

**DATE PRESENTING CLINICAL SIGNS**

7/18/22

PATIENT

Elvis Froude

SPECIES

Canine

BREED

Pitbull Mix

SEX

Neutered male

AGE

7/16/06

WEIGHT

67.6 lbs

INTERPRETED BYBeth Johnson, DVM
DACVIM**HOSPITAL NAME**Animal Emergency
Hospital**REFERRING VET**

Dr. Martinoli

INVOICE

16691

This morning went outside to urinate; didn't seem to have a normal long stream and then had some spurts. After that when he went back inside he kept asking to go out but no urine produced. At one point when outside he barked strangely then was staring, then circled/paced. Was at rDVM last week; had some routine bloodwork; 4DX negative and diabetes was ruled out although owners not sure exactly what bloodwork was done.

Current Medications: Gabapentin, Buprenorphine, Prazosin, Baytril, Galliprant, Enrofloxacin.

Lab Results: See attached.

Radiographs: No bladder stones. Prostate enlarged. No other abdominal masses seen. Lateral chest xray -- nsf; no full VD of chest to evaluate

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Rachel Brillhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

Urinary bladder is only mildly distended, made more distended when a foley catheter that's in place was flushed. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The prostate is irregularly enlarged, measuring approximately 6.0 cm in diameter with a mixed heterogeneous parenchyma and poor demarcation from surrounding tissue.

Left kidney is normal is size (6.93 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of mineral or infarcts observed. Mild pyelectasia is present.

Right kidney is normal is size (7.08 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of mineral or infarcts observed. Mild pyelectasia is present.

Adrenal Glands

Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Some parenchymal heterogeneity is present, likely normal for this age. Visible surrounding vasculature appears normal. The left adrenal gland measures 3.61 cm long x 1.37 cm at the cranial pole and 1.47 cm at the caudal pole. The right adrenal gland measures 2.97 cm long x 1.29 cm at the cranial pole and 1.33 cm at the caudal pole.

Spleen

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

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is only minimally distended, resulting in a thick irregular appearing wall with an edematous layer. Anechoic bile as well as suspended and gravity dependent echogenic debris are present. There is no evidence of cystic or CBD dilation.

Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. 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 and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. The capsule is mildly irregular in shape. Parenchyma is mildly heterogenous and coarse. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

Medial iliac 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.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

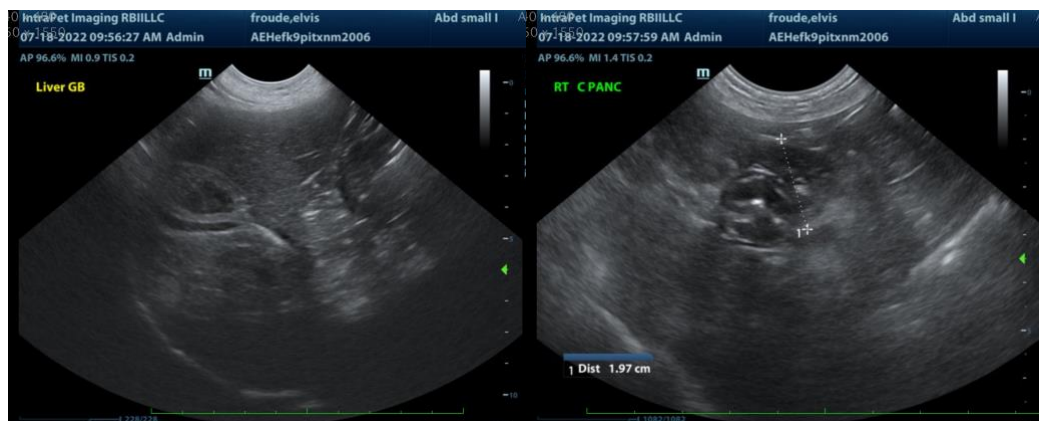
- Prostatomegaly/prostate mass, most concerning for infiltrative neoplasia, such as carcinoma. Benign prostatitis cannot be ruled out but is considered less likely.
- Bilateral adrenomegaly with age-related heterogeneity – consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.
- Heterogenous Liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.
- Gallbladder debris with a thick edematous gallbladder wall - 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.

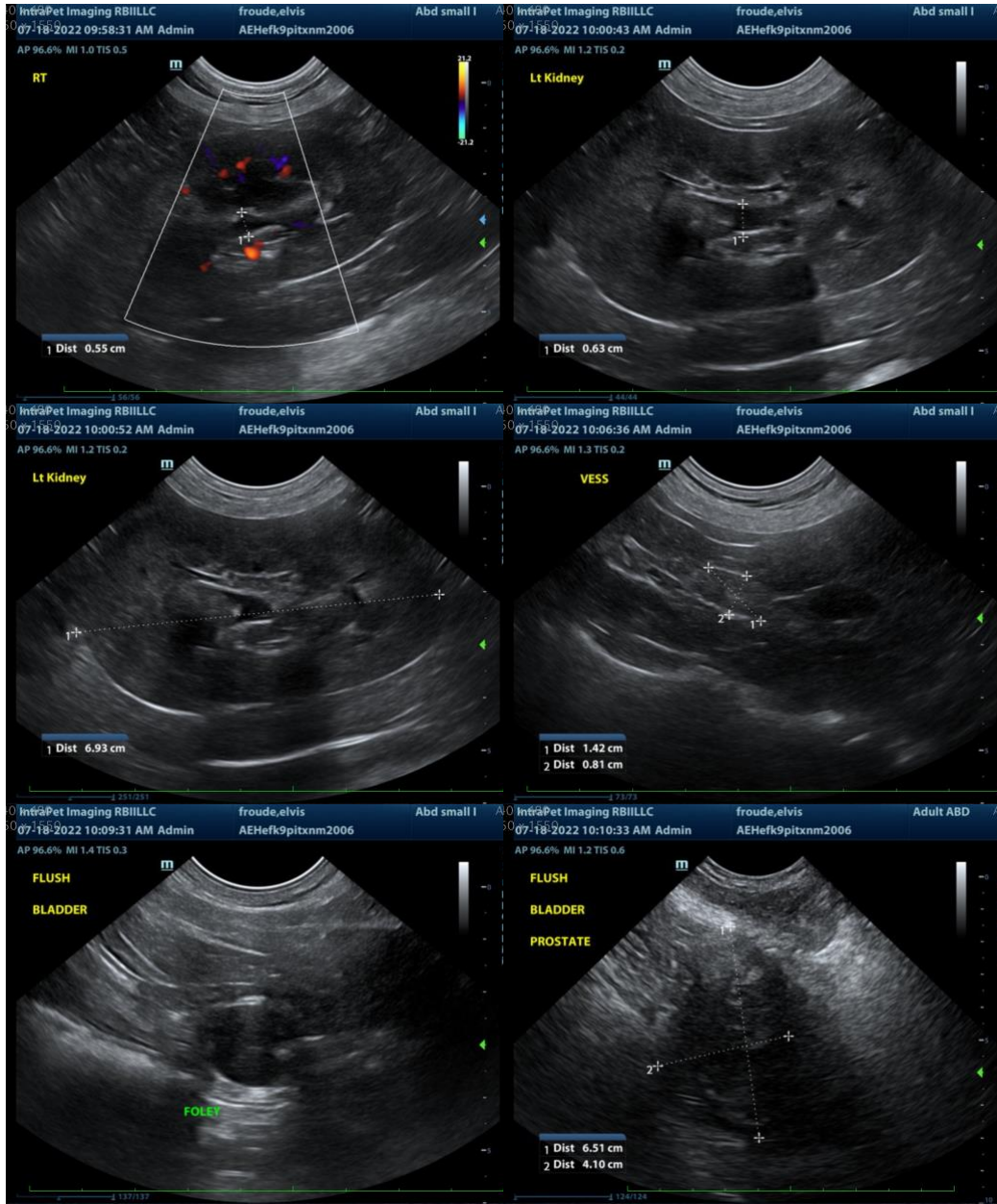
Secondary Findings

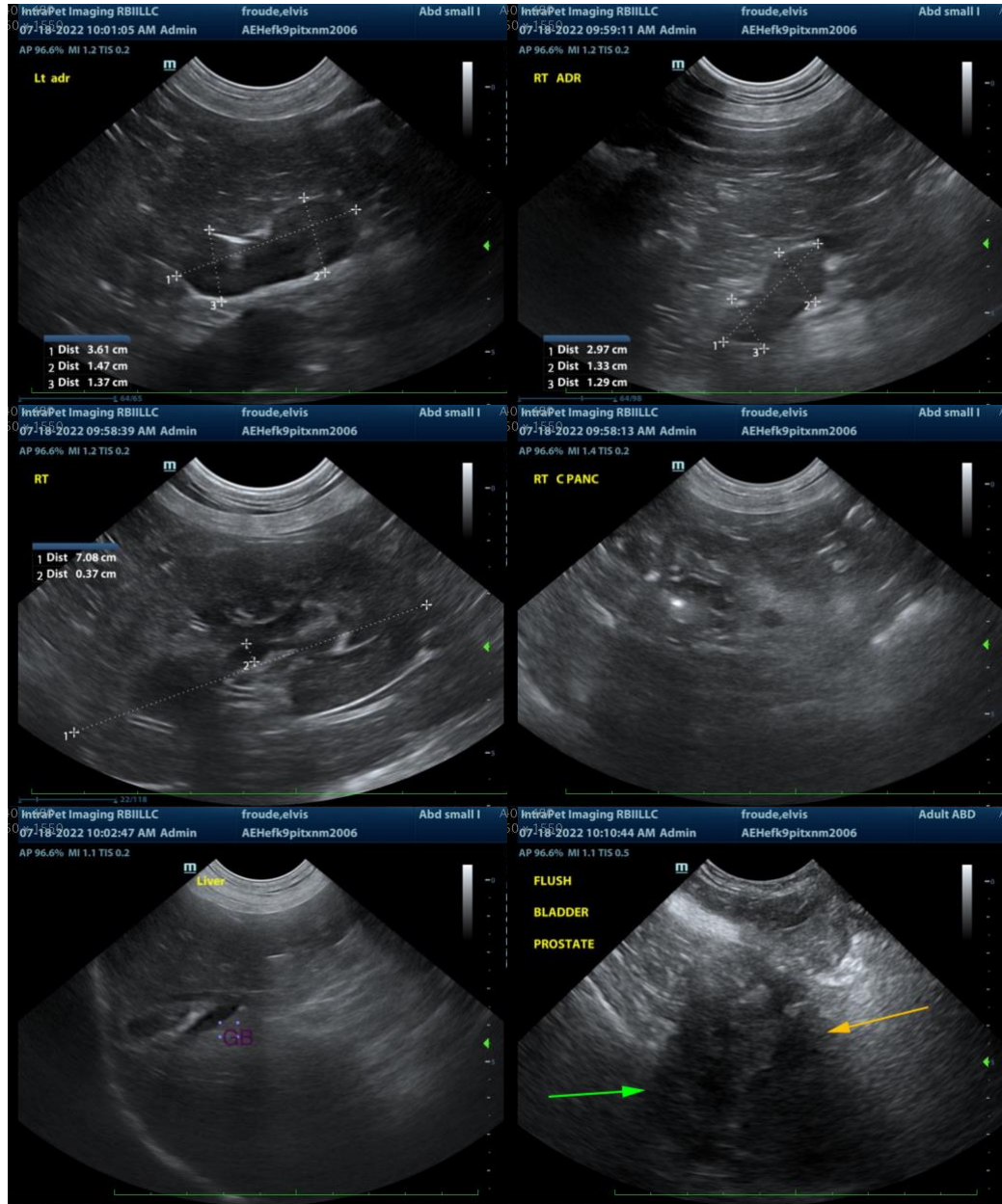
- Pancreatic age-related remodeling – Mild irregularities are consistent with benign age-related change. Low-grade smoldering chronic pancreatitis cannot be ruled out and should be suspected in the face of appropriate clinical signs.
- Bilateral pyelectasia – Differentials for pyelectasia include pyelonephritis, diuresis, congenital malformation or ureteral or lower urinary tract obstruction.
- Reactive medial iliac lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Urinalysis and urine culture, if indicated based on urinalysis results, are recommended. Submission of urine to look for BRAF gene mutation, which is associated with urinary bladder cancer, could be considered. Other diagnostic options include traumatic catheterization, fine needle aspirate (with small risk of tumor seeding/trailing) or cystoscopy for further sampling.
- Pending results of the prostatic work up, which is considered the primary contributing lesion to this patient's clinical signs, the described adrenal gland, liver and gallbladder changes are all suggestive of hyperadrenocorticism. If clinical signs of hyperadrenocorticism, such as polyuria, polydipsia, polyphagia, panting, hair loss, hypertension, etc. are present, testing for hyperadrenocorticism with a LDDS test is warranted. If a LDDS test has been evaluated with a normal result, investigation of possible atypical hyperadrenocorticism with a full ACTH stimulation adrenal panel to the University of Tennessee could be considered. If clinical signs are not present, monitoring is recommended with testing pursued when/if clinical signs develop. If not recently evaluated, blood pressure is recommended. If not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are also recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.







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.

Beth Johnson, DVM DACVIM

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