**PATIENT**

Jerry Sullivan

**PRESENTING CLINICAL SIGNS**

PU/PD

Abnormal PE/Chem/CBC/UA Results: U/A: 1.020 specific gravity for a first

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (0.49 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.

**BREED**

Mixed

**SEX**

Neutered Male

Prostate is normal in size, echotexture and echogenicity for a neutered male.

The right kidney is normal in size (6.05 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.

**AGE**

2 Years

The left kidney is normal in size (6.44 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.

**WEIGHT**

53 Pounds

**Adrenal Glands**

The right adrenal gland is normal in size (0.68 cm at the cranial pole and 0.51 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**INTERPRETED BY**Beth Johnson, DVM  
DACVIM

The left adrenal gland is normal in size (0.43 cm at the cranial pole and 0.49 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

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Tom McNeill

**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.

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**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.

**REFERRING VET**Clinton Vet Clinic  
Dr Severson

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.

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**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.

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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

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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.

**SPECIES**

Canine

***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.

**BREED**

Mixed

***Free Abdomen***

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

**SEX**

Neutered Male

The medial iliac, gastric and mesenteric 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.

**AGE**

2 Years

**ULTRASONOGRAPHIC FINDINGS**

- **Chronic Cystitis** - 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.
- **Reactive lymph nodes** - This could be a normal finding for a young patient versus other.

**WEIGHT**

53 Pounds

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS****INTERPRETED BY**Beth Johnson, DVM  
DACVIM

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, hypercalcemia, hyperadrenocorticism, hypoadrenocorticism, E.coli, infections (i.e., urinary tract), central diabetes insipidus, or primary nephrogenic diabetes insipidus, versus primary polydipsia caused by psychogenic polydipsia, fever, pain, central nervous system disease, etc.

**IMAGING PERFORMED BY**

Tom McNeill

Most causes of PU/PD can be diagnosed with a comprehensive history and physical exam, a first AM urine specific gravity to see if urine concentration is possible (as most animals drink less overnight), followed by a comprehensive CBC/Chem pane, electrolytes and urinalysis. If not, next steps to consider include a urine culture, low-dose Dexamethasone suppression test, T4, bile acids, Leptospirosis testing, etc., and/or an empirical course of antibiotics. If a diagnosis is still not obtained, a more advanced workup with considerations being a water deprivation test, Desmopressin trial, etc. may be recommended.

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Dr Severson

In this patient specifically, if not already evaluated, next recommended steps include CBC/Chem panel, electrolytes, urinalysis and urine culture.

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**SPECIES**

Canine

**BREED**

Mixed

**SEX**

Neutered Male

**AGE**

2 Years

**WEIGHT**

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**INTERPRETED BY**

Beth Johnson, DVM  
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Tom McNeill

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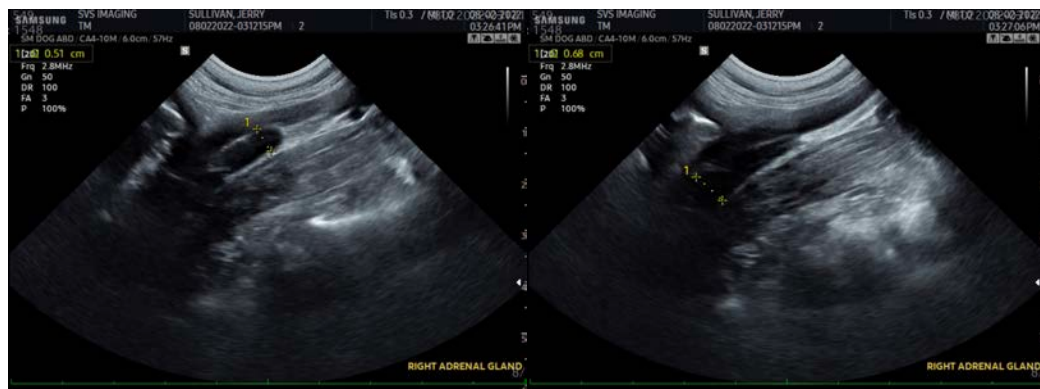
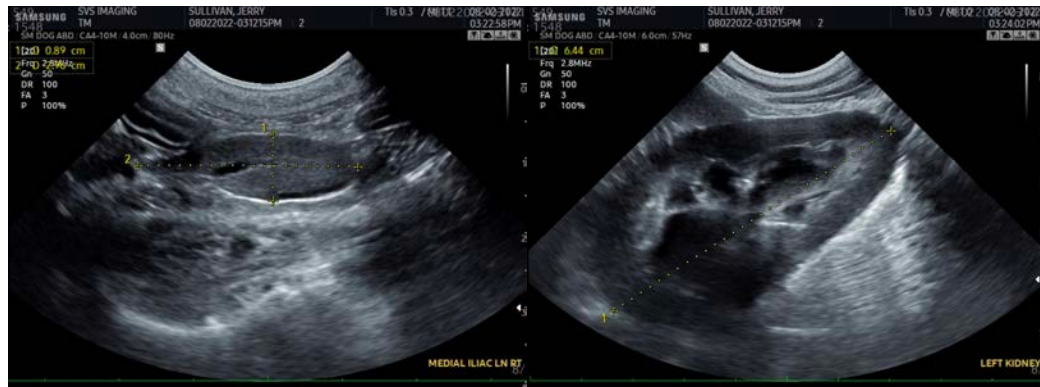
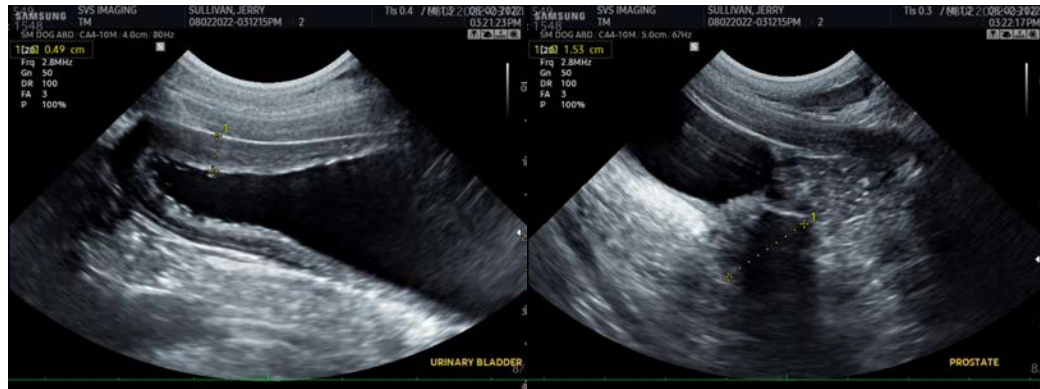
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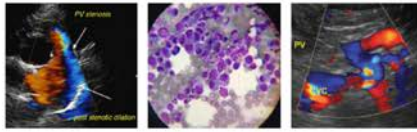
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**DATE**

8/3/22



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