



## PATIENT

Magenta Norum

## SPECIES

Feline

## BREED

DLH

## SEX

Spayed Female

## AGE

8 Years

## WEIGHT

18.5 lbs

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Nicole Hession

## HOSPITAL NAME

Veterinary Emergency  
Clinic of Casselberry

## REFERRING VET

Dr. Edmister

## INVOICE

72188

## DATE

11/29/25

## PRESENTING CLINICAL SIGNS

Patient presented for fever and lethargy. Has a history of elevated ALT. Usually gets like this when has a UTI. PL>50. Had cocci present in Urine. ALT 833. Fever is down with Onsior.

Abnormal PE/Chem/CBC/UA Results: FIV + 11/28/25 9am- GLU 180 (74-159), BUN 14 (16-36), ALT 833 (12-130), ALKP <10 (14-111), Pancreatic Lipase >50 (0.0-4.4). TBILI and GGT normal. UA- USG 1.014, BLD 250, WBC 6/hpf, RBC >50hpf, cocci chains on manual CBC- MCV 53.4 (35.9-53.1), NEU 1.68 (2.30-10.29), EOS 0.01 (0.17-1.57), BASO 0.00 (0.01-0.26), PLT 118 (151-600). 11/29/25 1am- Chem 8+ BUN 10 (17-35), GLU 176 (70-161), 11/29/25 1pm-K 3.2 (3.4-4.9), BUN 12 (17-35), GLU 174 (70-161), Hgb 8.8 (9.0-17)

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The **urinary bladder** and visible pelvic urethra were unremarkable for the level of repletion presented. The urine, however, did present some mildly echogenic debris consistent with mucous, exfoliated cells from renal or bladder origin, and/or blood clots as these echogenic changes can all present similarly. This is often related to urinary tract infection but may represent simple evidence of exfoliated debris or sterile inflammation. Cystocentesis, urinalysis, +/- culture would be recommended to rule out and define any UTI. The pelvic urethra was imaged 1.0 cm beyond the cystourethral junction.

The **right kidney** 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. The right kidney measured 4.15 cm.

The **left kidney** presented cortical infarct and collapse. The left kidney measured 4.14 cm with slight pyelectasia noted. Enhanced mesentery noted around the left kidney in particular, suggestive for active inflammation.

### Adrenal Glands

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 0.46 cm at the cranial pole and 0.36 cm at the caudal pole. The right adrenal gland measured 0.40 cm at the caudal pole and 0.46 cm at the cranial pole.

### Spleen

The **spleen** was mildly enlarged (1.28 cm) with uniform, but subtly micronodular parenchyma, and undulating capsular contour. This is consistent with reactive spleen owing to immune stimulus or early infiltrative disease such as mast cell disease or lymphoma. 25-gauge FNA would be ideal if weight loss is an issue to differentiate early round cell neoplasia versus splenitis or reactive spleen all of which can present in this manner.



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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 common bile duct was slightly dilated and thickened at the duodenal papilla, measuring at the upper limits of normal at 0.44 cm. The cystic duct was mildly tortuous.

## Gastrointestinal

The **gastrointestinal** presentation revealed mild uniform prominence of the gastric mucosa as well as areas of "ropey" small intestinal wall with slight disruption of the normal 1:3 muscularis/mucosal ratio. The intestinal submucosa was slightly irregular, thickened and hyperechoic suggestive of low grade, chronic disease. No evidence of obstruction was present. Chronic inflammatory bowel disease is likely with a low possibility of an early neoplastic event such as lymphoma. Full thickness tissue biopsies via open laparotomy, ideally guided by intraoperative ultrasound in order to obtain the most representative mural sample, would be necessary to rule out this possibility.

Mesenteric **lymph nodes** presented normal length to width ratio with slight, swollen contour. There was no loss of parenchymal detail. This is most consistent with reactive lymphadenitis or lymphatic hyperplasia. An example measured 2.47 cm x 0.80 cm.

## Pancreas

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. Left limb measured 1.0 cm. Right limb measured 0.91 cm with slight duct dilation noted. Some enhanced mesentery noted around the pancreas. However, this may be artifactual.

Pancreatic lymph nodes also enlarged, reactive, measuring up to 1.0 cm x 0.50 cm.

## Other

Comet tail lung pattern noted.

## ULTRASONOGRAPHIC FINDINGS

- Thickened duodenal papilla and mildly dilated common bile duct – likely chronic inflammatory lesion and hypertrophy. However, emerging carcinoma or other neoplasia can't be ruled out.
- Multifocal reactive lymphadenopathy – suggestive of systemic inflammation.
- Likely subacute or acute on chronic pyelonephritis.
- Urinary bladder debris.
- Possible pancreatitis.
- IBD GI pattern.
- Mild splenic enlargement- reactive spleen, splenitis versus round cell neoplasia.
- Comet tail lung pattern.



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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

There are multiple issues in this patient. Both systemic disease and UTI may be playing a role. No evidence of neoplasia. However, I cannot rule out an emerging neoplastic event of the duodena papilla and common bile duct.

Focally, I am most concerned about the chronic UTI and potential chronic pyelonephritis. Concurrent infection such as toxoplasmosis, bartonella or similar should be considered. 4-6 week antibiotic therapy to treat UTI recommended, given the renal changes. If painful upon imaging, pancreatitis is likely. The duodenal papilla/common bile duct should be rechecked at 6 weeks at the time of recheck of the urinary tract. Blood pressures would be ideal. FNA of the larger lymph node with cytology and culture along with spleen, if possible, would be indicated.

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.

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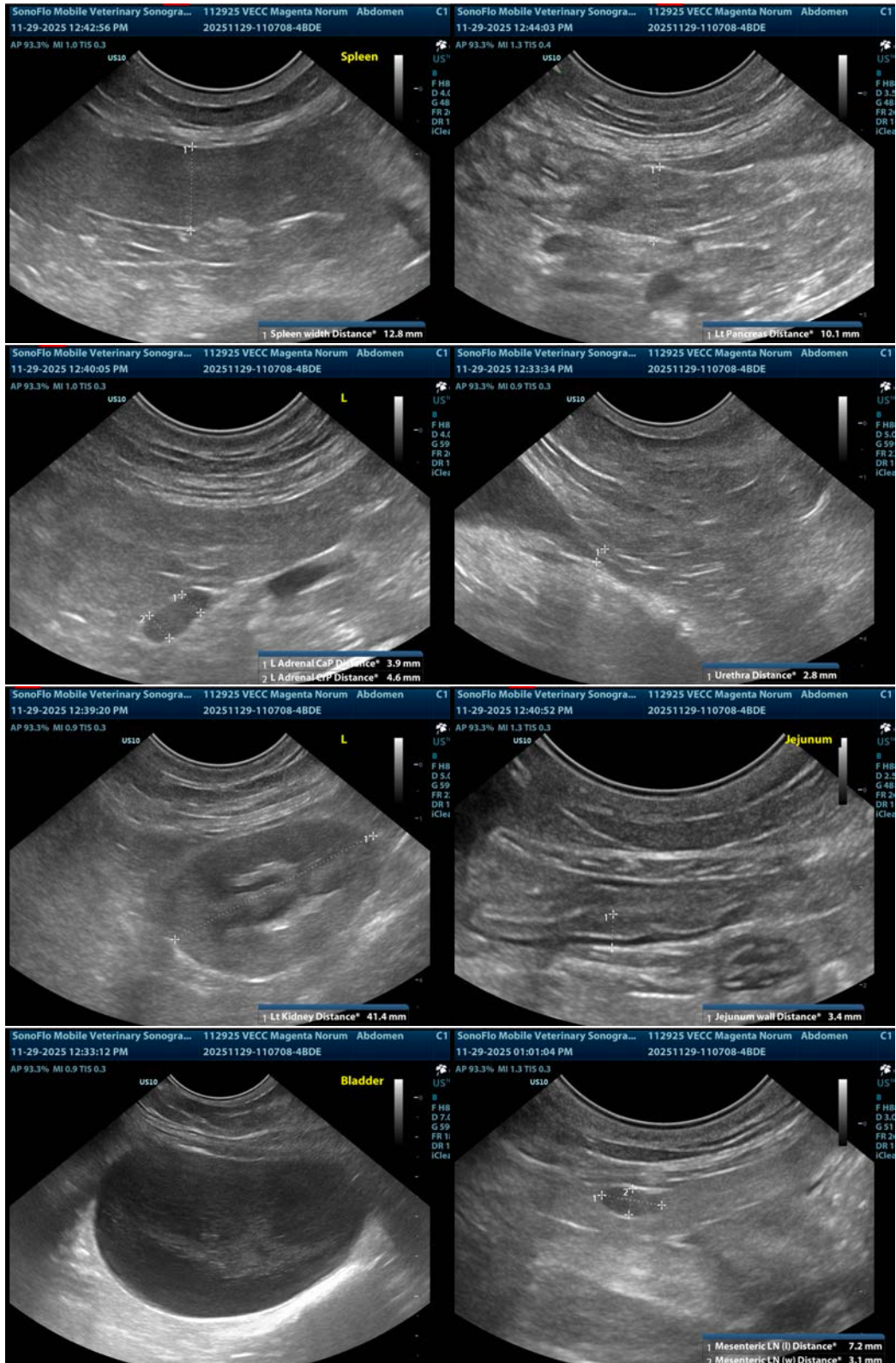
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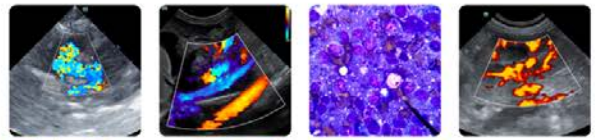
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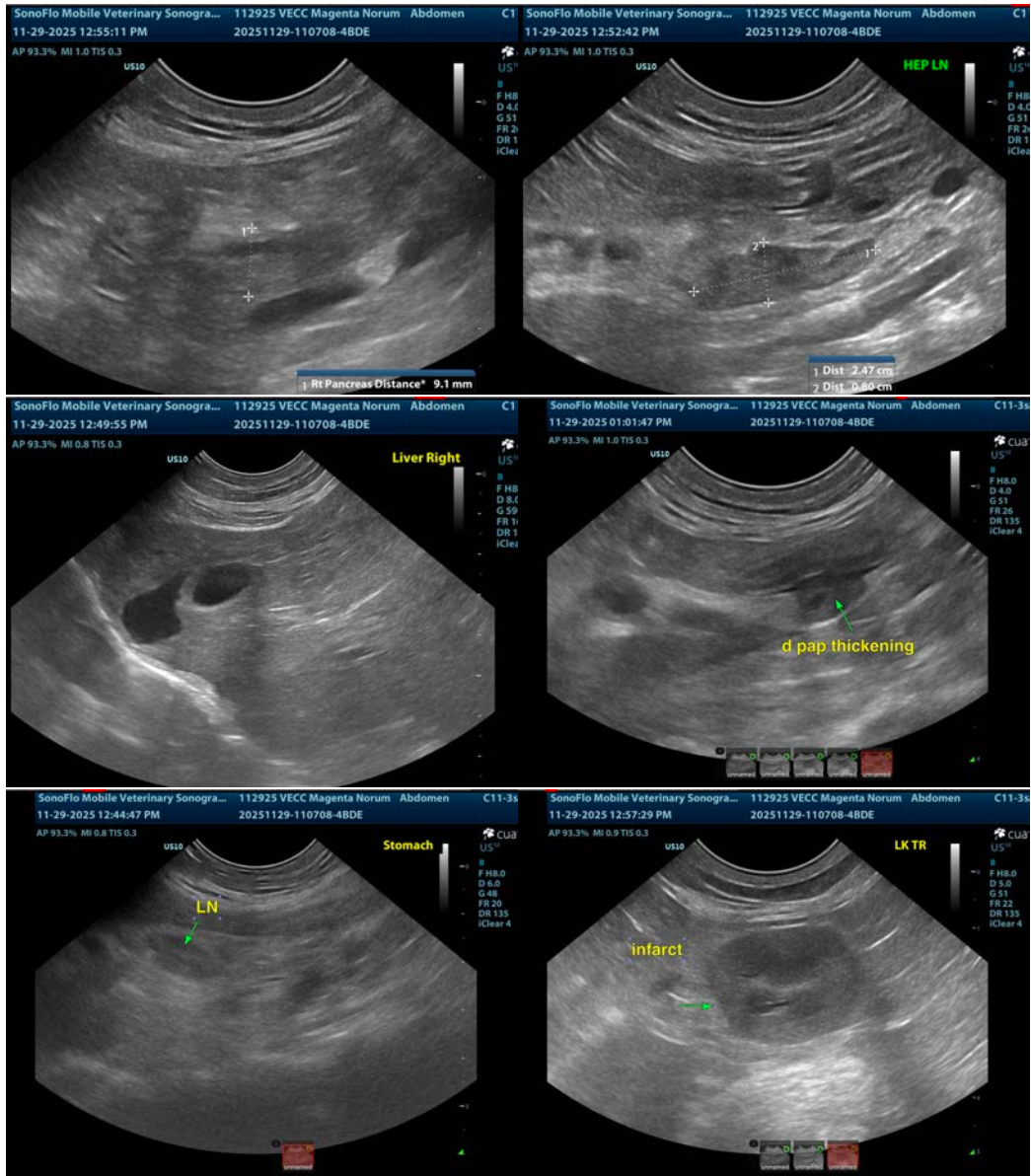
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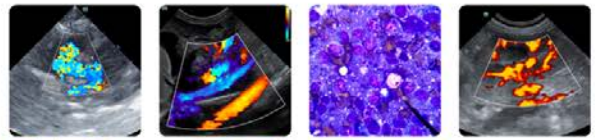
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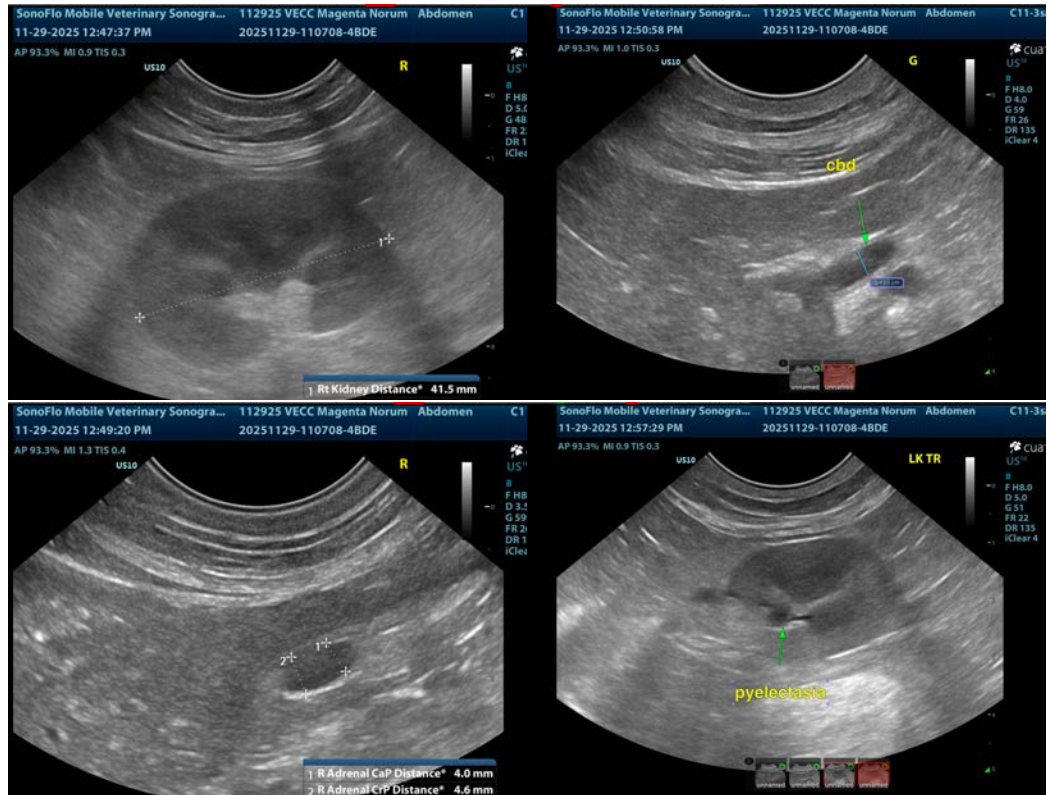
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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(CFM), Cert. IVUSS,  
CEO, Owner, Founder -- SonoPath.com  
[info@SonoPath.com](mailto:info@SonoPath.com)