



PATIENT PRESENTING CLINICAL SIGNS

PATIENT Devin Myrick
SPECIES Canine
BREED Miniature Schnauzer
SEX Spayed Female
AGE 13 years
WEIGHT 16.3 lbs

Intermittent vomiting and diarrhea since January. Diarrhea sometimes bloody. Proteinuria and weight loss (3.5 pounds over the past 6 weeks) January abdominal US - Gall bladder - large amount of organized, matrix like, sludge, not distended, not painful, no obvious stones. Has been on Telmisartan and Ursodiol Small bladder stones

Abnormal PE/Chem/CBC/UA Results: Recent labwork: ALP 1204, BUN 47, Cre 1.2, Phos 7.4, CBC NSF January 2022 labwork: CBC NSF, Glob 4.6, ALT 147, SAP 1502, BUN 22, Creat 0.6, Choles 365, PPSL 244, T4 1.2, USG 1.022, Protein 3+, UPCR 4.0 (UPCR has been holding at <2 for several years) Cortisol Sample 1 5.5 (HIGH) 1.0-5.0 µg/dL Cortisol Sample 2 Dex 0.4 0.0-1.4 µg/dL Cortisol Sample 3 Dex 1.5 (HIGH) 0.0-1.4 µg/dL After consult with IM specialist: LDDS "barely" supports PDH Cushings (8 hour post 1.5, normal is <1.4) Dog is not PUPD and is otherwise happy dog, so we will not treat Cushings at this time. Fecal negative but recently adopted puppy with giardia. TAMU GI Panel pending.

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 **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. The left kidney measured 5.13 cm with pyelectasia. The right kidney measured 5.52 cm with slight pyelectasia and slight areas of mineralization.

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. The right adrenal gland measured 0.67 cm.

Spleen

The **spleen** was normal size and relatively normal contour with multifocal hyperechoic areas of mineralization. This is a benign change; however, can be related to Cushing's disease or other endocrinopathies.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Williams

HOSPITAL NAME

Limestone VH

REFERRING VET

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INVOICE

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Liver

The **liver** presented heterogenous parenchyma with increased portal markings and coarse architecture. Slight undulating capsular contour was noted. This is consistent with chronic inflammatory hepatopathy. The gallbladder was mildly over distended with suspended and dependent debris, yet not to the level of emerging mucocele. However, the sludge appears to be mildly excessive. No adjunctive inflammation was noted.

Gastrointestinal

Examination of the **gastrointestinal tract** revealed retention of ingesta in the stomach with variable intestinal thickening with increased submucosal layer and hypertrophied muscularis. This continued into the small intestine and colon. This is consistent with chronic inflammatory bowel. The colonic wall was thickened and measured up to 0.47 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 subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

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ULTRASONOGRAPHIC FINDINGS

Chronic inflammatory bowel presentation from stomach to colon.

Chronic renal changes with pyelectasia.

Structurally unremarkable adrenal glands, measure within normal limits for this patient.

Chronic inflammatory hepatopathy.

Minor gallbladder congestion.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

FNA of the liver is warranted. Full thickness GI biopsies would be ideal. Full urinary work-up is warranted. I do not recommend treating Cushing's at this time. Screening evaluation with urine cortisol to creatinine ratio could be considered prior to LDDST. The patient may be emerging Cushingoid; however, Cushing's is not supported at this point. I am most concerned about the chronic GI issues and further defining inflammatory hepatopathy of the liver through FNA results.

Maldigestion panel, three view chest radiographs and full CNS examination is recommended to examine for occult disease that could be responsible for the weight loss. Evaluation for competitive eating environments should also be considered.



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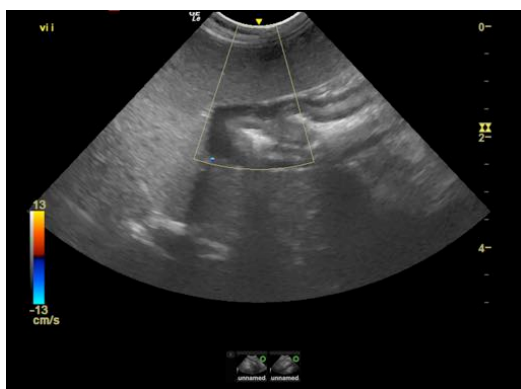
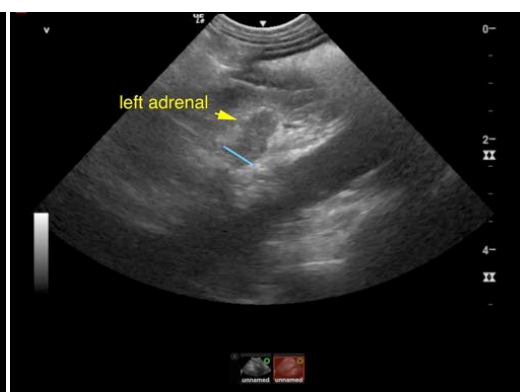
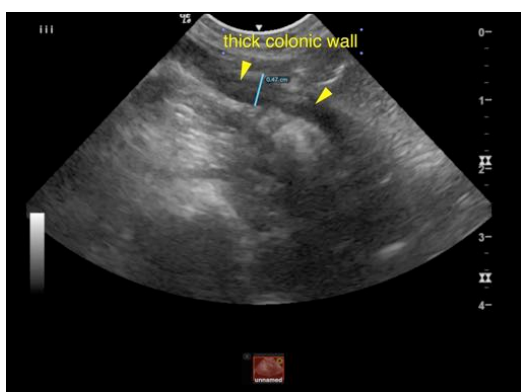
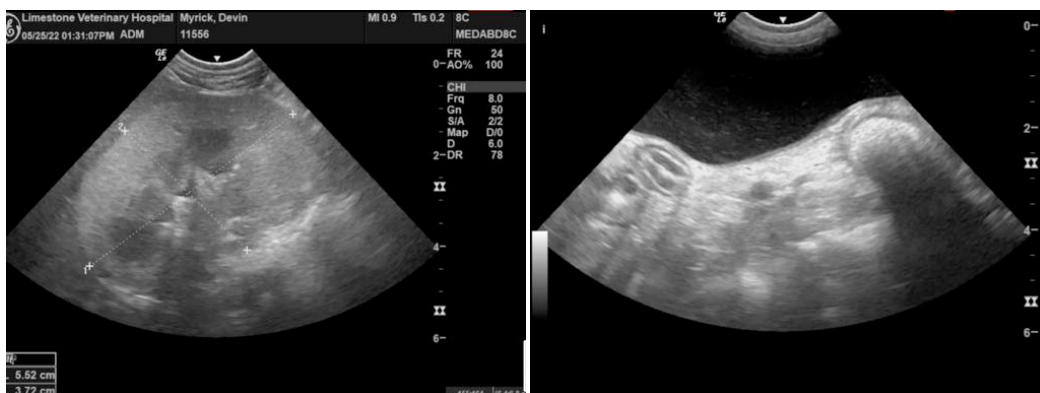
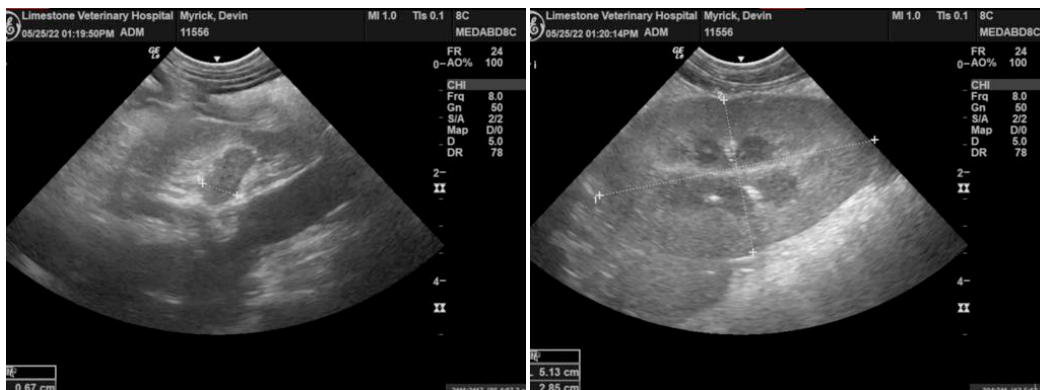
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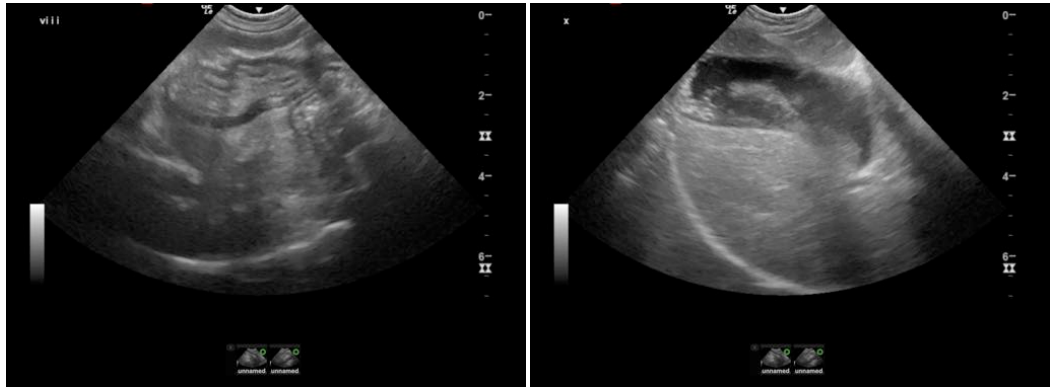
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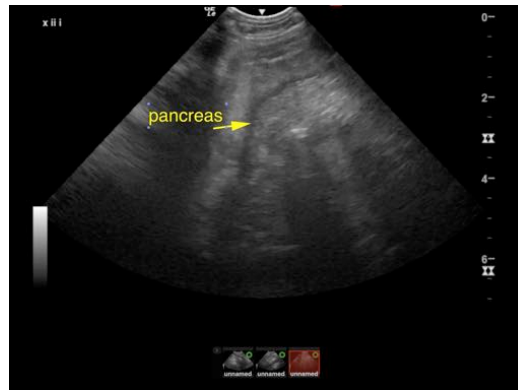
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

IMAGING PERFORMED BY

Dr. Williams

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.

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