



**PATIENT**

Marvin Northstar  
Rescue

**SPECIES**

Canine

**BREED**

Jack Russell Mix

**SEX**

Neutered male

**AGE**

4 years

**WEIGHT**

13.7 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Jenn

**HOSPITAL NAME**

Rockaway AH

**REFERRING VET**

Dr. Kahn

**INVOICE**

43437

**DATE**

3/22/23

**PRESENTING CLINICAL SIGNS**

History: Rescued from South Jersey in January 2023 intermittent diarrhea and vomiting currently has HGE 2 seizure episodes in past month Total T4 and free T4 started on thyroid supplement 1 month ago Chronic weight loss as well fecal parasite testing neg Current meds Levothyroxine P Lyte and Metro Abnormal PE/Chem/CBC/UA Results: Eos 2.75 TP 8.8 Glob 5.9 Chol 102 HWT neg Lepto neg T4 0.9

**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** were normal in size and contour; however, idiopathic, medullary rim sign was noted. Assessment for proteinuria may be indicated. This may be indicative of tubular disease; however, it is also idiopathic. The right kidney measured 4.77 cm. The left kidney measured 4.22 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 right adrenal gland measured 1.88 x 1.03 cm at the cranial pole and 0.56 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**

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.

**Gastrointestinal**

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.



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The intestinal submucosa was slightly irregular, thickened and hyperechoic suggestive of low grade, chronic disease. Soft stool was noted in the colon. 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. Reactive mesentery was noted associated with the small intestine.

**Pancreas**

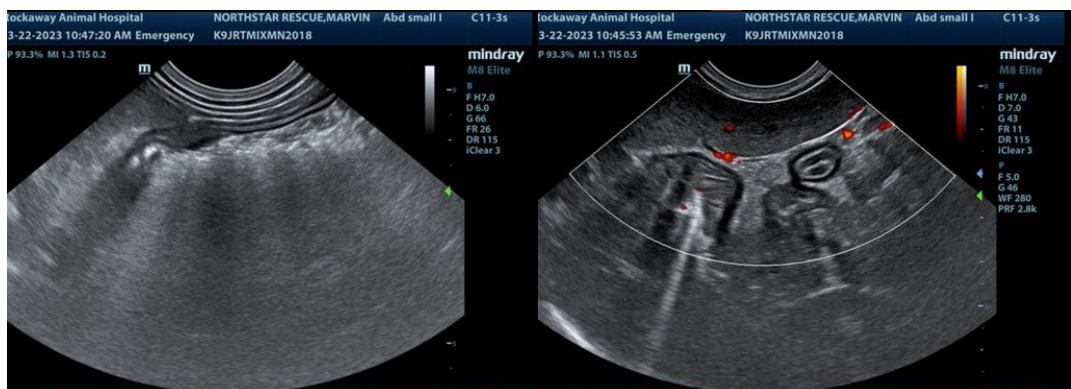
The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

**ULTRASONOGRAPHIC FINDINGS**

Diffuse gastrointestinal thickening.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No neoplastic criteria present; however, acute on chronic inflammatory bowel is likely with a potential for underlying parasitic disease or enterotoxins. Treatment for HGE with Enrofloxacin, Metronidazole, IV fluid support, GI protectants and anti-parasitic protocol is all indicated.





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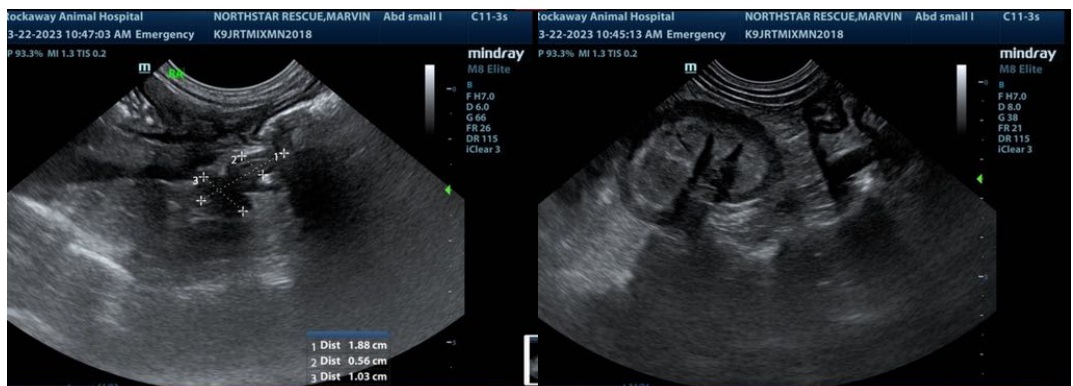
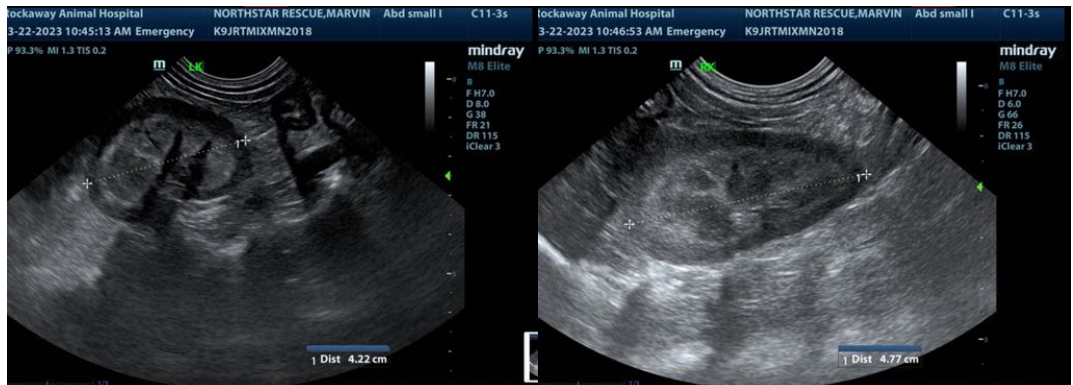
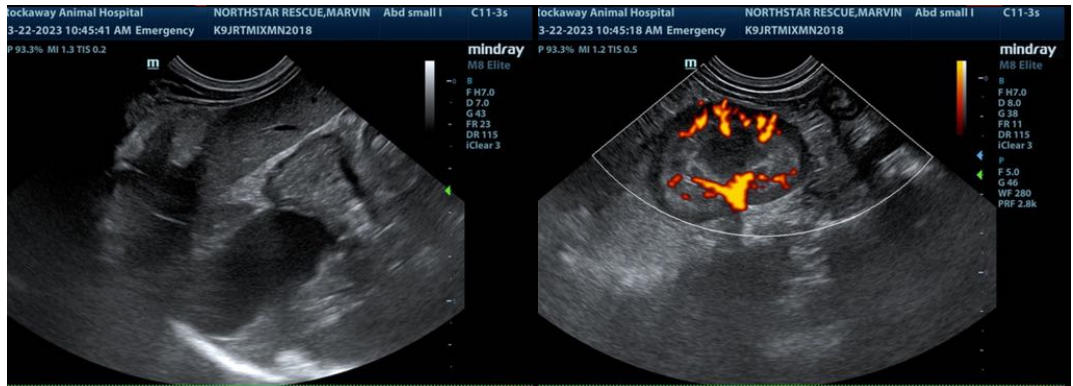
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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