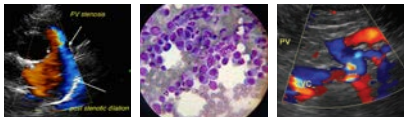
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

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DATE

1/13/23

PATIENT

Charles Anderson

SPECIES

Canine

BREED

Bulldog

SEX

Intact Male

AGE

4/12/19

WEIGHT

21.6 kg

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Chadwell AH

REFERRING VET

Dr. Mengers

INVOICE

44190

PRESENTING CLINICAL SIGNS

Presented for urinary dribbling and vomiting 5x in 12 hours with blood in vomit. Hx of UTI from 11/9/22 that never fully resolved and dribbling urine since. On PE tender in caudal abdomen, dermatitis, grade IV/VI heart murmur (history of).

Current Medications: cerenia (1 mg/kg) IV - started 1/12, clavamox (11mg/kg) PO BID - started 1/12, orbax 68mg one tab SID - given 14d on 11/9/22 and restarted 1/6/23, hydroxyzine 50mg tab BID - given 14d on 11/9/22 and restarted 1/6/23, apoquel 16mg tab SID - given since 9/7/22
Lab Results: UA: proteinuria, hematuria, pyuria. CBC: leukocytosis w/ neutrophilia. CHEM and electrolytes: BUN 121.2 (9-29), creatinine 2.0 (0.4-1.4), phosphorus 7.8 (1.9-5.0), remainder WNL
Radiographs: lumbosacral spondylosis, enlarged bladder but not visible stones, no foreign body obstructive patterning
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Requested/Approved.
Imaging Performed By: Stephanie Warga RDCS, RVT.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is mildly subjectively overdistended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (0.84 cm). Mucosa is hyperechoic and irregular. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface.

Prostate is symmetrically enlarged (3.2 cm thick) with smooth margins that are well differentiated from surrounding tissue. Normal bilobed shape is maintained. Parenchyma is heterogenous with scattered hyperechoic foci present. No mineral or cysts are noted.

Kidneys are normal in size and contour. A relatively uniform hyperechogenicity is observed with mildly decreased corticomedullary distinction. There is no pyelectasia noted and no mineral is observed. No overt masses/nodules are observed. The right kidney measures 5.82 cm. The left kidney measures 5.74 cm.

Adrenal Glands

The right adrenal gland is normal in size (2.03 cm long x 0.85 cm at the cranial pole and 0.97 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (3.11 cm long x 0.75 cm at the cranial pole and 0.75 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as mild suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

Fundic mucosal hypertrophy with hyperechoic mucosa and some mucosal remodeling is noted. There is no loss of mural detail. Layering is normal. There is mild luminal fluid accumulation. No evidence of masses/nodules or foreign material present.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

The sublumbar lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

The left testicle was visualized in the scrotum and is normal in appearance. The right testicle is visualized within the abdomen, adjacent to the urinary bladder, and measures 2.76 cm long x 1.5 cm thick.

PRIMARY FINDINGS

- **Benign Prostatic Hyperplasia –** Prostatic findings are most consistent with Benign Prostatic Hyperplasia (BPH) and hyperechoic foci consistent with increased vascularity and fibrosis often associated with BPH. Active prostatitis cannot be ruled out. Infiltrative neoplasia cannot be ruled out but is considered less likely.

- Intraabdominal/cryptorchid right testicle

- **Gastritis –** Consistent with irritation secondary to dietary indiscretion or intolerance, infection (bacterial, viral, other), parasitic or protozoal disease, toxin, other metabolic disease such as pancreatitis, other. Microulceration cannot be ruled out.

- **Nephritis –** This appearance can be consistent with chronic interstitial nephritis or glomerulonephritis. Toxic insult and/or infectious disease (pyelonephritis, Leptospirosis, etc.) cannot be ruled out. This finding should be interpreted in combination with suspicion for renal disease and/or supporting laboratory or urinalysis changes.

- **Reactive sublumbar lymph nodes –** infiltrative neoplastic disease cannot be ruled out but is considered less likely.

SECONDARY FINDINGS

- **Chronic Cystitis with a subjectively mildly overdistended bladder -** Urinary bladder wall changes are most consistent with chronic cystitis. Infiltrative neoplasia cannot be ruled out but is considered less likely give the location and diffuse nature of the changes.

- **Mild gallbladder debris -** Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

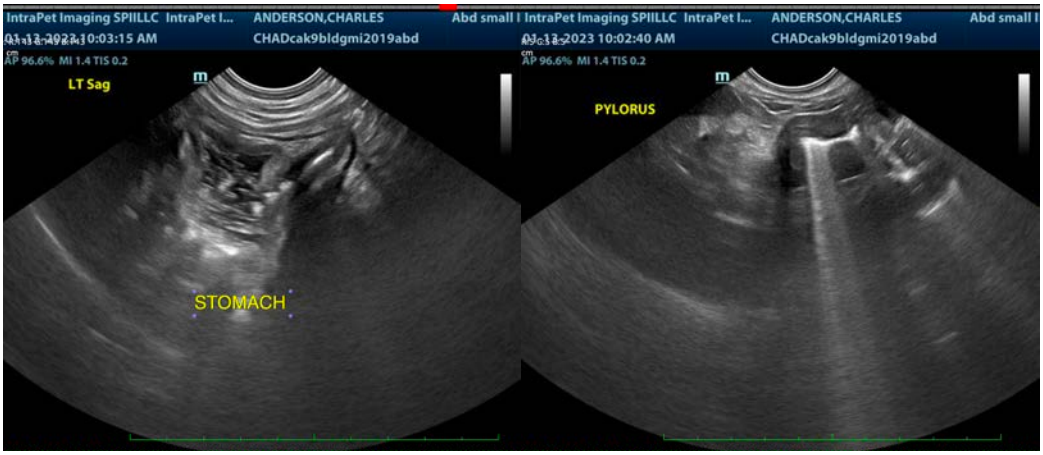
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

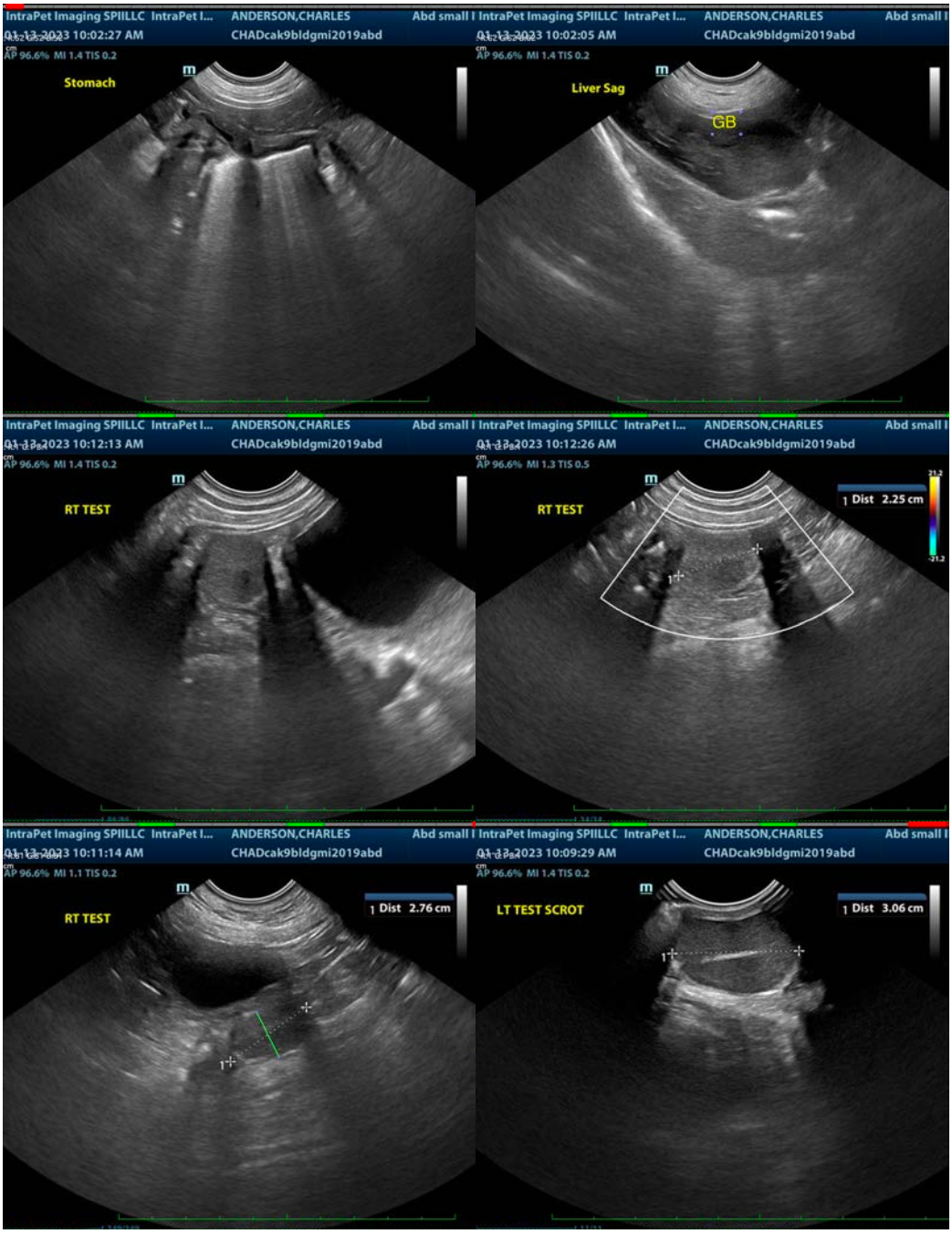
This patient's prolonged urinary signs are likely a combination of a complicated urinary tract infection potentially involving the prostate and the kidneys (i.e., bacterial prostatitis/pyelonephritis), making the clearance more difficult.

Therefore, recommendations include a urine culture a week to 10 days away from any recent antibiotic therapy, followed by management of a suspect complicated UTI/prostatitis/pyelonephritis with a longer course of antibiotics (4+ weeks), ideally based on culture and sensitivity results. This protocol should be followed by a 2nd culture a week to 10 days after starting antibiotics to ensure that it is negative, look for evidence of secondary pathogens, resistance, etc., and end with a final culture a week to 10 days after finishing antibiotics to ensure full clearance.

Additionally, patient neutering is strongly recommended to prevent progression of suspected benign prostatic hyperplasia and prostatitis, as well as prevent development of future complications from the intraabdominal testicle.

In the meantime, additional supportive/symptomatic medical management of suspect gastritis is recommended with antiemetics, gastroprotectants including sucralfate, as well as empirical deworming with a 5-day course of Panacur.




IntraPet Imaging SPIILLC IntraPet I... ANDERSON,CHARLES Abd small I
CHADcak9bldgmi2019abd
AP 96.6% MI 1.4 TIS 0.2
Stomach
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Liver Sag
GB
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1 Dist 2.76 cm
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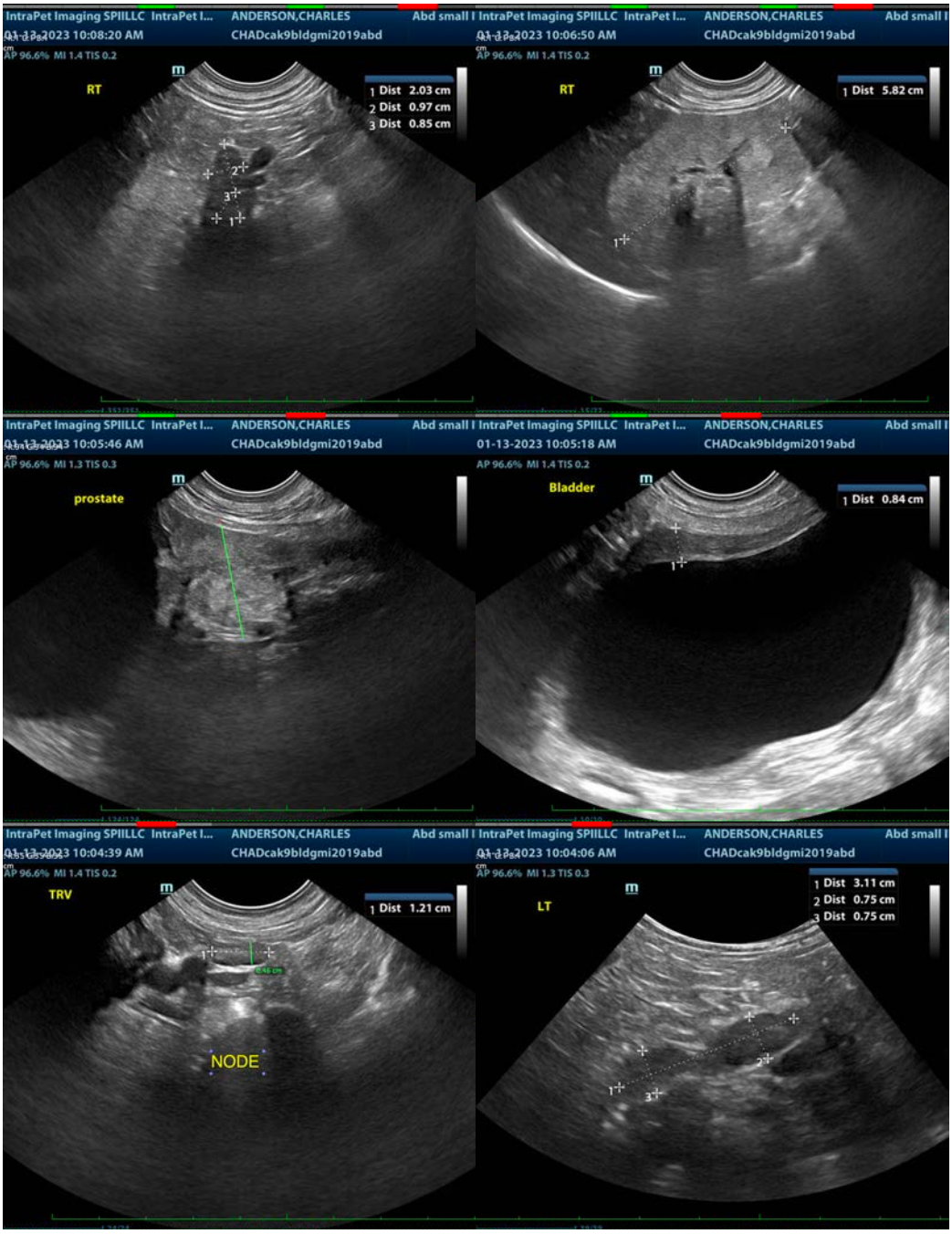
LT TEST SCROT
1 Dist 3.06 cm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01-13-2023 10:08:20 AM CHADcak9bldgmi2019abd
AP 96.6% MI 1.4 TIS 0.2
RT
1 Dist 2.03 cm
2 Dist 0.97 cm
3 Dist 0.85 cm
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RT
1 Dist 5.82 cm
IntraPet Imaging SPIILLC IntraPet I... ANDERSON,CHARLES Abd small I
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prostate
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01-13-2023 10:05:18 AM CHADcak9bldgmi2019abd
AP 96.6% MI 1.4 TIS 0.2
Bladder
1 Dist 0.84 cm
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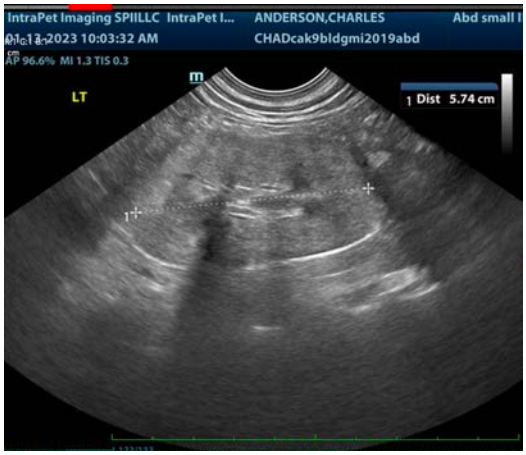
AP 96.6% MI 1.4 TIS 0.2
TRV
1 Dist 1.21 cm
NODE
IntraPet Imaging SPIILLC IntraPet I... ANDERSON,CHARLES Abd small I
01-13-2023 10:04:06 AM CHADcak9bldgmi2019abd
AP 96.6% MI 1.3 TIS 0.3
LT
1 Dist 3.11 cm
2 Dist 0.75 cm
3 Dist 0.75 cm



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.

Beth Johnson, DVM, DACVIM
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