



## PATIENT

Naya Rivas

## SPECIES

Canine

## BREED

Terrier Mix

## SEX

Spayed female

## AGE

12 years

## WEIGHT

## PRESENTING CLINICAL SIGNS

History: Recurring UTI signs. Responded to antibiotics but hematuria persists. Current meds: just finished Clavamox.

Abnormal PE/Chem/CBC/UA Results: U/A: protein 3+, blood 3+, WBC 4-10/HPF, RBC > 58 hpf, rods 26-50 HPF, USG 1.020 (free catch after round of Clavamox).

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The **urinary bladder** revealed a urethral junction mass that occupied the majority of the bladder. The mass extended into the pelvic urethra. This is strongly consistent with carcinoma.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 5.75 cm. The right kidney measured 5.43 cm.

### Adrenal Glands

The left **adrenal gland** was visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 2.31 x 0.53 cm at the caudal pole and 0.44 cm at the cranial pole. The right adrenal gland revealed a hyperechoic nodule that measured 1.28 cm at the cranial pole, 0.94 cm at the caudal pole and 2.55 cm in length.

### Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

### Liver

The **liver** revealed multi-focal, hypoechoic, expansive, irregular nodules with lobar biliary mineralization. The coalescing liver nodules created mass effects throughout the liver. This is strongly suggestive for metastatic disease or primary neoplasia. The gallbladder in this patient presented significant tissue proliferation, polypoid changes and areas of biliary calculi and mineralization. The common bile duct was dilated with multiple calculi. The common bile duct measured 0.7 cm with tissue and sand accumulation noted to the level of the duodenal papilla.

## INTERPRETED BY

Eric Lindquist, DMV,  
DABVP, Cert. IVUSS,  
CEO of SonoPath.com

## IMAGING PERFORMED BY

Kelly Vazquez, CVT

## HOSPITAL NAME

Midland Park VH

## REFERRING VET

Dr. Shokoff

## INVOICE

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1/12/23



**PATIENT**

**Gastrointestinal**

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A minor amount of non-shadowing, non-obstructive ingesta was noted in the **stomach**. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted. The iliac lymph nodes did not appear affected.

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**Pancreas**

Terrier Mix

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

**SEX**

Spayed female

**ULTRASONOGRAPHIC FINDINGS**

**AGE**

12 years

Extensive, bladder and cystourethral junction mass with hepatic nodular changes creating mass effects and chronic cholangitis with polypoid changes and calculi. There is a potential for biliary carcinoma.

**WEIGHT**

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Ultrasound-guided laser ablation or stent placement with chemotherapy upon the urinary tract would be appropriate and/or cholecystectomy as well as common bile duct lavage and FNA of the liver nodules as a screening process. There are multiple issues in this patient. Traumatic catheterization with ultrasound-guidance could be considered to confirm the suspicion of carcinoma and/or BRAF testing and/or cytospin of the free catch urine. Ultrasound-guided FNA of the liver nodules are recommended to assess nodular hyperplasia versus neoplasia. This should eventually be followed by cholecystectomy and common bile duct lavage; however, given the multiple issues in this patient the palliative therapy is likely the best option as well as coverage for UTI. The prognosis is guarded to poor long term.

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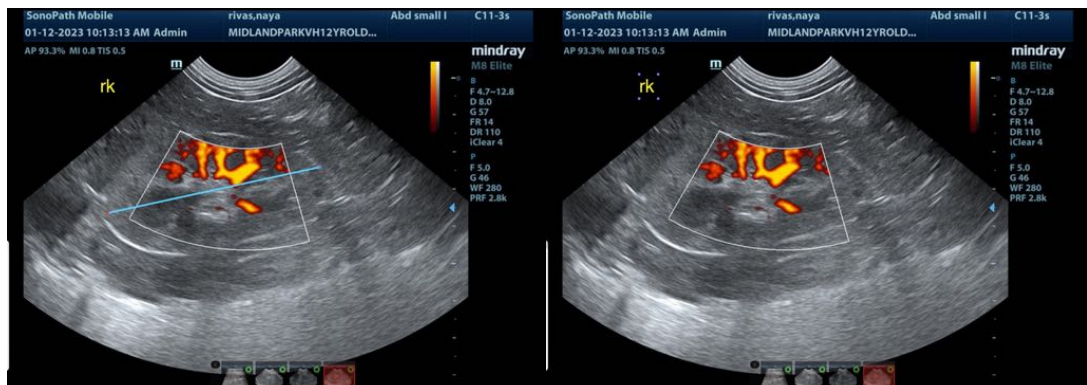
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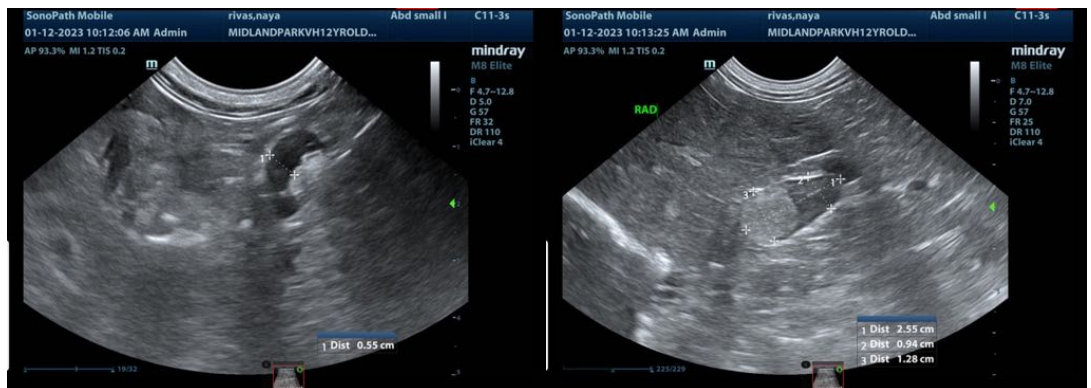
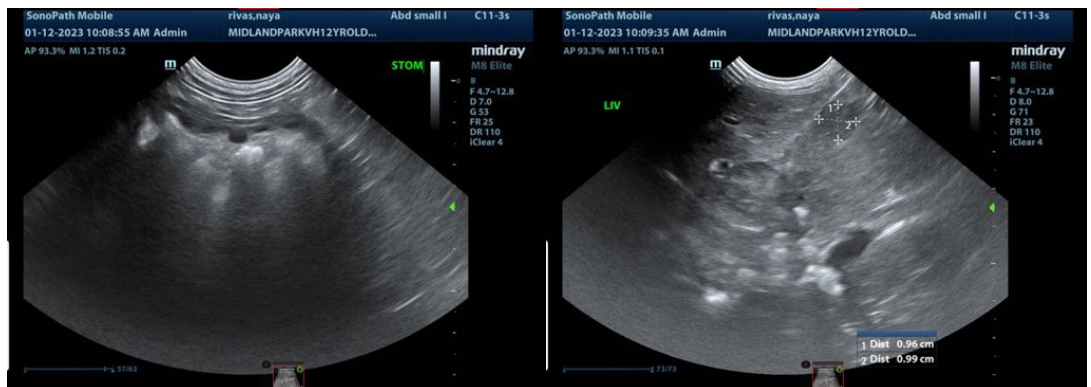
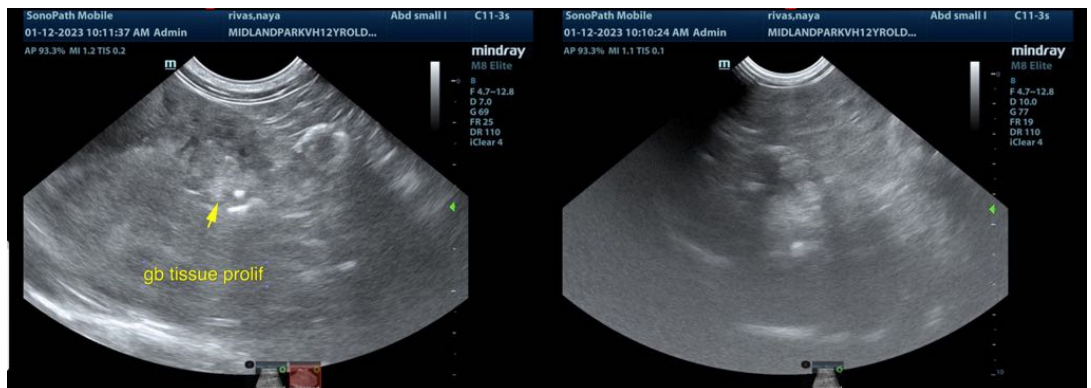
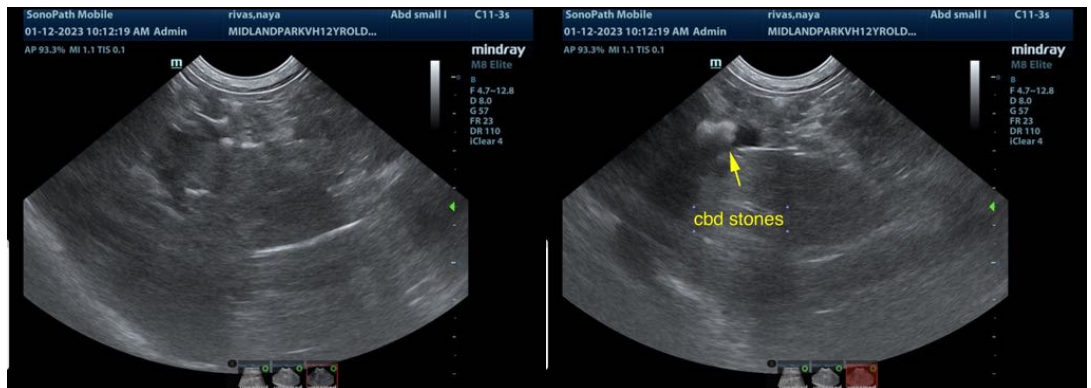
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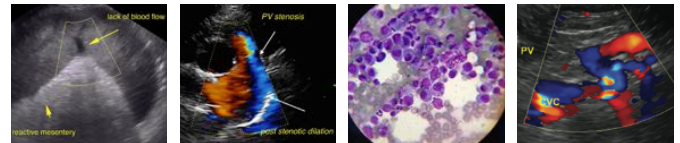
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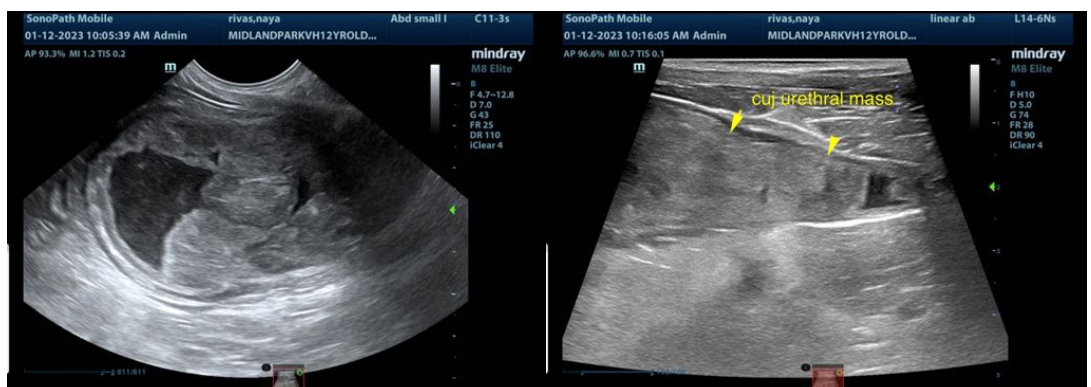
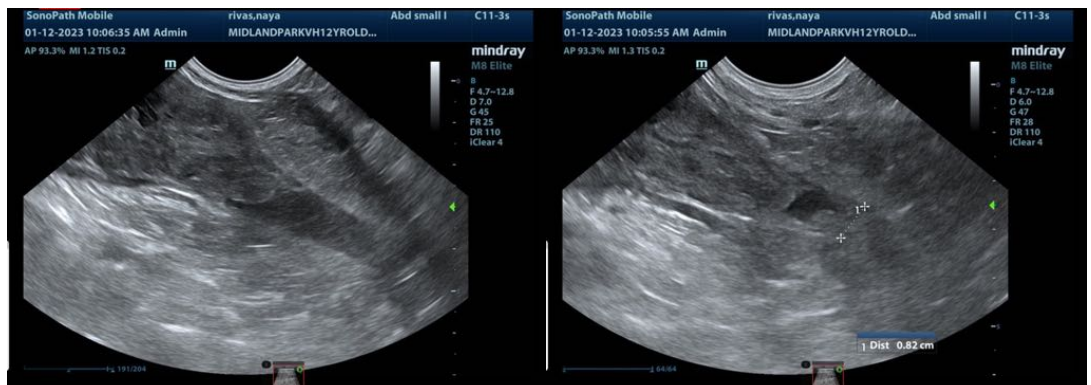
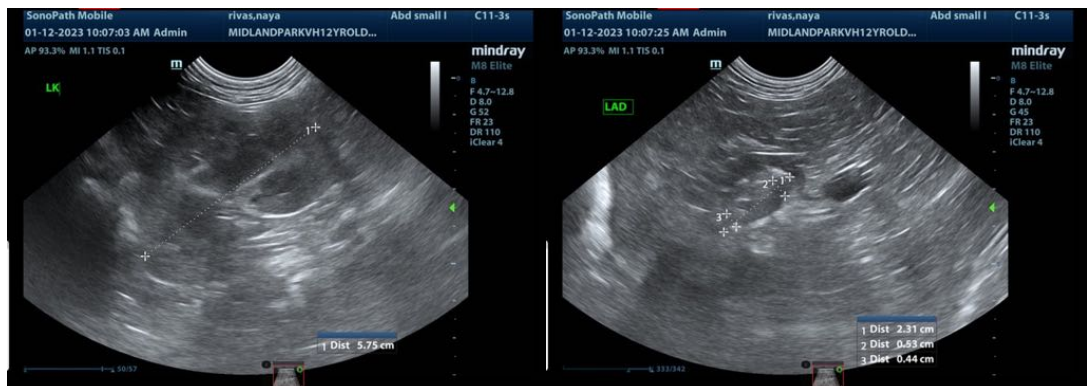
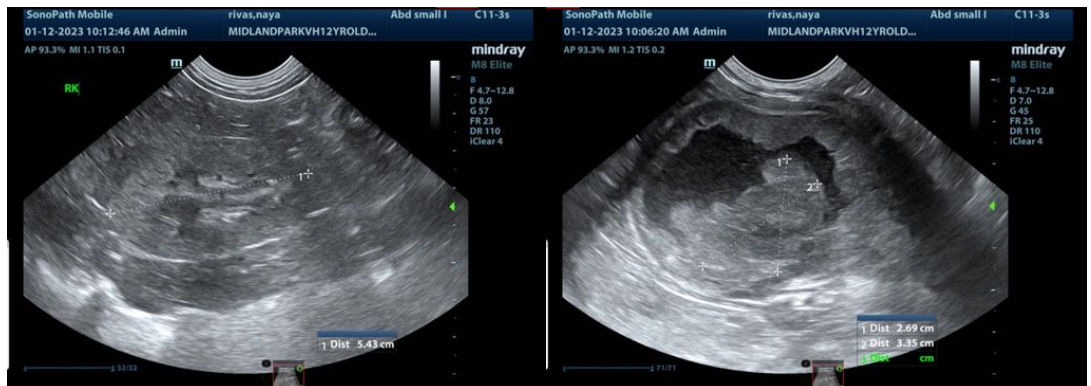
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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

**SPECIES**

Canine

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.

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Info@SonoPath.com

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