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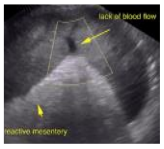

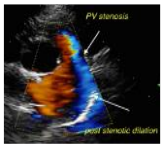

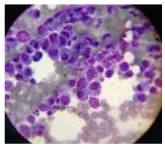
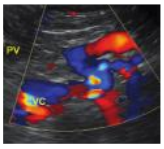

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1-800-838-4268 info@sonopath.com

PATIENT
Spike Marvray

SPECIES
Canine

BREED
Miniature Pinscher

SEX
MN

AGE
16y 6m

WEIGHT
5 lbs.

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

IMAGING PERFORMED BY
Jessica Miller

HOSPITAL NAME
Banfield PH of Bridgewater

REFERRING VET
Dr. Baker

INVOICE
15770

DATE
1/3/23

PRESENTING CLINICAL SIGNS

Hematuria- started 12/24/22. Current meds: MRX Renal RL
Abnormal PE/Chem/CBC/UA Results: ALKP 507, BUN 53, creat 2, Phos 7, SDMA 22 UA: RBC 750, transitional epith 2-3, squamas epih 2-3, protein 2+ SG: 1.014

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and cystourethral junction exhibited normal thickness and tone. Anechoic urine was present in the lumen with no calculi or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic mural changes was noted.

The residual prostate was free of pathology with mild residual prostatic urethra dilation, which is nonspecific and likely incidental. Post residual prostatic urethra was normal to a depth of 2.0 cm.

The area of the aortic trifurcation was free of pathology.

Both kidneys exhibited moderate to severe chronic degenerative changes including marked loss of corticomedullary border demarcation and minor areas of medullary mineralization along with bilateral cortical to corticomedullary cysts, more prominent in the left kidney, with the largest left kidney cyst measuring 2.4 cm in diameter, present in the lateral left kidney with mild associated renal capsule distortion. The cysts were thinly walled containing anechoic fluid. Bilateral mild pyelectasia was noted. No overt evidence of left or right retroperitoneal inflammation. The left kidney measured 4.6 cm in length. The right kidney measured 3.6 cm in length.

Adrenal Glands

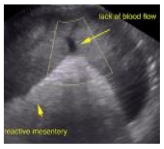
The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 1.7 cm length x 0.55 cm width at the caudal pole. The right adrenal gland measured 1.7 cm length x 0.44 cm width at the caudal pole. No evidence of adrenomegaly or tumors.

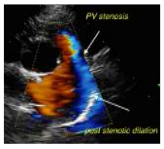
Spleen

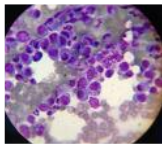
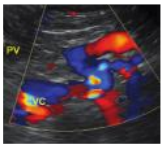
The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Hyperechoic, nondisruptive nodules were present throughout the cranial to caudal parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory or neoplastic changes were not noted. The hyperechoic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas.

Liver/ Gallbladder

The liver exhibited potential for mild enlargement. The liver parenchyma echogenicity was overall normal with a moderate coarse echotexture and subjective mild parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. Lobar biliary tree mineralization was present in the right medial to lateral liver lobe. The gallbladder was non-distended in size with mildly irregular hyperechoic to thickened gallbladder walls containing primarily anechoic





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content with mild, nonorganized, echogenic, nonmineralized, luminal gallbladder debris. The cystic and common bile ducts were normal.

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.

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.

Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum, consistent with age-related pancreatic changes and incidental. No signs of active inflammation or neoplasia.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Sonographically unremarkable urinary bladder, residual prostate, and visible proximal urethra
- Bilateral moderate to severe chronic degenerative to cystic renal changes with mild bilateral pyelectasia
- Benign hepatopathy exhibiting lobar biliary tree mineralization
- Potential chronic cholecystitis (non-mucocele)

Secondary Findings

- Benign splenic nodules - consistent with benign myelolipomas, previous infarcts, or possible emerging splenic mineralization

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Without evidence of lower urinary tract pathology, i.e., tumors, cystitis criteria, or calculi, the hematuria in this patient may be primarily renal. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered. CRD therapy and continued monitoring of hematuria would be appropriate. Assuming no evidence of UTI, screening BRAF Assay could be considered although no overt evidence of urinary tract neoplastic criteria.

The lobar biliary tree mineralization may be incidental, though at times this finding has been associated with chronic hepatobiliary inflammation. Screening hepatic FNA cytology could be considered to assess for evidence of inflammatory cells. Empirically, hepatosupportive medications and monitoring of hepatic enzymes would be appropriate.

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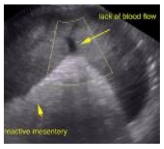
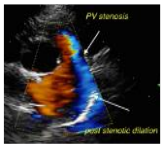
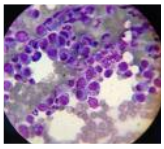
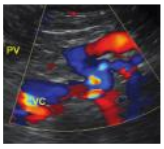

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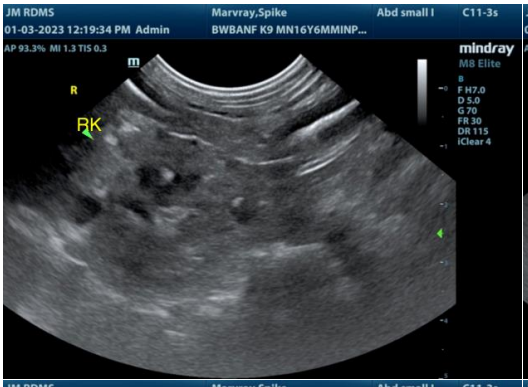

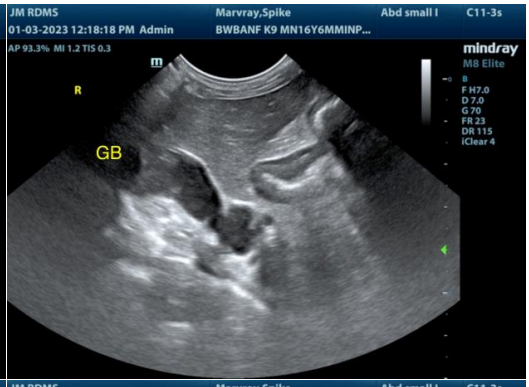

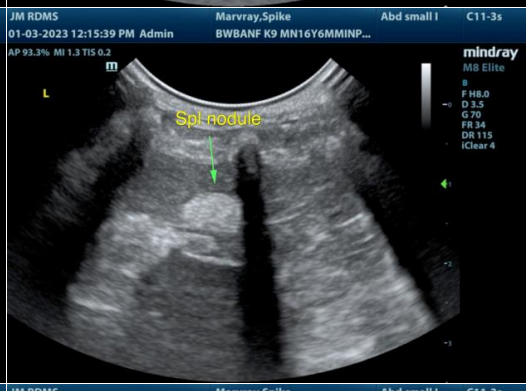

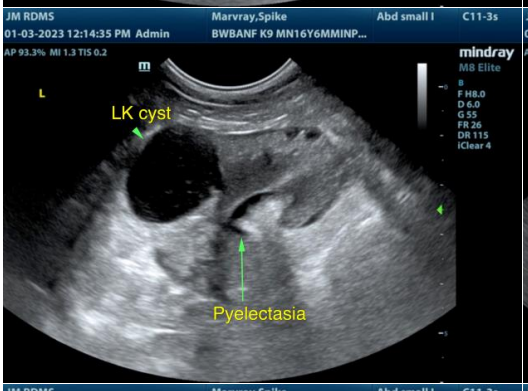

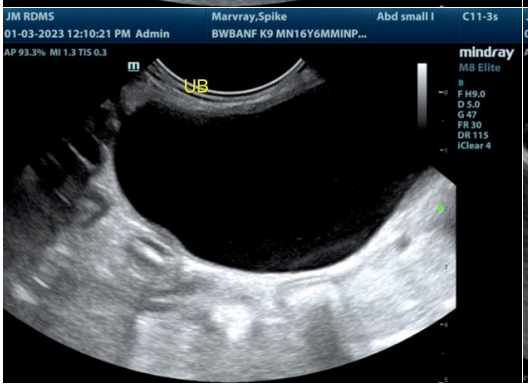

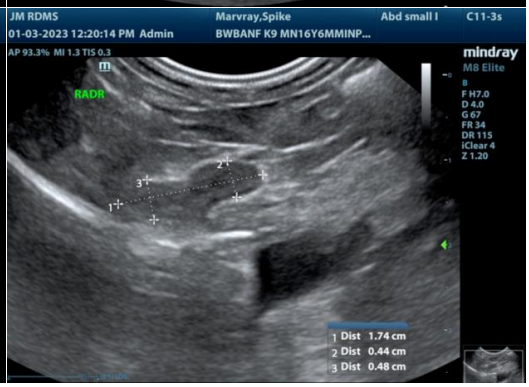

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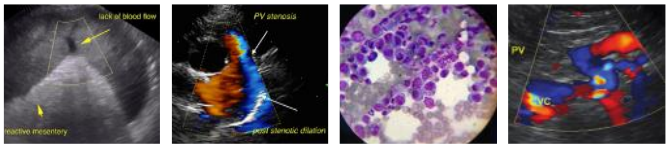

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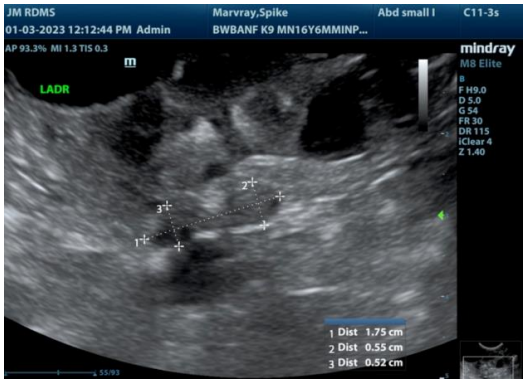

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
info@SonoPath.com