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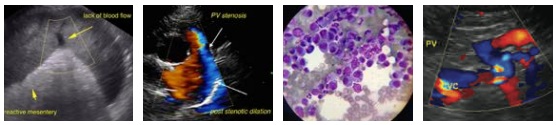

ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT
Zola Rath

SPECIES
Canine

BREED
Pug

SEX
Spayed Female

AGE
9 years

WEIGHT
19.6 lbs

INTERPRETED BY
Eric Lindquist, DMV, DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Jenna Walsh, CVT

HOSPITAL NAME
Banfield of South Eugene

REFERRING VET
Dr. Wright

DATE
5/2/22

Invoice
30069

PRESENTING CLINICAL SIGNS

History: presents for recurrent urinary tract infection (most recently treated 4/2/22 with clavamox, normal abdominal radiographs) - Chronic dermatitis, recurrent otitis externa, tucked/recessed vulva - KCS OU, glaucoma OD Current Medications ophthalmic meds (cosopt, latanoprost) Radiographic Findings recent 3 view abdominal rads wnl (kidneys/urinary bladder are normal in size, shape, location, opacity, no stones nor masses appreciated; hepatomegaly with smooth/normal margins; stomach, intestines, visible spleen are wnl; chronic degenerative changes appreciated in both coxofemoral joints and stifles)
Abnormal PE/Chem/CBC/UA Results: CBC Chem - WNL UA - significant pyuria (TNTC WBCs), hematuria, pH 7, struvite crystals, USG 1.020.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** wall presented concentric thickening with no evidence of masses. A mild amount of sand and a moderate amount of debris was noted. The sand was non-obstructive and grouping of which measured 1.5 cm. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

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 this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The right kidney measured 3.57 cm. The left kidney measured 3.88 cm with slight pinpoint mineralization.

Adrenal Glands

The left **adrenal gland** was visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The left adrenal gland measured 1.72 x 0.38 cm at the cranial pole and 0.35 cm at the caudal pole. The right adrenal gland revealed slight, hyperechoic nodule noted at the cranial pole and measured 0.68 cm. The caudal pole of the right adrenal measured 0.39 cm and 1.69 cm in length.

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 was noted.

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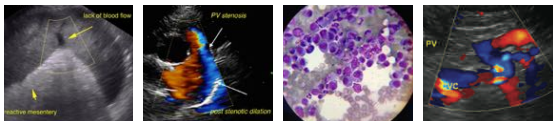

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Liver

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

ULTRASONOGRAPHIC FINDINGS

Right adrenal gland nodule, likely adenoma.

Chronic cystitis bladder pattern with sand.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Urine culture and sensitivity and 4-6 week antibiotic therapy is likely necessary to potentially care the suspected UTI given the chronic changes and sand. Medical management should prove effective. IV fluid push to dissolve the sand and liberate the urinary bladder can be considered as well. Assessment of the vestibule for predisposing issues such as recessed vulva, pyoderma and urine pooling should be considered. The urethral tone appeared to be adequate. A minor amount of debris and sand was noted in the urethra. There was no evidence of masses.

Canine Chronic UTI Protocol
I recommend **Enrofloxacin** (5-10 mg/kg SID PO) (In patients > 1 year of age) in late pm after urination to maximize urinary concentrations overnight. This assumes that culture supports this use. Repeat **culture** at 3-4 weeks and continue treatment at least 7-10 days post negative urinary sediment and negative culture. *Note: Negative culture does not necessarily mean lack of UTI.* Other favorite antibiotics for chronic UTI include third generation Cefa (Ceftiafur or similar s.i.d. injectable) or Clavamox. If suspicion of occult urinary incontinence is present then **phenylpropanolamine (PPA)** (1-2 mg/kg BID) can be employed long term to enhance urethral tone.

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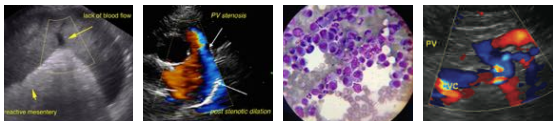

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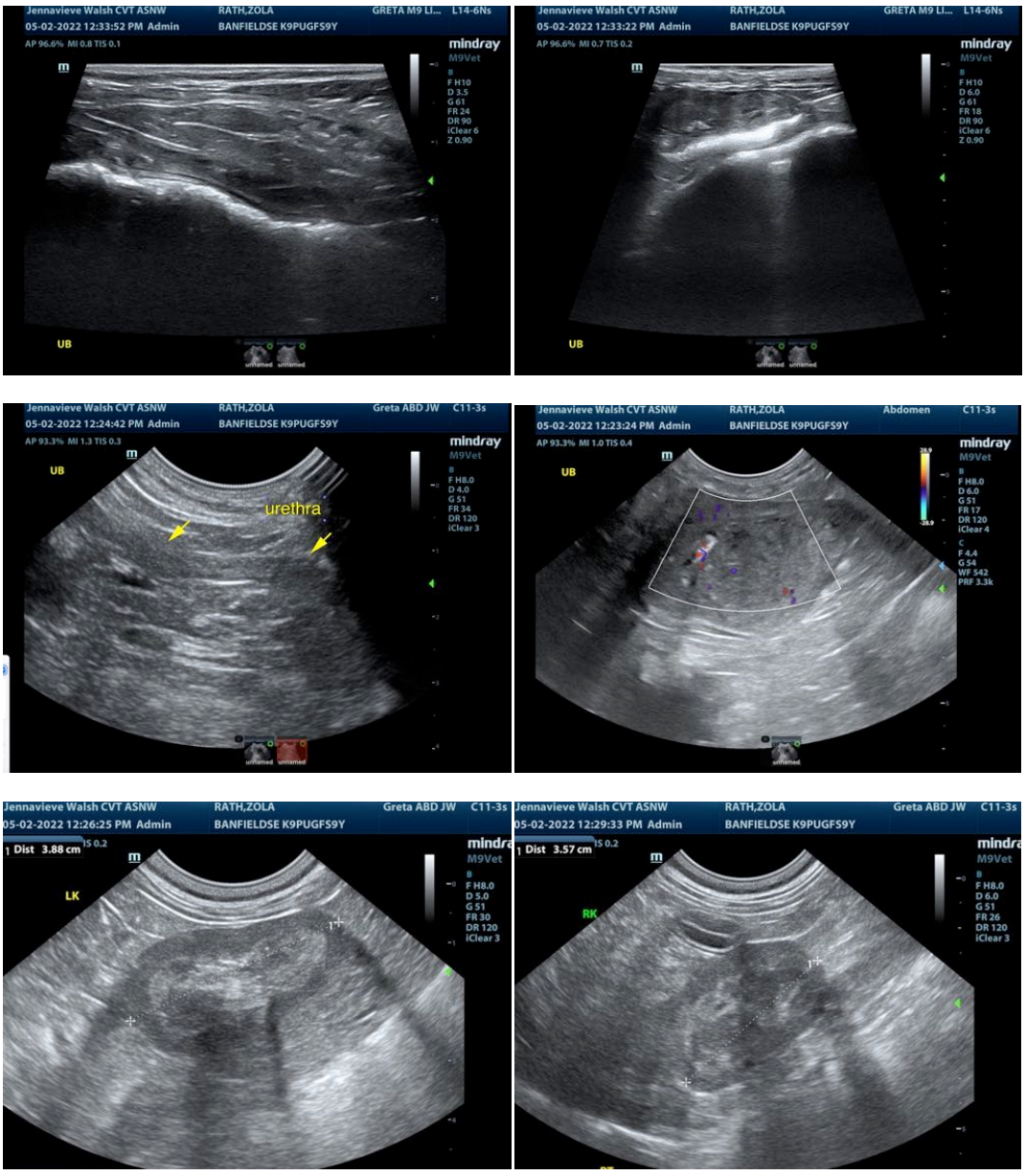

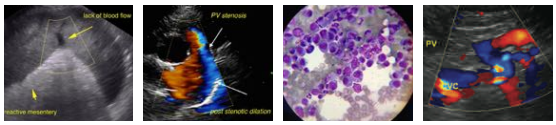

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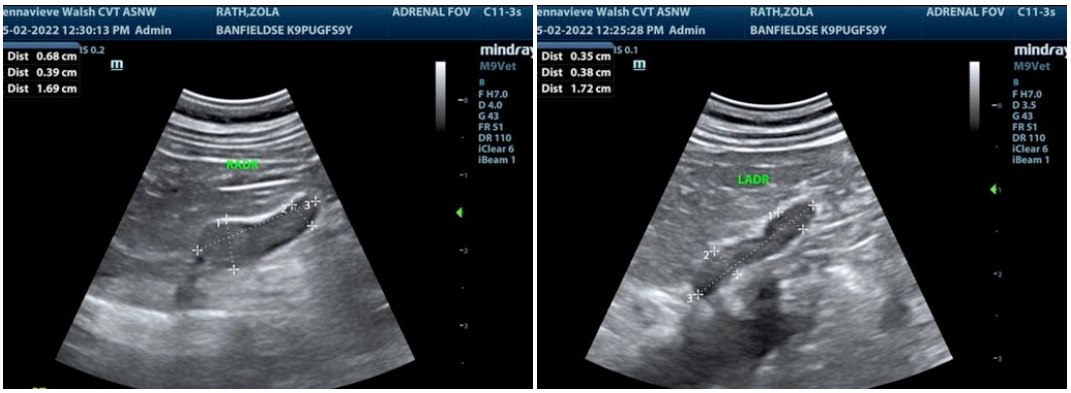

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

Eric.Lindquist@SonoPath.com