

**DATE PRESENTING CLINICAL SIGNS**

12/28/22

5 yo FS border collie (MDR1 positive). Presented for lethargy, ADR. Still eating/drinking. Physical exam showed slight abdominal distension, no fluid waves. Rads indicated hypovolemia and abdominal haze, splenic enlargement. Flash ultrasound showed no fluid pockets. Bloodwork demonstrated hematocrit of 10.8%, by hand PCV of 23%. WBC 21.11 w/ neutrophils 23.59.

**PATIENT**Koukla  
Theodoropoulos

Current Medications: prednisone (2 mg/kg) - started yesterday, duration dependent on laboratory and ultrasound findings, cerenia (1 mg/kg) - 3.3ml (10 mg/ml) IV SID x 5 days, enrofloxacin (10mg/kg) - 3.4ml (100mg/ml) IV SID x 14 days, LRS fluids - 75ml/hr (maintenance)

**SPECIES**

Canine

Lab Results: Flash ultrasound showed no fluid pockets. Bloodwork demonstrated hematocrit of 10.8%, by hand PCV of 23%. WBC 27.11 w/ neutrophils 23.59. ALP 191 (0-140).

**BREED**

Border Collie

Radiographs: hypovolemia and abdominal haze, splenic enlargement.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Andi Parkinson, BS, RDMS.

**SEX**

Spayed Female

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****AGE**

11/26/18

**Urinary System**

The urinary bladder is mildly distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

**WEIGHT**

33.6 kg

The left kidney has a normal shape and size (6.88 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

The right kidney has a normal shape and size (7.13 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**HOSPITAL NAME**

Chadwell AH

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.59 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**REFERRING VET**

Dr. Mengers

The right adrenal gland is normal in size measuring 0.70 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**INVOICE**

43746

**Spleen**

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

### **Liver**

The liver is subjectively normal in size with smooth peripheral margins. The parenchyma is mildly hyperechoic and homogenous in echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

### **Gastrointestinal**

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Jejunum wall measures 0.31 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### **Pancreas**

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### **Free Abdomen**

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

### **Other**

There is subtle ringdown artifact visualized at the level of the duodenum.

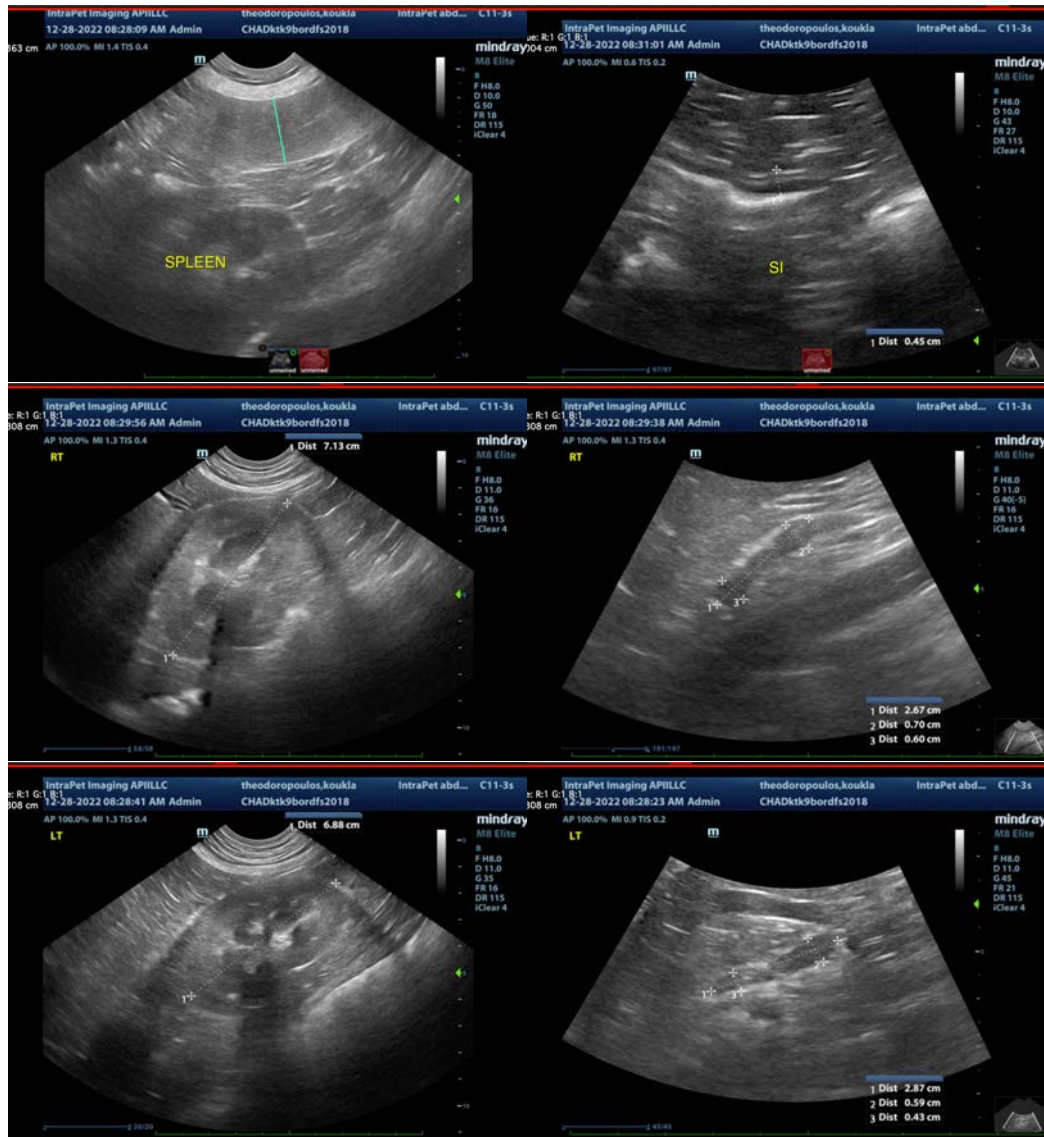
## **ULTRASONOGRAPHIC FINDINGS**

- Subjectively hyperechoic liver – The diffuse hepatic changes are non-specific and can be seen with vacuolar hepatopathy, reactive change, nodular hyperplasia or, less likely, inflammatory/immune-mediated disease, infiltrative neoplasia, or other hepatopathy.
- Mild ringdown artifact at the level of the duodenum – This can be seen with pulmonary parenchymal disease. Recommend 3-view thoracic radiographs.

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

The abnormalities noted on today's scan are relatively mild and may be incidental for this patient. Correlate the liver findings with liver enzyme values. If there are significant elevations present, consider a fine needle aspirate of the liver (provided coagulation parameters are normal).

There is a significant discrepancy between the hematocrit and PCV. Recommend a pathologist review of a blood smear, and reticulocyte count. If there is no evidence of regeneration, consider a bone marrow aspirate +/- vector borne disease testing (I like NC State's vector borne disease lab's canine comprehensive panel). If there is significant evidence of regeneration and no overtly neoplastic cells visualized, then consider the possibility of hemolysis or GI blood loss.





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.

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