

**PATIENT**Violet Drinkwater  
30311A**SPECIES**

Canine

**BREED**

Boston Terrier

**SEX**

Spayed Female

**AGE**

12 Years 11 Months

**WEIGHT**

8.6 kg

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

Tom McNeill

**HOSPITAL NAME**

SVS Imaging CT

**REFERRING VET**Madison Vet  
Specialists - Dr.  
Daggett**INVOICE**

39087

**DATE**

6/29/22

**PRESENTING CLINICAL SIGNS**

Violet is presented to MVS for respiratory distress. Violet has had a distended abdomen for awhile, and the owner noticed that it was firmer last night. Owner believes there is fluid in the abdomen. Violet had been diagnosed with a heart murmur within the last year, and since January, it has gotten worse. Violet hasn't eaten today which is unusual, drinking normal. She is active at night, barking often and gets worked up. No recent history of vomiting or diarrhea, urinating every 2 hours which is more than usual. Owner has noticed that Violet has gained weight. Violet is deaf and blind. She had a dental procedure this January, and has cognitive dysfunction - on supplements for it.

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

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.

The right kidney is normal in size (4.89 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 (4.69 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 left adrenal gland is enlarged in size (0.55 cm at the cranial pole and 0.76 cm at the caudal pole). Normal shape and contour are maintained. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The right adrenal gland is enlarged in size (0.76 cm at the cranial pole and 0.70 cm at the caudal pole). Normal shape and contour are maintained. Corticomedullary structure is unremarkable. In the cranial pole, a small hyperechoic non-capsule expanding nodule is noted. Visible surrounding vasculature appears normal.

**Spleen**

The 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.

**Liver**

The liver is subjectively enlarged with irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules (almost lacey, honeycomb appearance) within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

**PATIENT**Violet Drinkwater  
30311A**SPECIES**

Canine

**BREED**

Boston Terrier

**SEX**

Spayed Female

**AGE**

12 Years 11 Months

**WEIGHT**

8.6 kg

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

Tom McNeill

**HOSPITAL NAME**

SVS Imaging CT

**REFERRING VET**Madison Vet  
Specialists - Dr.  
Daggett**INVOICE**

39087

**DATE**

6/29/22

**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.

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

**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.

**Free Abdomen**

There is no evidence of peritoneal effusion.

Mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

**ULTRASONOGRAPHIC FINDINGS**

- Honeycomb appearance to the 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.
- Similar appearing lacey/honeycomb/nodular appearance to the liver, which can be seen with benign processes such as nodular hyperplasia or steroid or vacuolar hepatopathy, extramedullary hematopoiesis, etc., but combined with the concurrent splenic findings, it is concerning for infiltrative round cell neoplasia.
- Bilateral adrenomegaly - consistent with adrenal hyperplasia secondary to pituitary depending hyperadrenocorticism vs normal variant.
- Gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- Reactive mesenteric lymph nodes - infiltrative neoplastic disease cannot be ruled out but is considered less likely.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Given this patient's respiratory distress, recommendations include:

- Three view thoracic radiographs are recommended for further assessment of cardiopulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.
- Echocardiogram and blood pressure are recommended, if not recently evaluated.

**IMAGING PERFORMED BY**

SVS Mobile Imaging CT 262-366-5970  
fredgromalak@gmail.com



**PATIENT**

Violet Drinkwater  
30311A

**SPECIES**

Canine

**BREED**

Boston Terrier

**SEX**

Spayed Female

**AGE**

12 Years 11 Months

**WEIGHT**

8.6 kg

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Tom McNeill

**HOSPITAL NAME**

SVS Imaging CT

**REFERRING VET**

Madison Vet  
Specialists - Dr.  
Daggett

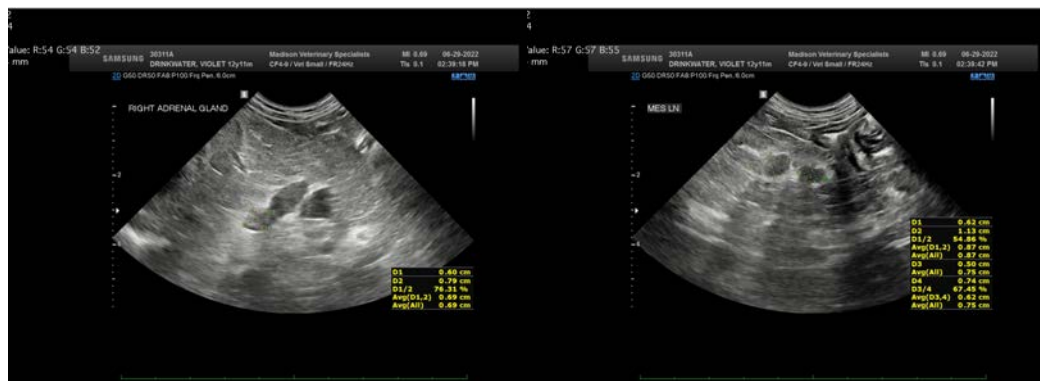
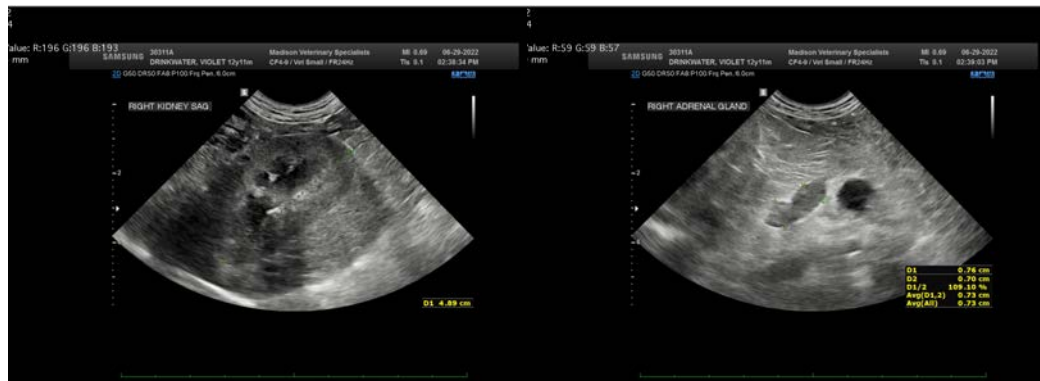
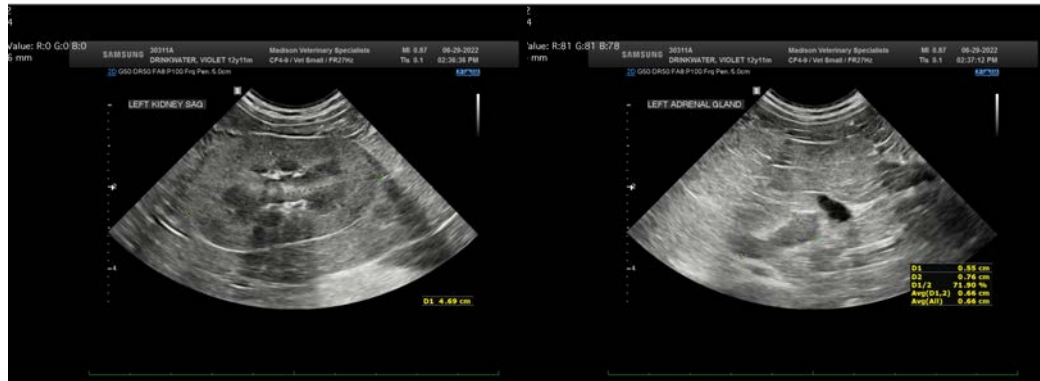
**INVOICE**

39087

**DATE**

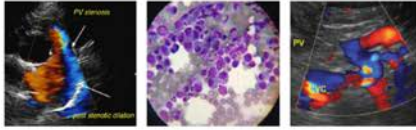
6/29/22

- While the relation to the presenting complaint is unclear, the splenic and hepatic changes warrant a fine needle aspirate of the liver and spleen, once patient is stable, if patient's coagulation status is appropriate.
- Finally, the historical behavioral changes in this patient combined with the physical exam appearance and ultrasound changes including adrenomegaly, heterogeneous liver, and gallbladder debris are all suggestive of possible hyperadrenocorticism, in which case, given the recent reported respiratory distress, a pulmonary thromboembolism is also a consideration. If after stabilization clinical signs of hyperadrenocorticism are present, testing in the form of a low-dose Dexamethasone suppression test may be warranted.



**IMAGING PERFORMED BY**

SVS Mobile Imaging CT 262 - 366 - 5970  
fredgromalak@gmail.com



**PATIENT**

Violet Drinkwater  
30311A

**SPECIES**

Canine

**BREED**

Boston Terrier

**SEX**

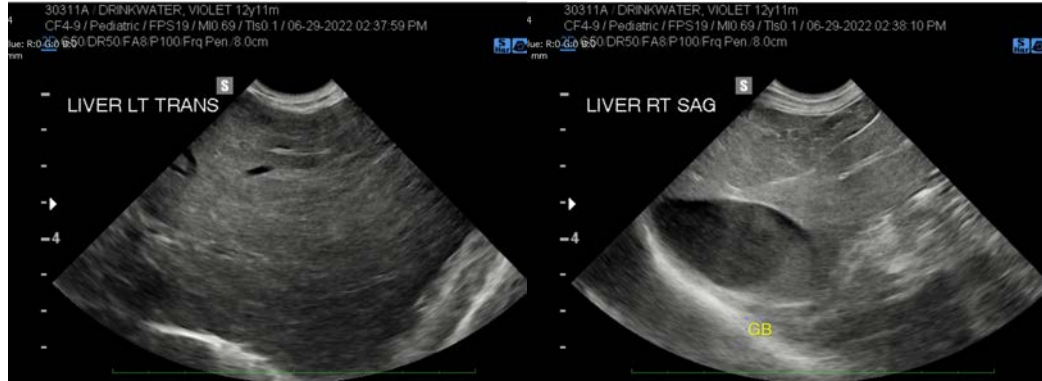
Spayed Female

**AGE**

12 Years 11 Months

**WEIGHT**

8.6 kg



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.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

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

**IMAGING PERFORMED BY**

Tom McNeill

**HOSPITAL NAME**

SVS Imaging CT

**REFERRING VET**

Madison Vet  
Specialists - Dr.  
Daggett

**INVOICE**

39087

**DATE**

6/29/22