



**PATIENT PRESENTING CLINICAL SIGNS**

**Elsa Eckel** History: Azotemia, lethargy, decreased appetite, history of polyria (not new), prior history of Aspergillosis - was given 6 months to live 2 years ago. Has occasional nose bleeds, possible history of fractured nose at other DVM? Current meds: Carprofen.

**SPECIES** Abnormal PE/Chem/CBC/UA Results: SDMA 19, creat. 1.6, BUN 36, albumin 2.7 (low normal). U/A: 30-50 WBCs, marked rods (no symptoms of LUTD), USG 1.019. Follow up U/A pending.

Canine

**BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**German Shepherd** *Urinary System*

**SEX** 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.

**Spayed Female**

**AGE** The iliac trifurcation was unremarkable.

4 years

**WEIGHT** The **kidneys** revealed moderate degenerative changes with pyelectasia and irregular contour. The left kidney measured 6.04 cm. The right kidney measured 6.77 cm with pyelectasia that measured 1.5 x 1.0 cm with echogenic debris.

80 lbs

**INTERPRETED BY** *Adrenal Glands*

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

Both **adrenal glands** were 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 1.84 x 0.37 cm at the caudal pole and 0.33 cm at the cranial pole. The right adrenal gland measured 1.92 x 0.57 cm at the caudal pole and 0.91 cm at the cranial pole.

**IMAGING PERFORMED BY** *Spleen*

Kelly Vazquez, CVT

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.

**HOSPITAL NAME**

Bergen County VC

**REFERRING VET**

Dr. Gess

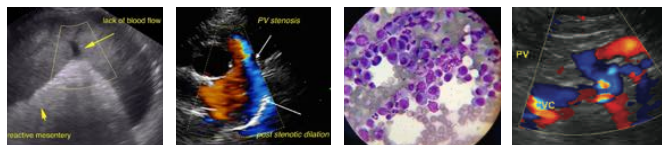
**INVOICE** *Liver*

91529

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

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8/26/21



**PATIENT** lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

Elsa Eckel

**SPECIES** *Gastrointestinal*

Canine

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.

**BREED**

German Shepherd

*Pancreas*

**SEX**

Spayed Female

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.

**AGE**

4 years

**ULTRASONOGRAPHIC FINDINGS**

Chronic cystitis bladder pattern with mild to moderate degenerative renal changes and pyelectasia.

**WEIGHT**

80 lbs

Chronic pyelonephritis is likely.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Predisposing issues such as recessed vulva and urine pooling should be investigated in this patient. Treatment for urinary tract infection based on culture and sensitivity results are recommended for at least 4-6 weeks given the pyelectasia. Recheck sonogram is recommended in 4-5 weeks post therapy.

**IMAGING PERFORMED BY**

Kelly Vazquez, CVT

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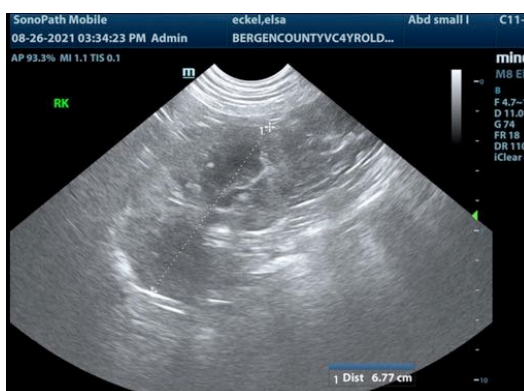
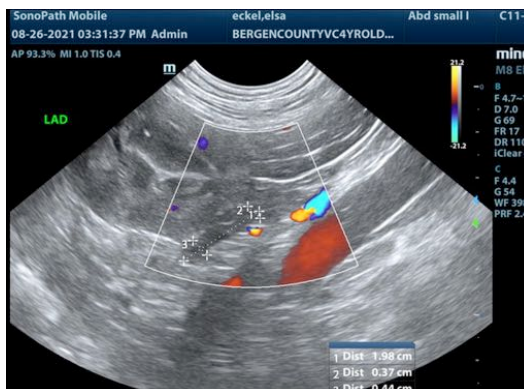
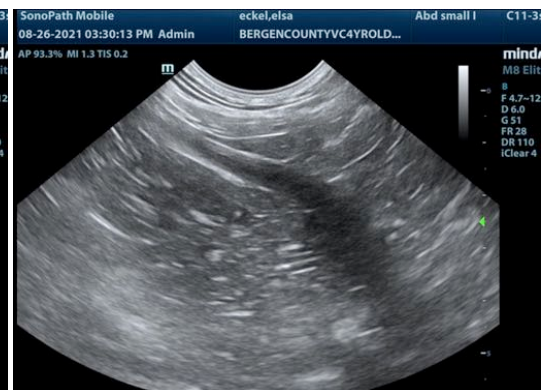
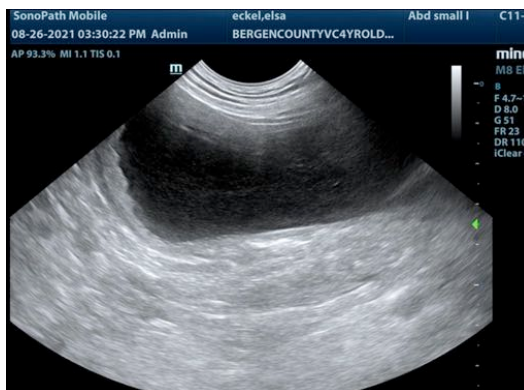
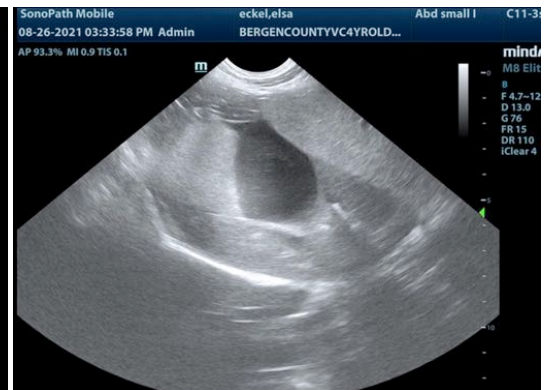
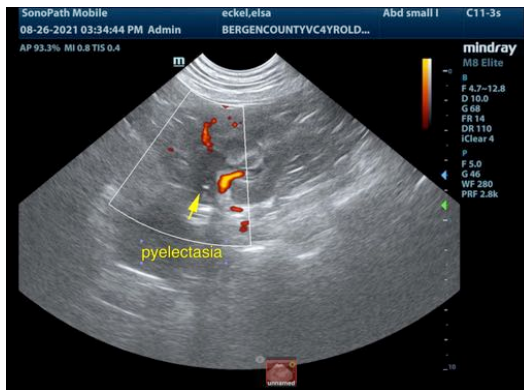
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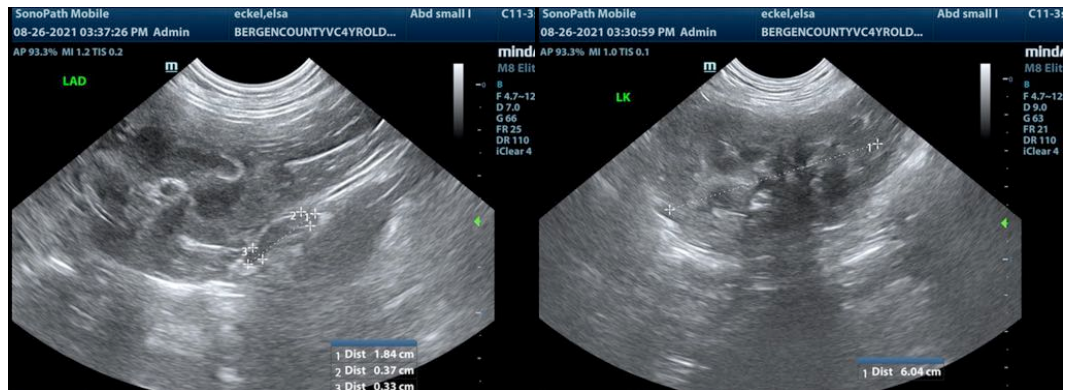
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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  
info@SonoPath.com