



**PATIENT**

Tula Reinberg

**SPECIES**

Canine

**BREED**

Mini Australian Shepherd

**SEX**

Spayed Female

**AGE**

11 Years

**WEIGHT**

11.5 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Laura de Cordon

**HOSPITAL NAME**

Mason Dixon Animal  
Emergency Hospital

**REFERRING VET**

Dr. Brewer

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39735

**DATE**

7/22/22

**PRESENTING CLINICAL SIGNS**

O reports pt hasn't been eating for past 2 days- O states this isn't particularly abnormal Is not herself, not drinking or eating, won't really move Has not been outside in the heat for long amounts of time Abnormal PE/Chem/CBC/UA Results: febrile - 105.5 at presentation 4DX test - neg x 4 Abnormal CPLi Platelet count of 88,000 Chem12/lytes: amylase 1640 lipase 624 Tbili high N at 0.5

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately distended with mild primarily suspended echogenic debris present. 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 calculi. Echogenic debris of this type can be associated with small crystals, cellular debris and proteinaceous debris.

The left kidney has a normal shape and size (4.27 cm) with a small 0.47 cm cystic structure visualized within the cortex. Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.16 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.62 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.

The right adrenal gland is normal in size measuring 0.56 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.

**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, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of hyperechoic shadowing debris. The cystic and common bile ducts are normal/not visible.



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**Gastrointestinal**

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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.

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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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

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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.

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**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.

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**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.

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**PRIMARY FINDINGS**

- Mildly echogenic debris visualized in the urinary bladder – The echogenic debris in the bladder lumen could be consistent with cells, crystals, and/or mucus.
- Heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.
- Moderate hyperechoic shadowing debris within the gallbladder – The significance of the shadowing debris within the gallbladder is unclear. There is no evidence of wall thickening or inflammation surrounding the gallbladder. Recommend continued monitoring.

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**SECONDARY FINDINGS**

- Small cystic structure visualized within the left kidney – This is likely associated with a benign cyst. Recommend continued monitoring.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

There are some subtle lesions visualized on today's exam that are likely not related to the acute illness reported. There is some mild echogenic debris in the urinary bladder. Recommend urinalysis and culture. Additionally, the liver is mildly heterogeneous and there is some gallbladder debris present. In

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light of no significant liver enzyme elevations, the significance of this is unclear. If there is concern, you could consider a liver function test and a fine needle aspirate of the liver.

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This fever is very high, and possibly could be consistent with heat stroke, inflammation, infection, underlying neoplasia, etc. Initially, I would focus on stabilization, closely monitor the platelet count, and look for possible infectious causes of a fever. This includes thoracic radiographs to look for pneumonia, vector borne disease testing to look for tickborne disease, etc., close auscultation for a new heart murmur, urinalysis and culture, and a thorough physical exam. Additionally, in this case I would consider testing for Leptospirosis. If infectious disease testing is negative and there is no response to Doxycycline and IV fluids, then I would consider further evaluation for possible autoimmune disease, etc.

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Consider reevaluation of the pancreas with ultrasound if GI signs persist and the PLI remains elevated.

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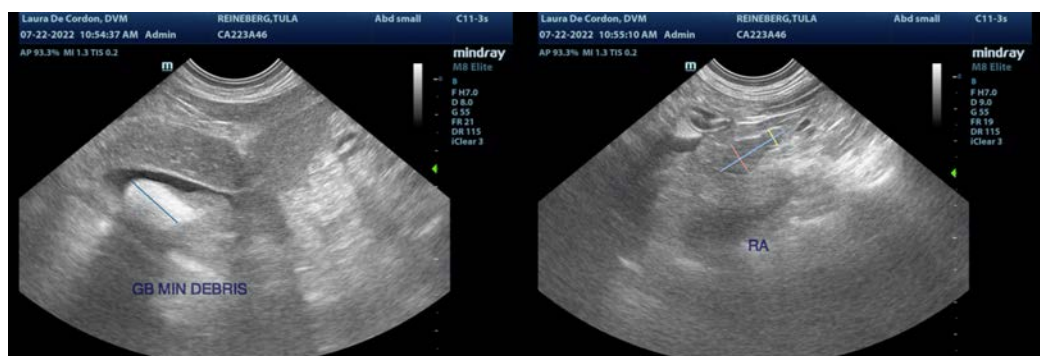


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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

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