



**PATIENT**

Pulga Madrid

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Male

**AGE**

3 years

**WEIGHT**

7.8 lbs.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Michaleen

**HOSPITAL NAME**

DPC VH

**REFERRING VET**

Dr. Feldt

**INVOICE**

15004

**DATE**

9/28/22

**PRESENTING CLINICAL SIGNS**

Date: 9/27/2022 Reason for Visit: intermittent diarrhea Still "coughing" 2-3x/day....based on owners description sounds like a reverse sneeze....confirmed after owner watched video of reverse sneeze. History: Pet presents for intermittent diarrhea continuing from visit from 1mo ago. Vomited once yesterday Approx 1 month ago started on Doxy, Provable and Panacur. FEcal NPS, normal CBC/Chem other than mildly elevated ALT Normal chest/ab rads though to me liver looks small - dmf C/S/V/D: vomited once yesterday, diarrhea

Abnormal PE/Chem/CBC/UA Results: Hydration: N Mentation: BAR EENT: N Oral Cavity: mm pm mod tartar Lymph Nodes: N Skin: N CV/Respiratory: N Abd/GI: N Uro/Perineum: N Musculoskeletal: N Neurological: N Diagnostic Testing Needed: NSAID chem in house to see if ALT still elevated Fasted Bile Acids even if ALT WNL 8/31/22 - ALT 122 U/L (8-75) 9/28/22- ALT 212 U/L (8-75) 9/2/22- AST 55 U/L (0-50) bile acid pending

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, and cystourethral junction exhibited normal thickness and tone. Anechoic urine was present in the lumen with no sediment or calculi. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

The prostate was of expected size and presentation for a young intact male canine without overt pathology measuring 1.5 cm in diameter.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of renomegaly, mineralization, or pelvic dilation. The left kidney measured 3.6 cm in length. The right kidney measured 3.4 cm in length.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.42 cm width at the caudal pole and 0.5 cm width at the cranial pole. The area of the right adrenal gland was free of overt pathology.

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.



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***Liver/ Gallbladder***

Pulga Madrid

The liver exhibited subjective borderline subnormal size with normal structure and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

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***Gastrointestinal***

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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was primarily empty with mild luminal gas. The ventral gastric body wall width measured 0.34 cm.

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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material. The duodenum wall measured 0.34 cm width. The jejunum wall measured 0.31 cm width.

**WEIGHT**

7.8 lbs.

The descending colon exhibited intact yet subjective mildly prominent wall layering containing semi-formed to soft fecal matter, consistent with patient history. The descending colon wall measured 0.21 cm width.

***Pancreas***

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The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

***Free Abdomen***

No overt lymphadenopathy or peritoneal effusion was present.

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**ULTRASONOGRAPHIC FINDINGS**

- Borderline subnormal liver size - low-grade inflammatory hepatopathy, potential for microvascular dysplasia / portal vein hypoplasia
- Sonographically unremarkable gastrointestinal tract, potential mild colitis

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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No overt evidence of a definitive portosystemic vascular anomaly. Correlation with pending bile acid profile is recommended. Screening hepatic FNA cytology primarily to assess for or possibly identify inflammatory cell type, if present, could be considered. If significantly elevated, post prandial bile acids and advanced imaging including Gold Standard CT with contrast may be indicated if strong suspicion of a portosystemic shunt. However, no evidence of concurrent findings typically associated with portosystemic shunts, i.e., renal or cystic calculi. Hepatic core surgical biopsy may be required for a definitive diagnosis.

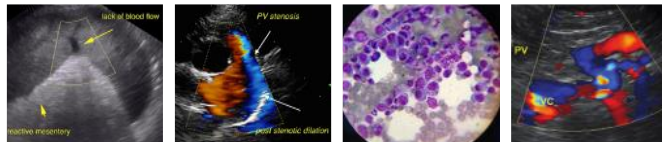
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A novel protein or hydrolyzed diet trial with potential long-term dietary therapy and high colony count probiotics such as current Provable may prove beneficial.



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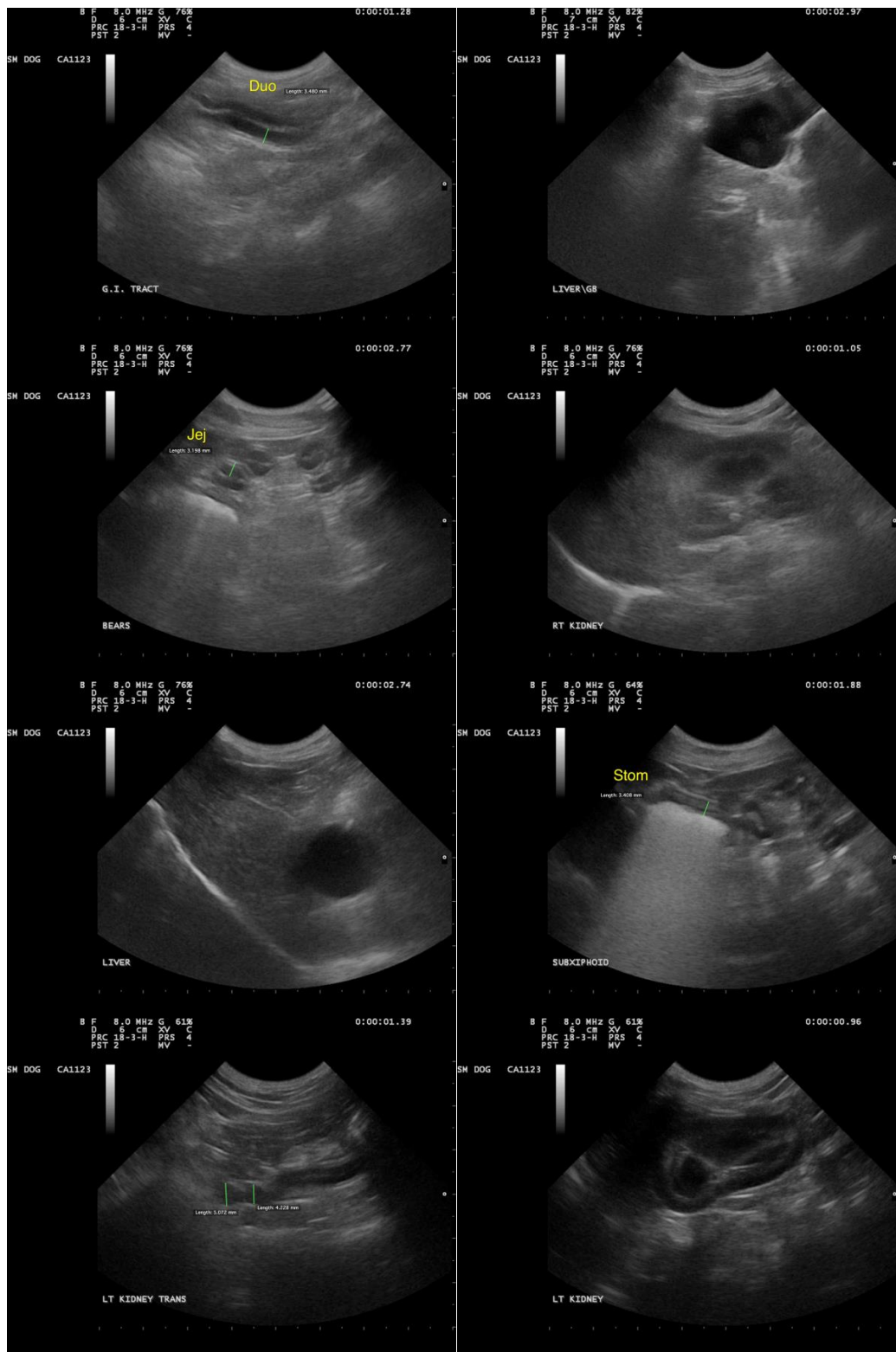
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**  
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