

**PATIENT**

Waldo Schmalz

**SPECIES**

Canine

**BREED**

Terrier Mix

**SEX**

MN

**AGE**

12 yrs

**WEIGHT**

20.2 lbs.

**INTERPRETED BY**R. McKenzie Daniel,  
DVM, DABVP (Canine  
and Feline)**IMAGING  
PERFORMED BY**

Rachel Runnells, RVT

**HOSPITAL NAME**

SVS Imaging KC

**REFERRING VET**

Dr. Kristine Mulloy

**INVOICE**

14762

**DATE**

8/30/22

**PRESENTING CLINICAL SIGNS**

Patient presented on 5/20/22 for urinating in the house- U/A= WBC's 25+ /hpf and RBC's + Bacteria TNTC. Fecal = WNL. CBC/CHEM = WNL, T4 = slightly low, CHOL = slightly high. Treated with clavamox and carprofen. Presented again on 7/6/22 owner said started urinating inappropriately again after meds were completed. Owner wanted to try another round of clavamox. Presented again on 8/17/22 for urinating in the house, saw little change on antibiotics. U/A = RBC's 20-30 /hpf and WBC's 2-3/hpf. Sent off urine culture and susceptibility to Antech = Escherichia coli and proteus mirabilis. Did xrays and sent to radiographic specialty clinic, they said unremarkable abdomen and complaint is not identified- no evidence for radiographic calculi. We tried to place a urinary catheter but could not get passed more than 3 inches into urethra. Treated with baytril and carprofen. Presented again on 8/24/22 said the antibiotics were helping some this time but started having bloody urine on 8/23/22. CBC= WNL and CHEM= Increased ALP, BUN and Ca. Urine drips when going outside to eliminate.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder was mildly subnormal in size exhibiting moderate to marked variable mural thickening primarily in the ventral, apical, and mid dorsal urinary bladder wall. Dorsal-apical urinary bladder wall width measured 1.2 cm. Primarily maintained homogeneous mural echogenicity was noted. Minor, primarily dependent, possibly adhered luminal mineral was noted. Minimal anechoic urine was present. The urethra exhibited normal structure and tone to a depth of 3.0 cm.

The residual prostate exhibited mild prominent size with maintained symmetrical capsule contour and definitively differentiated prostatic capsules compared to adjacent tissue. Mildly nonhomogeneous to hypoechoic residual prostate parenchyma exhibiting pinpoint hyperechoic parenchyma foci were present. The residual prostate measured 1.8 cm in diameter.

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. A nonuniform cortex echogenicity exhibiting cortical cysts and likely cortical microinfarctions was noted. Pinpoint areas of medullary mineral were noted in the bilateral kidneys. Moderate loss of corticomedullary symmetry and definition was noted, expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 5.4 cm in length. The right kidney measured 5.3 cm in length.

**Adrenal Glands**

The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.54 cm width in the cranial pole and 0.62 cm width in the caudal pole. The right adrenal gland measured 0.54 cm width in the cranial pole and 0.53 cm width in the caudal pole.

**Spleen**

The spleen exhibited a mildly expansive yet symmetrical isoechoic to mildly nonhomogeneous small mass present in the mid spleen with associated mild symmetrical distortion of the medial splenic capsule. Within the mass were several non-disruptive hyperechoic nodules. The small mass measured

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approximately 3.1 cm in diameter. An example of an Intra-mass hyperechoic nodule measured 0.39 cm in diameter.

**Liver/ Gallbladder****SPECIES**

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The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size containing mild, non-dependent, mildly hyperechoic gallbladder debris. The gallbladder and peripheral gallbladder were sonographically normal. 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.

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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.

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**Pancreas**

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

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**Free Abdomen**

No overt lymphadenopathy or peritoneal effusion was present.

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**ULTRASONOGRAPHIC FINDINGS**

- Moderate to markedly thickened urinary bladder with minor possibly adhered luminal mineral
- Mild residual prostatomegaly exhibiting pinpoint hyperechoic parenchyma foci
- Bilateral moderate chronic renal changes exhibiting pinpoint medullary mineral and small cortical cysts
- Nonspecific small splenic mass
- Vacuolar hepatopathy pattern - subjectively benign
- Mild gallbladder debris (non-mucocele)

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS****INVOICE**

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General considerations for the urinary bladder may include moderate to marked chronic cystitis vs. extensive urinary bladder tumor. Primary concern for urinary bladder neoplastic process, although not definitive, is warranted with potential early involvement of the residual prostate, given the presence of

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mild residual prostatomegaly exhibiting potential for pinpoint to emerging areas of parenchymal mineralization.

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Assuming normal clotting status, ultrasound-guided FNA of the residual prostate, +/- screening BRAF Assay, is warranted. Urinary bladder and prostatic biopsies may be required for a definitive diagnosis.

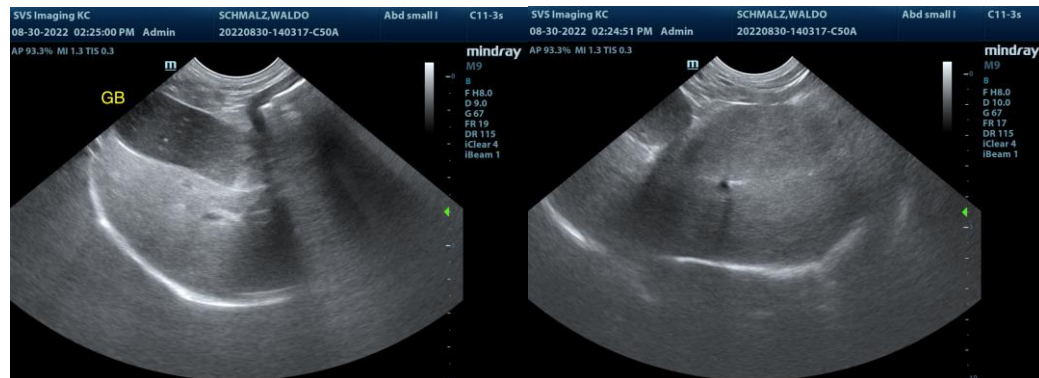
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The splenic mass may indicate benign hyperplasia, hematopoiesis, granuloma with concurrent myelolipomas, or incidental splenitis, with neoplastic criteria considered less likely, although cannot be definitively excluded based on sonographic appearance. Concurrent screening splenic mass FNA using a 25-gauge needle is recommended for cytology.

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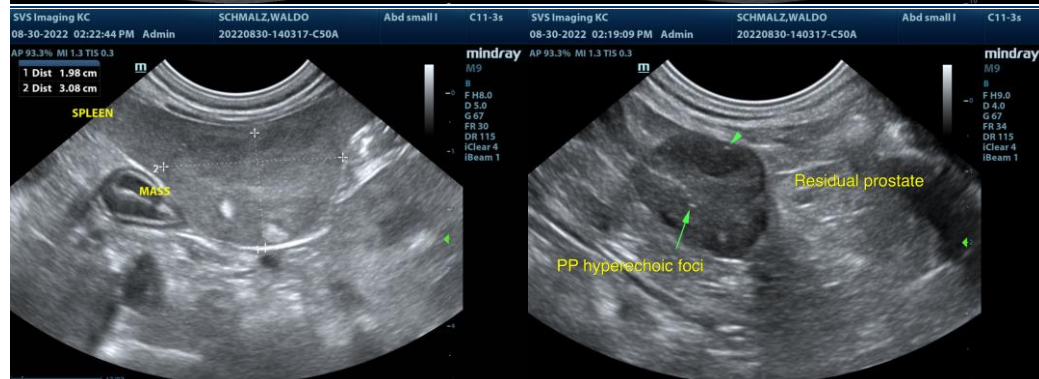


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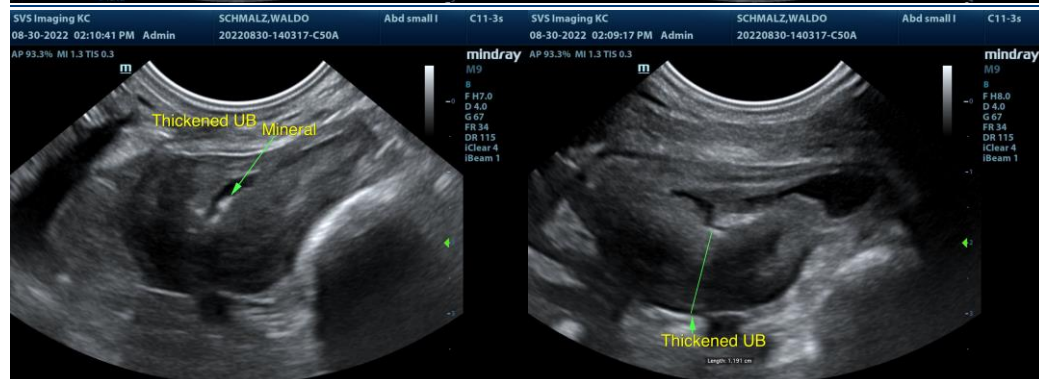


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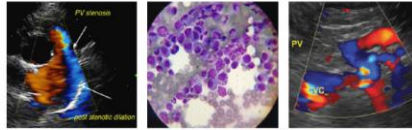
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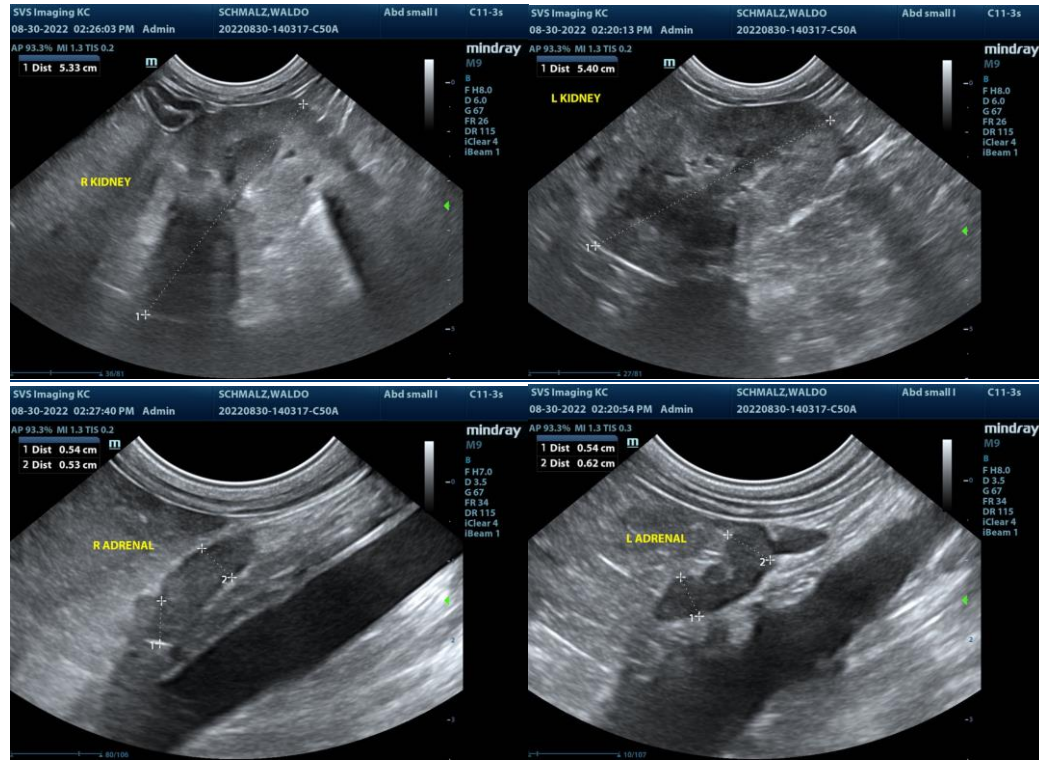
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**  
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