

IMAGING PERFORMED BY

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Clinical Sonography & Telecytology

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**DATE PRESENTING CLINICAL SIGNS**

2/23/23 Pt presents for mass near hind end which bleeds. Pt also has newly diagnosed arrhythmia.

**PATIENT**

Bella Botsaris  
Current Medications: Cefpodoxime started 2/20/23.  
Lab Results: ALP 2380, ALT 134, K 5.7, proteinuria.  
Date of Previous IntraPET Ultrasound: No previous.  
Sedation: Not required to complete full diagnostic ultrasound.  
Stat Report: Not requested.

**SPECIES**

Canine

Imaging Performed By: Stephanie Warga RDCS, RVT.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED**

Golden Retriever

**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.

**SEX**

Spayed Female

The right kidney is normal in size (7.21 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.

**AGE**

9/24/10

The left kidney is normal in size (6.99 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. Several small cortical cysts are noted. There is no evidence of pyelectasia, mineral or infarcts observed.

**WEIGHT**

69.2 Pounds

**Adrenal Glands**

The right adrenal gland is normal in size (3.31 cm long x 0.88 cm at the cranial pole and 0.90 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

The left adrenal gland is normal in size (2.13 cm long x 0.52 cm at the cranial pole and 0.73 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**HOSPITAL NAME**

Everhart VH

**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.

**REFERRING VET**

Dr. Rubinstein

**INVOICE**

45472

**Liver**

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. Two discrete heterogeneous nodules/masses are noted. In the caudal liver, there is a 4.4 cm x 2.5 cm heterogeneous, primarily hypoechoic mass. In the caudal right liver, there is a similar appearing heterogeneous, primarily hypoechoic 8.0 cm x 9.0 cm mass. Visible vasculature and biliary tree appear normal without distension or congestion.

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.

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 free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

## **PRIMARY FINDINGS**

- Multiple heterogeneous liver nodules/masses – Concerning for infiltrative neoplasia such as primary hepatic neoplasia, potentially with a metastatic lesion, versus infiltrative round cell neoplasia versus sarcoma versus other. Marked nodular hyperplasia or other benign hepatopathy, steroid or endocrine hepatopathy, etc. can't be ruled out, and this finding should be further pursued with tissue sampling.

## **SECONDARY FINDINGS**

- Small cortical cysts in the left kidney

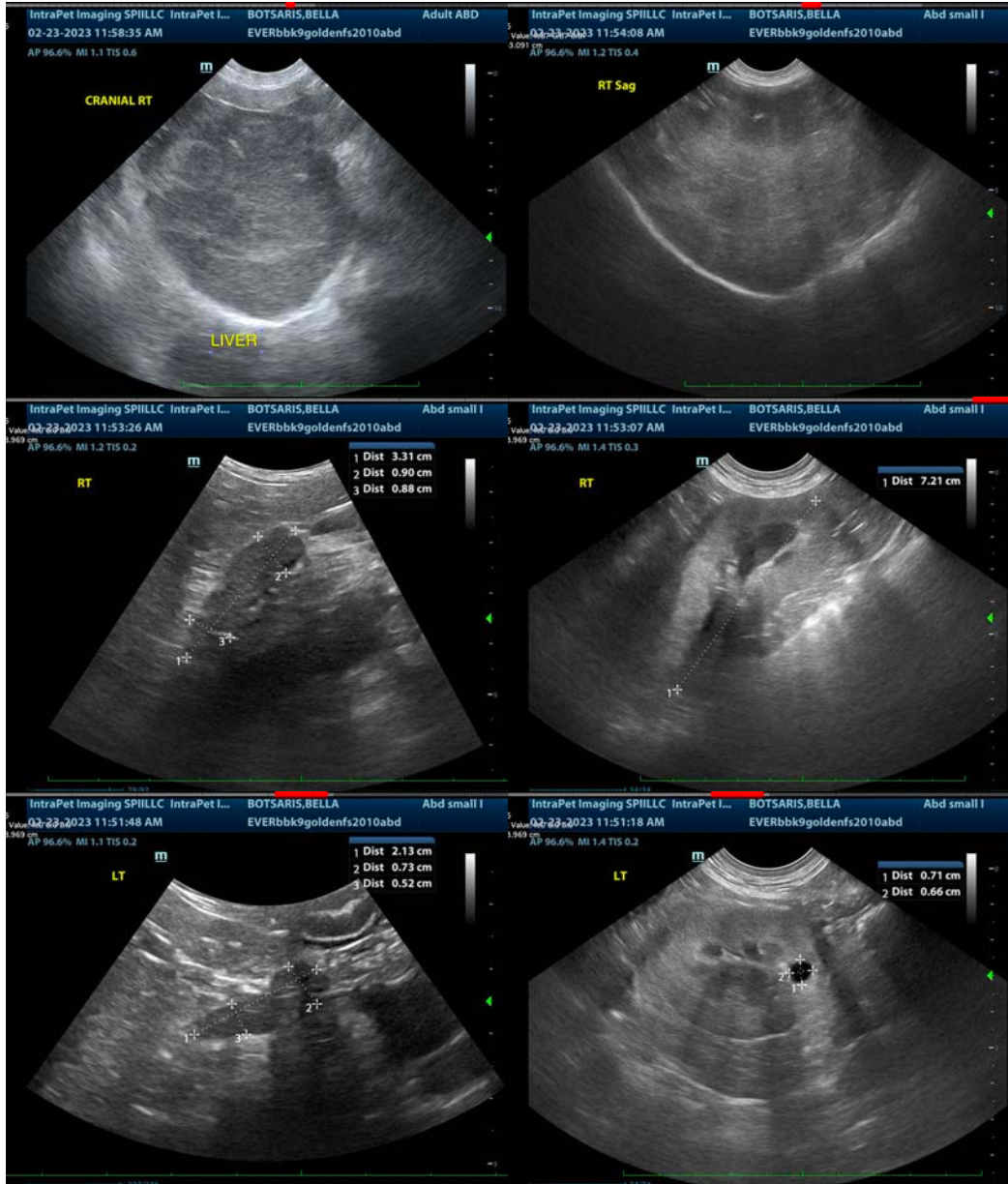
## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

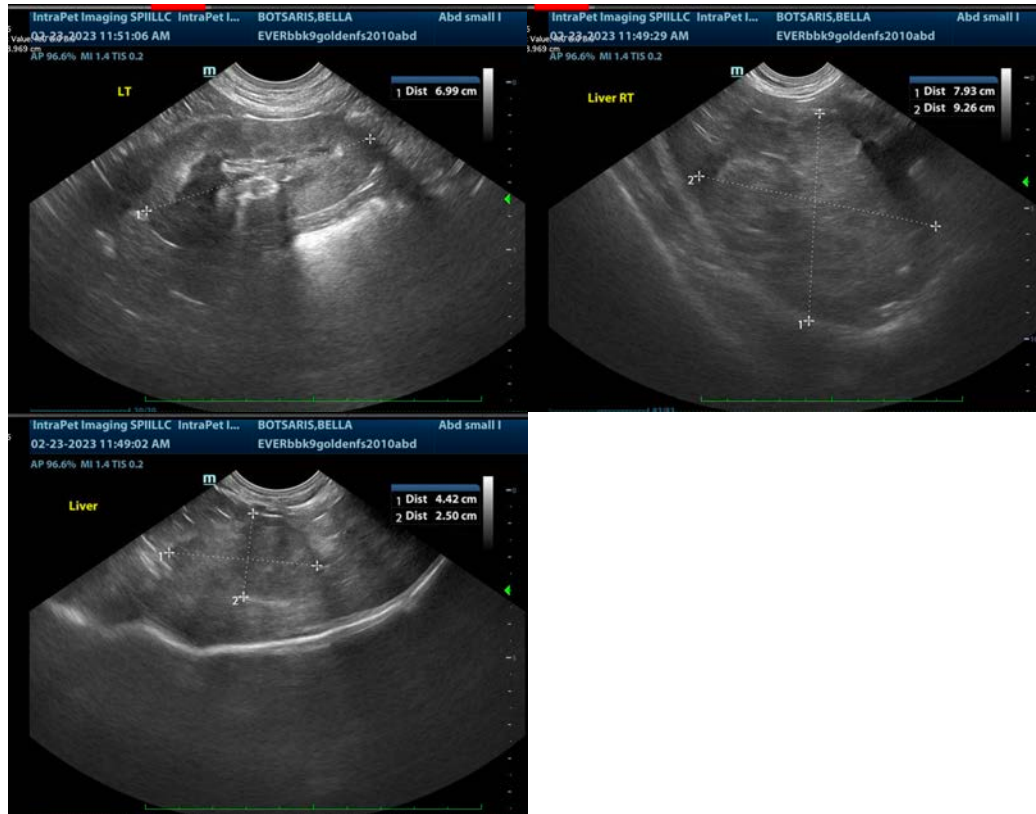
Given this patient's reported arrhythmia and the visualized liver masses, three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated, followed potentially by an echocardiogram and/or consultation with a cardiologist.

Additionally, given the reported proteinuria, a urine protein to creatinine ratio is recommended for quantification if not recently evaluated, as is a blood pressure.

Fine needle aspirates of both liver masses are recommended if patient's coagulation status is appropriate, as is a biopsy/removal of the reported bleeding skin tag mass, if elected.

Alternatively, or if a cytologic diagnosis cannot be obtained, an exploratory laparotomy or planned liver masses biopsy/removal could be considered. While the disease is multifocal, both masses are discrete, and while full resectability cannot be guaranteed ultrasonographically, resectable appears possible.





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