



**PATIENT PRESENTING CLINICAL SIGNS**

Pearl Stroemer Stranguria, vomiting.

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Canine Urinary System**

**BREED**

Beagle

**SEX**

Spayed Female

**AGE**

9 Years

**WEIGHT**

26.5 Pounds

The **urinary bladder** presented a relatively uniform thickening of the cranioventral and craniodorsal mucosae with micropolypoid mucosal changes without involvement of the submucosae. The urine presented some echogenicity consistent with suspended debris. No evidence of urethral pathology was present. This presentation is most consistent with chronic cystitis. Technically transitional cell carcinoma cannot be ruled out without histopathological review but is not overtly suspected based on this pattern. Cystocentesis and urine culture +/- pathological review of urine cytology would be warranted. No overt calculi were present at this time. The pelvic urethra was imaged 3.0 cm beyond the cystourethral junction. Slight free fluid noted adjacent to the apex of the urinary bladder.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The right kidney measured 5.4 cm. The left kidney measured 5.18 cm.

**INTERPRETED BY Adrenal Glands**

Eric Lindquist, DMV

The **left adrenal gland** revealed an expansive hyperechoic nodule at the cranial pole, measuring 0.74 cm. The caudal pole measured 0.44 cm. Length measured 2.21 cm.

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The **right adrenal gland** revealed a hyperechoic nodule at the cranial pole measuring 1.2 cm x 0.93 cm. The right adrenal gland measured 2.23 cm x 1.34 cm at the cranial pole and 0.51 cm at the caudal pole.

**IMAGING PERFORMED BY**

Jessica Miller, RDMS

Both adrenal nodules have capsular expansion without capsular escape or vascular invasion.

**HOSPITAL NAME**

New Bridge VP

**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

**REFERRING VET**

Dr. Glennon

**Liver**

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The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.

**DATE**

8/16/23



**PATIENT**

**Gastrointestinal**

Pearl Stroemer

The **stomach** revealed retention of ingesta and a 1.3 cm shadowing structure in the pyloric outflow. This may represent medication or possible foreign matter. The small intestine and colon were unremarkable.

**SPECIES**

Canine

**Pancreas**

**BREED**

Beagle

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxyphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

**SEX**

Spayed Female

**ULTRASONOGRAPHIC FINDINGS**

**AGE**

9 Years

- Bilateral adrenal nodules – likely adenomas.
- Chronic cystitis bladder pattern with slight free fluid – likely inflammatory based.
- Age related renal, hepatic, and pancreatic changes.
- 1.3 cm shadowing structure in pyloric outflow – possible medication.

**WEIGHT**

26.5 Pounds

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**INTERPRETED BY**

Eric Lindquist, DMV

Regarding the stomach, recommend conservative treatment. If vomiting persists, then endoscopy indicated. Workup for UTI indicated.

DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Jessica Miller, RDMS

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**UTI Types**

Guidelines for management of UTIs. The Veterinary Journal 247 (2019) 8-25

- Sporadic Bacterial Cystitis** - simple, uncomplicated UTI, hematuria, pyuria, bacteria. Dogs and older cats primarily. Tx analgesic + Ab-clavamox or similar 3-5 days. No effect? Ensure no comorbidity or C/S result non compatible
- Recurrent Bacterial Cystitis** - 3+ episodes within 12 months. Look for underlying cause. Incontinence, recessed vulva/pyoderma, prostatitis, calculi, neoplasia, resistant bacteria. Analgesia, and culture and refine AB Tx up to 14 days. Culture 5-7 days after stopping Tx.
- Upper UTI** - Pyelonephritis, ascending or embolic. Comorbidity check for diabetes, cushings, lithiasis, prostatitis, neoplasia. Fever, Lethargy, PU/PD, painful kidney on clinical exam. Tx Fluoroquinolone (Marbo/enro not cipro) or Cefa (Naxcel injectable in larger dogs), C/S, tx up to 4-6 weeks (debate). Culture 1-2 weeks after stopping AB.
- Subclinical Bacteruria** - Commensalism, treatment debatable and variable depending on scan.
- EL recs** - scan, evaluate, Tx AB 5-7 days negative sediment + negative culture. Clavamox, Cefa, Quinolone



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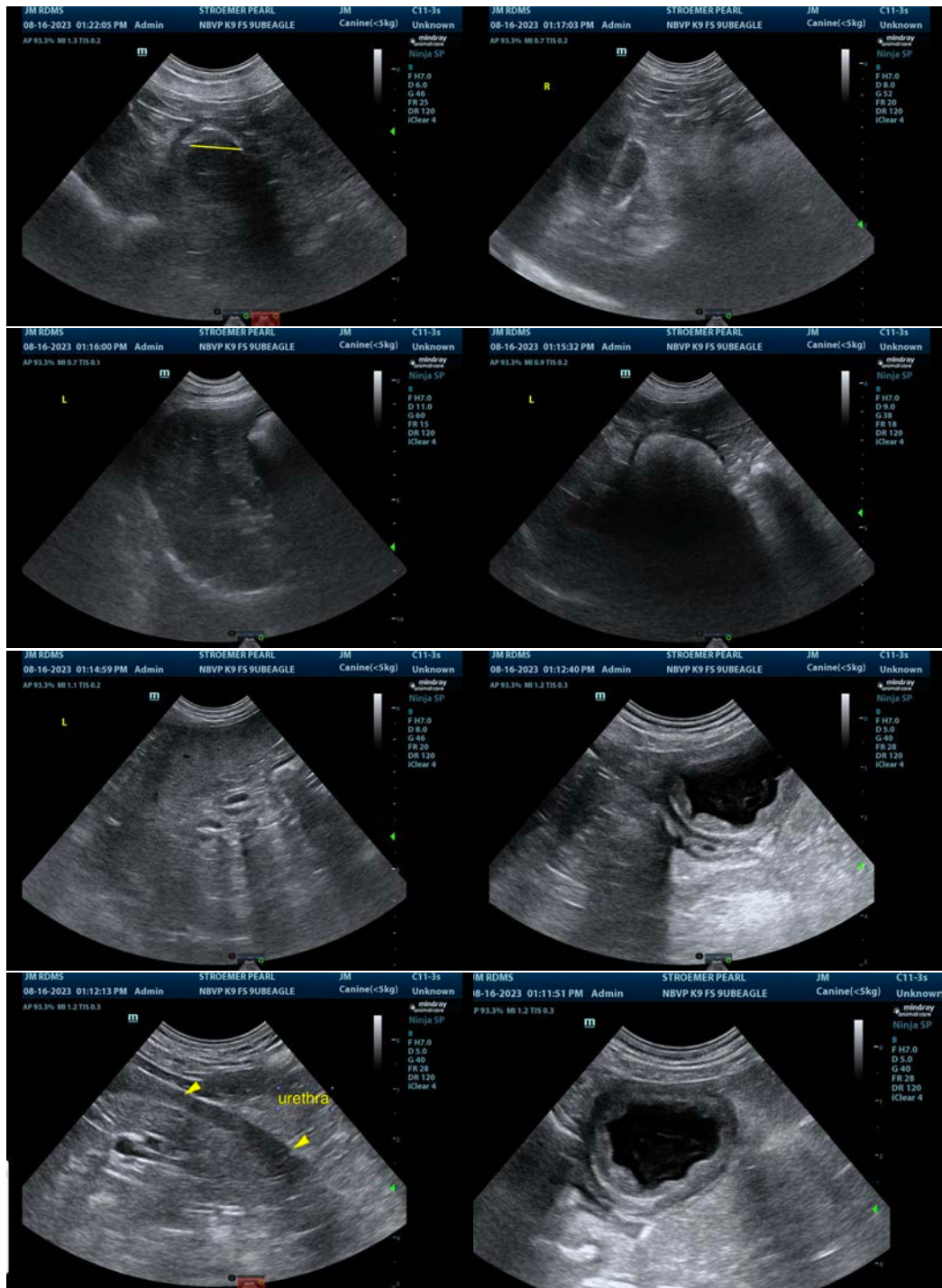
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com**

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