IMAGING PERFORMED BY

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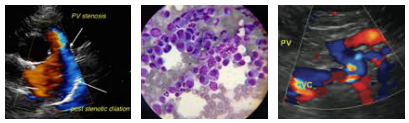

SonoPath
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DATE
2/22/22

PATIENT
Scrappy O'Neal

SPECIES
Canine

BREED
Dachshund Mix

SEX
Intact male

AGE
6/25/11

WEIGHT
30.5 lbs

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

HOSPITAL NAME
Banfield TImonium

REFERRING VET
Dr. Borrison

INVOICE
96227

PRESENTING CLINICAL SIGNS

History of prostatitis, recent blood in urine.
Current Medications: None listed.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Stephanie Pearce RDCS, RVT.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, 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 prostate is large in size and measured approximately 7.33 x 3.67 cm in cross section. It has a somewhat irregular shape with a heterogenous parenchyma and large, lacy, irregular cysts throughout the parenchyma. Some of the cysts were large and measured between 2-3 cm in diameter. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (6.1 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.

The right kidney has a normal shape and size (5.71 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 0.56 cm at the cranial pole, 0.7 cm at the caudal pole and 2.42 cm in length. It is observed in its normal position cranial to the left renal artery. It is somewhat irregular in appearance. The caudal pole contains a slightly, hyperechoic, heterogenous nodule measuring 1.24 x 1.6 cm. There is no evidence of free fluid or inflammation surrounding the adrenal gland. The findings are most consistent with a caudal adrenal nodule.

The right adrenal gland is normal in size measuring 0.57 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 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 gallbladder 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 (0.41 cm) and the jejunum measured as normal (0.33 cm). 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 right pancreatic limb 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, 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

The left and right testicle were both visualized and appeared within normal limits.

ULTRASONOGRAPHIC FINDINGS

PRIMARY FINDINGS:

- Large, irregular, cystic prostate. The findings are most consistent with benign prostatic hypertrophy and large, irregular prostatic cysts. Unfortunately secondary prostatitis is likely and prostatic abscess or underlying prostatic neoplasia cannot be definitively ruled out.

- Caudal adrenal nodule. Left/right adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

- Heterogenous 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.

SECONDARY FINDINGS:

- Decreased corticomedullary distinction in the kidneys. The bilateral renal findings are consistent with age-related change.

- Prominent, mottled, right limb of the pancreas. The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

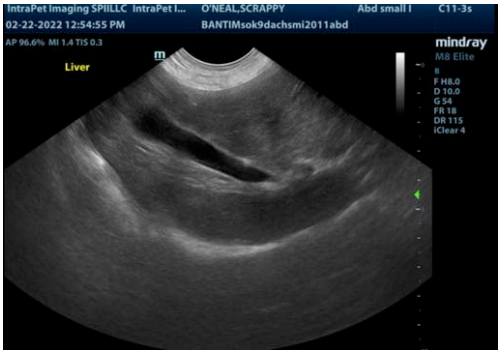
The prostate is very large and irregular in shape with large, cystic lesions. The findings are most consistent with prostatic cysts and benign prostatic hypertrophy. I recommend urinalysis and culture in addition to sampling/drainage of the prostatic cysts to look for evidence of underlying infection.

If prostatitis is suspected you can consider instilling Baytril into the prostatic cyst at the time of drainage. These lesions will not improve without stopping the effects of testosterone. Ideally castration with drainage +/- installation of the prostatic cysts is the most promising treatment. Even with this treatment I recommend to continue monitoring of the cysts as they can become infected and become a problem. Is neutering is absolutely not an option you can consider testosterone blocking medications (i.e. Finasteride).

There is mass present involving the left adrenal gland. These masses can be benign or malignant and can secrete hormones or be non-active. Based on the irregular appearance of this mass a cancerous process is considered more likely. Options moving forward include:

- If signs of Cushing's are present, consider adrenal function testing. I prefer an ACTH stimulation test combined with an adrenal panel to the University of Tennessee's endocrine lab to look for atypical adrenal hormones as well as cortisol. (other testing can suffice)
- If adrenal dependent Cushing's is suspected and supported by adrenal function testing consider medical therapy with Lysodren or Trilostane and/or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)-This can be a challenging surgery with significant risk for complication
- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma
- Due to the invasive nature of these masses a CT scan is recommended to evaluate for metastasis and vascular invasion.
- If no symptoms of Cushing's are present, consider either referral for surgery or if surgery is not an option consultation with a veterinary oncologist regarding chemotherapeutic options and continued monitoring with ultrasound (in 4-6 weeks) can be considered.
- Some aggressive adrenal tumors can grow quickly and there is risk for acute hemorrhage from vascular invasion.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

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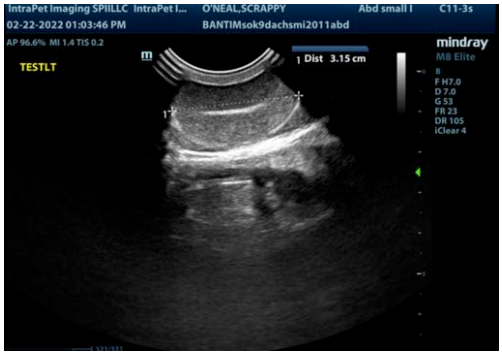
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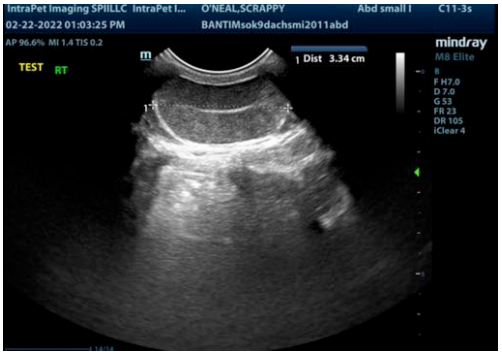
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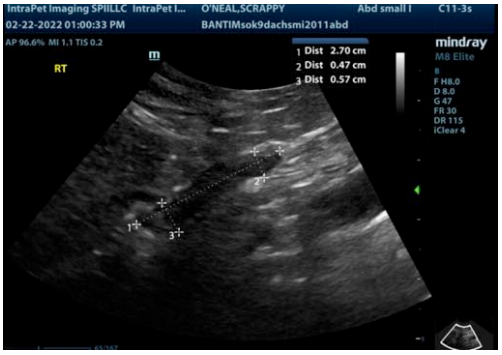
LT ADR
1 Dist 1.24 cm
2 Dist 1.60 cm
LA CD POLE NODULE
mindray
M8 Elite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RT
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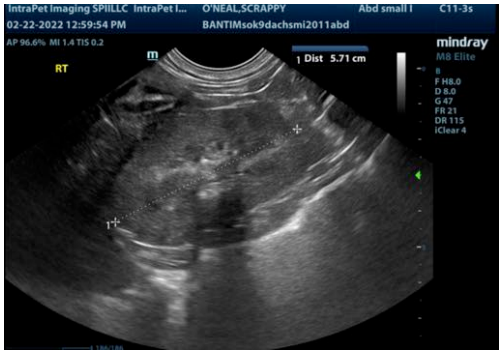
2 Dist 0.47 cm
3 Dist 0.57 cm
mindray
M8 Elite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RT
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mindray
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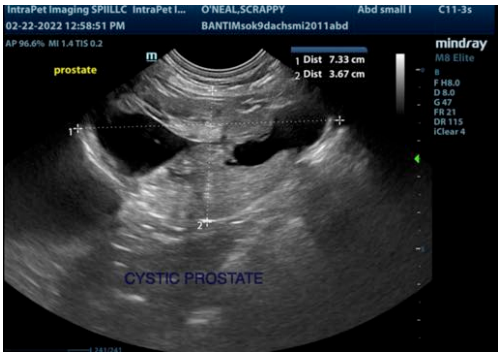
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prostate
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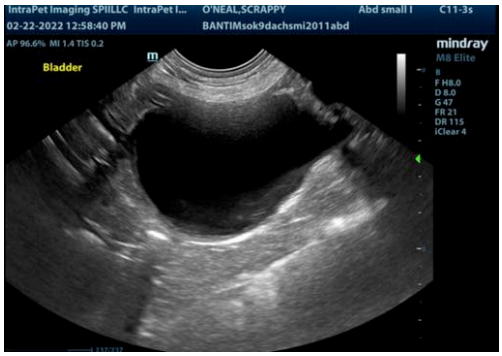
2 Dist 3.67 cm
CYSTIC PROSTATE
mindray
M8 Elite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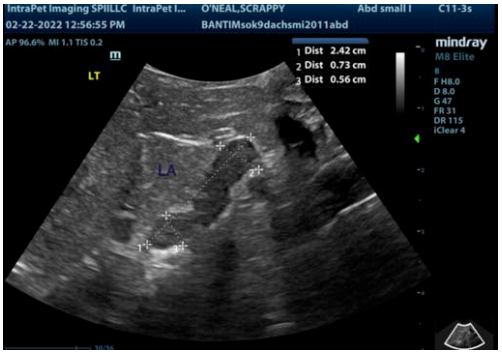
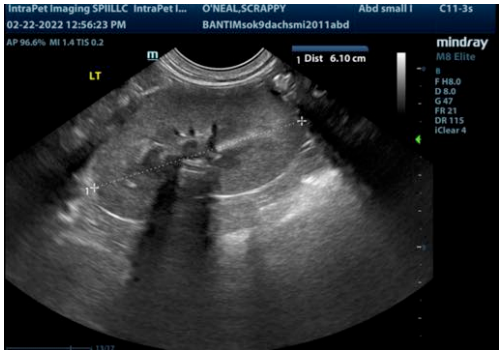
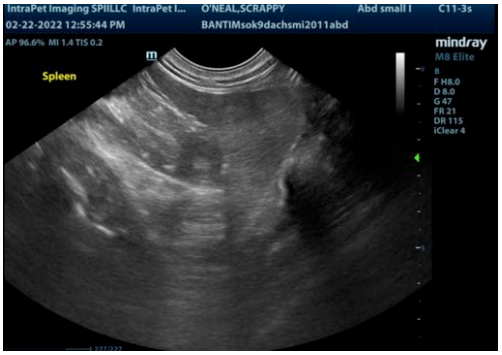
Bladder
mindray
M8 Elite







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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)
kathleen.sennello@sonopath.com