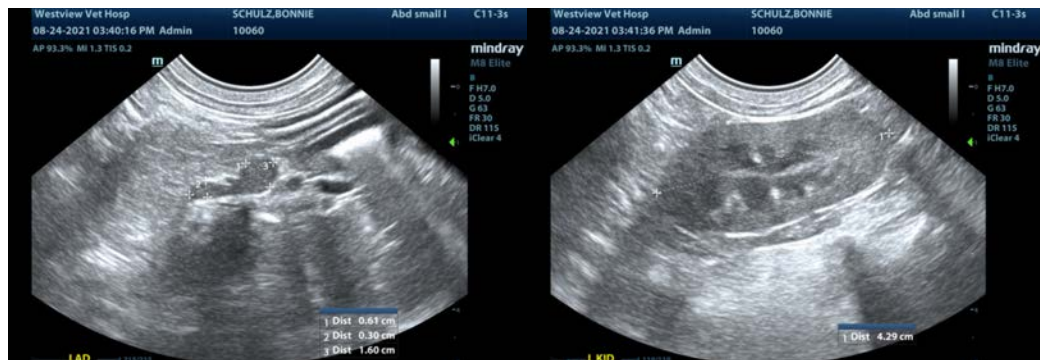
Further evaluation of the anemia with a pathologist review would be helpful to look for signs of regeneration, atypical cells, blood parasites, etc. This could be an anemia chronic disease, could be due to occult blood loss other places (check for melena, etc.), or could be due to early primary bone marrow disease, tick borne disease, etc. Recommend additional diagnostics including a GI panel with a PLI, cobalamin and folate levels to look for evidence of underlying gastrointestinal disease, as well as additional diagnostics regarding the anemia. Recommend 3-view thoracic radiographs, symptomatic therapy for GI signs, and close monitoring.

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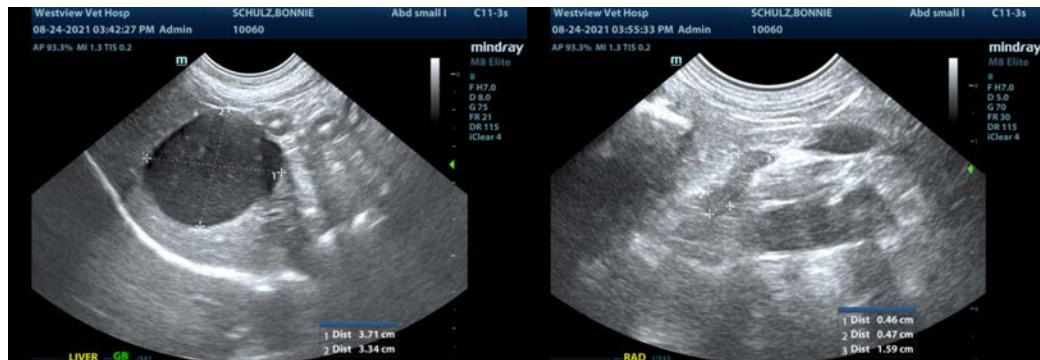
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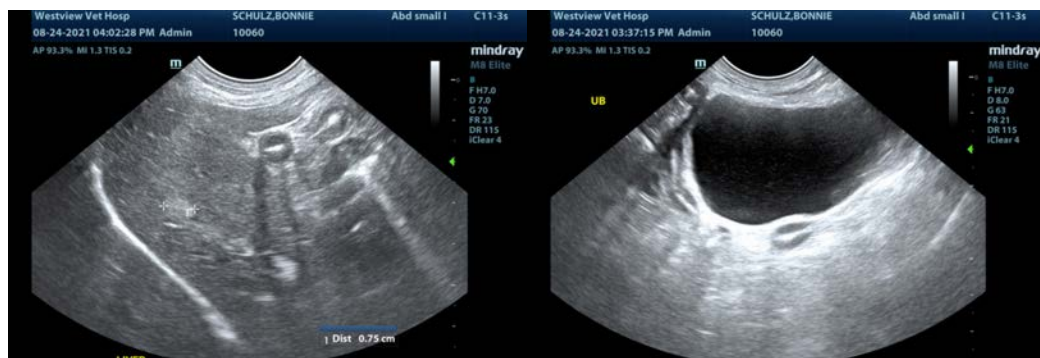


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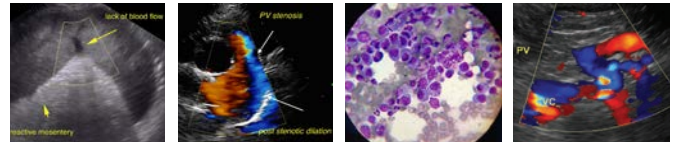
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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