



**PATIENT PRESENTING CLINICAL SIGNS**

**PATIENT** Logan Bull  
Lethargic, couple vomits yest. Jaundiced appearance, not eating as well. Recent wt loss however Os were working on him losing weight.

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: Generalized lymphadenopathy, pyrexia, jaundice. CBC - mild nonregen anemia (hct 0.34), mild lymphopenia. Chem - mod ALT elevation (330), marked ALP elevation (>2000), marked GGT elevation (63), TBil 145, mild hypercholesterolemia (10.11mmol/L).

**BREED**

GSD x

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**SEX**

Neutered Male

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**AGE**

6 Years

The prostate is unable to be well visualized in these images.

The right kidney is normal in size (7.14 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**WEIGHT**

24.5 kg

The left kidney is normal in size (6.36 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**Adrenal Glands**

The right adrenal gland is normal in size (1.01 cm thick), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**IMAGING PERFORMED BY**

Dr. Guenther

The left adrenal gland is normal in size (0.96 cm at the cranial pole and 0.86 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

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Emergency Hospital

**Spleen**

Spleen is subjectively large in size with a swollen and scalloped/undulating capsular contour. Multifocal coalescing nodules are noted throughout the parenchyma. Splenic vasculature appears normal. Enhanced hyperechoic surrounding fat is noted.

**REFERRING VET**

Dr. Lauzon

**Liver**

Liver is subjectively enlarged (swollen contour). Mild parenchymal remodeling with diffusely mildly coarse architecture and increased portal markings is present. No focal nodules or masses are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

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**DATE**

7/16/23

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.



**PATIENT** *Gastrointestinal*

Logan Bull The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

**SPECIES**

Canine

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

**BREED**

GSD x

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

**SEX**

Neutered Male

**Pancreas**

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

**AGE**

6 Years

**Free Abdomen**

**WEIGHT**

24.5 kg

There is no evidence of free peritoneal effusion noted in these images.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

Diffusely, lymph nodes are enlarged with swollen irregular capsular contour and loss of normal length to width ratio (rounded in shape), involving primarily medial iliac/sublumbar lymph nodes, with mesenteric and cranial abdominal/gastric lymph nodes enlarged as well. Nodes are hypoechoic with loss of normal parenchymal detail.

**ULTRASONOGRAPHIC FINDINGS**

**IMAGING PERFORMED BY**

Dr. Guenther

- **Hypoechoic hepatomegaly** – This appearance is consistent with an acute hepatopathy or acute cholangiohepatitis. Infiltrative neoplasia (round cell neoplasia) should also be considered.
- **Honeycomb Spleen** – This finding is strongly suggestive of infiltrative disease such as round cell neoplasia. Benign disease cannot be ruled out but is considered less likely.
- **Aggressive generalized lymphadenopathy** – most consistent with infiltrative round cell or metastatic neoplasia. A benign aggressive inflammatory response cannot be ruled out without tissue sampling +/- culture.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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Given the diffuse changes combined with the reported peripheral lymphadenopathy, infiltrative neoplasia such as lymphoma is high on the list of differentials. Therefore, recommendations include fine needle aspirates of the peripheral lymph nodes +/- the enlarged medial iliac/sublumbar lymph nodes, spleen, and liver.

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Three view thoracic radiographs could be considered for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.



**PATIENT**

Logan Bull

**SPECIES**

Canine

**BREED**

GSD x

**SEX**

Neutered Male

**AGE**

6 Years

**WEIGHT**

24.5 kg

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**IMAGING PERFORMED BY**

Dr. Guenther

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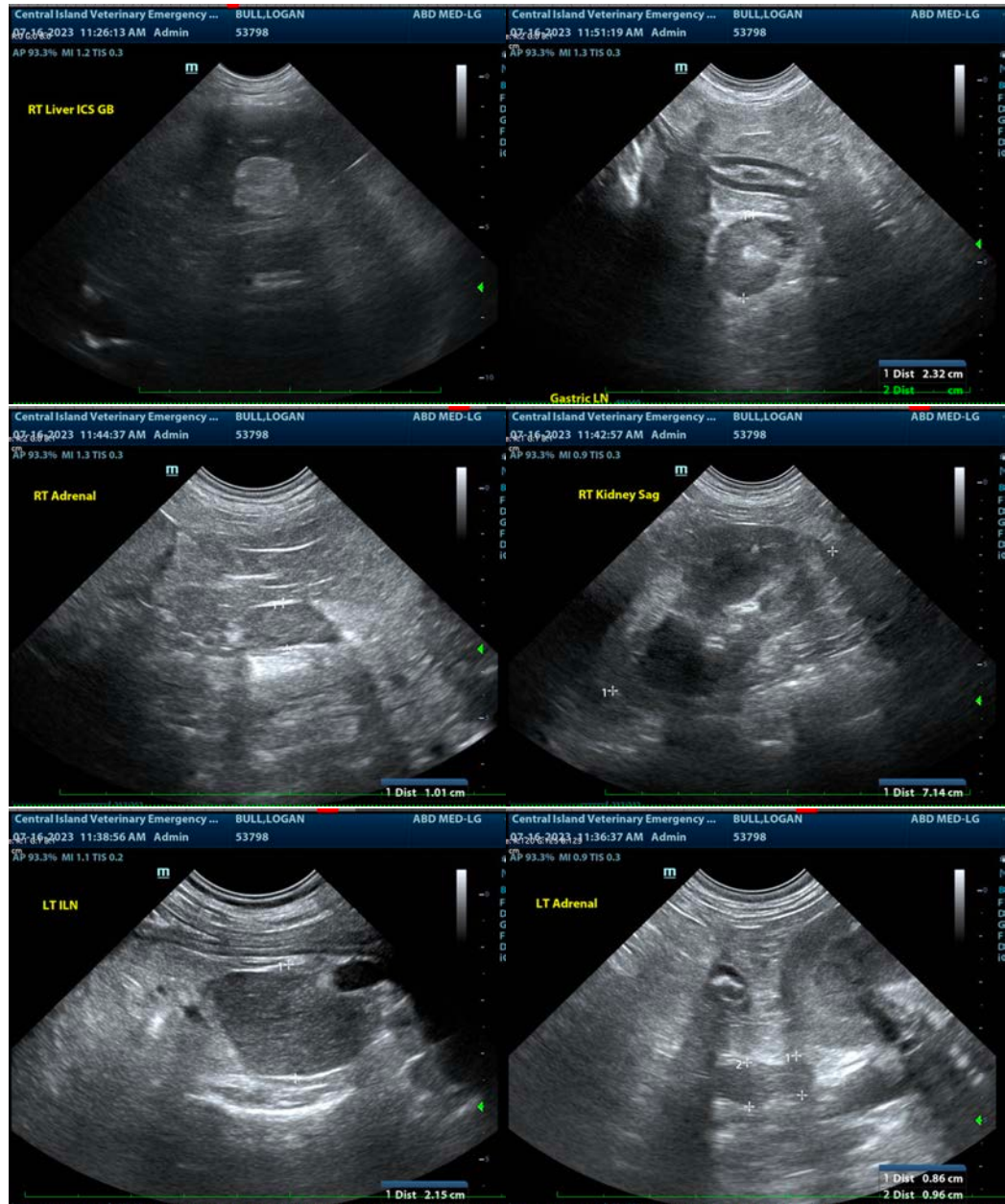
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**PATIENT**

Logan Bull

**SPECIES**

Canine

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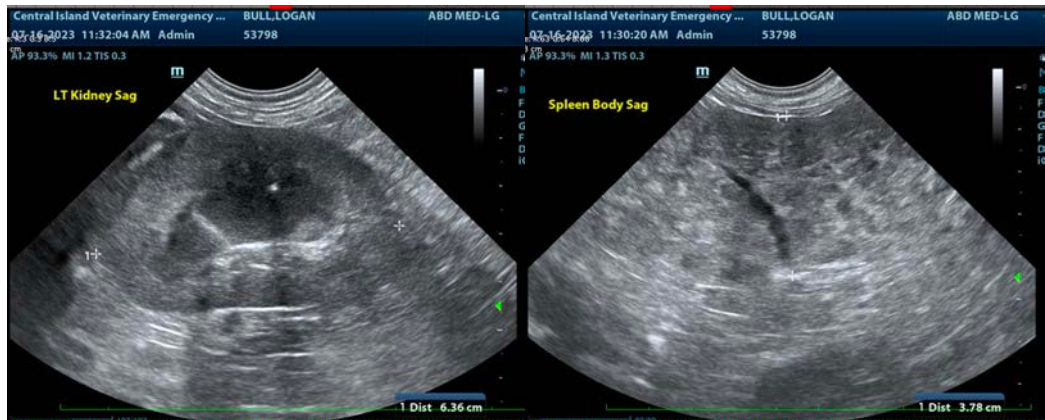
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Beth Johnson, DVM, DACVIM**  
info@sonopath.com