



**PATIENT**

Charlie Martin

**SPECIES**

Feline

**BREED**

Domestic Shorthair

**SEX**

Spayed Female

**AGE**

11 years

**WEIGHT**

7.78 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Arpaia

**HOSPITAL NAME**

VCA McKenzie Vet

**REFERRING VET**

Dr. Arpaia

**INVOICE**

99278

**DATE**

4/13/22

**PRESENTING CLINICAL SIGNS**

Hx of chronic enteropathy - vomiting (improved with limited ingredient diet) and B12 injections systolic murmur right stifle DJD Hx of renal calculi and small intestinal thickening annual monitoring of abdominal ultrasound - overall doing well at home.

Abnormal PE/Chem/CBC/UA Results: persistent eosinophilia Low serum B12 Low Serum vitamin D3

**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 this age patient. Medullary structure differed distinctly from that of the cortex. Mild pyelectasia was noted. The right kidney measured 3.5 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 0.16 cm.

**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**

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



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**Gastrointestinal**

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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 concerning lymphadenopathy was visible. 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.

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**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**

Minor renal pyelectasia.  
 Minor degenerative changes.  
 Mild intestinal thickening, likely inflammatory bowel.  
 Age related pancreatic changes.

**INTERPRETED BY**

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 DABVP, Cert. IVUSS

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Subxiphoid palpation is recommended to assess for pain-solicited response. If pain is noted low grade pancreatitis is suspected. Urinary work-up is warranted. Diet change to a hydrolyzed diet is recommended along with anti-parasitic protocol. Treatment for enterotoxins are indicated. A clinical trial of Zithromax and Metronidazole over a 5-7 day period while transitioning to hydrolyzed diet can be considered. However, the patient appears stable. If the patient is responding to diet change alone then I recommend continuing along this course without further medications.

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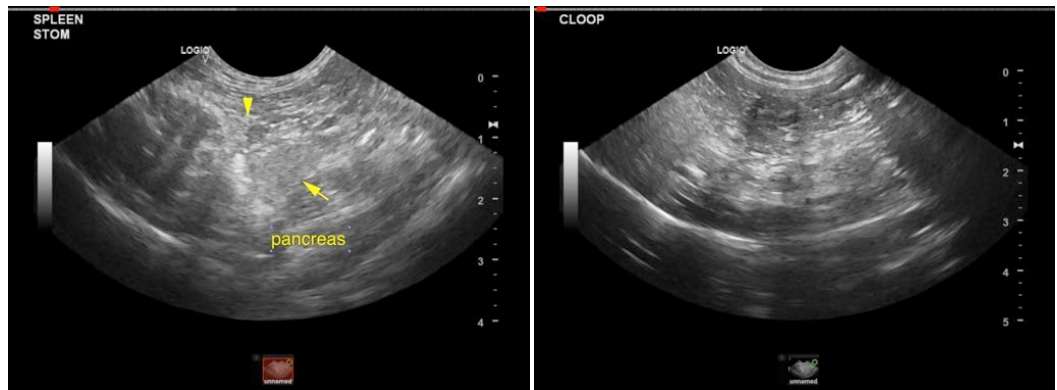
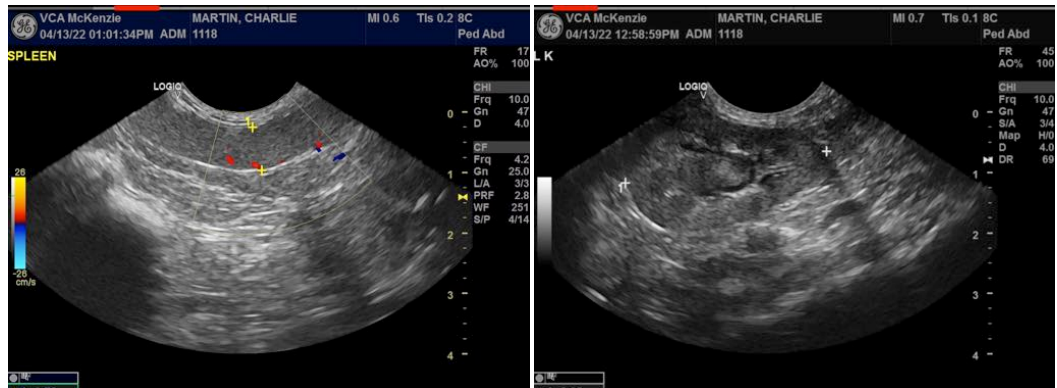
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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