

**DATE PRESENTING CLINICAL SIGNS**

8/21/23 History: Bloody urine for 6 weeks.

**PATIENT**

Jake Robley

Current Medications: Convenia 0.68mL SQ.

Lab Results: See attached.

Radiographs: Large radiodense circular lesion/mass in areas of stomach or liver.

Date of Previous IntraPet Ultrasound: No previous.

**SPECIES**

Feline

Sedation: DKT.

Stat Report: Not requested.

Imaging Performed By: Stephanie Warga RDCS, RVT.

**BREED**

DSH

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****SEX**

Neutered Male

**Urinary System**

Urinary bladder is not fully distended, almost empty, but appears to contain primarily anechoic contents, except for a 0.86 cm in diameter cystolith. No masses or other inflammatory changes, echogenic debris, etc., are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**AGE**

8/13/11

Left kidney is normal in size (4.09 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**

15.7 Pounds

Right kidney is normal in size (4.16 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**

Left adrenal gland is normal in size (0.43 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

**HOSPITAL NAME**

Warm &amp; Fuzzy VC

Right adrenal gland is normal in size (0.36 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

**REFERRING VET**

Dr. Ullman

**Spleen**

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.

**INVOICE**

24021

**Liver**

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. A 1.8 cm x 1.4 cm, primarily hyperechoic, partially cystic nodule is noted in the deep liver. Additionally, multifocal intrahepatic biliary mineral was noted. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is non-distended in size. The wall is smooth without visible thickening; however, it is brightly echogenic/consistent with mineral debris adherent to the wall. Luminal contents are primarily anechoic, except for multiple shadowing mineral densities, including a 1.6 cm shadowing density consistent with a cholecystolith. The cystic and common bile duct are not pathologically distended, however, they contain a

similar appearing brightly echogenic wall. There is no gallbladder or biliary system distention to signify obstruction, however, partial obstruction from the larger cholecystolith cannot be definitively ruled out.

### ***Gastrointestinal***

The visible stomach wall is normal in thickness 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. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty, except for in the mid jejunum, there is a focal area with some intraluminal shadowing contents.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

### ***Pancreas***

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### ***Free Abdomen***

There is no evidence of peritoneal effusion. The 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**

- A urinary bladder cystolith
- A large amount of biliary mineral debris, including intrahepatic biliary mineral and a large cholecystolith within the gallbladder or proximal cystic duct.
- Feline biliary cystadenoma – In a senior cat, this liver lesion is most consistent with a benign biliary cystadenoma. Malignancy cannot be ruled out but is considered less likely given lack of clinical signs and/or laboratory changes.
- Reactive mesenteric lymph nodes- infiltrative neoplastic disease cannot be ruled out but is considered less likely.
- The shadowing contents within the mid jejunum are not resulting in distention or an obstructive pattern, plication, etc., to indicate obstruction and could represent normal gas/ingesta, however, nonobstructive foreign material cannot be definitively ruled out. This finding should be interpreted in combination with clinical signs and/or resolution vs progression, etc.

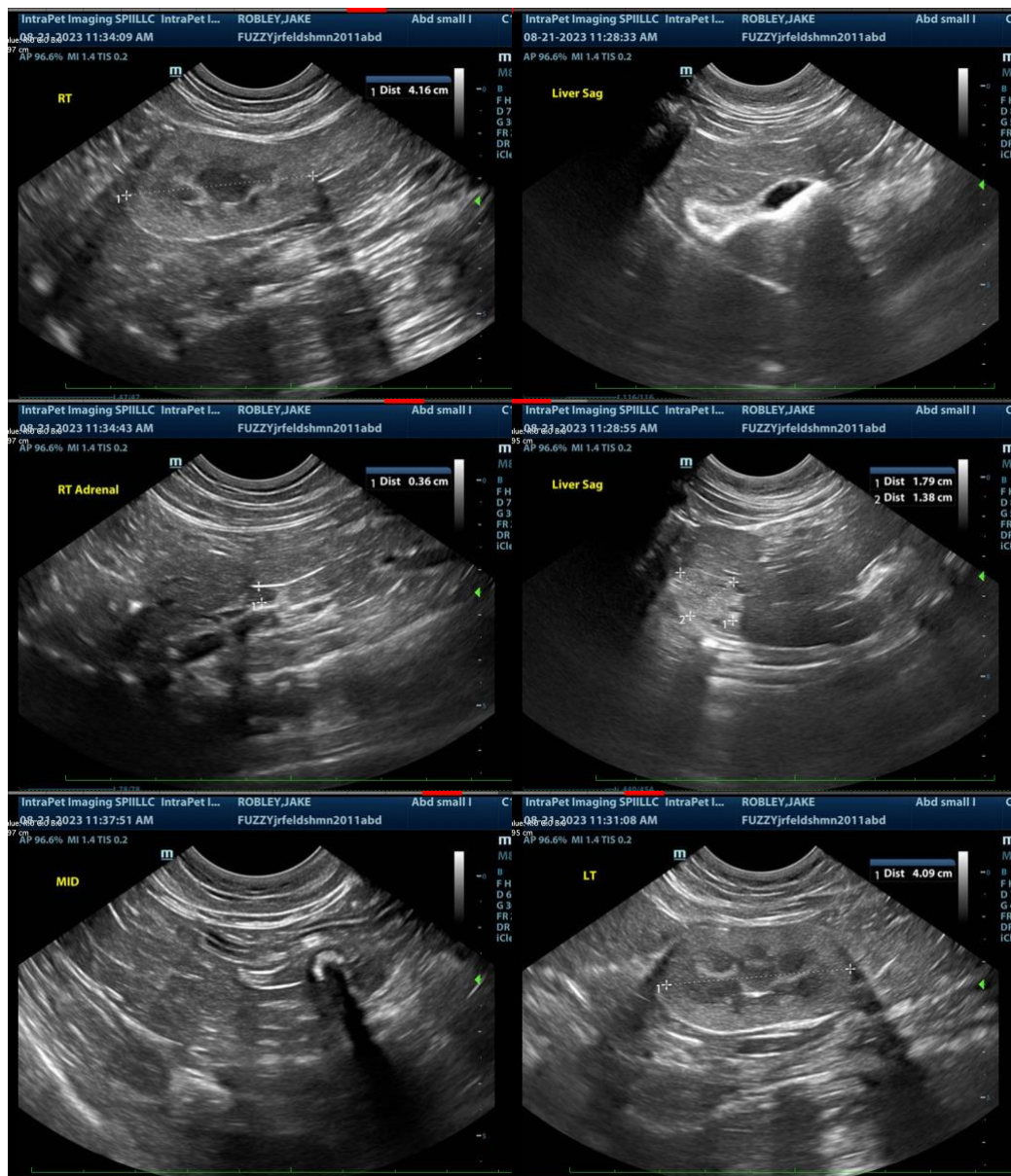
## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

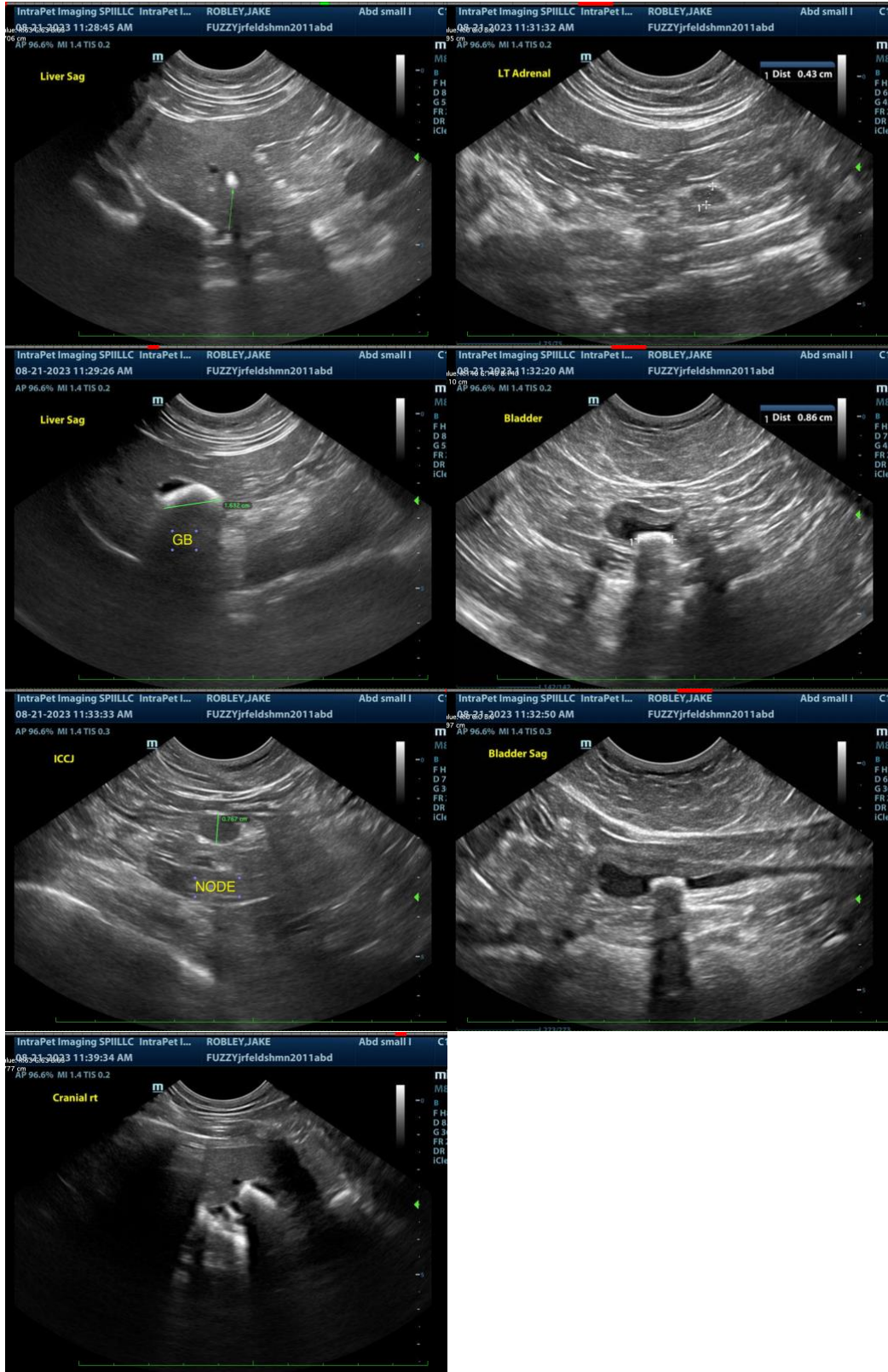
If not recently evaluated, urinalysis and, if indicated based on urinalysis results, urine culture is recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

Pending urinalysis results, removal of the urinary bladder cystolith may ultimately be necessary, either surgically or via less invasive interventional methods if available, to eliminate this patient's reported

ongoing hematuria.

In the meantime, given the concurrent reported liver enzyme changes, treatment recommendations include fluid therapy, anti-emetics, gastroprotectants, hepatic nutraceuticals such as ursodiol and/or Denamarin, and broad-spectrum antibiotics. Nutritional support is critical to prevent/manage concurrent hepatic lipidosis, so appetite stimulants and/or, if indicated, feeding tube placement is also recommended. Monitoring of liver enzymes +/- ultrasonographic appearance of the gallbladder, etc., should be considered to help determine the ongoing clinical significance of the mineral debris, i.e., progression to obstruction, etc. The plan for this finding is partially dependent on patients clinical status.





**The information and recommendations provided are based on the images presented by the referring veterinarian. 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**  
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