

## PATIENT

Theodora McMillan

## PRESENTING CLINICAL SIGNS

## SPECIES

Canine

## BREED

Yorkie X

inappropriate urination since 7/7/22. Urine C/S showed staph pseudointermedius from bladder on 7/7/22. Patient used 2 rounds of Clavamox but no improvement in comfort. Patient is also on Visbiome. Patient strains and several attempts to urinate. Had recheck 8/12/22 and urine C/S was negative, but patient was still straining. Performed vaginal exam but no BFs were found. Patient is unlikely to have FT since rarely goes outdoors and uses potty pads inside. Physical exam findings: Periodontal disease BW and UA values: Accuplex negative, no fecal, UA shows increased RBCs and WBCs, 3+ proteinuria, culture is pending. ALP 189 Radiograph Findings (email radiographs if available): None performed Reason for Ultrasound: evaluate lower urinary tract

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### SEX

Spayed Female

### *Urinary System*

The urinary bladder is moderately distended with mildly echogenic urine. The Bladder wall appears diffusely mildly thickened and irregular, but focally at the level of the trigone there is irregular, thickened, partially mineralized tissue measuring >1.32 cm x 0.72 cm, most consistent with a focal bladder mass lesion. Right-sided ureteral dilation is evident at the level of the urinary bladder.

### AGE

13 Years

The left kidney has a normal shape and size (3.9 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There are numerous cortical cysts evident with the largest measured 0.87 cm. Additionally, there is a 0.48 cm non-obstructive nephrolith, and pyelectasia at 0.25. There is no evidence of perinephric inflammation or effusion. There is no evidence of infarcts or hydroureter. Renal vasculature is normal.

### WEIGHT

8 Pounds

## INTERPRETED BY

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

The right kidney is borderline large (4.2 cm) with numerous small cortical cysts and a 0.34 cm non-obstructive nephrolith. There is severe pyelectasia present, consistent with hydronephrosis. Renal pelvis measures 1.3 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. Renal vasculature is normal. The right ureter is dilated and can be followed from the renal pelvis to the junction with the urinary bladder. The right ureter measures at 0.33 cm mid abdomen.

## IMAGING BY

Loetitia Saint-Jacques,  
LVT

### *Adrenal Glands*

The left adrenal gland is normal in size measuring 0.69 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.

## HOSPITAL NAME

Brighton Greens VH

The right adrenal gland is normal in size measuring 0.49 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.

## REFERRING VET

Dr. Robin Janeway

### *Spleen*

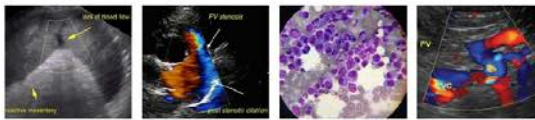
The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

## INVOICE

40744

## DATE

8/24/22



**PATIENT**

Theodora McMillan

**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. There are numerous ill-defined, hypoechoic nodules throughout the liver varying in size from 0.5-1.0 cm.

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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.

**SEX**

Spayed Female

**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.

**AGE**

13 Years

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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**WEIGHT**

8 Pounds

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.

**INTERPRETED BY**

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**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.

**IMAGING BY**

Loetitia Saint-Jacques,  
LVT

**Free Abdomen**

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. Mesenteric lymph nodes appear normal. The right sublumbar lymph node measures at 0.53 cm. The left measures 0.64 cm. The omentum is of normal echogenicity.

**ULTRASONOGRAPHIC FINDINGS**

**HOSPITAL NAME**

Brighton Greens VH

- Focal irregularity and mineralization of the urinary bladder wall with secondary ureteral obstruction – most consistent with a bladder mass located at the trigone and secondary right-sided ureteral obstruction.

**REFERRING VET**

Dr. Robin Janeway

- Decreased corticomedullary distinction in both kidneys with cortical cysts, non-obstructive nephroliths, and pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.

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- Right-sided hydronephrosis and hydroureter – This is likely secondary to the obstructive effects of the trigonal mass.

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- Large, heterogeneous liver with hypoechoic nodules – 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. The appearance of the hypoechoic nodules trends towards a benign appearance, although a neoplastic process cannot be ruled out.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The focal thickening and mineralization in the trigone of the urinary bladder is most consistent with a transitional cell carcinoma or other bladder mass lesion. Additionally, there is obstruction of the right ureter and subsequent early right hydronephrosis. Options to obtain a diagnosis include a traumatic catheterization, urine BRAF test, or surgical biopsies. Additionally, recommend a urinalysis and culture. Once a diagnosis is obtained, recommend consultation with a veterinary oncologist regarding treatment options and prognosis.

**SEX**

Spayed Female

The changes to the liver are non-specific. If additional evaluation is desired, you could consider a liver function test and a fine needle aspirate.

**AGE**

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Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

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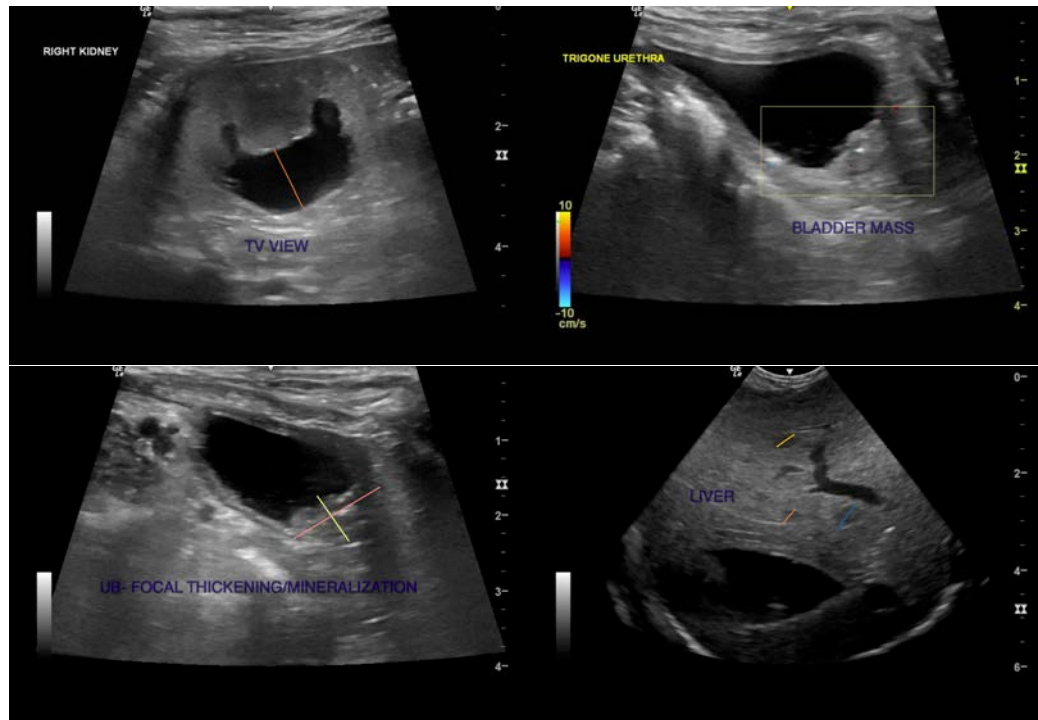
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**HOSPITAL NAME**

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**REFERRING VET**

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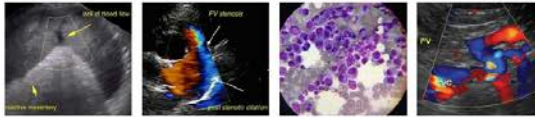


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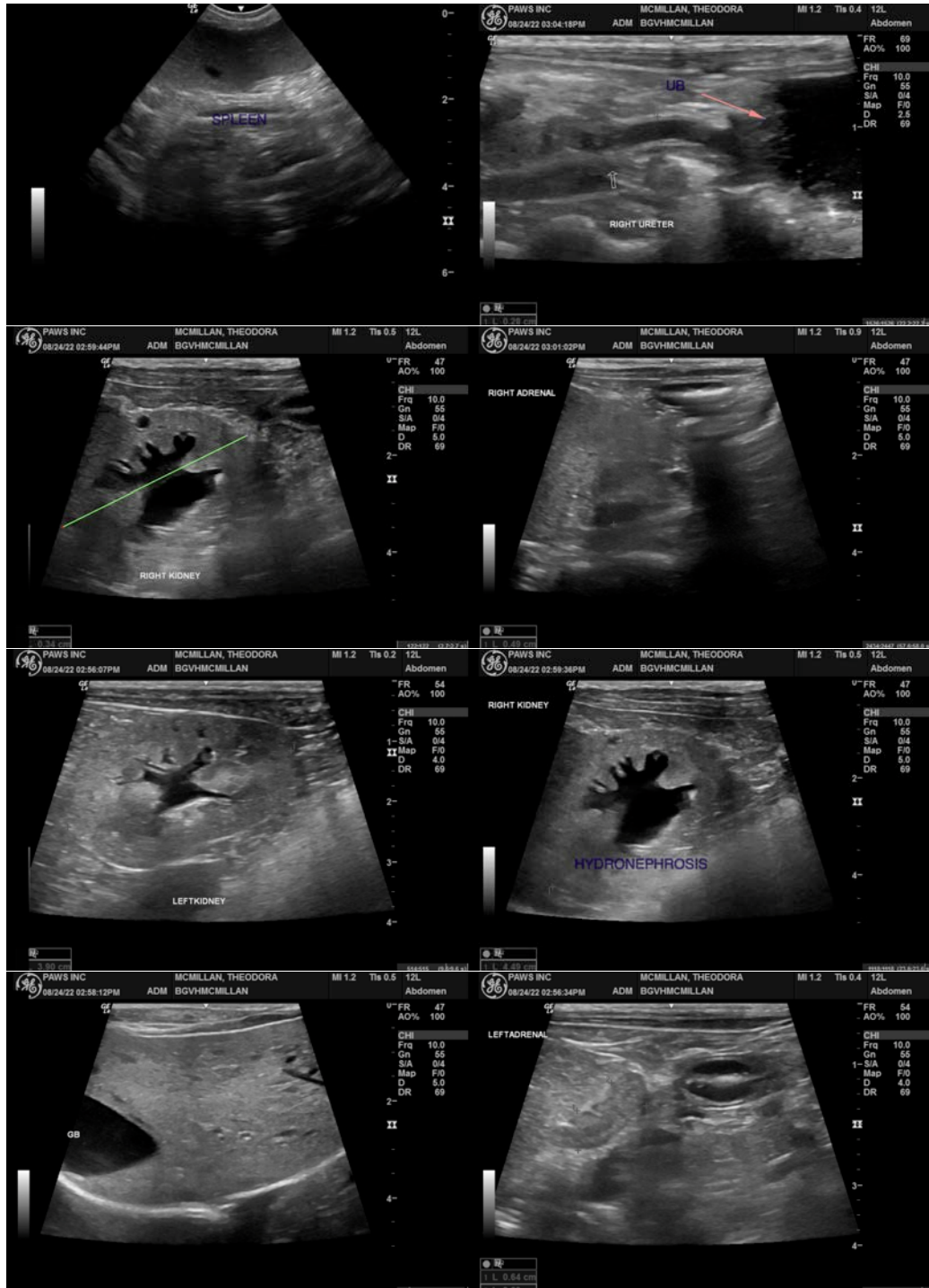
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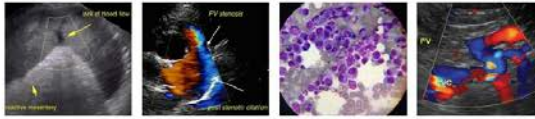
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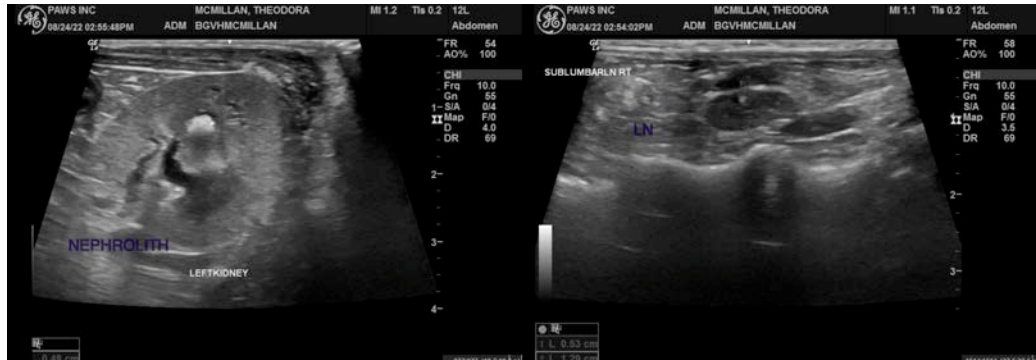
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**SEX**

Spayed Female

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.

**AGE**

13 Years

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.

**WEIGHT**

8 Pounds

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