

**DATE PRESENTING CLINICAL SIGNS**

9/22/21 Hematuria. Weight loss.

PATIENT

Kaylani Lei Rodaligo

Current Medications: 9/14/21 - Amoxicillin 100 mg BID x 14 days.

Chronic medications: Dasuquin Advanced, Gabapentin 300 mg BID, Galliprant 90 mg SID.

Lab Results: UA (free catch) 9/14/21 - sp grav 1.012, bilirubin crystals, protein 300, pH 5, +++250 leukocytes, +++250 blood.

SPECIES

Canine

4/27/21: CBC/Chem: CREAT H (3), BUN H (52).

Date of Previous IntraPet Ultrasound: No previous

Sedation: not needed

Stat Report: not requested

BREED

Rottweiler X

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**SEX**

Spayed Female

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall generally is of normal thickness, devoid of any irregularities up until the point of the trigone, where there is a large, partially obstructing soft tissue mass in the distal trigone and proximal urethra, measuring at least 4.52 cm x 2.21 cm. In cross sectional views, the urethra appears completely obstructed, although this is unlikely based on the moderate urinary bladder distention observed. No cystic calculi are observed.

AGE

2009

The left kidney has a normal shape and is subjectively small in size (4.07 cm). Pyelectasia noted at 0.2 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. There is no evidence of nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

WEIGHT

76.4 Pounds

The right kidney has a normal shape and size (6.38 cm). Mild pyelectasia noted at 0.23 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. There is no evidence of nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

INTERPRETED BY

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Adrenal Glands

The left adrenal gland is normal in size measuring 0.66 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

Banfield #5025

The right adrenal gland is normal in size measuring 0.66 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. Carroll

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

25732

Liver

The liver is subjectively normal in size, and 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, mixed echogenic nodules noted throughout the liver. Two more distinct nodules are a hyperechoic nodule measuring 3.77 cm x 3.1 cm and a target like lesion measuring 2.29 cm x 2.5 cm.

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.

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 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

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

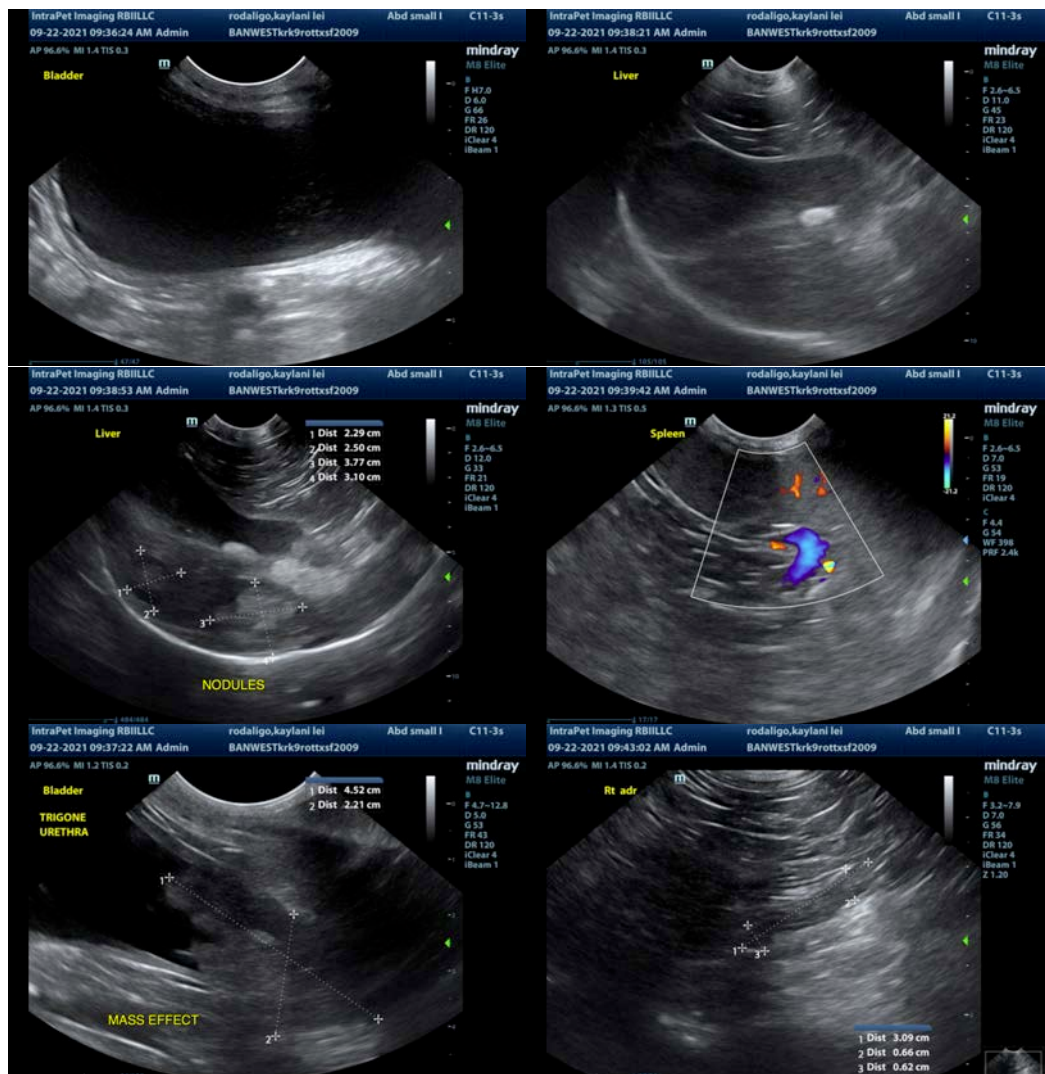
- Large mass effect within the urinary bladder and the trigone and proximal urethra – very concerning for a possible transitional cell carcinoma. Sampling is necessary to confirm.
- Decreased corticomedullary distinction in both kidneys with mild pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the kidneys could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Heterogeneous liver with nodules – These are non-specific findings, but the distinct nodules visualized are somewhat concerning for a possible metastatic lesion.

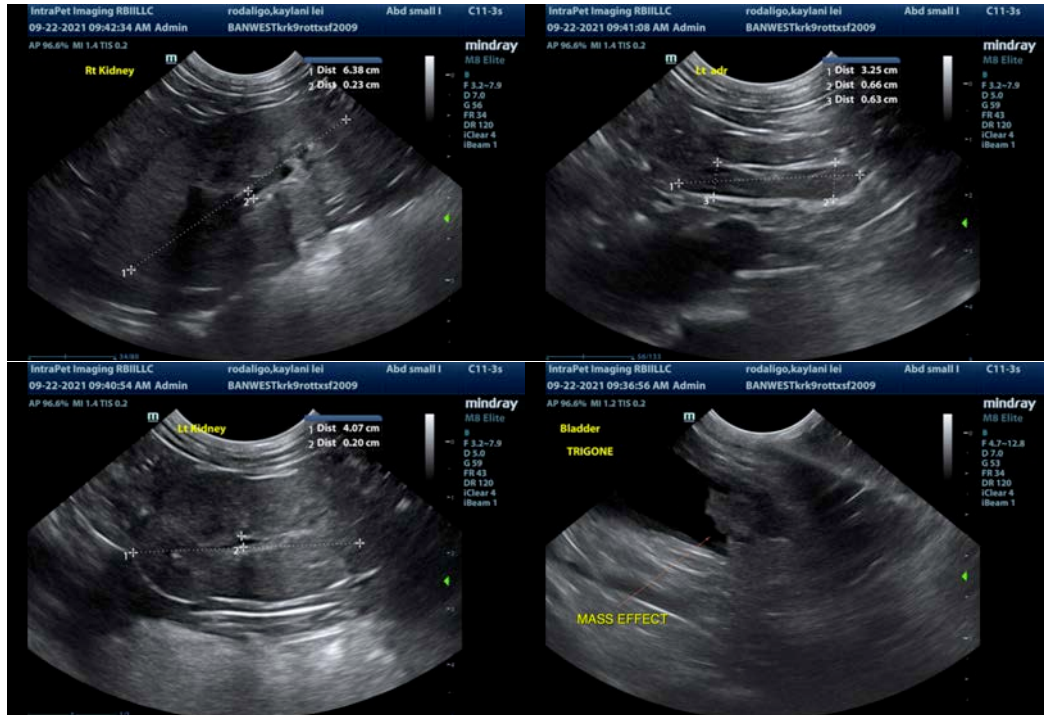
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large mass effect within the proximal urethra and trigone of the urinary bladder. I suspect this is causing a partial obstruction, and would likely be palpable with rectal exam. The focal mass has the characteristics most consistent with a neoplastic lesion, but polyps and inflammatory lesions can sometimes have a similar appearance. A definitive diagnosis cannot be determined by ultrasound alone.

- Recommend urine evaluation for BRAF mutation seen in patients with transitional cell carcinomas. A positive test is diagnostic, a negative test is inconclusive and will need further diagnostics.
- If negative or non-diagnostic BRAF consider traumatic catheterization to obtain representative cells for cytology, or biopsy sampling via either cystoscopy (if a female) or surgery.

- Patients with bladder pathology should always have urinalysis and culture performed. Ideally cystocentesis should be avoided in patients with suspected bladder masses to try and prevent tracking of tumor cells along the needle path.
- If TCC is confirmed consider referral to/consultation with a board certified. Veterinary oncologist for recommendations regarding treatment options and prognosis.
- There is some concern here for impending obstruction. Consider starting Piroxicam at a low dose with very close monitoring due to the risk of renal injury given the pre-existing azotemia.
- 3-view thoracic radiographs recommended.
- Consider fine needle aspirate of the liver nodules to look for evidence of metastasis.





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.

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