

PATIENT

Emma Marshall

PRESENTING CLINICAL SIGNS

was HBC 2 years ago, broke pelvis-now healed, chronic hematuria, typically resolves with meds
Abnormal PE/Chem/CBC/UA Results: Please see attached labs

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

BREED

Springer Spaniel

The urinary bladder is moderately distended with anechoic urine. The Bladder wall largely appears of normal thickness with some mucosal irregularity in the apical region. In some views, there is the impression of a mildly dilated distal ureter measuring approximately 0.30 cm in diameter at the opening into the urinary bladder. Additionally, there is some hypoechoic, striated, irregular tissue towards the apex of the urinary bladder, most consistent with inflammation, a diverticuli, less likely a mass etc.

SEX

Spayed Female

The left kidney has a normal shape and size (6.17 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

AGE

5 Years

The right kidney has a normal shape and size (6.2 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

WEIGHT

23 kg

Adrenal Glands

INTERPRETED BY

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

The left adrenal gland is normal in size measuring 0.42 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.

The right adrenal gland is normal in size measuring 0.45 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.

IMAGING PERFORMED BY

Kelly Reschny

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.

HOSPITAL NAME

Wellington AH

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

REFERRING VET

Dr. Dennis

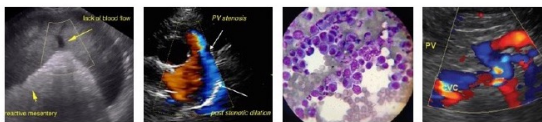
The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

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Gastrointestinal

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The stomach is mildly/moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. 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 layering is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

SPECIES

Canine

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. Jejunum wall measured 0.30 cm.

BREED

Springer Spaniel

Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

SEX

Spayed Female

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.

Pancreas

AGE

5 Years

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.

Free Abdomen

WEIGHT

23 kg

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

- Prominent distal ureter and ureteral opening as well as atypical tissue just cranial to and involving the apical area of the urinary bladder. The significance of these lesions is currently unclear. This could represent anatomic abnormalities associated with previous trauma, stricture formation, etc., congenital abnormalities, or early pyelonephritis.

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Medicine)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

IMAGING PERFORMED BY

Kelly Reschny

There is a prominent distal ureter visualized on today's imaging as well as some irregular tissue in the abdomen just cranial to and involving the apical region of the urinary bladder. The significance of these lesions is unclear, but given the history, there could be the potential for bladder abnormalities secondary to previous trauma or congenital abnormalities. These issues could contribute to the recurrent enterococcus UTIs. Additionally, these changes could represent a result of chronic recurrent UTIs with early distal ureteral dilation and some inflammation. Consider a contrast CT scan and/or contrast cystourethrogram to see if additional information can be obtained regarding these areas of the urinary tract.

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Recurrent enterococcus UTIs are very challenging to treat, and are often the result of chronic antibiotic use. Generally, treatment of these infections is not recommended unless it is a complicated urinary tract infection, or there is cystitis involved. If this is an asymptomatic infection, I might consider aggressive treatment with probiotics chronically, external wiping of the urogenital region, and close monitoring of the urinary tract for symptoms worsening, hematuria, etc., to try to determine if treatment is truly necessary. These patients need to have regular cultures performed with sensitivities, and treatment should only be implemented based on culture and sensitivity result, as there is risk for progressive resistance developing.

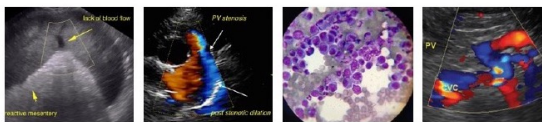
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The ideal scenario would be to try and identify the underlying cause for the infections, and based on the



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history, I suspect either an anatomic abnormality or neurogenic damage to the urinary bladder, resulting in impaired emptying, etc. Evaluation of the bladder post urination can be helpful in determining this. If this is suspected, you could consider a trial with Bethanechol and Prazosin, etc. Additionally, cystoscopy could be considered to further evaluate the inner bladder for any irregularities.

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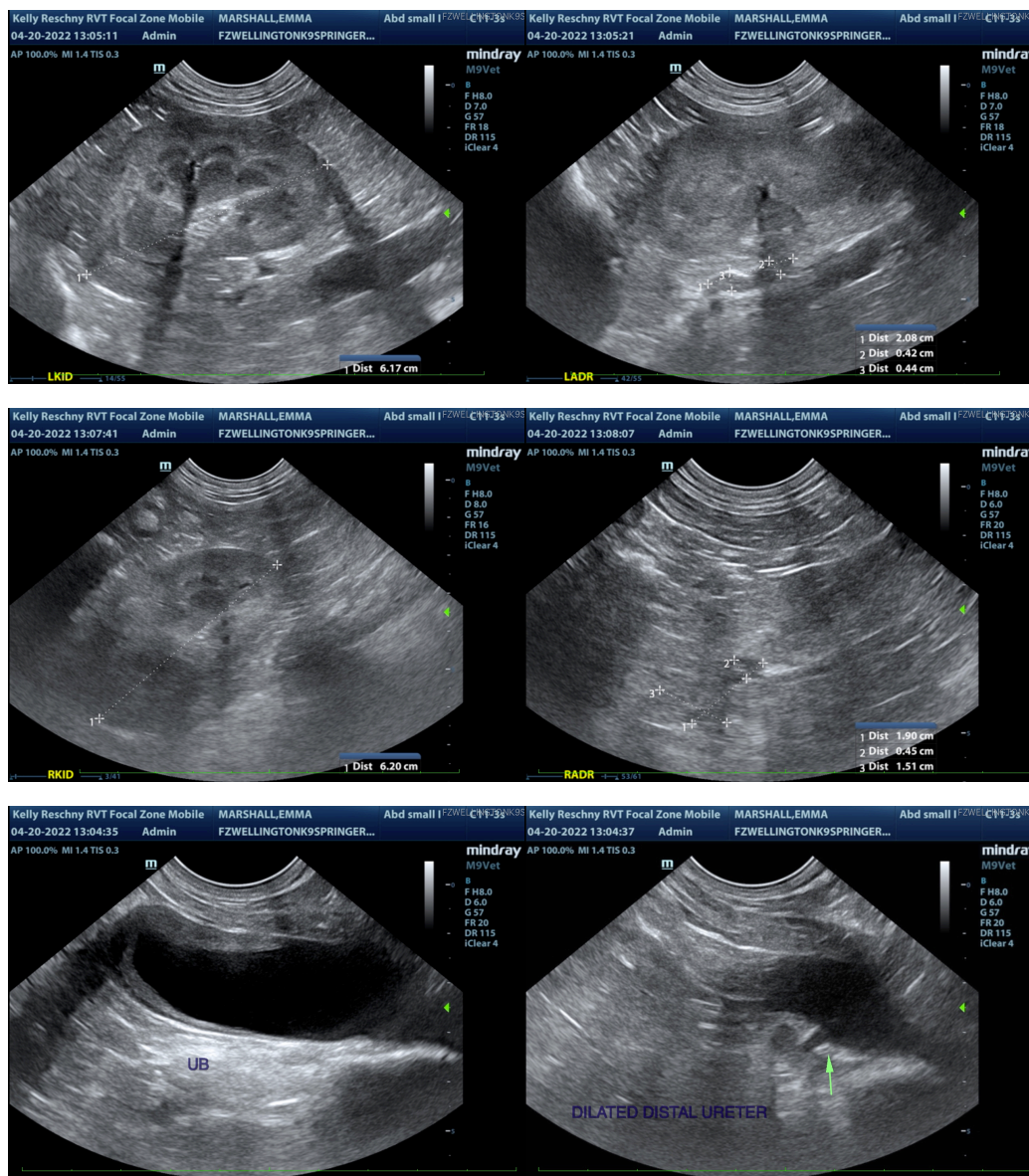
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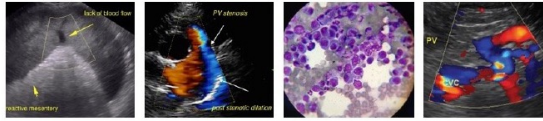
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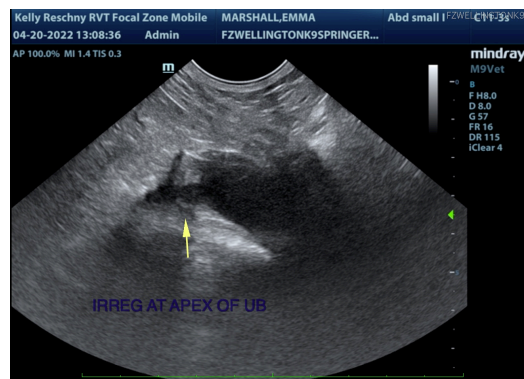
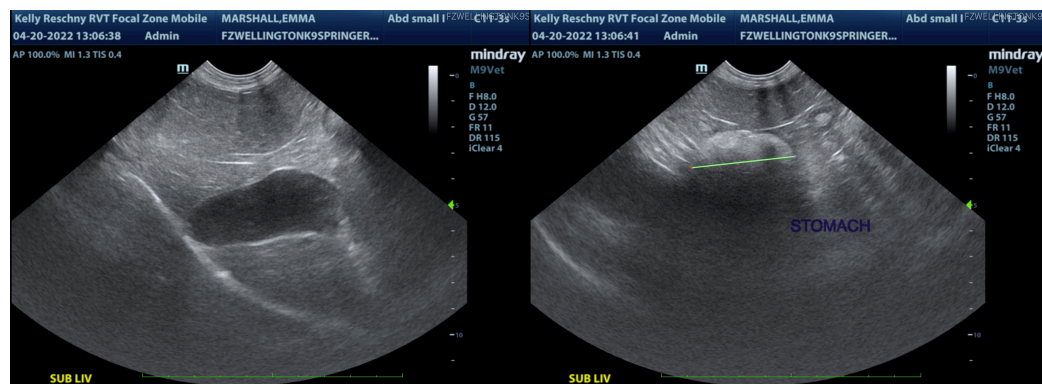
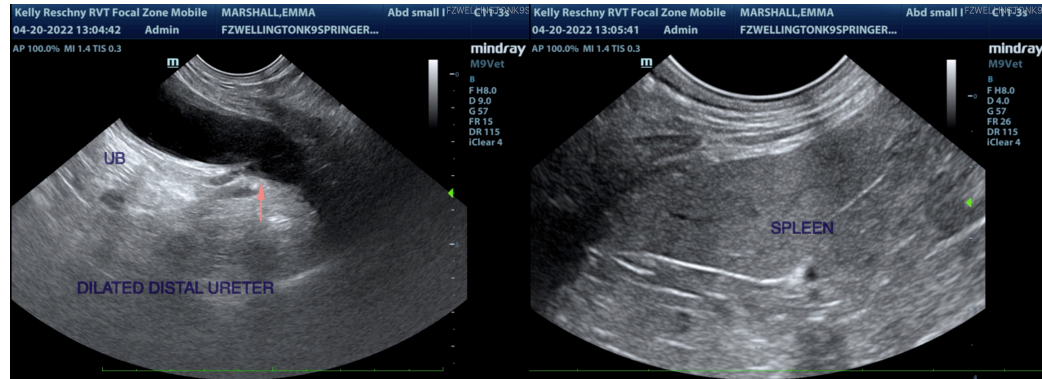
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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