

**PATIENT PRESENTING CLINICAL SIGNS**

Mel Demoura Third episode of hematuria since May, 2021. Successfully treated with antibiotics. No evidence of stones on radiographs or ultrasound. Urine: rods and cocci - Proteius sp cultured 2 x

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Canine *Urinary System*

**BREED**

Shih Tzu

**SEX**

FS

**AGE**

10 Years

**WEIGHT**

13.6 lbs

The urinary bladder presented generalized mild uniformly thickened wall primarily in the ventral apical to dorsal apical urinary bladder wall. The luminal margin of the thickened urinary bladder wall was mildly asymmetrical in contour. The apical urinary bladder wall thickness measured 0.54 cm width. Mineralization or echogenic foci within the thickened areas of urinary bladder wall was not present. The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0 cm exhibited normal tone. Primarily anechoic urine was present with mild congealed sediment or mucus in the dependent lumen. No calculi was present. The ureteral papillae were normal. The ureters were not visible which is normal. No overt evidence of neoplastic criteria.

No evidence of pathology in the area of the aortic trifurcation.

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. Minor pyelectasia was present in the right kidney. No evidence of pelvic dilation was present. The left kidney measured 4.3 cm in length. The right kidney measured 4.3 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 0.49 cm width in the cranial pole and 0.60 cm width in the caudal pole. The right adrenal gland measured 0.45 cm width in the cranial pole and 0.54 cm width in the caudal 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. The hepatic and portal vasculature were normal in appearance without signs of congestion. Intermittent non-expansive subtly hypoechoic nodules were present. An example measured 1.1 cm diameter.

The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. 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 contained mild retained ingesta without signs of obstruction or foreign material. The gastric body wall measured 0.30 cm width.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Pamela Harrigan, RDCS

**HOSPITAL NAME**

Barnstable Animal  
 Hospital

**REFERRING VET**

Mary Ware, DVM

**INVOICE**

47448

**DATE**

9-19-21



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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. The duodenum wall measured 0.50 cm width.

**SPECIES**

Canine

Normal visible colon wall layers were present with generalized semi-formed to soft feces in lumen.

*Pancreas*

**BREED**

Shih Tzu

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.

*Free Abdomen*

**SEX**

FS

No overt lymphadenopathy or peritoneal effusion was present.

**ULTRASONOGRAPHIC FINDINGS**

**AGE**

10 Years

- Mild cystitis with mild congealed luminal sediment / mucus.
- Mild hepatic parenchymal remodeling with intermittent subtly hypoechoic non-expansive nodules - subjectively benign.
- Soft feces in colon.
- Mild age related kidneys with minor right kidney pyelectasia, no overt pyelonephritis.

**WEIGHT**

13.6 lbs

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Given the recurrent urinary tract infection in this patient, gross inspection of the vulva and vaginal vault may be considered to assess for pathology which may predispose to ascending infection. Ideally, based on urine culture and sensitivity results, a higher dose and shorter frequency antibiotic regimen i.e., enrofloxacin 20mg/kg sid for 4-5 days with recheck urine culture and sensitivity 7 days post-completion of antibiotics may prove beneficial. Additionally, N-acetylcysteine in combination with the antibiotics may be of benefit.

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The minor right kidney pyelectasia is suspected to be owing to mild chronic changes or pelvic scarring.

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Likely subtle areas of hepatic hematopoiesis or subtle nodular to regenerative hyperplasia suspected.

Monitoring for evidence of soft stool or possible emerging diarrhea recommended.

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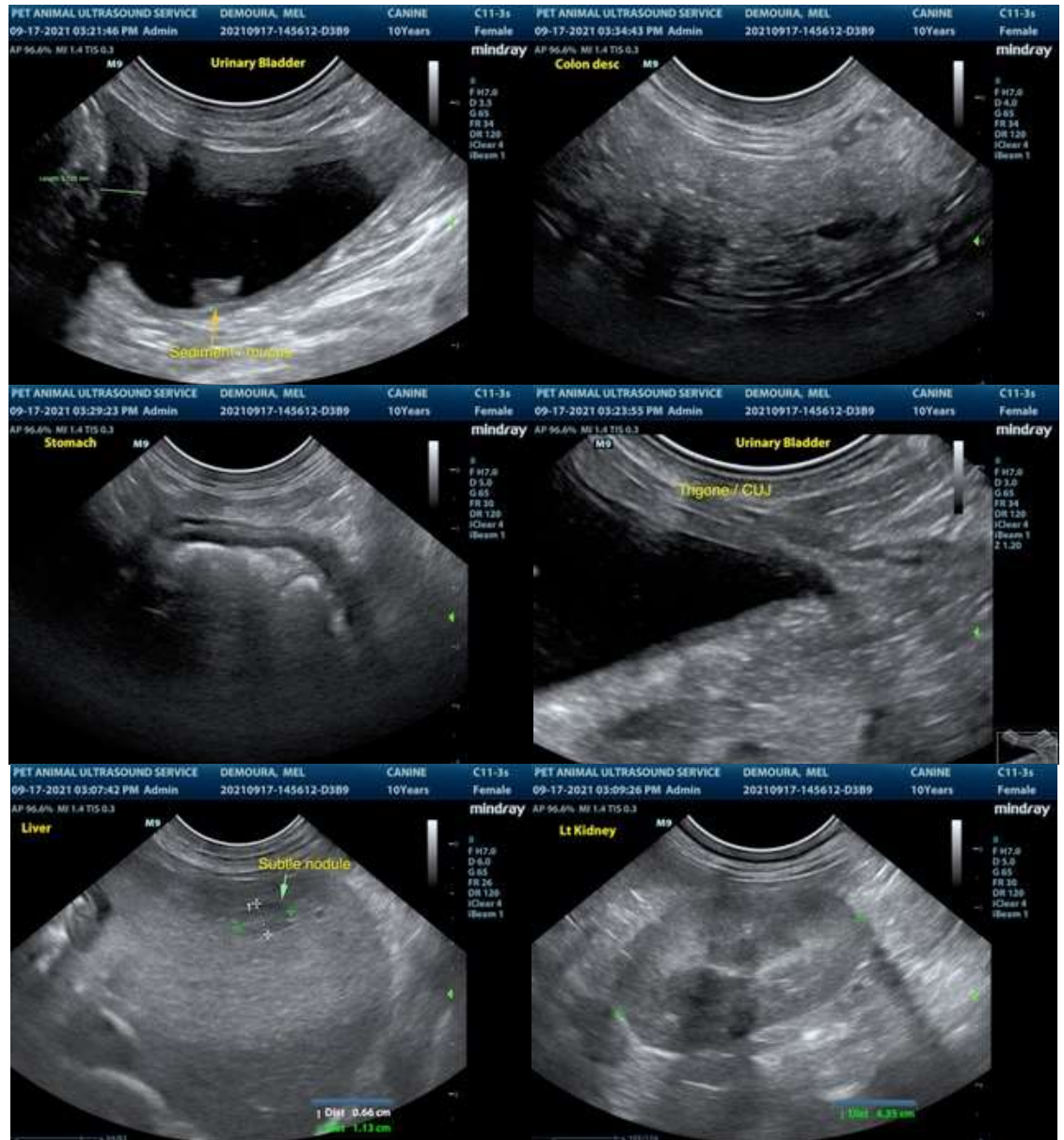
Mary Ware, DVM

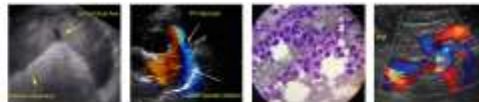
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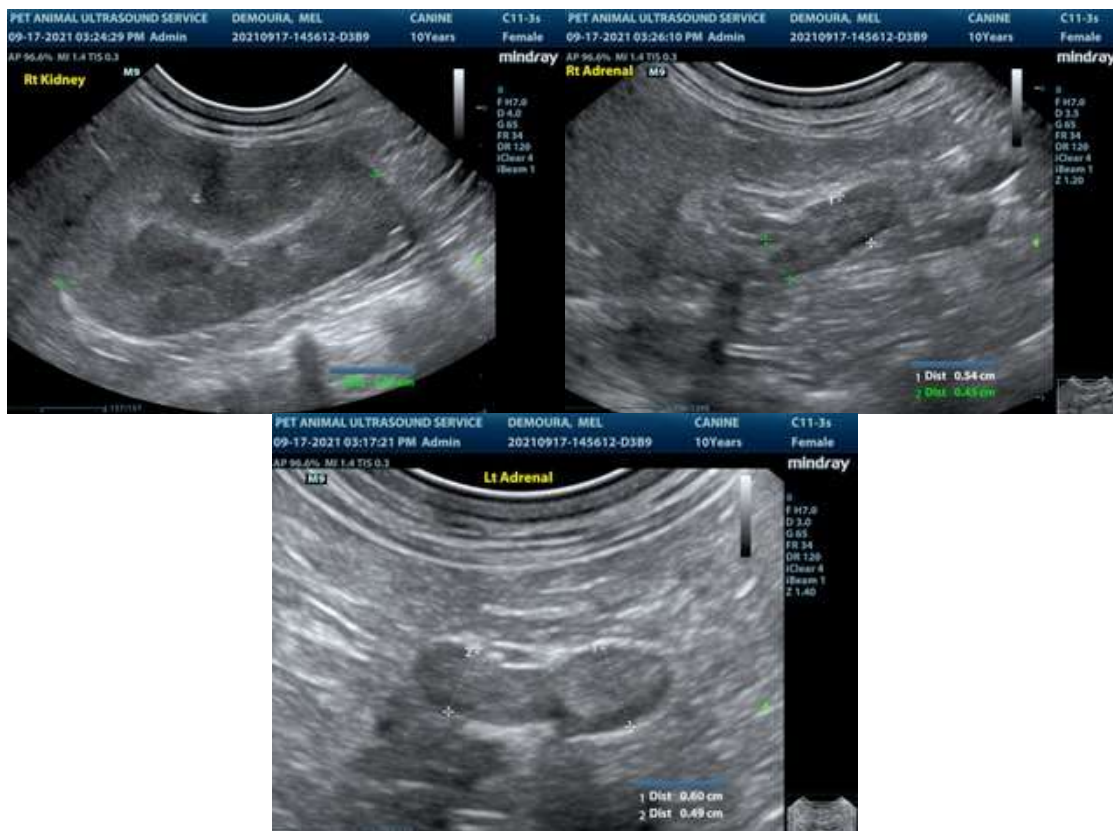
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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