



PATIENT

Zeus Bakkie

PRESENTING CLINICAL SIGNS

SPECIES

Canine

BREED

Pomeranian

PAWS Request Form: Chief Concern / Provisional Diagnosis: ~Rule out bladder neoplasia vs other~ Relevant Medical History and Physical Exam findings: ~Zeus initially presented on 8/28/21 for hair loss and was diagnosed with hypothyroidism. Patient is currently on levothyroxine and being well managed. Additionally noted increased proteinuria and hematuria, recommended additional diagnostics to rule out bladder neoplasia. ~ Recent Diagnostics: Relevant Laboratory Results / Abnormalities: ~ Urinalysis UPC 2.0 Protein 3+ Blood/Hemoglobin 3+ RBCs 30-50/HPF WBCs: 2-5/hpf Chemistry: ALT 164 U/L Glob: 5.0 g/dL Tot prot: 8.6g/dL BUN: 34 mg/dL~ Current medications (include full name, dosage and frequency): ~ Levothyroxine 0.1mg BID~ Abnormal PE/Chem/CBC/UA Results: Vital Sign MM1 Weight 19.8 pounds BodyScor e9 5 - Ideal - 5 Temp 102.5 Pulse 140 Resp 40

SEX

Intact Male

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall is slightly thickened and irregular. There is a 0.38 cm x 0.33 cm raised soft tissue structure, most consistent with an inflammatory polyp. Additionally, there is a large pile of shadowing echogenic stones in the dependent portion of the urinary bladder. These stones are approximately 0.6-0.8 cm in size, and I would estimate there are at least 5. The area of the trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no mass lesions or calculi.

AGE

8 Years

WEIGHT

19.8 Pounds

The prostate is large in size (0.234 cm in width in the sagittal view) but has a regular shape with smooth external margins. The parenchyma is heterogenous but no discrete focal lesions are present. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

INTERPRETED BY

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

The left kidney has a normal shape and size (5.03 cm). Overall echogenicity is normal with mildly reduced corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There are too numerous to count small speckling mineralizations visualized at the corticomedullary junction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

IMAGING BY

Loetitia Saint-Jacques,
LVT

The right kidney has a normal shape and size (5.05 cm). Overall echogenicity is normal with mildly reduced corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There are too numerous to count small speckling mineralizations visualized at the corticomedullary junction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

HOSPITAL NAME

MountainView AH

Adrenal Glands

The left adrenal gland is normal in size measuring 0.50 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. Pablo Mendoza

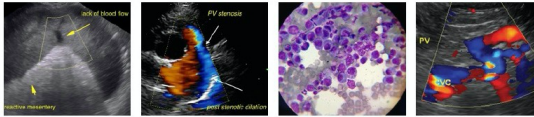
The right adrenal gland is normal in size measuring 0.65 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

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36651

DATE

3/31/22



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Spleen

The spleen is subjectively normal in size. The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There are too numerous to count small hyperechoic speckles throughout the spleen, possibly consistent with small mineralizations. Additionally, there is a small ill-defined, hypoechoic nodule measuring 0.42 cm.

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Liver

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

SEX

Intact Male

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.

AGE

8 Years

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.

WEIGHT

19.8 Pounds

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.

INTERPRETED BY

Kathleen Sennello DVM,
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(Small Animal Internal
Medicine)

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.

IMAGING BY

Loetitia Saint-Jacques,
LVT

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.

HOSPITAL NAME

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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.

REFERRING VET

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Other

Both left and right testicles are visualized and appear within normal limits.

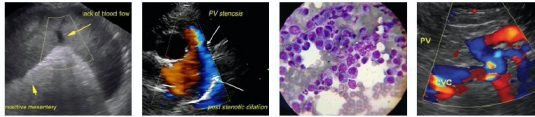
A brief view of the heart was submitted. No significant pericardial effusion was seen.

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PRIMARY FINDINGS

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- Large number of dependent calculi observed within the urinary bladder in addition to a small mucosal mass effect – Findings are most consistent with calculi +/- cystitis and an inflammatory polyp.

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Pomeranian

- Large, heterogeneous prostate – Findings are most consistent with BPH +/- prostatitis.
- Mottled spleen with pinpoint hyperechoic foci and a small hypoechoic nodule – There is a non-cavitated, hypoechoic splenic nodule visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.

SEX

Intact Male

- Large, 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.

AGE

8 Years

SECONDARY FINDINGS

WEIGHT

19.8 Pounds

- Hyperechoc speckling in the corticomedullary junction of both kidneys – This is likely an incidental finding.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

INTERPRETED BY

Kathleen Sennello DVM,
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Medicine)

The hematuria reported is likely secondary to the bladder stones present. Correlate these findings with abdominal radiographs to determine the number and size of the stones present. Additionally, there is a small mucosal irregularity, which I suspect is an inflammatory polyp. Recommend biopsy of this lesion at the time of cystotomy. Recommend urinalysis and culture.

IMAGING BY

Loetitia Saint-Jacques,
LVT

The spleen is somewhat irregular and mildly mottled. This can be normal in this individual, as many of the abdominal structures have these small pinpoint hyperechoic foci, which I suspect are incidental. Consider a fine needle aspirate of the spleen and/or further evaluation at the time of surgery.

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The liver is large and hyperechoic with a mild ALT elevation. This could be reactive due to the inflammation in the bladder, or could be due to a primary hepatopathy. You could consider a liver function test and a fine needle aspirate of the liver, or even a small liver biopsy at the time of surgery for the cystotomy. Consider neutering at time of cystotomy, as there could be concern for chronic prostatitis based on the stones and inflammation present in the urinary bladder.

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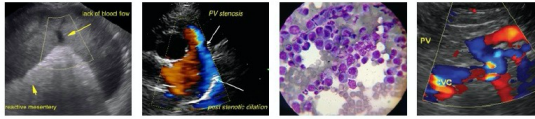
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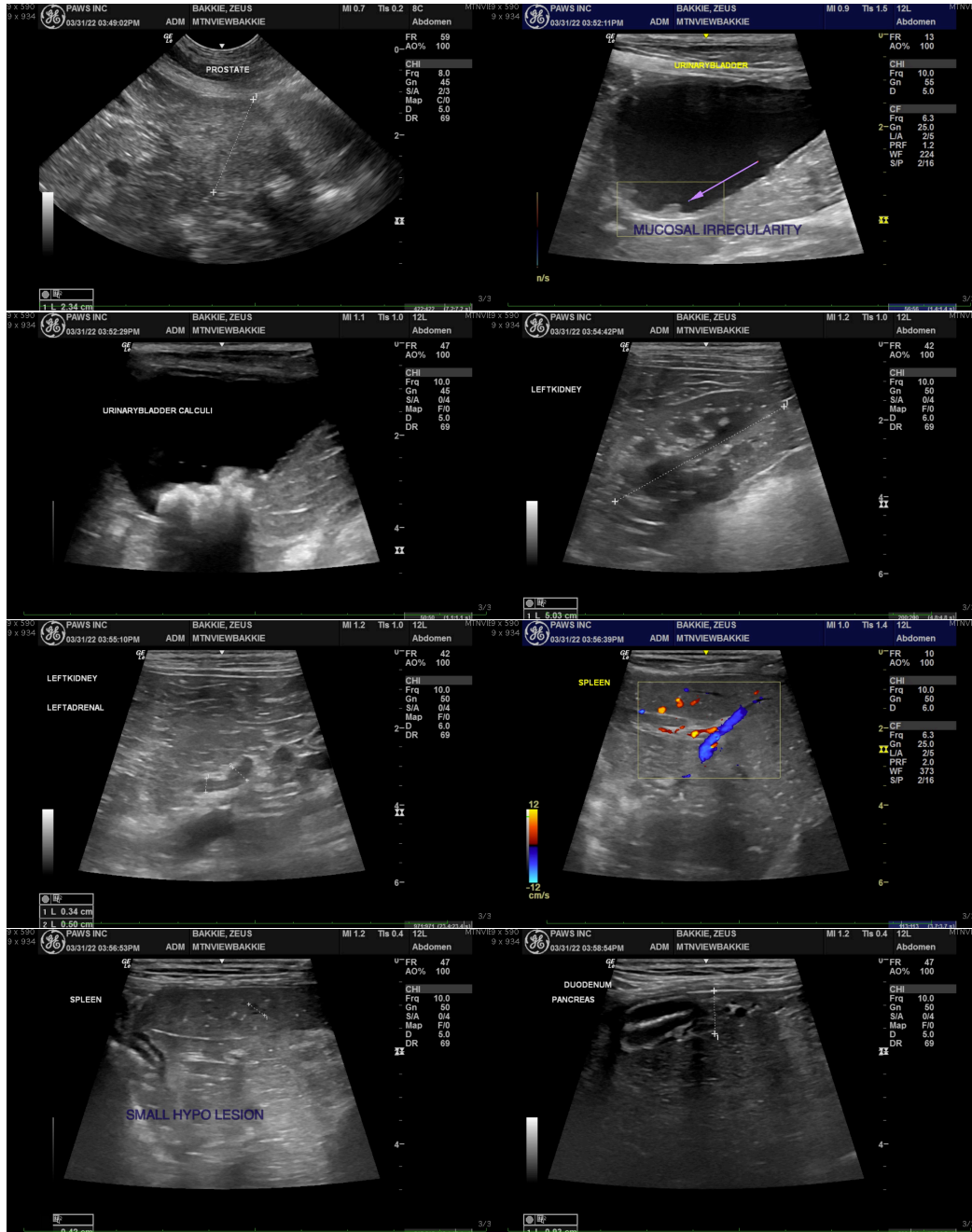
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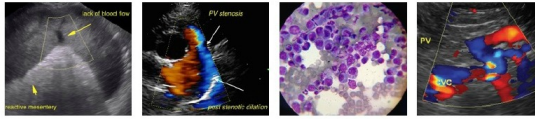
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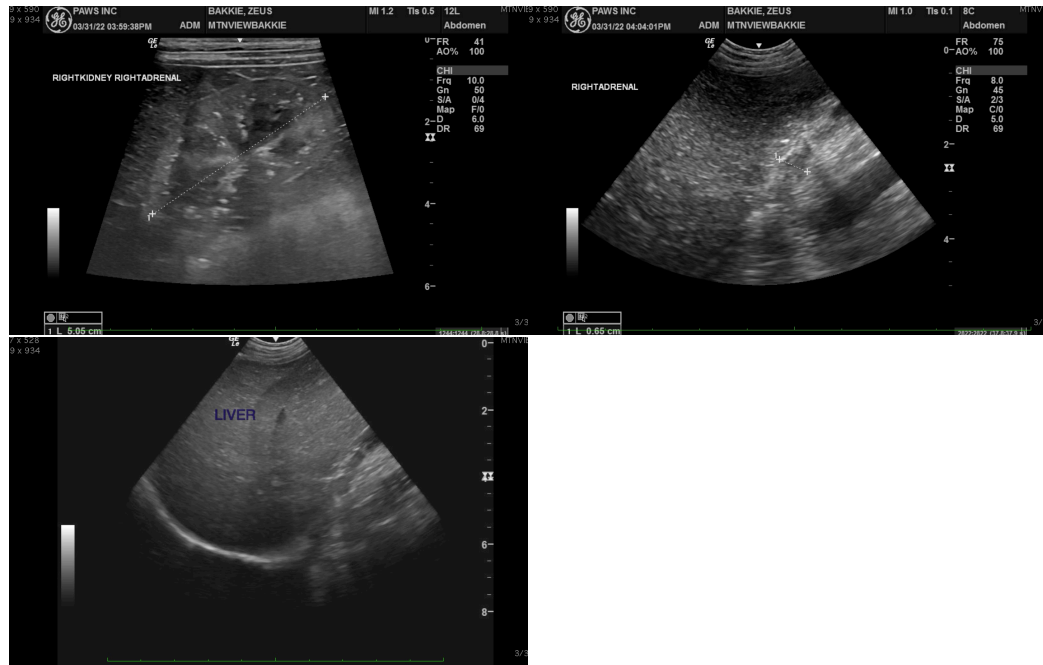
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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