

**DATE PRESENTING CLINICAL SIGNS**

6/22/23 Blood in urine intermittently for several years, lethargic, inappetent.

**PATIENT** Current Medications: Baytril 136mg SID, Cimetidine 150mg BID, Mirtazapine 7.5mg BID.

Miss Daisy Bennett

Lab Results: See attached.

Radiographs: See attached.

Date of Previous IntraPet Ultrasound: No previous.

**SPECIES** Sedation: Not required to complete full diagnostic ultrasound.

Canine

Stat Report: Not requested.

Imaging Performed By: Rachel Brillhart, RDMS.

**BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Poodle X

**Urinary System**

**SEX**

Spayed Female

The urinary bladder is moderately distended with mildly echogenic urine. The Bladder wall appears severely thickened and irregular in the apical region, creating a large, irregular, slightly mineralized mass effect measuring 2.84 cm x 5.27 cm. This lesion appears vascular and there is some evidence of tissue in the region of the trigone with a lesion measuring 1.05 cm x 0.46 cm. Additionally there are small hyperechoic dependent foci most consistent with small stones/sandy debris. One such stone is measured at 0.26 cm. The region of the proximal urethra appears free of any mass lesions or obstruction.

**AGE**

5/3/09

The left kidney has a normal shape and size (5.76 cm) with small non-obstructive nephroliths. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**WEIGHT**

30 Pounds

The right kidney has a normal shape and size (5.97 cm) with small non-obstructive nephroliths. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

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

**Adrenal Glands****HOSPITAL NAME**

Bay Country VH

The left adrenal gland is normal in size measuring 0.64 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.

**REFERRING VET**

Dr. Smith

The right adrenal gland is normal in size measuring 0.56 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.

**Spleen****INVOICE**

43392

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.

**Liver**

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

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

### ***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.

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.

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***

The pancreas is prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### ***Free Abdomen***

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is a prominent sublumbar lymph node visualized measuring 0.71 cm x 1.24 cm. The omentum is generally of normal echogenicity.

## **ULTRASONOGRAPHIC FINDINGS**

- Large, irregular, vascular mass effect in the apical region of the urinary bladder and a small wall irregularity noted near the trigone. Findings are highly concerning for a transitional cell carcinoma, but other differentials are possible.
- Small dependent mineralized foci in the urinary bladder – Findings are consistent with small stones/sandy debris.
- Non-obstructive nephroliths visualized in both kidneys – The hyperechoic mineralized foci observed at the corticomedullary junction of the left/right kidney are consistent with small, non-obstructive nephroliths.
- Prominent, mottled pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Large, hyperechoic liver – The diffuse hepatic changes are non-specific and can be seen with vacuolar hepatopathy, reactive change, nodular hyperplasia or, less likely, inflammatory/immune-mediated disease, infiltrative neoplasia, or other hepatopathy.
- Prominent sublumbar lymph node – This could represent a reactive lymph node or early metastatic disease.

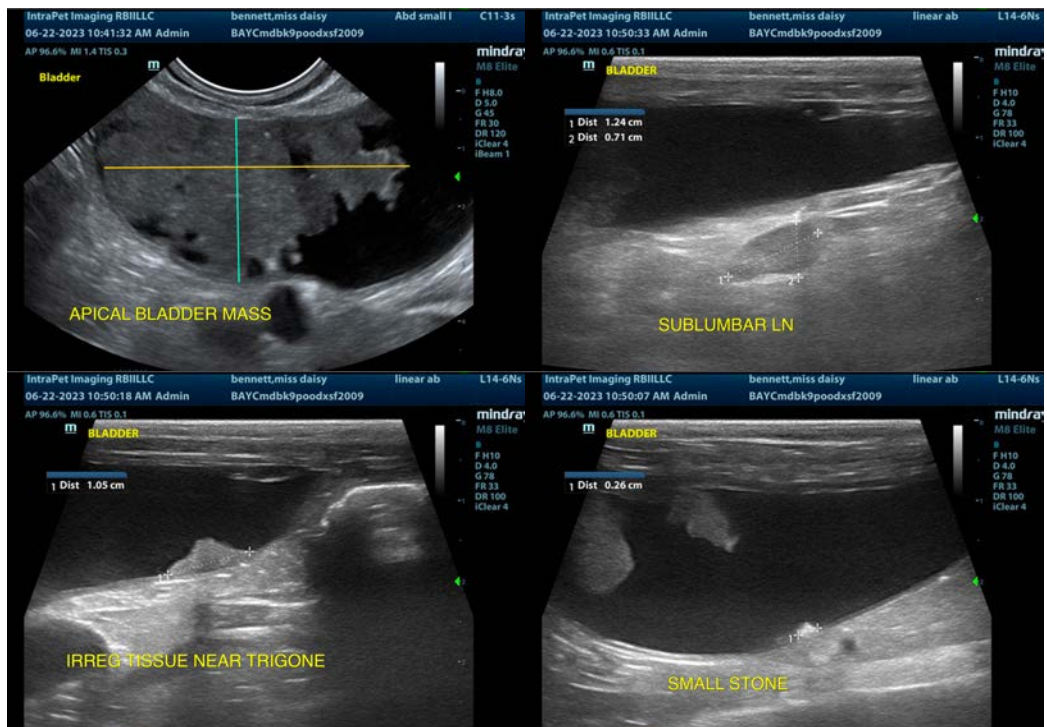
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

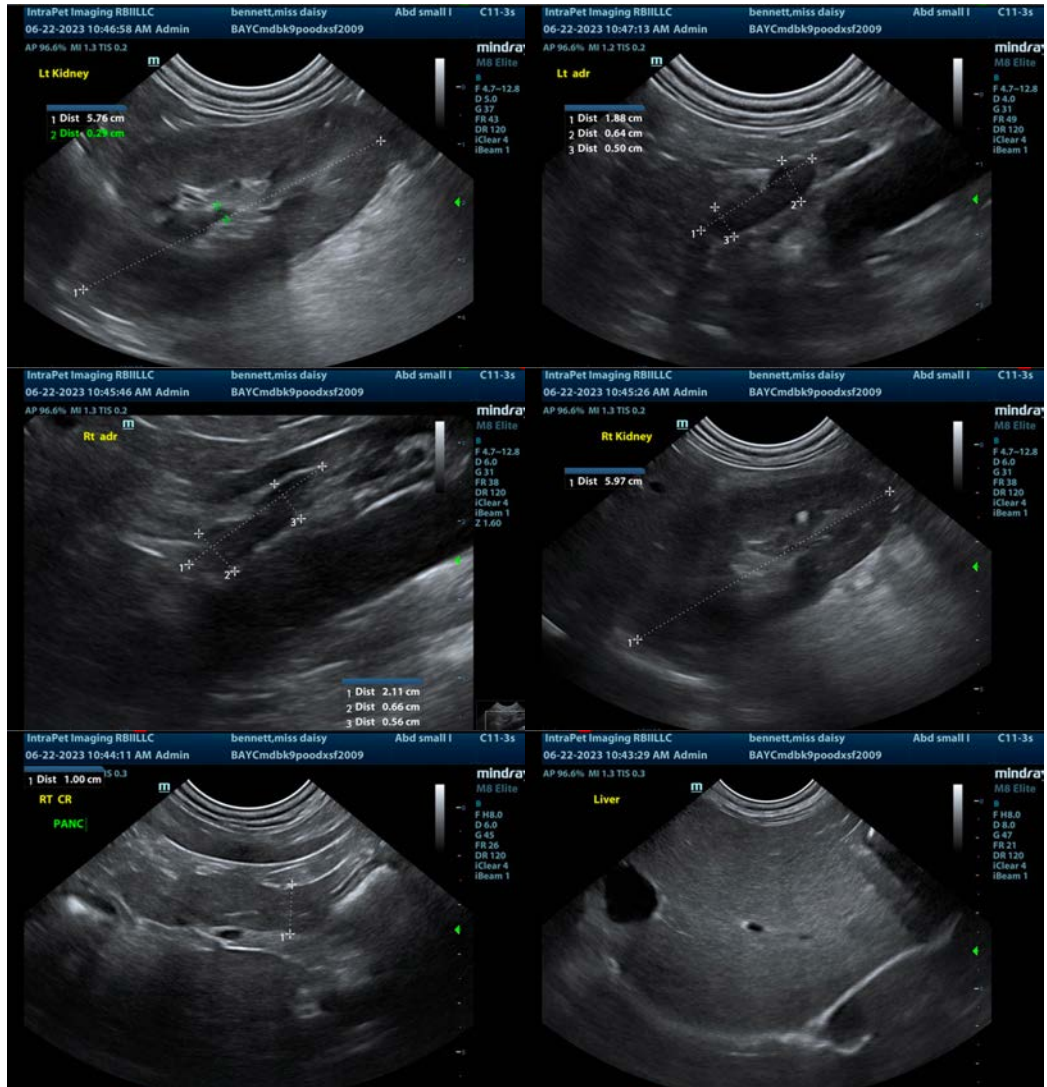
There is a large mass effect visualized in the apical region of the urinary bladder and a smaller lesion visualized towards the trigone. There is no evidence of obstructive disease present at this time. These findings are highly concerning for an underlying neoplastic process, although the urinalysis submitted shows evidence of an active infection as well with a large number of epithelial cells. It is possible that a cytologic evaluation of this urine sample could be diagnostic, but often if there is active inflammation, interpretation of the samples can be challenging. Recommend a urine culture on a clean caught sample and treatment based on sensitivity results. Recommend chronic probiotic therapy spaced at least 2 hours from antibiotic therapy, and options for sampling would include either submitting a urine sample for cytologic evaluation, a traumatic catheterization, or cystoscopy to obtain biopsies. Once a diagnosis is obtained, recommend consultation with a veterinary oncologist for treatment recommendations and prognosis.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

The significance of the pancreatic changes is uncertain. I suspect this is most consistent with previous episodes of pancreatic inflammation. If GI signs are present, you could consider treatment for chronic pancreatitis.

The liver is hyperechoic with no focal lesions. A vacuolar hepatopathy would be suspected but continued monitoring is warranted.





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.

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 info@sonopath.com