**PATIENT**

Spike Mariani

**SPECIES**

Canine

**BREED**

West Highland Terrier

**SEX**

Male

**AGE**

12.5 Years

**WEIGHT**

24.4 Pounds

**INTERPRETED BY**Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)**IMAGING  
PERFORMED BY**

Amy Mayhew, LVT

**HOSPITAL NAME**

SVS Imaging MI

**REFERRING VET**Wixom Family Pet  
Practice**INVOICE**

38982

**DATE**

6/22/22

**PRESENTING CLINICAL SIGNS**

Current Medications: Interceptor plus and bravecto Patient History: Chronic history of ehrlichia positive, indolent lymphoma but asymptomatic, and proteinuria. Was cryptorchid, had abdominal testicle removed years ago. Recently PU/PD. Some mobility issues. Owner feels his breathing has been louder, but no difficulty or coughing noted.

Abnormal PE/Chem/CBC/UA Results: Grade 2 dental dz, new grade 2-3/6 left sided heart murmur, mild decrease ROM in bilateral hips. Bloodwork: mild lymphocytosis and hyperglobinemia (chronic), mild increase BUN, T4 slightly low, USG 1.025. 3 view chest rads: NSF \*\*Please see attached labs \*\*Please see attached rads for cardiac review

**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 prostate is large and hyperechoic, measuring 2.94 cm in height in the sagittal view. The parenchyma is heterogeneous with too numerous to count small cystic areas.

The left kidney has a normal shape and size (5.96 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.61 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.48 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**

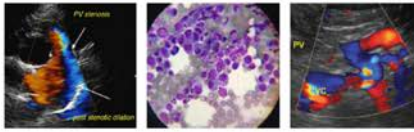
The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There is a hypoechoic, somewhat cystic/mixed echogenic nodule towards the head of the spleen, measuring 1.37 cm x 1.29 cm.

**Liver**

The liver is large in size, and normal in 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. No focal nodules or cystic lesions are observed.

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The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

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***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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West Highland Terrier

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. Duodenum wall measured 0.49 cm. Jejunum wall measured 0.33 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**SEX**

Male

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. Colon

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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.

**WEIGHT**

24.4 Pounds

***Free Abdomen***

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.

**INTERPRETED BY**

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
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Medicine)

**ULTRASONOGRAPHIC FINDINGS**

- Large, heterogeneous, cystic prostate – most consistent with an involuted/previously diseased prostate post-castration. These prostates can still have prostatitis, and underlying neoplasia cannot be ruled out as a possibility (seems unlikely). Recommend urinalysis and culture.
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Hypoechoic/cystic mixed echogenic nodule in the head of the spleen – This lesion could represent a benign or neoplastic process.
- Large, heterogeneous 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.
- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

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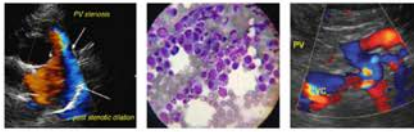
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

An obvious cause for the PU/PD reported is not visualized. The prostate is abnormal. It is large, hyperechoic, and severely heterogeneous/cystic. This could be normal for a previously diseased involuted prostate post-castration, but if there is previous prostatitis present, etc., this could prove as a nidus. Recommend a urinalysis and culture, and if it is felt that prostatic symptoms are progressing, you

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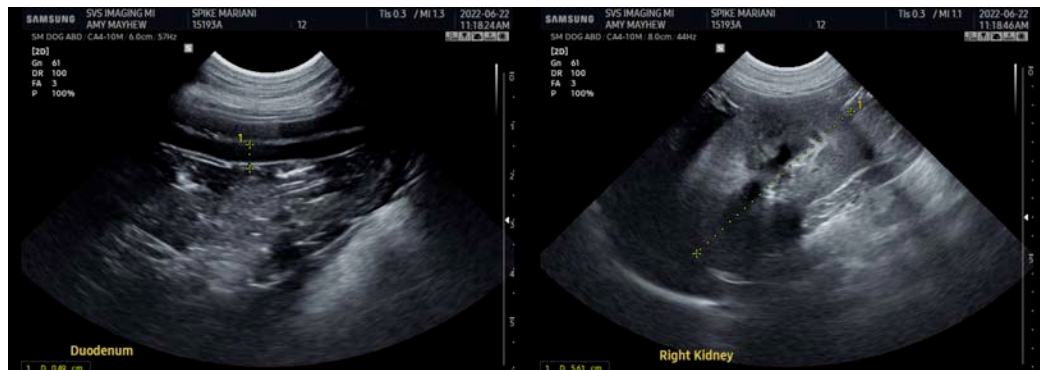
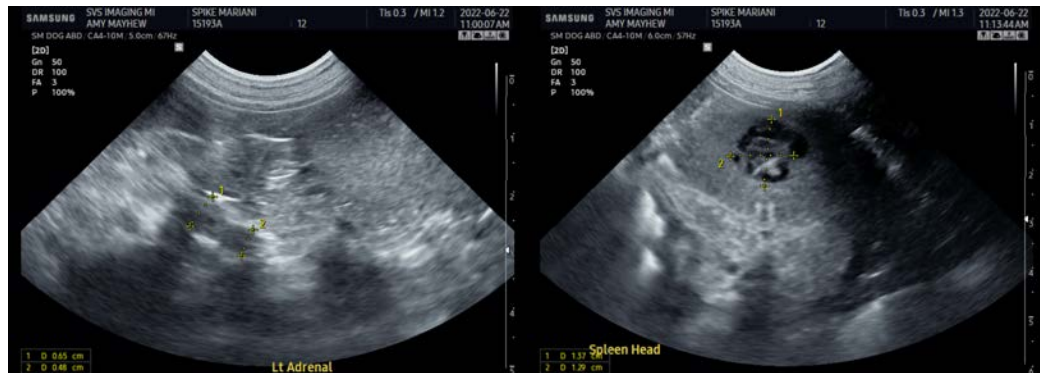
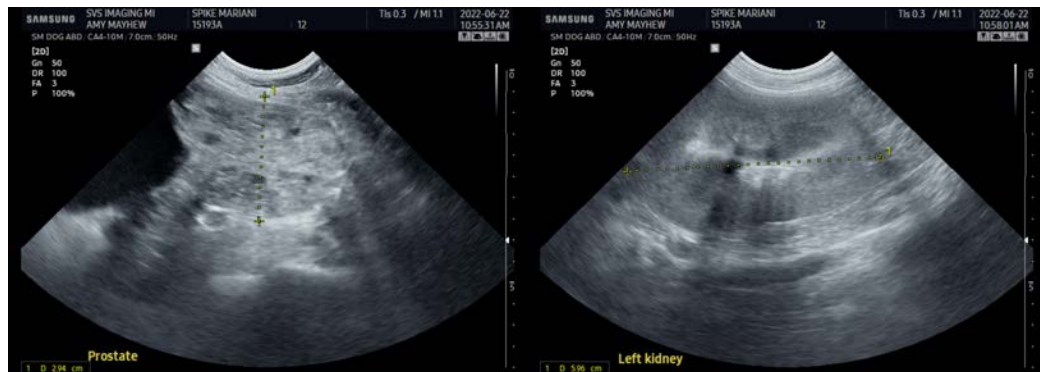
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could consider a fine needle aspirate.

There is a largely hypoechoic nodule in the cranial pole of the spleen. This appears somewhat cystic with some hyperechoic material within. This lesion could represent a benign or neoplastic lesion. Options moving forward would include splenectomy with histopathology, a fine needle aspirate, or continued monitoring with ultrasound.

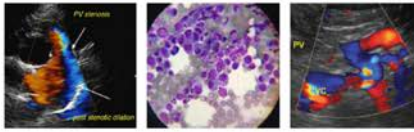
The liver is subjectively large and heterogeneous and there is some moderate debris in the gallbladder. The significance of these changes is unclear with no liver enzyme elevations. You could consider a liver function test or continued monitoring. Additionally, a fine needle aspirate of the liver could be considered due to the lymphoma diagnosis to look for possible progression or spread.

Initial next step evaluation for the PU/PD reported would include a urinalysis, culture, a review of the calcium levels, +/- a liver function test and possible further evaluation of the splenic nodule. Additionally, you could consider consultation with your veterinary oncologist regarding the possibility of progression of the indolent lymphoma.



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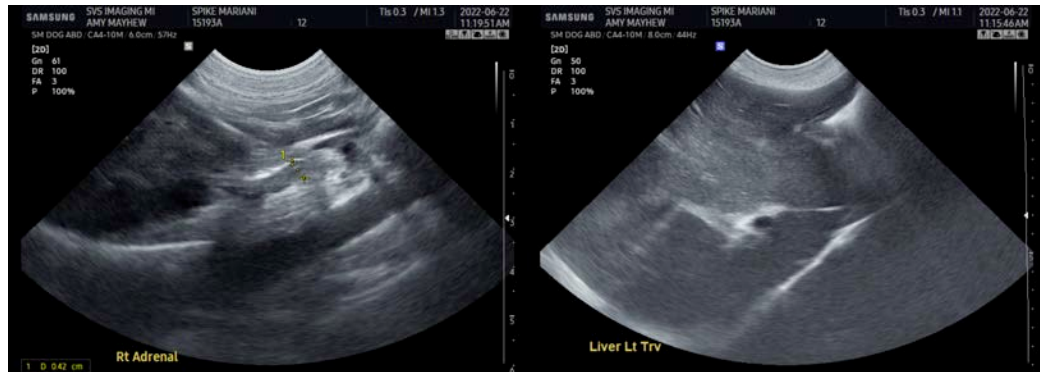
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

kathleen.sennello@sonopath.com

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