**PATIENT**

Tibby Richman

**SPECIES**

Feline

**BREED**

DSH

**SEX**

SF

**AGE**

2 yrs

**WEIGHT**

5kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Sarah Pender, CVT

**HOSPITAL NAME**

SVS Imaging QC

**REFERRING VET**

Dr. Susan Oliver

**INVOICE**

17116

**DATE**

8/31/22

**PRESENTING CLINICAL SIGNS**

Hematuria, strangiuria, poliakiuria. Passed ammonium urate (100%) bladder stones July 25, 2022. Started on K/D food. Urinary signs started again Aug 16th. Given Convenia on 8-16, and 8-30. U/S today with cysto. Can also send out Pre and Post BA samples - test was performed today, but has not yet been sent out, waiting on US report

Abnormal PE/Chem/CBC/UA Results: CBC - ok. CHEM - glucose 202, ALT 140, U/A via cysto today- urine bloody, 200-300 RBCS, 2+ cocci, 15 ketones, 100 mg/dL glucose - suspect stress/pain induced hyperglycemia and glucosuria urine culture pending.

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

The urinary bladder was subnormal in size owing to lack of urine distention. A minimal amount of anechoic urine was present. Multiple areas of dependent to possibly adhered mineral noted, extending into the area of the cystourethral junction. Mild concurrent proximal urethral hyperechoic sand was present. No evidence of urethral obstruction noted.

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 and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. The left kidney measured 3.7 cm in length. The right kidney measured 4.0 cm in length.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.42 cm.

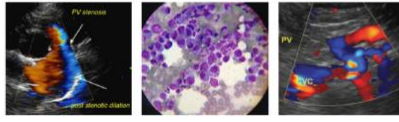
The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.50 cm.

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical 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, neoplastic, or benign parenchyma changes were not noted.

**Liver/ Gallbladder**

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature/vascular volume were normal in appearance without signs of congestion. The portal vein appeared to exhibit subjective normal volume with subjective normal branching at the area of the portohepatis. The caudal

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vena cava at the level of the liver and diaphragm, appeared to exhibit normal volume, measuring 0.58 cm in diameter. By comparison, the portal vein measured 0.40 cm in diameter.

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The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

***Gastrointestinal*****BREED**

DSH

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was contained mild retained anechoic antrum and pyloric fluid without evidence of mechanical pyloric outflow obstruction.

**SEX**

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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*****Primary Findings***

- Small yet multiple areas of dependent potential adhered urinary bladder mineral, concurrent nonobstructive urethral sand
- Normal bilateral kidneys- no evidence of renal mineralization or pyelectasia
- Low grade hepatopathy. The liver exhibited normal hepatic vascular volume.

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***Secondary Findings***

- Minor retained gastric fluid

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS****REFERRING VET**

Dr. Susan Oliver

Urine culture and sensitivity on sterile urine sample is recommended, even with recent antibiotic administration. The small urinary bladder mineral/calculi and proximal urethral sand did not appear to be obstructive given the subnormal urinary bladder size. Potential for some degree of mild concurrent cystitis is suspected. Urinary diet may prove beneficial. Urinary bladder sonographic reassessment is recommended, if continued evidence of stranguria is present.

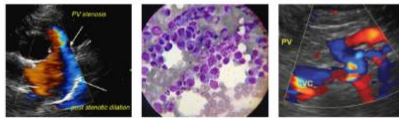
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No obvious portosystemic shunt with potential for low grade inflammatory hepatopathy. Screening hepatic FNA cytology, assuming normal clotting status, could be considered with potential identification of inflammatory cell type (if present). Bile acid testing is warranted, primarily to ensure normal hepatic functionality and further assessment of nonobvious vascular anomaly.

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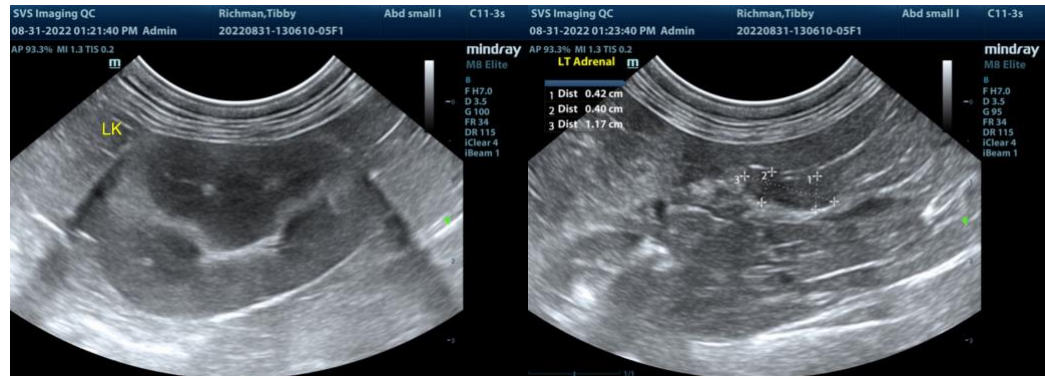
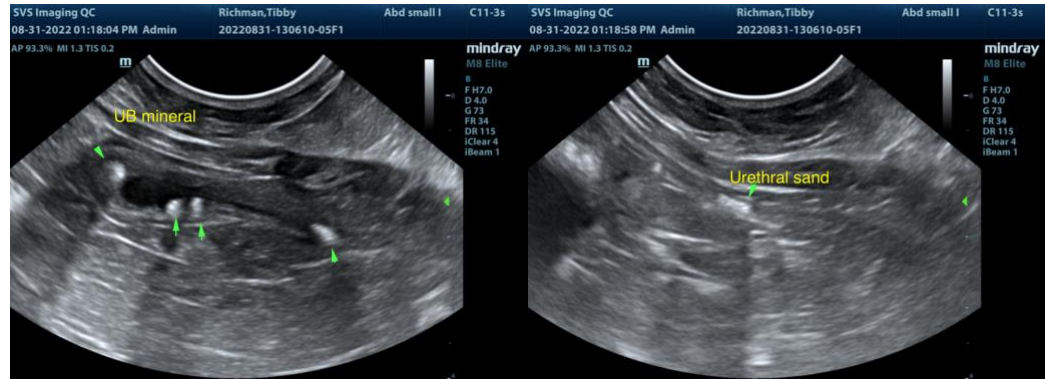
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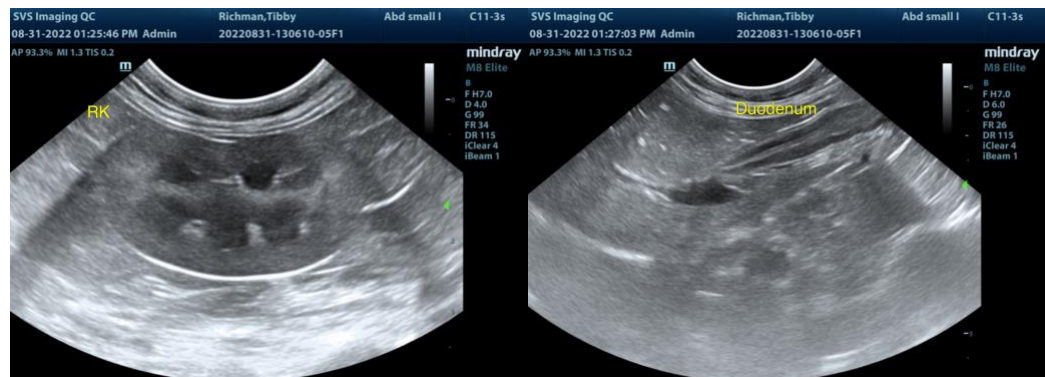
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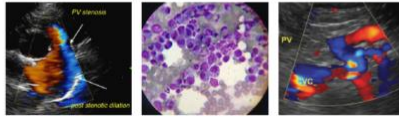
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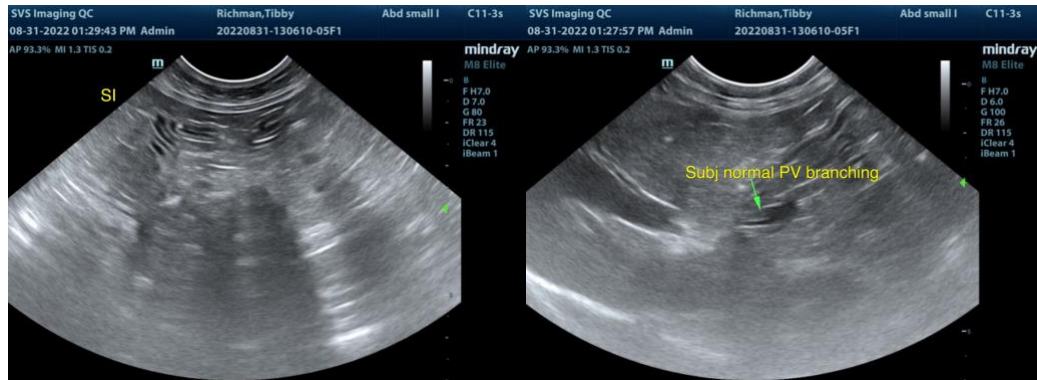
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)**  
 info@SonoPath.com

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