

**DATE PRESENTING CLINICAL SIGNS**

11/29/2021

History: Presented 11/26/21 for a 9-day history of lethargy and inappetence. BW found a moderate strongly regenerative anemia w/ bilirubinuria, proteinuria, ketonuria. FAST scan unremarkable, NSF on preliminary blood smear review (submitted for pathologist review),

**PATIENT**

Primo Liberati

Current Medications: Prednisone 2.6 mg/kg PO daily starting 11/26/21 Doxycycline 5 mg/kg PO q 12 h starting 11/26/21.

Lab Results: 11/26/21 HCT 24.5% w/ 450 K/ul reticulocytosis, 4DX neg.

**SPECIES**

Canine

Radiographs: FAST scan, CXR negative/ unremarkable.

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

**BREED**

Chihuahua

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth.

The bladder lumen is mildly distended. A scant amount of echogenic debris is suspended within the lumen.

No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

**SEX**

Male, neutered

**AGE**

11/15/2017

The prostate is normal in size (0.92 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

**WEIGHT**

3.8 kg.

The left kidney is normal size (3.89 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

The right kidney is normal size (3.80 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**Adrenal Glands**

The left adrenal gland is normal size (0.38 cm at cranial pole) (0.54 cm at caudal pole) (1.81 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**IMAGING PERFORMED BY**

Andi Parkinson RDMS

The right adrenal gland is normal size (0.63 cm at cranial pole) (0.53 cm at caudal pole) (1.47 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**HOSPITAL NAME**

Eastern AH

**Spleen**

The spleen is prominent in size (1.19 cm in width at the level of the hilus) with normal curvilinear peripheral contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

**REFERRING VET**

Dr. Michelotti

**Liver**

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is thin and smooth. A small amount of aggregated echogenic partially dependent debris is observed within the lumen. The cystic and common bile ducts are normal/not

**INVOICE**

12608

seen. The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

### ***Gastrointestinal***

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is minimally distended with ingesta. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

### ***Pancreas***

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is slightly hypoechoic relative to surrounding omental fat and is homogeneous in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic effusion.

### ***Free Abdomen***

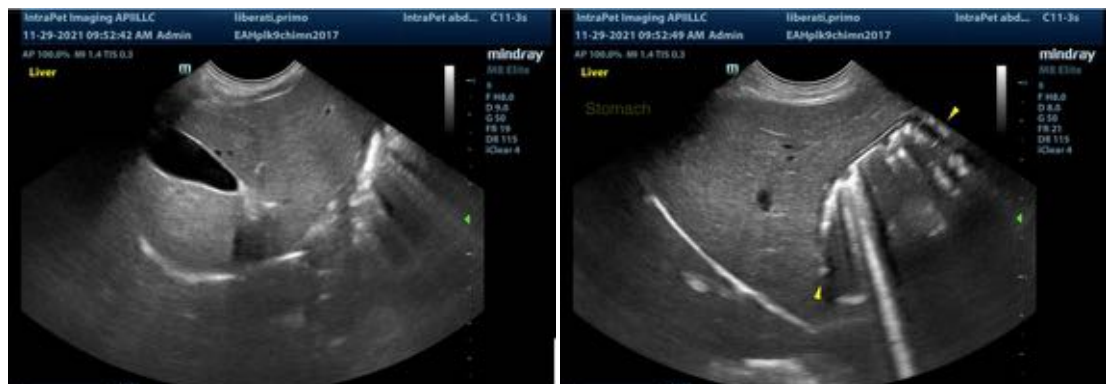
The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

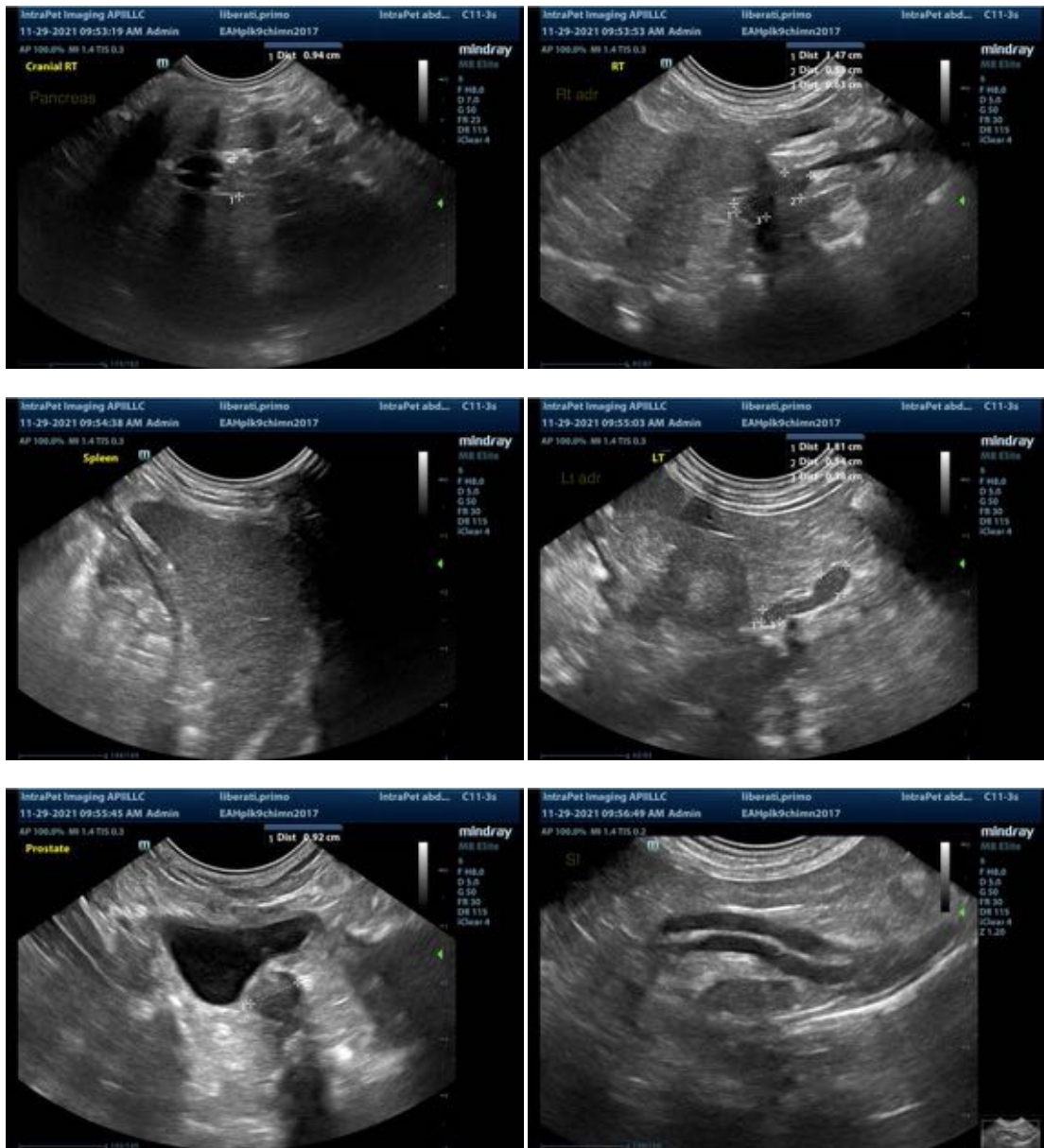
## **ULTRASONOGRAPHIC FINDINGS**

- The mild hepatomegaly may be secondary to extramedullary hematopoiesis, vacuolar hepatopathy, inflammation, infiltrative neoplasia (unlikely), other hepatopathy.
- The pancreatic changes may be a normal variant for this patient or could be consistent with mild, chronic pancreatitis. Correlation with clinical findings is recommended.
- The mild splenomegaly is likely due to extramedullary hematopoiesis secondary to the patient's anemia.

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Continued supportive care for immune mediated hemolytic anemia is recommended.
- Also consider a comprehensive tick panel (<https://cvm.ncsu.edu/research/labs/clinical-sciences/vector-borne-disease/>) to assess for organisms such as Babesia, which can result in IMHA.





The information and recommendations provided are based on the images presented by the referring veterinarian. 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.

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

[Andrea.nicastro@sonopath.com](mailto:Andrea.nicastro@sonopath.com)