

**DATE PRESENTING CLINICAL SIGNS**

8/18/22

=Second opinion from other vet hospital for urinary tract disease. Pet is PU/PD, as well as having intermittent diarrhea and soft stool. Per other hospital, pet had urinary tract infections but recent culture is negative and signs persist. Fecal also negative and systemic labwork does not support obvious systemic issues (renal, e-lyte changes, etc).

PATIENT

Cal McGuire

SPECIES

Canine

Current Medications: None listed.

Lab Results: 8/12/22: urine culture negative, USG 1.007, phos 7.6, chol 363, fecal negative.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Dexdomitor/Torbugesic.

Stat Report: Not requested.

BREED

Labrador X

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**SEX**

Intact Male

Urinary System

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface. Both ureteral papillae are well visualized and appear normal.

AGE

3/3/22

Prostate is normal in size for an intact male. Parenchyma is diffusely homogenous and relatively hyperechoic. Normal distinct margins and symmetrical bilobed shape are maintained.

WEIGHT

35.8 Pounds

The right kidney is normal in size (6.66 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 pyelectasia, mineral or infarcts observed.

INTERPRETED BYBeth Johnson, DVM
DACVIM

The left kidney is normal in size (6.46 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 pyelectasia, mineral or infarcts observed.

IMAGING PERFORMED BYStephanie Warga
RDCS, RVT**Adrenal Glands**

Adrenal glands are small (flattened contour). Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The left adrenal gland measures 2.9 cm long x 0.37 cm at the cranial pole and 0.37 cm at the caudal pole. The right adrenal gland measured 3.1 cm long x 0.60 cm at the cranial pole and 0.60 cm at the caudal pole.

HOSPITAL NAME

Everhart Vet Hospital

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.

REFERRING VET

Dr. Notarangelo

Liver

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

INVOICE

40599

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) 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 (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 a scant amount of anechoic free fluid noted.

Mesenteric lymphadenopathy is noted.

No testicular pathology is present in these images. Both testicles were well visualized.

ULTRASONOGRAPHIC FINDINGS

- **Flat adrenal glands** – This can be a normal patient variant and/or a sign of exogenous cortisol administration. If exogenous steroids are not being administered, hypoadrenocorticism (either relative or absolute) should be considered.
- **Hyperechoic hepatomegaly** - This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.
- **Mesenteric lymphadenopathy** – Both reactive lymphadenopathy as well as infiltrative neoplasia are differentials and cannot be differentiated without tissue sampling.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.

Given this patient's reported diarrhea combined with the mesenteric lymphadenopathy, a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended.

A fecal enteropathogen PCR panel to Texas A&M GI Laboratory could be considered for further evaluation of possible infectious disease.

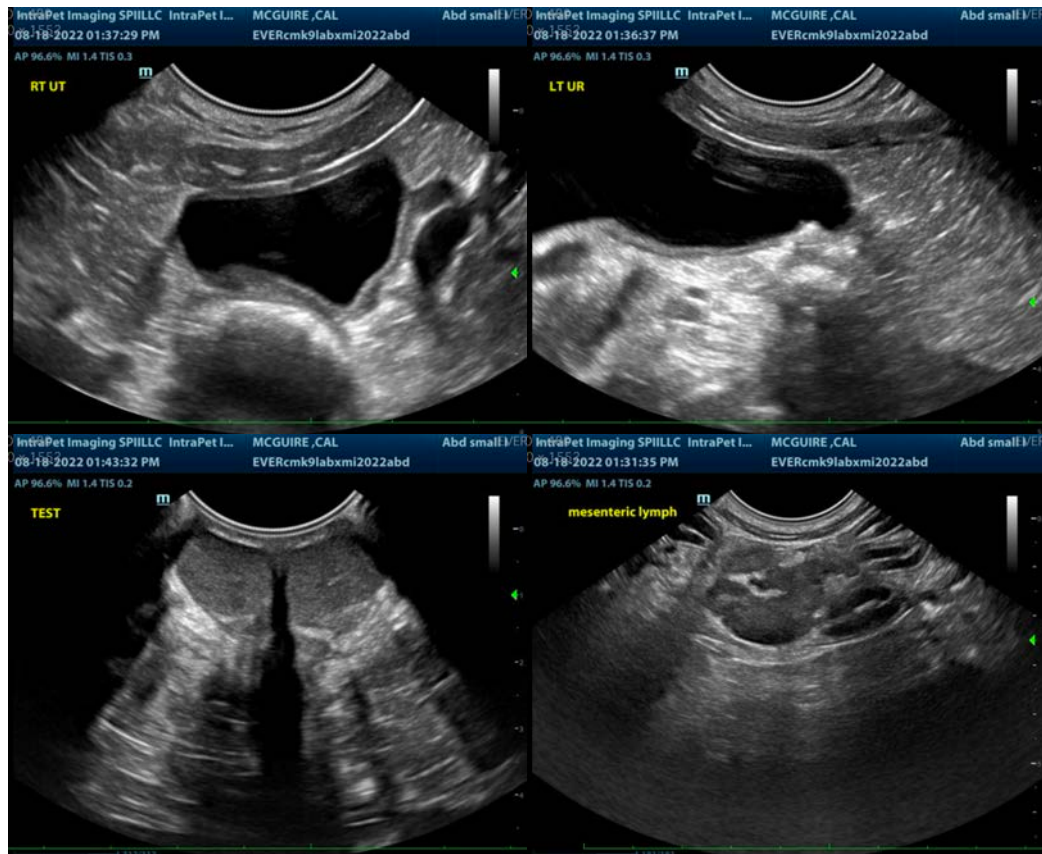
Differentials for PU/PD are vast, and include but are not limited to primary polyuria caused by chronic kidney disease, pyelonephritis, liver disease, diabetes mellitus, hyperthyroidism, hypercalcemia, hyper- and hypoadrenocorticism, central diabetes insipidus, and nephrogenic diabetes insipidus, or primary polydipsia caused by a psychogenic polydipsia, fever, pain, CNS disease, etc. Most causes of PU/PD can be diagnosed

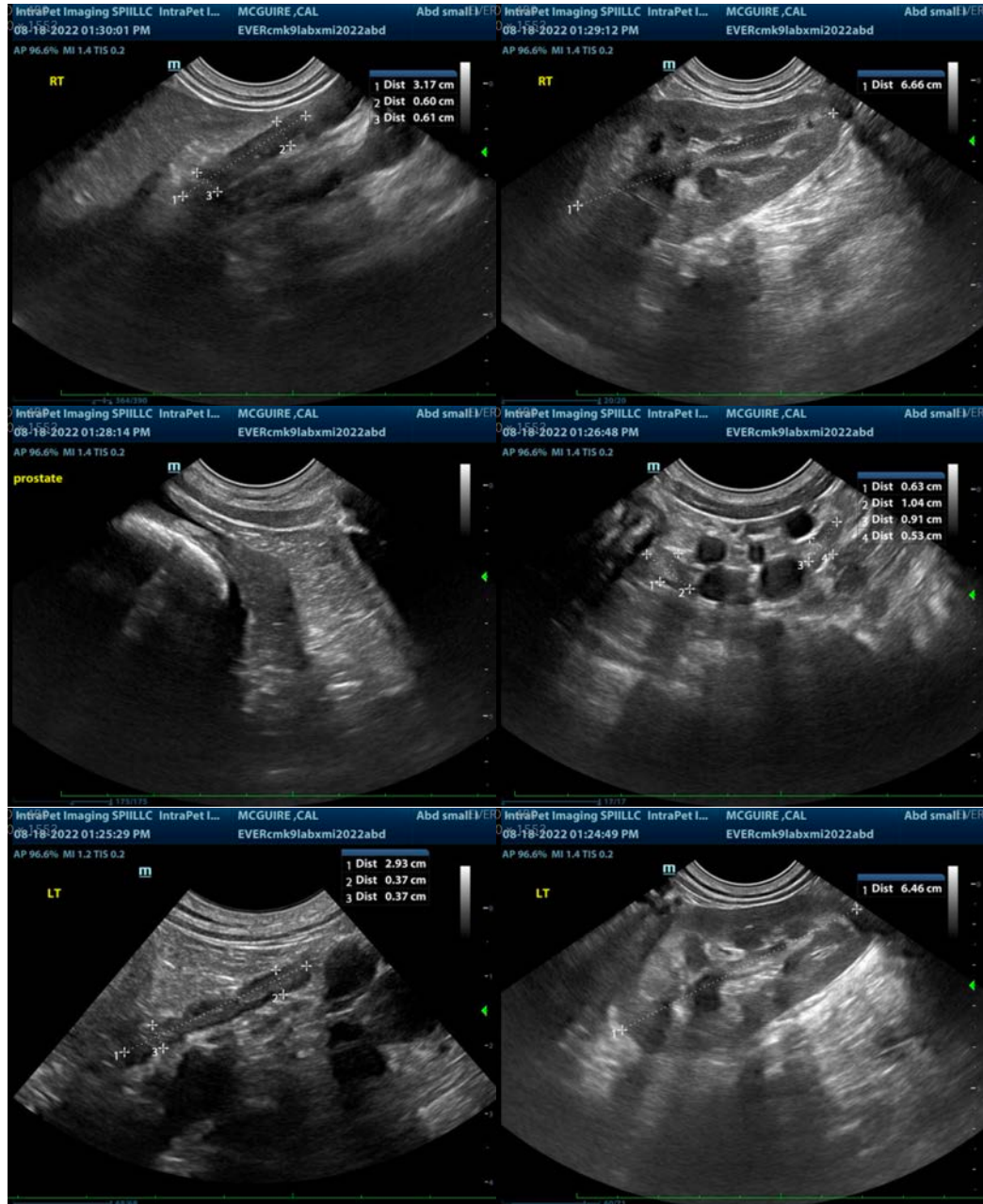
with a comprehensive history and physical exam, a first morning urine specific gravity to see if urine concentration is possible, as most animals drink less overnight, followed by comprehensive CBC/serum chemistry panel, electrolytes, and urinalysis.

In this patient specifically, if the reported negative urine culture was within a week of receiving antibiotics, a recheck urine culture while the patient is clinical with at least a week separation between the last antibiotics is recommended.

Other considerations could include testing for hypothyroidism, bile acids, Leptospirosis testing, and/or a longer empirical course of antibiotics. In this patient specifically, a fine needle aspirate of the mesenteric lymph nodes could be considered if patient's coagulation status is appropriate.

In the meantime, empirical deworming with a 5-day course of Panacur and potentially a transition to a novel or hydrolyzed protein diet could be considered, given the concurrent diarrhea.





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
Beth.Johnson@sonopath.com