



PATIENT

Shelby Foreman

SPECIES

Canine

BREED

Mini Schnauzer

SEX

Spayed Female

AGE

12 Years

WEIGHT

16 lbs

INTERPRETED BY

Eric Lindquist, DMV,
DABVP (CFM), Cert.
IVUSS

IMAGING PERFORMED BY

Mary Pearce

HOSPITAL NAME

Chambersburg Animal
Hospital

REFERRING VET

Dr. Dawn Eckert

INVOICE

72375

DATE

12/5/25

PRESENTING CLINICAL SIGNS

Presenting Symptoms: PU/PD with intermittent vomiting for at least 2 months, losing weight Reason for Ultrasound: Previous history of elevated ALT/ALP (currently nearly resolved), now also with the symptoms above. On fasted bw/UA 10-06-25, WBC 25.6 (5.8-16.2), neutrophils 20.941 (3.004-9.741), monocytes 0.87 (0.145-0.736); plt 441 (120-412); globulins 4.1 (2.4-4.0); ALP 231 (5-160); T4 0.6 (1.0-4.0), triglycerides 1,363 (20-150); cPL 162 (0-200). On UA USG 1.008, prot 1+, WBC 15-20/hpf, RBC 2-5/hpf, mod rods 9-40/hpf. 3-view rads in October (abd, thorax also visible)--liver appears somewhat prominent, no obvious mass or ascites, cardiac silhouette may be somewhat prominent. On followup UA USG 1.008, WBC 6/hpf, RBC 2/hpf, no bacteria found. Rx low fat diet started, have recommended recheck fasted serum triglycerides 6-8 wks after fully transitioned.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** presented a relatively uniform thickening (5.0 mm at moderate repletion) 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 2.0 cm beyond the cystourethral junction.

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. Mineralization noted in both kidneys. The right kidney measured 4.82 cm with slight pyelectasia and enhanced pelvic fat noted. Echogenic debris noted within the dilated right renal pelvis. The left kidney measured 4.8 cm with minor pyelectasia noted.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having largely normal shape, size, position and acceptable echogenicity for this age group and breed. Some heterogeneity was noted within the adrenal parenchyma without concerning capsular distortion. These changes are likely age related but should be monitored by sonogram should the patient be suspected of having adrenal disease. Right measured 1.62 cm x 0.67 cm at the cranial pole and 0.47 cm at the caudal pole. The left adrenal gland was mineralized and measured 2.16 cm x 0.73 cm at the caudal pole and 0.34 cm at the cranial pole.

Spleen

The **spleen** was swollen with scalloping contour.

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. Gallbladder sand and overdistention noted. Sand measured 3.4 cm.



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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.

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.

Free Abdomen

A mid abdominal lymph node was enlarged and rounded, measuring 1.12 cm x 0.80 cm.

ULTRASONOGRAPHIC FINDINGS

- Chronic cystitis/pyelonephritis pattern.
- Splenic enlargement.
- Mesenteric lymphadenopathy.
- Excessive gallbladder sand, consistent with emerging mucocele.
- Age related adrenal changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Recommend urine culture and sensitivity despite negative bacteria. Washout effect may be playing a role, given the hyposthenuria. Urine culture and sensitivity, IV fluid support, and management for pyelonephritis indicated. Ursodiol therapy recommended over the next 6-8 weeks. FNA spleen, mesenteric lymph node, and ideally liver all warranted. PU/PD is likely owing to embedded UTI with secondary washout effect. Recheck sonogram in 6 weeks prior to stopping any antibiotic therapy, assuming that neoplasia is not found on splenic and mesenteric lymph node aspirates.

The following is to be utilized for UTI with chronic urinary tract changes found sonographically that may serve as nidus of infection and history of chronic or recurrent UTI is an issue.

I recommend Clavamox as a first level approach to chronic UTI at 12.5-25 mg/kg bid owing to optimal urinary concentrations. If bacterial resistance is an issue then **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 (Ceftiofur 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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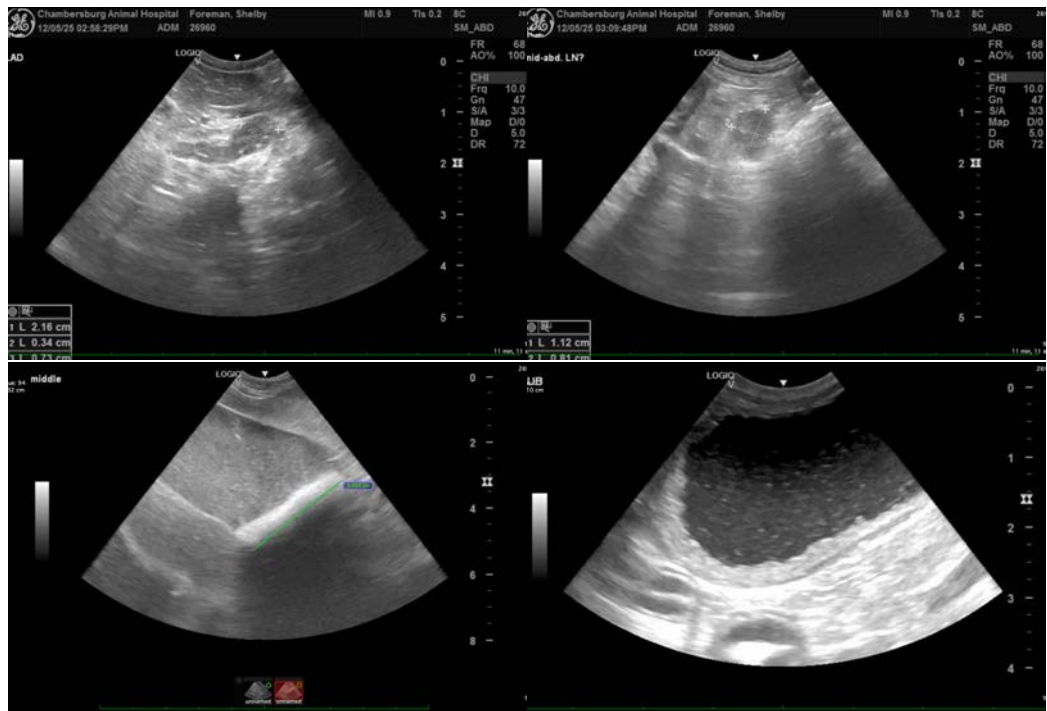
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UTI Types

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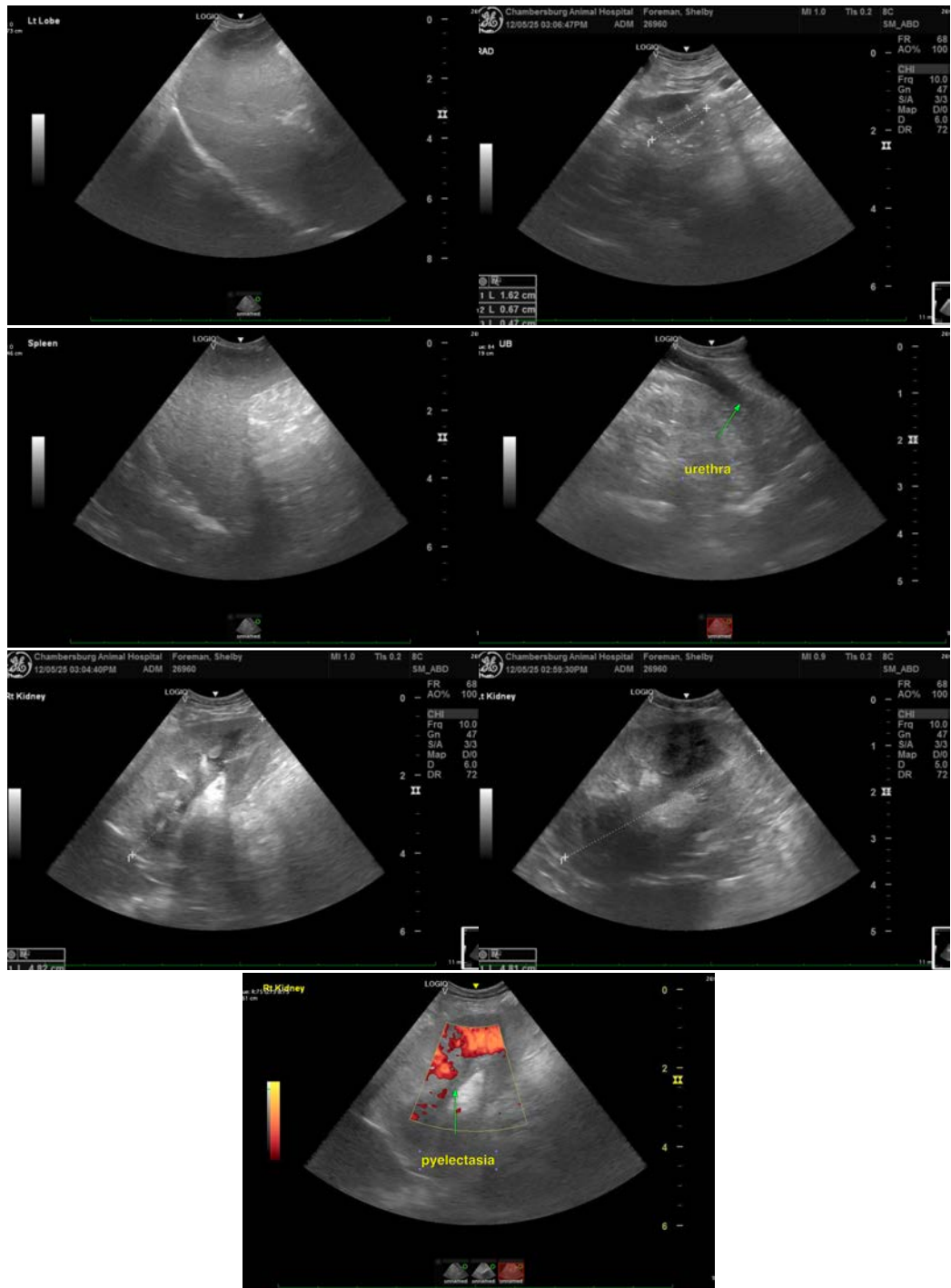
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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(CFM), Cert. IVUSS,
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