



**PATIENT**

Mr. Snuggles  
Greenholm

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Neutered Male

**AGE**

13 Years

**WEIGHT**

7.4 kg

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Kelly Reschny

**HOSPITAL NAME**

Gagemount AH

**REFERRING VET**

Dr. Keir

**INVOICE**

37259

**DATE**

4/28/22

**PRESENTING CLINICAL SIGNS**

Lethargic, not eating as well as usual, quiet, not snuggling Submandibular and popliteal lymph nodes enlarged - FNA sent to lab - thought was reactive but couldn't rule out lymphoma - no response to antibiotics Now abdomen appears enlarged/bloated - cannot feel fluid wave, difficult due to size to palpate much Concerned with possible lymphoma, other cancer meds: Dexamethasone 1 mg SID Abnormal PE/Chem/CBC/UA Results: please see attached BW

**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 prostate is normal in size (0.73 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (5.02 cm). Overall echogenicity is slightly hyperechoic with poor 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 (5.45 cm). Overall echogenicity is slightly hyperechoic with poor 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 0.71 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 0.64 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 large in size, and normal in 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 gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.


**PATIENT** *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.

**SPECIES**

Canine

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.)

**BREED**

Chihuahua

Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**SEX**

Neutered Male

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**
**AGE**

13 Years

The pancreas is prominent and hypoechoic as compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

**Free Abdomen**
**WEIGHT**

7.4 kg

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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**ULTRASONOGRAPHIC FINDINGS**

- Large, 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. This could also be consistent with a steroid hepatopathy.
- Hypoechoic, prominent pancreas – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**
**REFERRING VET**

Dr. Keir

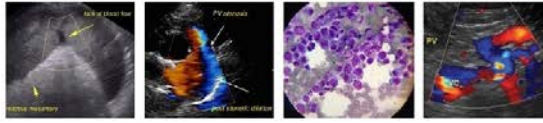
There is no evidence of an abdominal lymphadenopathy noted. The liver is large, heterogeneous and slightly bright. This could be consistent with a steroid hepatopathy, infiltrative disease, inflammatory disease, etc. Correlate these findings with the duration of Dexamethasone use and the impact that could have on liver enzyme elevations, liver size, and the lymph nodes. A fine needle aspirate of the liver could be considered to further evaluate for infiltrative disease, and a quantitative PLI could be performed to further evaluate the pancreatic changes. Consider a sedated oral exam if the patient does not allow an excellent evaluation of the back of the throat and teeth as a cause for a local lymphadenopathy. If other lymph nodes are enlarged, consider a fine needle aspirate and cytology, as the submandibular lymph nodes are notoriously difficult to evaluate due to the proximity to the inflammation from the oral cavity, etc.

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Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.

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Other differentials for lymphadenopathy that do not include lymphoma would include tick borne disease, autoimmune disease, and other general inflammatory conditions. A lymph node biopsy can be considered if the suspicion is very high. Additionally, discontinuation of the steroids and reassessment may be helpful.

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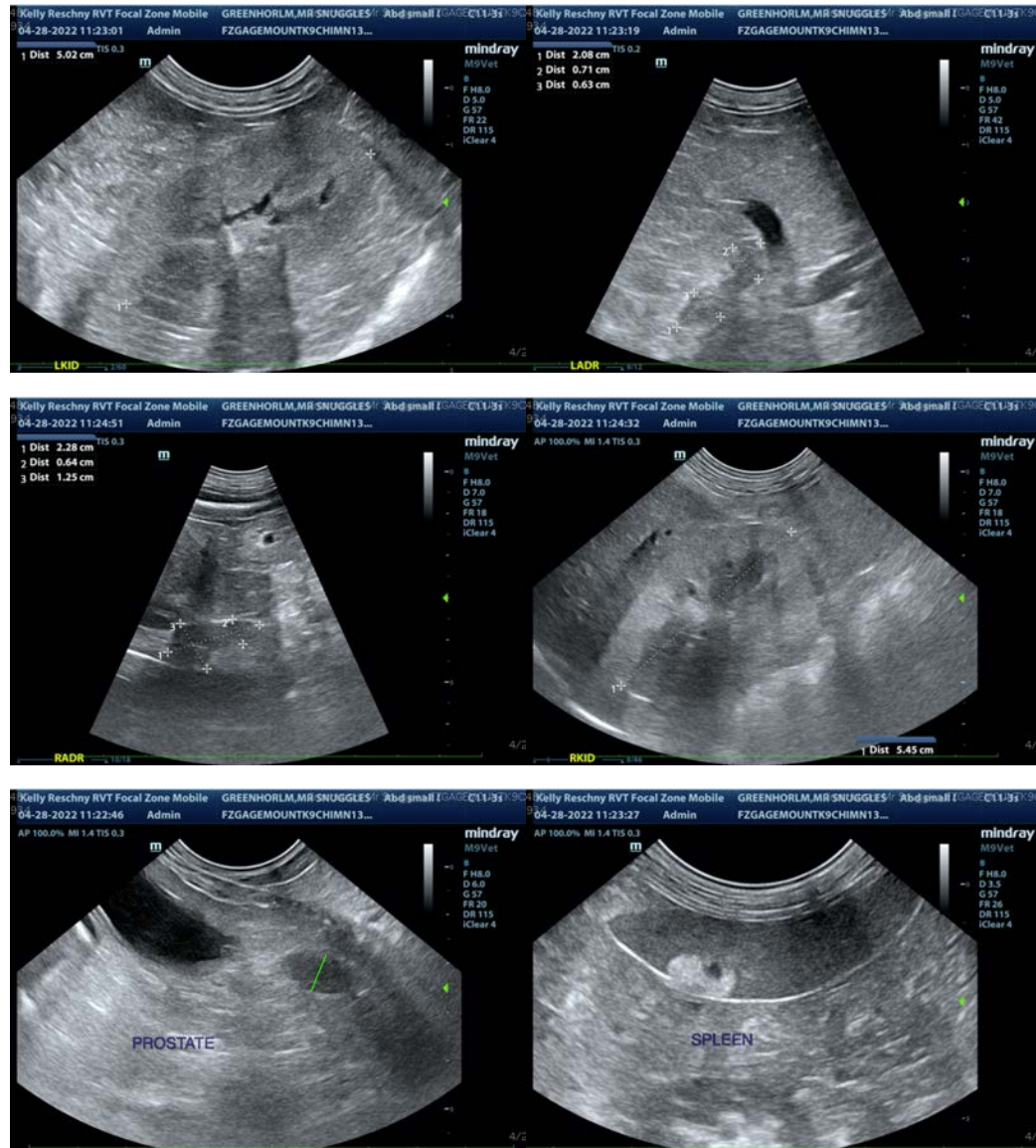
Dr. Keir

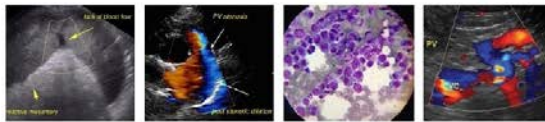
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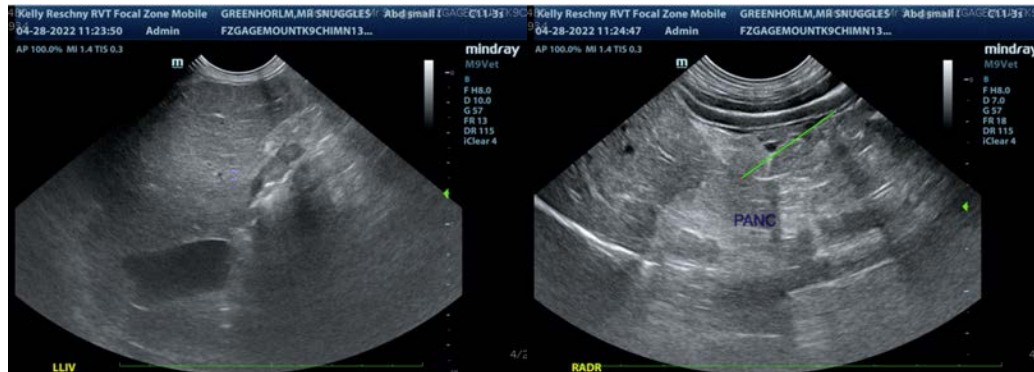
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

kathleen.sennello@sonopath.com