



**PATIENT**

Teddy Culhane

**SPECIES**

Canine

**BREED**

Terrier Mix

**SEX**

Neutered male

**AGE**

12 years

**WEIGHT**

5.1 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Russell

**HOSPITAL NAME**

Frosted Faces  
Foundation

**REFERRING VET**

Dr. Russell

**INVOICE**

43575

**DATE**

3/28/23

**PRESENTING CLINICAL SIGNS**

History: Hx intermittent V+ or possibly regurg r/o V+ diff: gastritis, metabolic, endocrine, ADR, neo vs regurg diff: MO vs esophagitis vs GERD vs neo vs nmj vs ++ Plus also: 1. Seizures - idiopathic on phenobarbital 2. Hypothyroid 3. DJD 4. NS OU 5. Tartar 2/4 6. HL paresis / IVDD  
Abnormal PE/Chem/CBC/UA Results: - ALT 134 r/o pheno - ALP 478 r/o phen

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. 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 his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Occasional cortical cyst was noted. The largest cyst in the left kidney measured 0.4 cm and 0.96 cm. The left kidney measured 4.01 cm. The right kidney measured 3.8 cm.

**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 0.43 cm at the caudal pole and 0.38 cm at the cranial pole. The right adrenal gland measured 0.4 cm at the cranial pole and 0.62 cm at the caudal pole.

**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.

**Liver**

Exam of the cranial abdomen demonstrated excessive **liver** size, swollen contour, with conserved uniform architecture. Parenchymal echogenicity was diffusely isoechoic to the spleen and falciform fat. Minor excessive GB debris was noted with the presence gall bladder dilation and precipitate without the overt formation of mucocele but this may be an issue in the future. Minor gallbladder polyps were



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noted. This type of liver presentation typically is associated with slow and gradual SAP elevations with low-grade ALT rise. USG-FNA sampling is encouraged if more aggressive LE profiles are present such as ALT > 200 or rapid rise in SAP. These presentations are usually reactive hepatopathies owing to other disease processes either endocrine (Diabetes, Hypothyroidism, Cushing's disease), "antigen surveillance" from the gut/pancreas, or idiopathic breed predisposed progressions.

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**Gastrointestinal**

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The stomach in this patient was mildly thickened and measured 0.6 cm with thickened submucosal layer.

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**Pancreas**

Minor heterogenous **pancreatic** changes were noted.

**AGE**

12 years

**ULTRASONOGRAPHIC FINDINGS**

Pancreatic remodeling.

Gastric thickening.

**WEIGHT**

5.1 kg

Benign hepatopathy.

Age related renal changes with occasional cortical cyst.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Subxiphoid palpation is recommended to assess for pain in the region of the pancreas. Treatment for gastritis is indicated. The cause of seizures is not evident in the abdomen. Skull CT with contrast is indicated to ensure that underlying pathology is not present given the history and age of the patient. Clinical trial of the following is indicated.

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**Helicobacter/Gastritis protocol**

A clinical trial of **Zithromax** (**Dogs:** 5-10 mg/kg p.o. q24h. May increase dosing interval to q48h after 3-5 days of treatment), **Metronidazole** (10-20 mg/kg p.o. b.i.d.), **Pepcid** (0.5-1 mg/kg s.i.d.) and **Sucralfate** (0.5-2 g/dog PO) or **Omeprazole** (1 mg/kg p.o. s.i.d.) over the next 3 weeks along with a **novel-protein or hydrolyzed diet** with slurry feeding b.i.d./t.i.d. over the next 2-4 days and then increase to canned diet bid. Dry food should be avoided over the next 4 weeks. A recheck sonogram to assess GI improvement or progression would be ideal in 4 weeks.

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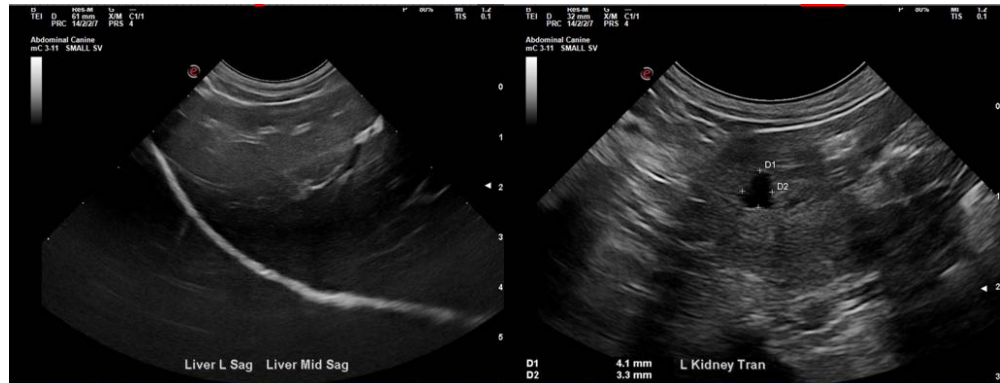
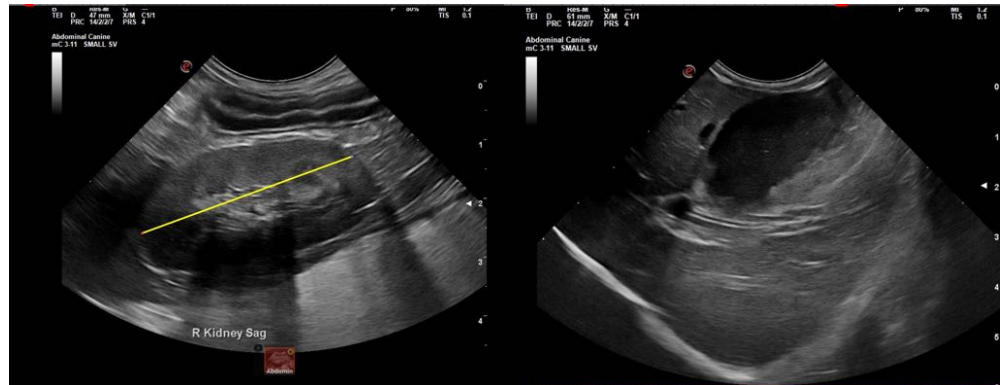
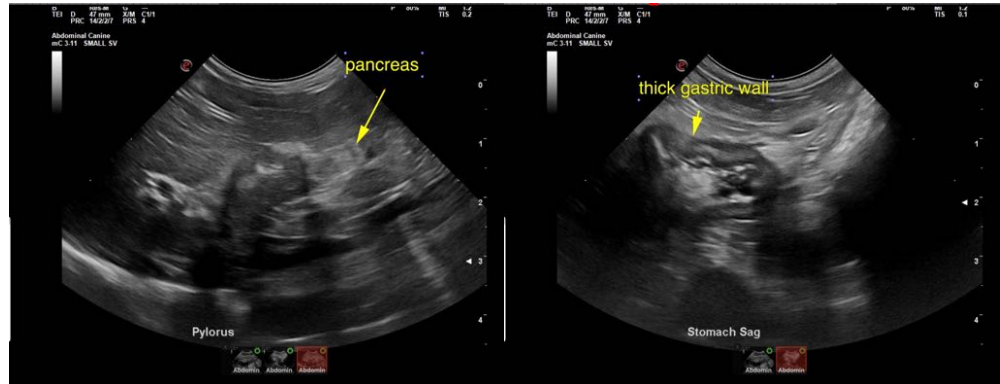
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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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**  
info@SonoPath.com