



**PATIENT PRESENTING CLINICAL SIGNS**

Arlo Costa

**SPECIES**

Canine

**BREED**

Rottweiler

**SEX**

Neutered male

**AGE**

1 ½ years

**WEIGHT**

43.3 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kelly Reshny, RVT

**HOSPITAL NAME**

Beatties PH Stoney  
Creek

**REFERRING VET**

Dr. Mellish

**INVOICE**

96115

**DATE**

2/17/22

Patient presented with hyporexia progressing to anorexia for past 2 days, vomited 1x, no known FB or toxin ingestion, lethargic, rapid weight loss. PE done under sedation due to temperament: WNL. Patient was neutered 1 month prior at another facility. Leptospirosis in house test negative. Buprenorphine IV BID, Ampicillin IV TID, Famotidine IV BID, Cerenia IV SID  
Abnormal PE/Chem/CBC/UA Results: UREA 19.7, CA >4.00, CREA 223, LIPA 1825, CI 103, SDMA 44, TT4 11, USG 1.010 Rads: FINDINGS: There is a small amount of gas seen throughout the intestinal tract. There is a small amount of gas seen within the stomach. Rugal folds are seen within the stomach. The spleen and the liver are mildly enlarged. There is increased soft tissue opacity the cranial dorsal abdomen however this may be due to semi-should the kidneys and the spleen. The kidneys are difficult to fully discern due to summation of bowel, however no significant or definitive renal abnormalities are noted. There is an increased rounded soft tissue opacity ventral to L6 and the right lateral projection which is less apparent on the other images and may be artifactual due to normal soft tissue structures however mild medial iliac lymphadenopathy could be present. The remainder of the abdomen is unremarkable on this study. The musculoskeletal structures are within normal limits. CONCLUSIONS: The cause for the patient's clinical symptoms are not definitively identified. The gas filled intestinal tract on this exam is a nonspecific and mild finding. Paralytic ileus may be present. Given the mild splenomegaly, hepatomegaly, and questionable soft tissue opacity seen within the region of the medial iliac lymph nodes, lymphoma could be present in this patient despite the young age. The renal silhouettes are unremarkable but difficult to fully discern on this study to summation of bowel however in light of the blood work, and urinalysis, renal failure could be present

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately 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.

The visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (7.37 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 mild pyelectasia at 0.49 cm. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (8.48 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 0.53 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 1.0 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.



**PATIENT**

**Spleen**

Arlo Costa

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

**SPECIES**

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**Liver**

**BREED**

Rottweiler

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

**SEX**

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**AGE**

1 ½ years

**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.

**WEIGHT**

43.3 kg

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 (0.65 cm) and the jejunum measured as normal (0.32 cm). Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**INTERPRETED BY**

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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.

**IMAGING PERFORMED BY**

Kelly Reshny, RVT

**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. There is a prominent, hypoechoic, lymph node in the caudal abdomen measuring 3.2 x 4.6 cm. The omentum is of normal uniform echogenicity.

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**ULTRASONOGRAPHIC FINDINGS**

**PRIMARY FINDINGS:**

- Large mottled spleen. The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- Large, heterogenous 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 lymphadenopathy. The prominent abdominal lymph nodes are concerning for neoplasia.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No focal lesions are visualized associated with the kidneys or liver/spleen, but there is a general organomegaly and the spleen is mottled. These findings in conjunction with the enlarged caudal lymph node and hypercalcemia are concerning for possible round cell neoplasia. I recommend FNA of the spleen and liver as well as abdominal lymph node if you are able to reach it. Additionally I recommend a hypercalcemia malignancy panel to Michigan State for an ionized calcium, PTH, and PTHrP level. I recommend three view thoracic radiographs and careful rectal exam to look for any evidence of anal gland tumors.

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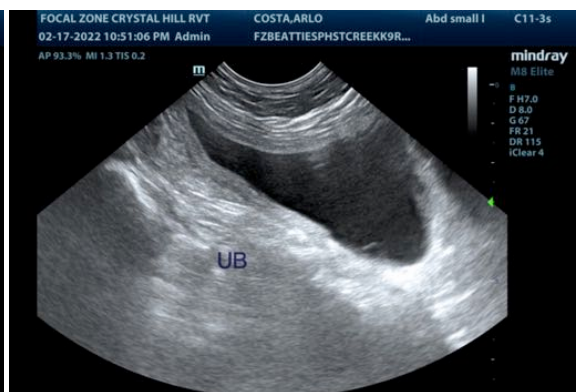
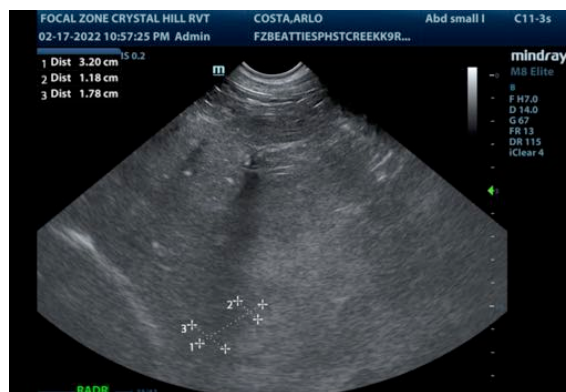
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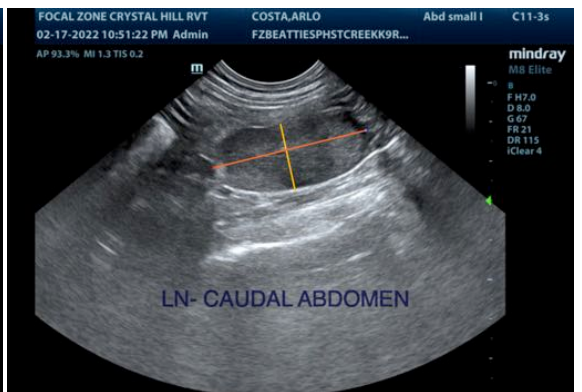
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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