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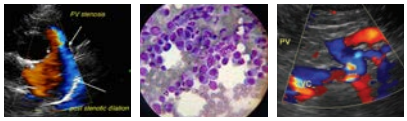

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
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**DATE**

7/26/22

**PATIENT**

Hopper Coleman

**SPECIES**

Canine

**BREED**

Husky

**SEX**

Intact Male

**AGE**

7/25/14

**WEIGHT**

74.7 Ponds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Rachel Brilhart RDMS

**HOSPITAL NAME**

Animal Emergency Hospital

**REFERRING VET**

Dr. Martinoli

**INVOICE**

39806

## PRESENTING CLINICAL SIGNS

About a month ago owner noticed weakness/mild ataxia in left hind leg. Then noticed increased urination/drinking. Free catch urine sample & BW at rDVM; BW WNL but WBC noted in urine; started an antibiotic. Recheck urine (also FC) still had WBC so changed to Enrofloxacin. Weakness in hind limbs has worsened over past 2 weeks so he now needs help walking, but has not been having urine or BM accidents in house. Diarrhea started about a week ago; put on Metronidazole. O thinks that is improving as he hasn't had any diarrhea (or any BM) in last 2 days but not straining. Last UA was done via cysto and no WBC so rDVM thinks the WBC may have been contaminant from penis or prepuce. Has CADET-Braf (for bladder/prostate cancer) pending as well as tick panel. Has not been interested in eating the past 2 days.

Current Medications: Carprofen, Methocarbamol, Metronidazole, Cerenia, Buprenorphine.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is minimally distended with urine. The Bladder wall appears relatively normal. A foley catheter is visualized in place, and saline is being instilled. There is no evidence of any calculi or focal lesions. The urine appears echogenic. This could be consistent with air bubbles, turbulence, etc.

The prostate is large in size (4.16 cm x 3.12 cm) 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.

The left kidney has a normal shape and size (7.78 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 a large, hypoechoic, somewhat echogenic lesion visualized in the periphery of the left kidney, measuring 4.28 cm x 2.2 cm, most consistent with a hypoechoic nodule. An echogenic cystic lesion cannot be definitively ruled out as color flow is poor. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney has a normal shape and size (7.75 cm). Overall echogenicity is normal with decreased corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is an irregular, hypoechoic lesion visualized towards the periphery of the right kidney measuring 2.4 cm x 2.18 cm. This lesion appears surrounded by hyperechoic mesentery and is most consistent with a mass lesion, although an echogenic cystic lesion cannot be excluded as a possibility.

### *Adrenal Glands*

The left adrenal gland is large in size measuring 0.86 cm at the cranial pole, 0.87 cm at the caudal pole, and 4.0 cm in length. It is observed in its normal position cranial to the left renal artery. It is abnormal in appearance in there is abnormal hyperechoic tissue visualized at the cranial pole of the left adrenal gland, most consistent with a mixed echogenic mass effect measuring 3.15 cm x 3.57 cm. There is no definitive vascular invasion visualized.

The right adrenal gland is normal in size measuring 0.61 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*
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 homogenous 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 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.

### *Other*
Both the left and right testicles are visualized and appear to be of normal size and have normal contour. There is an ill-defined, iso- to hypoechoic lesion visualized in the left testicle, measuring 1.44 cm x 1.34 cm, and punctate mineralizations are visualized in the parenchyma of both testicles.

## PRIMARY FINDINGS

- Large, heterogeneous, hyperechoic prostate – Prostatic changes are most consistent with benign prostatic hyperplasia. Other differentials include bacterial prostatitis and prostatic neoplasia. However, given the lack of lower urinary tract symptoms, these differentials are considered less likely in this patient.

- Hyperechoic, mixed echogenic, poorly defined mass lesion arising from the cranial pole of the left adrenal gland – Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

- Hypoechoic, echogenic lesions visualized on both kidneys – Primary differential for both kidneys is a hypoechoic mass effect, although echogenic fluid filled lesions (abscess) is also possible. Recommend sampling of these lesions.

- Mild punctate mineralizations in both testicles with a left-sided iso- to hypoechoic nodule – These lesions are relatively subtle and trend towards a benign appearance, but neutering and submission for histopathology is recommended.

## SECONDARY FINDINGS

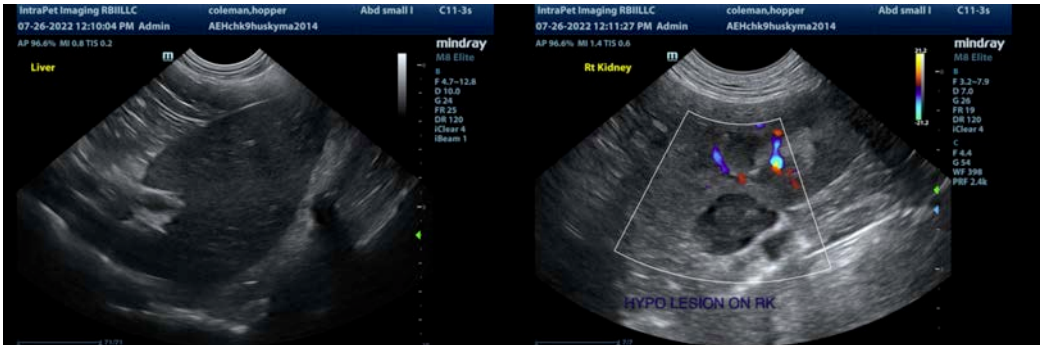
- Questionably echogenic urine in the urinary bladder with a foley catheter – Consider urinalysis and culture.

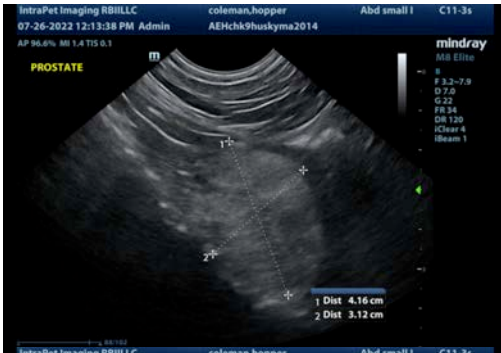
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Both kidneys have focal hypoechoic lesions. These lesions are most consistent with hypoechoic mass lesions/nodules, but an echogenic fluid-filled structure would be an alternate differential as color. Provided coagulation parameters are normal and blood pressure is normal, recommend a fine needle aspirate of these hypoechoic lesions.

Additionally, there is a lesion in the region of the cranial pole of the left adrenal gland. This is concerning for a mixed echogenic mass effect. These types of lesions can be benign or malignant, and can secrete hormones or be non-active. Given the patient's severe systemic signs, adrenal function testing is probably not recommended at this time. Consider blood pressure evaluation and a contrast CT scan to better evaluate the adrenal lesion and the renal lesions, looking for evidence of metastatic disease, inflammation, etc. An obvious cause for the pelvic limb abnormalities is not noted, but a spinal lesion, vascular lesion, etc. must be considered.

The prostate is large and hyperechoic. This is most consistent with benign prostatic hypertrophy +/- prostatitis. If the other medical issues can be managed, consider neutering with submission of both testicles for histopathology.

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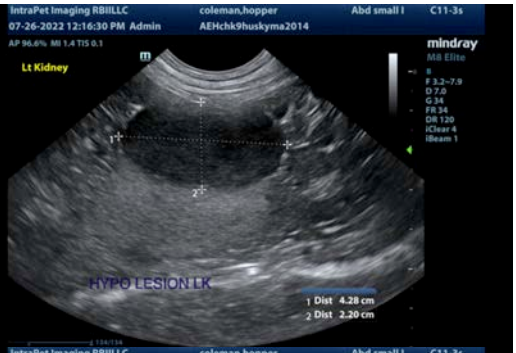
2 Dist 3.12 cm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HYPO LESION LK
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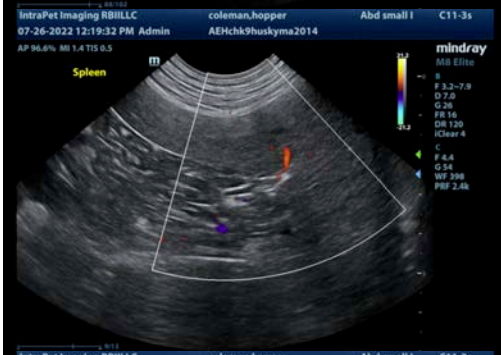
2 Dist 2.20 cm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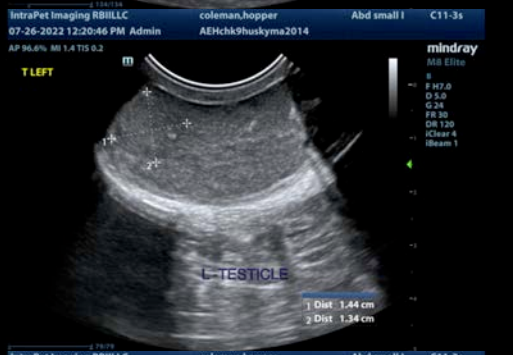
Spleen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M8 Elite
T LEFT
L-TESTICLE
1 Dist 1.44 cm
2 Dist 1.34 cm


IntraPet Imaging RBIIILLC
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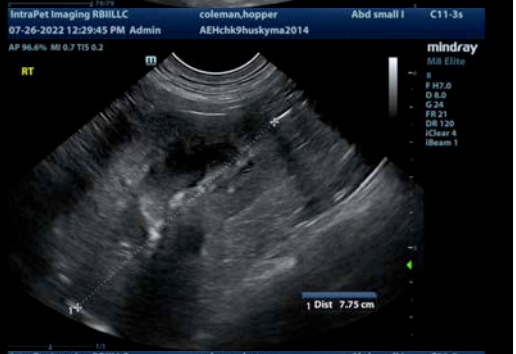
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RT
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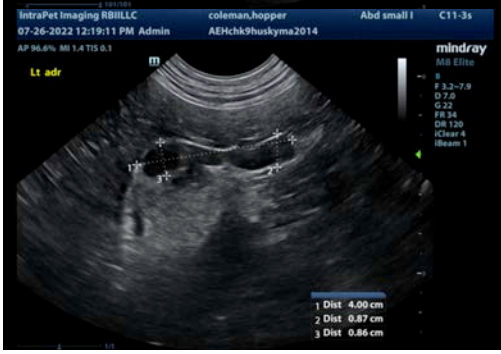
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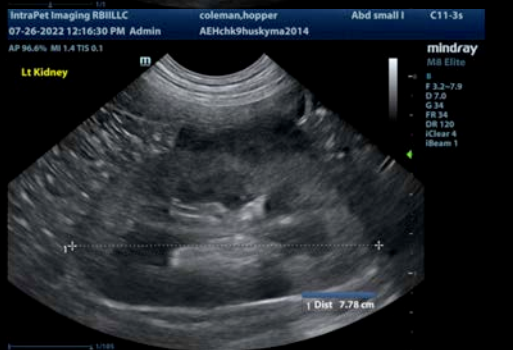
2 Dist 0.87 cm
3 Dist 0.86 cm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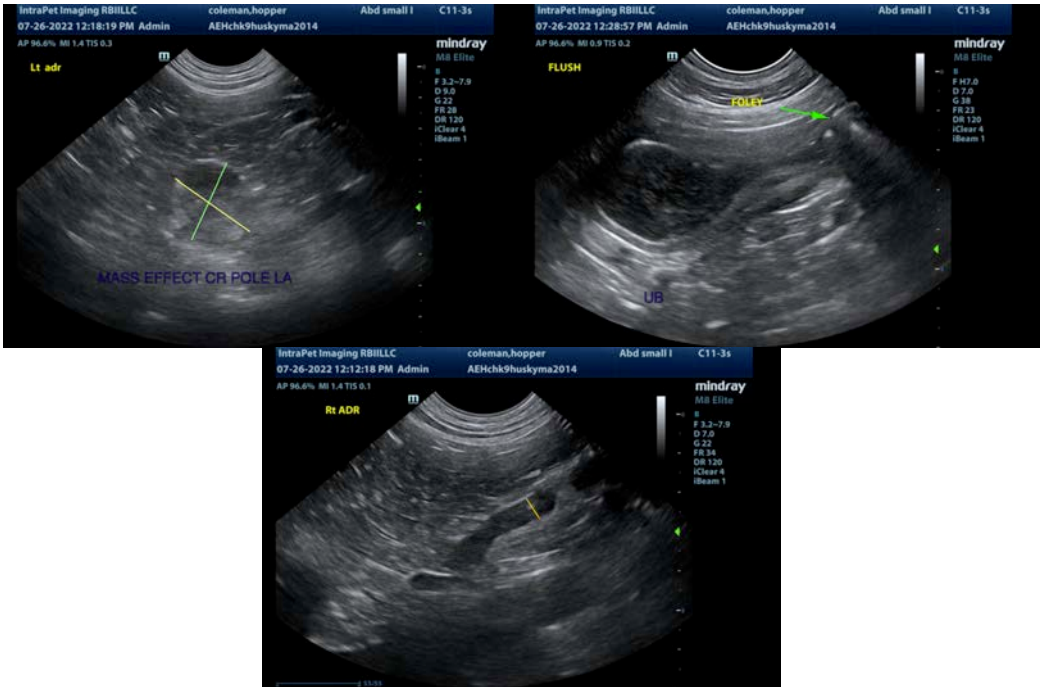


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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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kathleen.sennello@sonopath.com