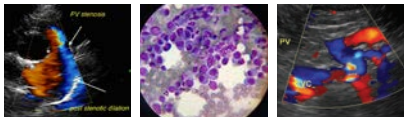
IMAGING PERFORMED BY

IntraPet.com



SonoPath

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DATE

9/7/21

PATIENT

Kona Seeman

SPECIES

Canine

BREED

Boxer X

SEX

Spayed Female

AGE

2011

WEIGHT

79.2 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Jacksonville VH

REFERRING VET

Dr. Kablis

INVOICE

25202

PRESENTING CLINICAL SIGNS

Hematuria - History of hematuria and bladder stones (struvite).
Feeds Purina UR. Previous cystotomy Feb 2020, stone 100% struvite.

Current Medications: None currently. Had 2 week course of Clavamox (8-7 to 8-21).
Lab Results: Alkp 404, Chol 375, T4 1.0, FT4 13.8.
Date of Previous IntraPet Ultrasound: No previous
Sedation: not needed
Stat Report: not requested

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall appears thickened and irregular, primarily in the apex region. The bladder measured 2.62 cm in thickness. This tissue is partially mineralized, and in some areas organizes into more focal masses. The ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size (0.64 cm) with mild pyelectasia of 0.43 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 hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.65 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 pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large in size measuring 0.8 cm at the cranial pole, 1.08 cm at the caudal pole, and 4.1 cm in length. It is observed in its normal position cranial to the left renal artery. It is somewhat irregular in appearance with an ill-defined, hyperechoic nodule in the cranial pole measuring 0.68 cm, but there is no evidence of an overt mass effect.

The right adrenal gland is large in size measuring 0.96 cm at the caudal pole, 1.59 cm at the cranial pole, and 4.2 cm in length. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is irregular in appearance with a hyperechoic, large cranial pole measuring 1.26 cm x 1.56 cm, and a more normal appearing, hypoechoic caudal pole, consistent with a nodule in the cranial pole of the adrenal.

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.

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. 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 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

- Thickened, irregular bladder wall with mineralizations – suspicious for a primary bladder tumor, cystitis cannot be 100% ruled out.

- Bilateral adrenal enlargement with a small, indistinct, hyperecehoic nodule in the cranial pole of the left adrenal, and a large, hyperechoic nodule in the cranial pole of the right adrenal – The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended.

- Heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.

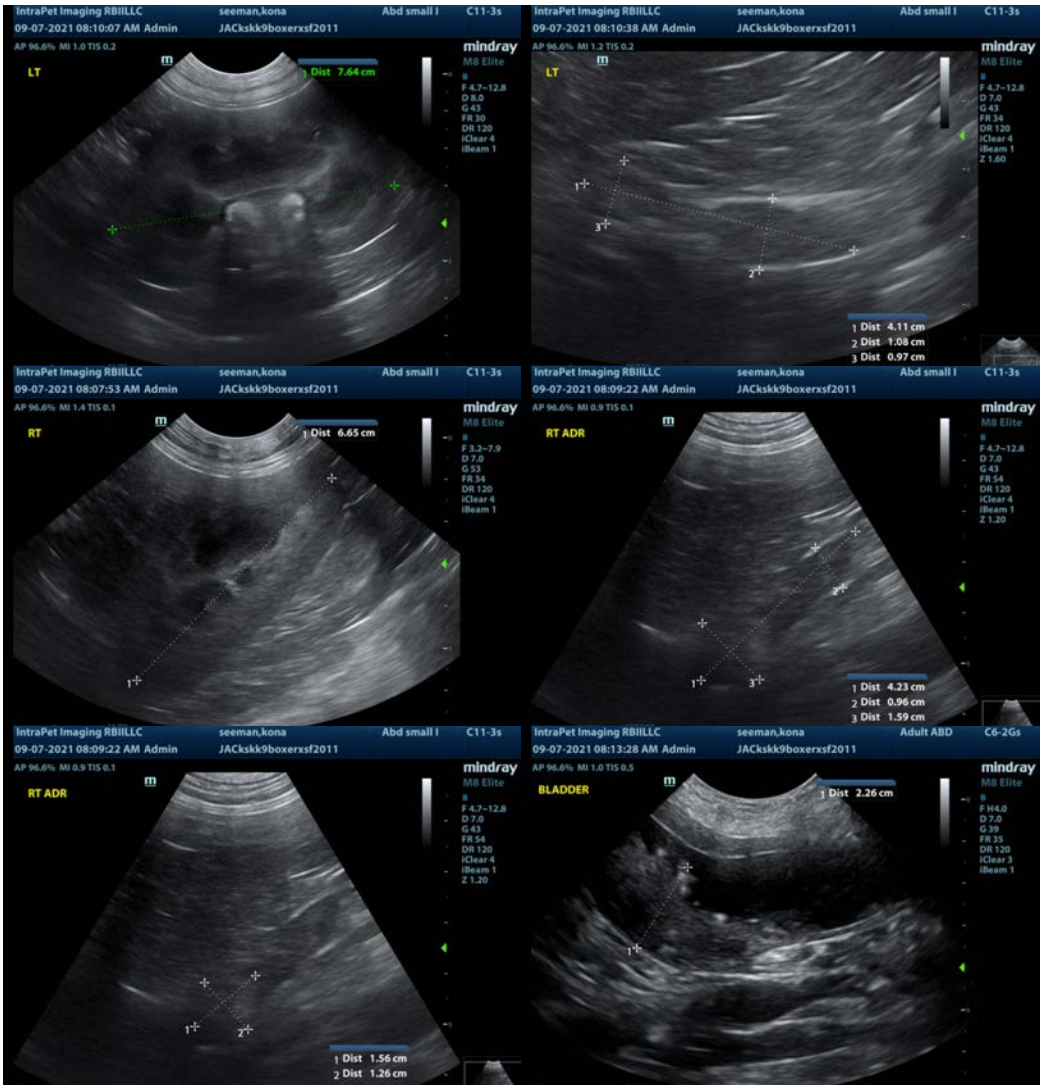
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

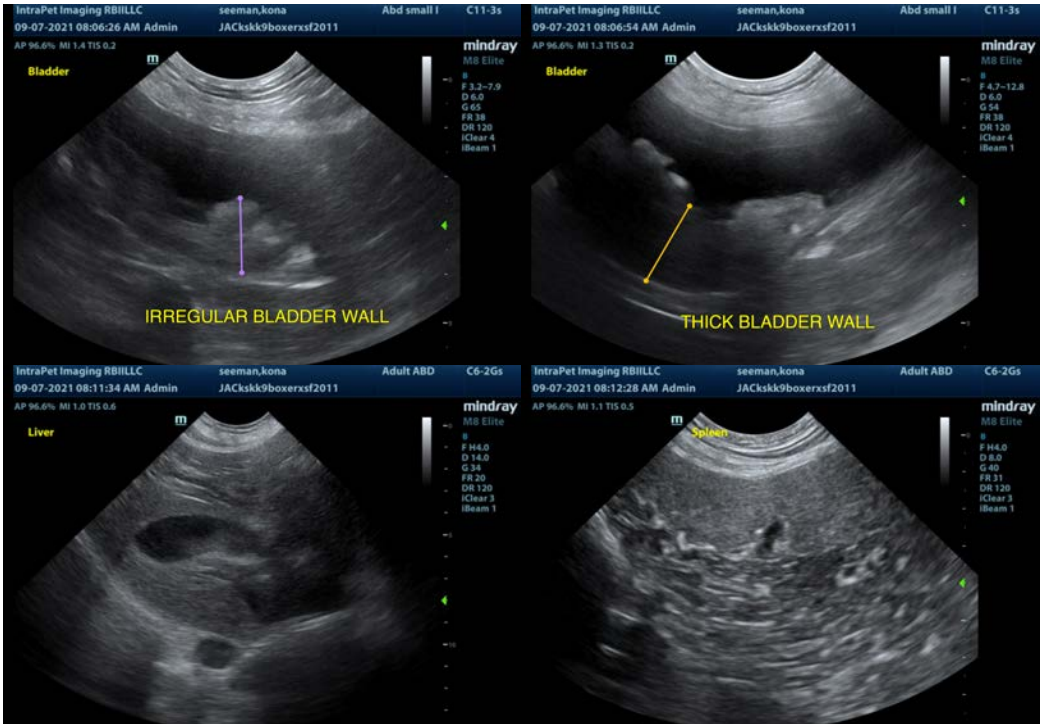
There is a focal area of thickened and irregular tissue in the apical region of the urinary bladder. This tissue is mineralized, which increases concern for possible neoplastic process. The apex is a somewhat atypical location for TTC, so recommend further diagnostic testing.

-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.

Additionally, both adrenal glands are enlarged, and both have hyperechoic foci, which are of questionable significance. If signs of Cushing's disease are present, you could consider adrenal function testing to further evaluate. Recommend blood pressure evaluation and continued monitoring of the adrenal glands with ultrasound. Bilateral adrenalectomy would be necessary to know the nature of the lesions in the adrenal glands, and although this is possible, I would recommend further evaluation of the urinary lesion before any aggressive measures are taken. Recommend 3-view thoracic radiographs.





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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