



**PATIENT**

Jackson Benitez

**SPECIES**

Canine

**BREED**

Jack Russell Terrier

**SEX**

MN

**AGE**

13 years

**WEIGHT**

21 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

Animal General on  
Hudson

**REFERRING VET**

-

**INVOICE**

13899

**DATE**

5/18/22

**PRESENTING CLINICAL SIGNS**

Chronic GI upset, intermittent vomiting, screen for VDI, TKI is high, CRP mildly elevated = mild positive neoplasia index, IBD/early GI neoplasia. Patient has been RX'd B-complex, D3, Ion gut heal, Ferrofood, slippery elm, Thyrotabs, gut soothe.

Abnormal PE/Chem/CBC/UA Results: 2/23/22: RBC 4.37, retics 23.1, ALT 4, ALP 371, cholesterol 122. U/A: >40/HPF, rods marked, yeast present, protein 1+, trace blood, USG: 1.033. 4/19/22: 1.040 - resolved abn findings above.

**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 uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

No overt pathology was noted in the area of the residual prostate.

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 was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 4.6 cm in length. The right kidney measured 4.0 cm in length.

**Adrenal Glands**

The bilateral adrenal glands were mildly prominent in size without overt evidence of neoplastic criteria. Mild parenchyma heterogeneity and mild capsule asymmetry was present in the bilateral adrenal glands without suspicion for overt neoplasia. The left adrenal gland measured 1.9 cm length x 0.83 cm width in the caudal pole. The right adrenal gland measured 1.7 cm length x 0.71 width in the caudal pole.

**Spleen**

The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Subtle hyperechoic nodules were present throughout the cranial to caudal 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 or neoplastic changes were not noted. The echogenic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas.

**Liver/ Gallbladder**

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size containing primarily anechoic content with mild to moderate congealed yet nonorganized gallbladder debris.



<b>PATIENT</b>	<b><i>Gastrointestinal</i></b>
Jackson Benitez	The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material. The gastric body wall width measured 0.32 cm. The pylorus wall width measured 0.5 cm.
<b>SPECIES</b>	
Canine	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 width measured 0.44 cm. The jejunum wall width measured 0.42 cm.
<b>BREED</b>	
Jack Russell Terrier	The colon exhibited intact yet mildly prominent wall layering containing formed to semi-formed feces. The descending colon wall width measured 0.31 cm.
<b>SEX</b>	
MN	<b><i>Pancreas</i></b>
<b>AGE</b>	The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.
13 years	<b><i>Free Abdomen</i></b>
<b>WEIGHT</b>	No overt lymphadenopathy or peritoneal effusion was present.
21 lbs.	<b>ULTRASONOGRAPHIC FINDINGS</b>
<b>INTERPRETED BY</b>	<ul style="list-style-type: none"> <li>• Mild chronic renal changes</li> <li>• Mildly prominent bilateral adrenal glands - nonspecific, patient or age-related variant, mild benign hyperplasia or adenomatous change likely, no evidence of neoplastic criteria</li> <li>• Subtle yet benign splenic nodules - consistent with probable mild to emerging myelolipomas</li> <li>• Hepatic parenchymal remodeling</li> <li>• Mild congealed gallbladder debris (non-mucocele)</li> <li>• Overtly normal gastrointestinal tract</li> <li>• Minor pancreatic remodeling</li> </ul>
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	
<b>IMAGING PERFORMED BY</b>	
Kelly Vazquez	
<b>HOSPITAL NAME</b>	<b><u>INTERPRETATION OF THE FINDINGS &amp; FURTHER RECOMMENDATIONS</u></b>
Animal General on Hudson	Overall, largely geriatric abdomen without evidence of significant visceral pathology.
<b>REFERRING VET</b>	Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered.
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<b>INVOICE</b>	Overall, the liver was nonspecific yet consistent with benign hepatic changes and suggestive of probable vacuolar hepatopathy, given the ALP elevation. Hepatosupportive medications including Denamarin and Ursodiol could be considered.
13899	
<b>DATE</b>	In a patient with recurrent to chronic gastrointestinal signs, dietary intolerance / food hypersensitivity, dysbiosis, low-grade to chronic pancreatitis, or structurally insignificant inflammatory enteropathy (both of which may present as sonographically unremarkable), could be possible. No evidence of
5/18/22	



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gastrointestinal neoplastic criteria was noted. Further assessment may include a GI panel to include PLI/TLI/Cobalamin/Folate.

**SPECIES**

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Empirically, a limited antigen or hydrolyzed diet trial with potential long term dietary therapy, prophylactic deworming (Panacur 50 mg/kg SID x 5 consecutive days with repeat protocol in 3 weeks even if fecal testing is negative), high colony count probiotic (Provable or Visbiome), antibiotic trial and as needed gastrointestinal support with assessment of clinical response may prove beneficial. Intestinal biopsies may be indicated if GI signs continue despite empirical therapy.

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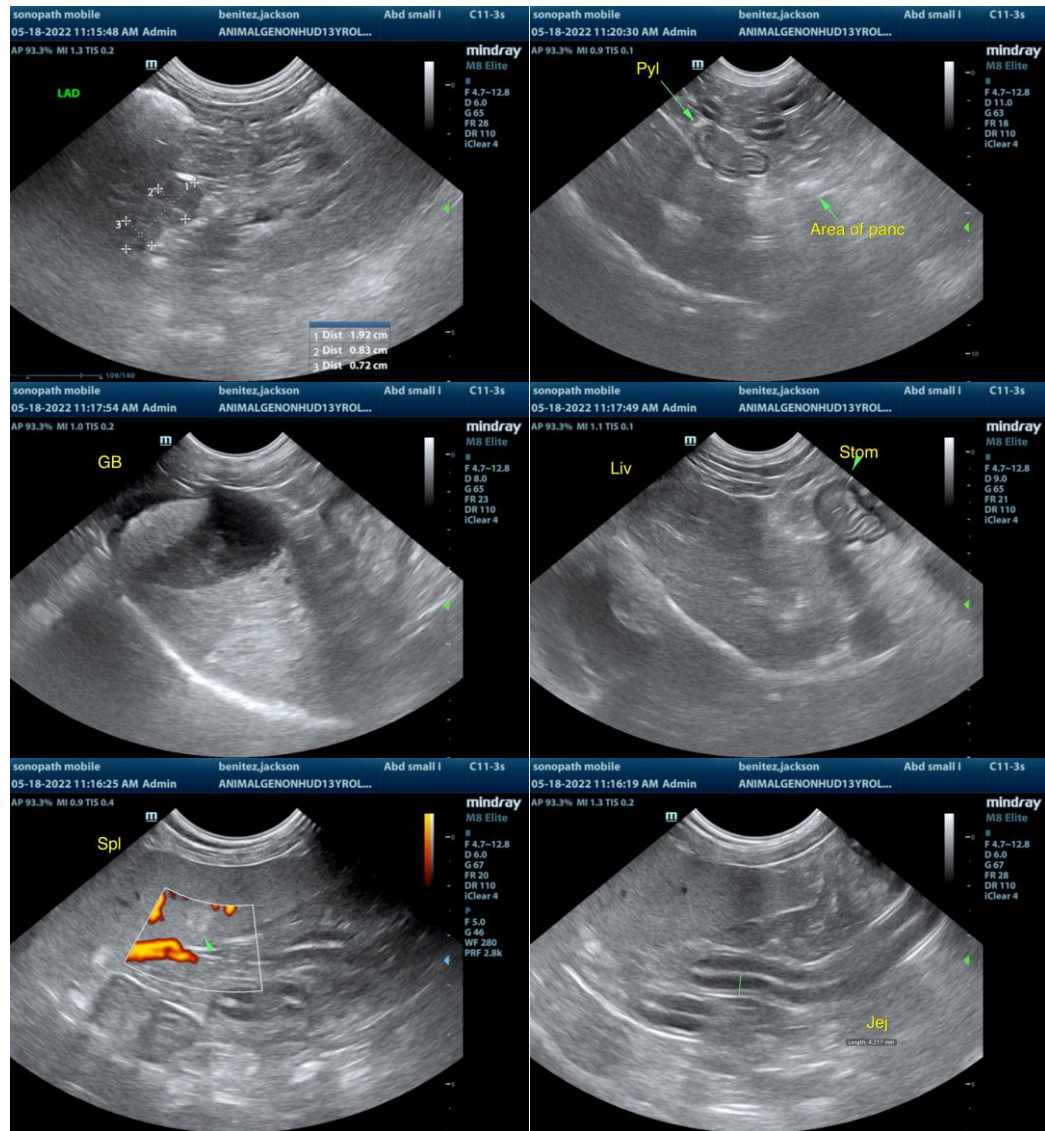
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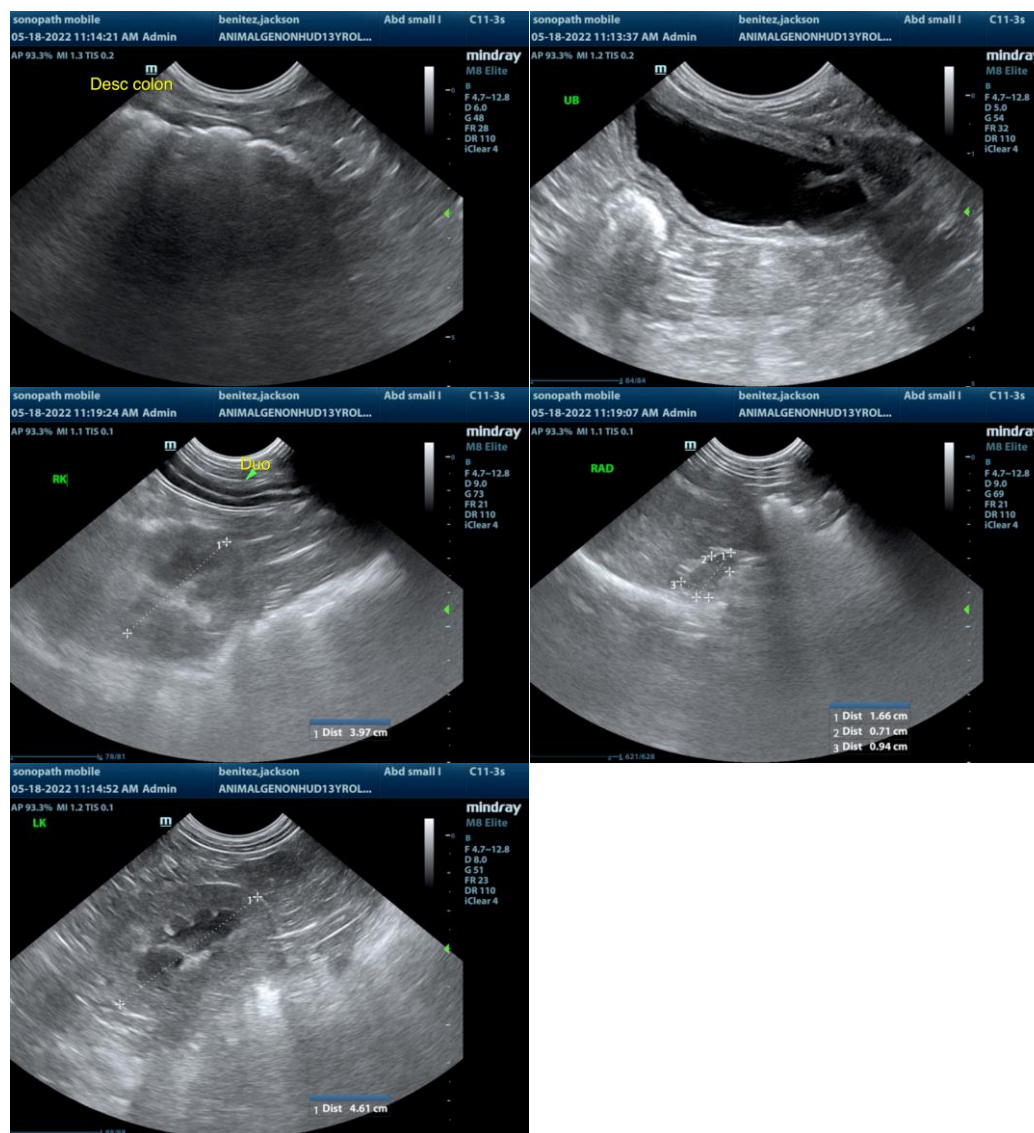
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)  
info@SonoPath.com