**PATIENT**

Cooper Johnson

**SPECIES**

Canine

**BREED**

Lab

**SEX**

Neutered Male

**AGE**

13 Years

**WEIGHT**

73 Pounds

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

Sarah Pender, CVT

**HOSPITAL NAME**

SVS Imaging QC

**REFERRING VET**

Dr. Jennifer Duster

**INVOICE**

14547

**DATE**

3/28/22

**PRESENTING CLINICAL SIGNS**

History: Straining to urinate - goes outside and will position to urinate and will take minutes for him to go. Asking to go outside all the time and having some accidents in the house. No not eating and vomiting up food.

Abnormal PE/Chem/CBC/UA Results: Weight loss noted recently, MM pink, CRT WNL. Blood work - slight increase to BUN, Creatinine, and SDMA. Mild increase in ALT but rest of liver enzymes normal. CBC normal. Lateral radiograph taken to assess for bladder stones - no stones noted in bladder, but cranial abdomen appears unusual. Seen at ISU on 10/06/2021 for a cardiac workup - no abdominal ultrasound performed at that time. Currently on pimobendan, and enalapril orally. No other routine meds.

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

The urinary bladder was overall normal in size and tone. Primarily anechoic content was present with pinpoint to focal intermittent dependent mineral. The area of the caudal trigone and urinary bladder neck exhibited mildly nonhomogeneous mural thickening, extending into the proximal urethra and area of the residual prostate. The residual prostate did not appear to be overtly enlarged yet was indistinctly visualized, obscured by associated regional urinary bladder neck and proximal urethral thickening. The proximal urethra exhibited mild asymmetrical thickening to a depth of 2.0 cm, measuring 1.3 cm in width. No overt evidence of urethral mural mineralization. The deep visualized proximal urethral to a depth of 3.0 cm, by comparison, appeared to be relatively normal and, by comparison, measured 0.74 cm in width.

The left and right kidneys were normal in size and contour. The medullary parenchyma was replaced by moderate to severe anechoic fluid, extending into the lateral diverticula, more prominent in the left kidney compared to the right with only minimal left medullary parenchyma present. Concurrent left and right hydroureter, extending from the bilateral kidneys respectively caudally to the level of the ureteral papilla. The left and right ureters exhibited variable yet primarily moderate to severe dilation with retained urine. A small amount of scant left retroperitoneal free fluid noted. The right kidney measured 7.8 cm. The left kidney measured 6.9 cm.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.77 cm width at the caudal pole and 0.50 cm width at the cranial pole.

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.70 cm width at the caudal pole and 0.67 cm width at the cranial pole.

**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**

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. Solitary, nondisruptive or expansive mildly hypoechoic intraparenchymal nodule noted in the ventral aspect of the mid to left liver, measuring 2.2 cm in diameter. The hepatic and portal vasculature were normal in appearance without signs of congestion.

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The gallbladder was non distended in size with mild gallbladder debris. The cystic duct and common bile ducts were normal without evidence of dilation.

***Gastrointestinal*****SPECIES**

Canine

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained moderate ingesta, exhibiting progressive distal acoustic shadowing.

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.

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Lab

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 was evident.

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13 Years

***Free Abdomen***

No overt lymphadenopathy or peritoneal effusion was present.

**WEIGHT**

73 Pounds

**ULTRASONOGRAPHIC FINDINGS**

- Thickened urinary bladder trigone, neck and proximal urethra with obscured residual prostate visualization
- Bilateral, moderate to severe hydronephrosis with concurrent significant left and right hydroureter to the level of ureteral papilla
- Low-grade hepatopathy with nonspecific likely benign intraparenchymal nodules- suspect low-grade hepatopathy with focal area of hematopoiesis or nodular to regenerative hyperplasia
- Gastric ingesta

**INTERPRETED BY**

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Unfortunately, the presentation of the thickened caudal trigone, urinary bladder neck and proximal urethra are consistent with probable extensive tumor with transitional cell carcinoma considered most probable until proven otherwise. This has resulted in obstruction of the ureteral papilla with secondary generalized left and right hydroureter and left and right hydronephrosis. No overt evidence of regional metastasis. This case appears to be nonsurgical. Oncology consult could be considered.

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The presence of gastric ingesta may indicate recent meal ingestion, however, given the reported inappetence in this patient, along with vomiting, gastric hypomotility may be present. No overt evidence of gastric foreign material, which is thought less likely.

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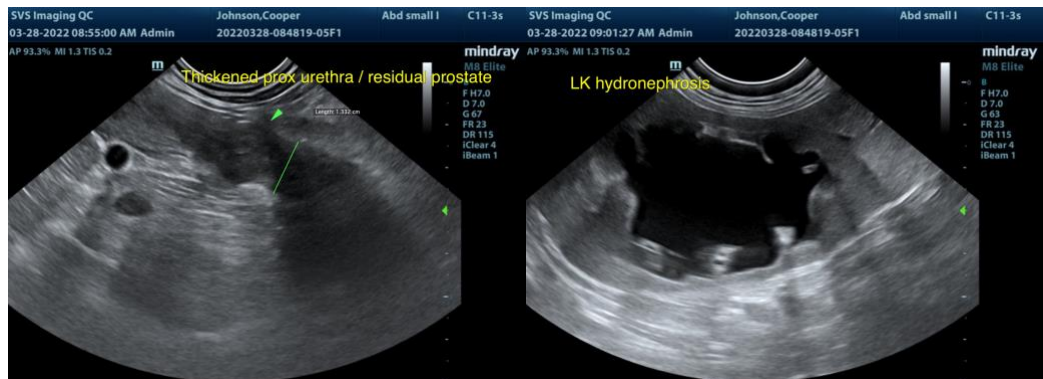
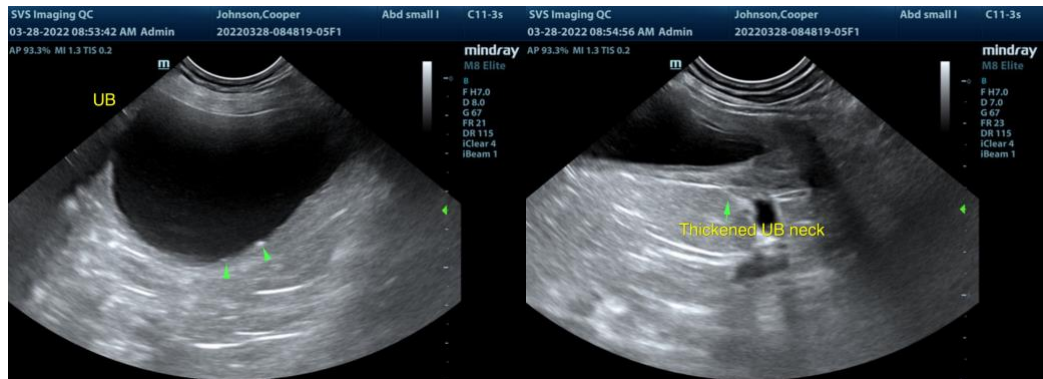
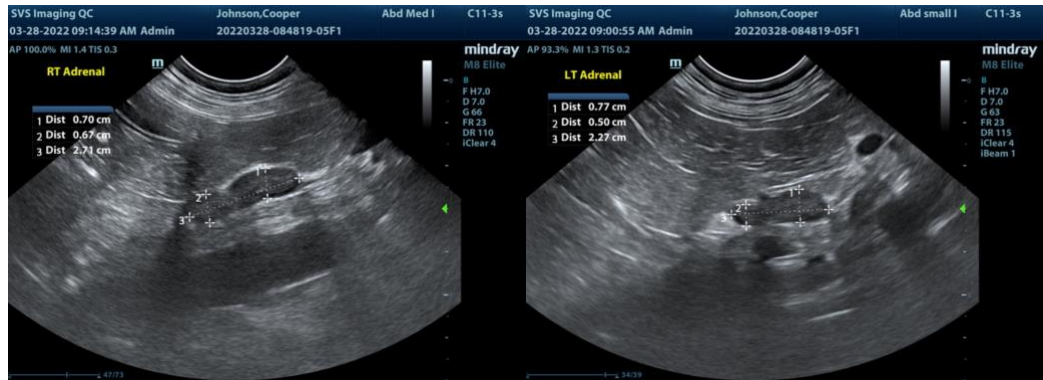
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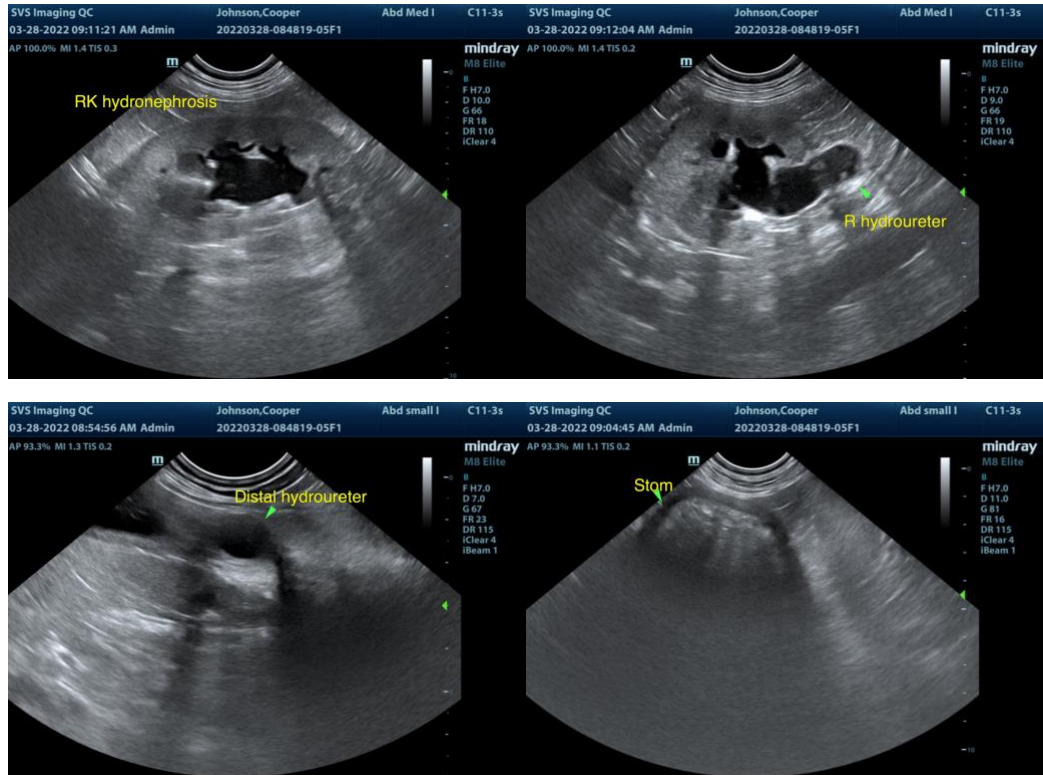
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)  
info@SonoPath.com