

**PATIENT**

Zoe Bourget

**SPECIES**

Canine

**BREED**

Golden Retriever

**SEX**

Spayed Female

**AGE**

13 Years

**WEIGHT**

60 Pounds

**INTERPRETED BY**Beth Johnson, DVM  
DACVIM**IMAGING PERFORMED BY**

Amy Mayhew, LVT

**HOSPITAL NAME**

SVS Imaging MI

**REFERRING VET**

Dr. Heather Witherell

**INVOICE**

47269

**DATE**

5/9/23

**PRESENTING CLINICAL SIGNS**

Seems to be slowing down recently. Someone picky appetite. No V/D.  
 Abnormal PE/Chem/CBC/UA Results: Elevated liver enzymes. Please see attached.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

Urinary bladder is adequately distended with primarily anechoic contents and occasional echogenic non-shadowing debris. Apical urinary bladder wall is diffusely thick (0.37 cm). Mucosa is hyperechoic and irregular. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal thickness with a smooth mucosal surface.

The right kidney is normal in size (6.83 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.

The left kidney is normal in size (6.35 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.

**Adrenal Glands**

The right adrenal gland is normal in size (0.54 cm at the cranial pole and 0.55 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.42 cm x 0.51 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**Spleen**

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

**Liver**

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion. In the mid caudal liver and right caudal liver, there are discretely markedly more heterogeneous areas with rounded, almost emerging mass-like appearances.

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.

**Gastrointestinal**

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.

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.

## IMAGING PERFORMED BY

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

## SPECIES

### *Pancreas*

Canine 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.

## BREED

### *Free Abdomen*

Golden Retriever

There is a scant amount of anechoic free fluid in the cranial abdomen.

## SEX

There is no apparent lymphadenopathy noted in these images.

Spayed Female

## ULTRASONOGRAPHIC FINDINGS

## AGE

13 Years

- **Markedly heterogeneous liver with mass-like appearance to the mid caudal and right caudal liver lobes, and a scant amount of anechoic free fluid** – Concerning for infiltrative neoplasia such as round cell neoplasia, metastatic neoplasia, versus other. Having said that, these changes can occur with benign processes as well, such as nodular hyperplasia, steroid or vacuolar hepatopathy, extramedullary hematopoiesis, or even chronic inflammatory disease. Therefore, differentiation cannot be confirmed without tissue sampling.

## WEIGHT

60 Pounds

- **Chronic Cystitis** - Urinary bladder wall changes are most consistent with chronic cystitis. Infiltrative neoplasia cannot be ruled out but is considered less likely give the location and diffuse nature of the changes.

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DACVIM

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

If not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

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

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A fine needle aspirate of the liver is recommended if patient's coagulation status is appropriate.

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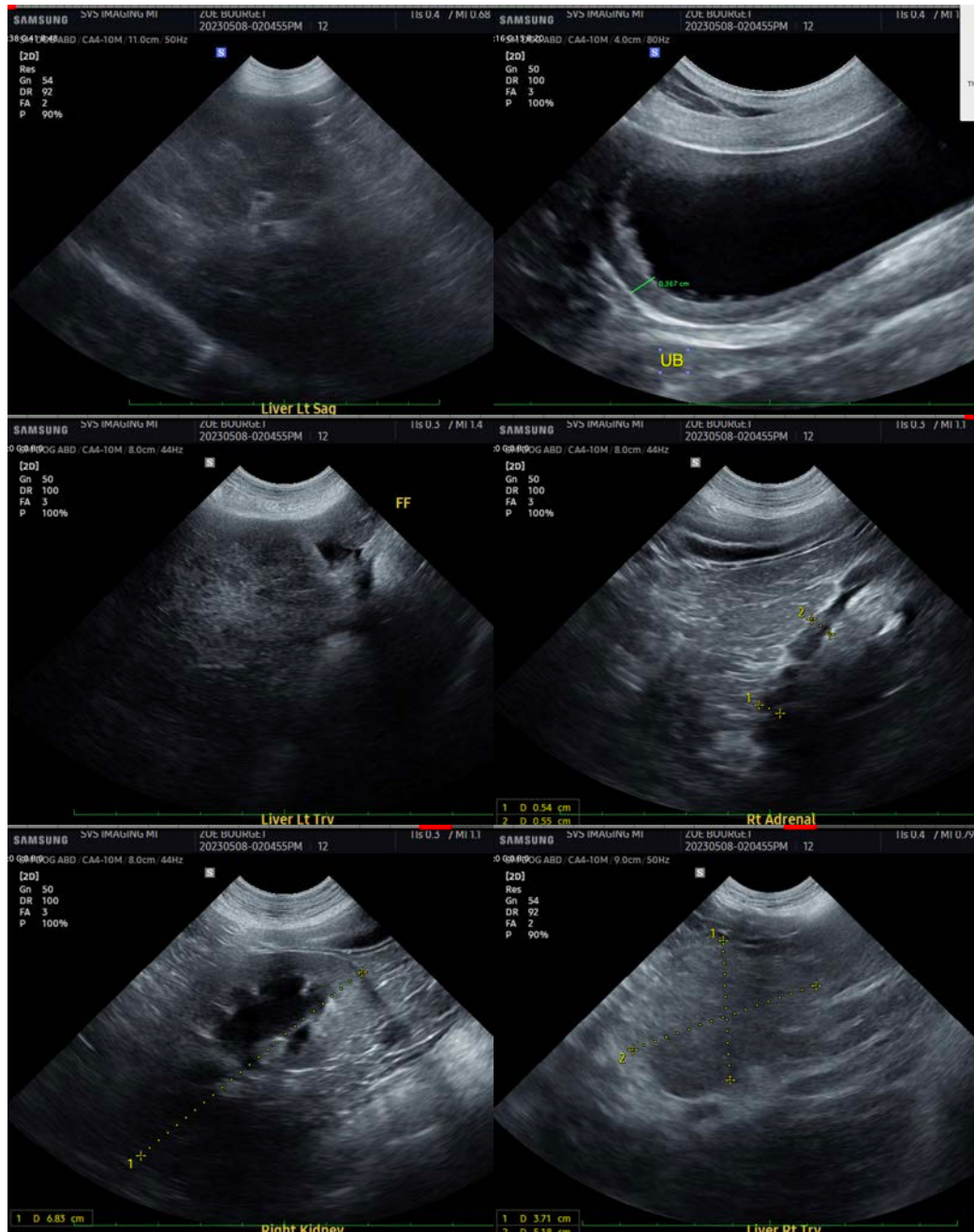
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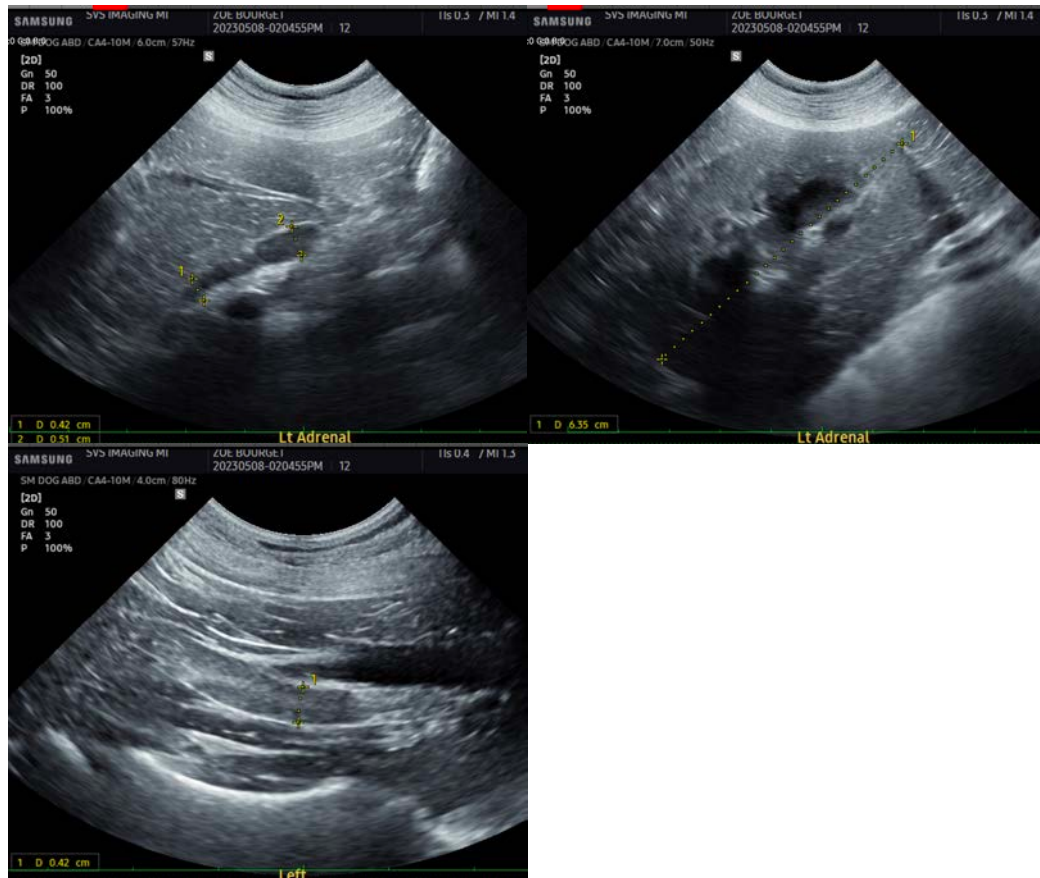
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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