



**PATIENT**

Rocky Lewis

**SPECIES**

Canine

**BREED**

Mixed

**SEX**

Neutered Male

**AGE**

9 years

**WEIGHT**

58 lbs

**INTERPRETED BY**

Andrea Nicastro,  
DVM, Diplomate  
ACVIM (Small Animal  
Internal Medicine)

**IMAGING  
PERFORMED BY**

Julia Bakker, DVM

**HOSPITAL NAME**

Orange Blossom  
Vet Imaging

**REFERRING VET**

Ronni Tudin, DVM

**INVOICE**

14166

**DATE**

8.18.23

**PRESENTING CLINICAL SIGNS**

History: History of losing weight and nausea.

Abnormal PE/Chem/CBC/UA Results: mild hyperglobulinemia (3.8) Mild ALP elevation (296) Mild SDMA elevation (16.5) Hypercalcemia (11.7) Platelet count 412 Cocci and rods in free catch UA Low Tot T4 0.6

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is mildly to moderately distended. The wall in the region of the apex is mildly thickened (up to 0.44 cm) with a slightly irregular mucosal surface. The wall tapers to a normal thickness as it extends towards the cystourethral junction. A small amount of suspended echogenic debris is observed within the lumen. No cystic calculi are observed. The region of the trigone and visible portion of the proximal urethra are normal.

The prostate is normal in size (0.93 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal in size (7.29 cm in length) with a normal shape, architecture and smooth peripheral margins. The cortex is isoechoic relative to the spleen. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Severe pyelectasia is present (1.24 cm in the longitudinal plane). There is no evidence of nephroliths or infarcts. There is questionable mild proximal hydroureter. Renal vasculature is normal.

The right kidney is normal in size (7.39 cm in length) with a normal shape, architecture and smooth peripheral margins. The cortex is isoechoic relative to the spleen. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Trace pyelectasia is present. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is mildly enlarged (0.60 cm at cranial pole) (0.76 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

In the region of the right adrenal gland, a 3.70 x 2.40 cm echogenic-to-heterogenous round mass is visualized. The mass appears to extend into the caudal vena cava (See also "Other" category).

**Spleen**

The spleen is overall normal in size (1.87 cm in width at the level of the hilus). In the mid- to caudal aspect, an approximately 2.00 cm irregular, hypoechoic-to-heterogenous, slightly cavitated vascular mass is visualized. The lesion causes slight capsular expansion. The remaining parenchyma is homogenous. Splenic vasculature is normal with no evidence of thrombosis.

**Liver**

The liver is subjectively normal in size with slightly irregular peripheral contours. The parenchyma is hypoechoic relative to the spleen. Throughout the organ, varying-sized, hyperechoic-to-heterogenous nodules/masses are visualized (the largest measuring >5.00 cm). One-to-two small cystic areas are also seen. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder lumen is moderately distended. The wall is thin and smooth. A moderate amount of gravity-dependent, echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.



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### **Gastrointestinal**

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal. There is disruption in the normal 1:3 muscularis: mucosal ratio in most segments. Discreet masses are not identified. The colonic lumen is normal. No obstructive disease is noted.

### **Pancreas**

The right limb of the pancreas is normal in size with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

### **Free Abdomen**

Trace free fluid is observed. The abdominal lymph nodes are normal/not visible.

### **Other**

A brief echocardiogram reveals no obvious evidence of pericardial effusion.

The caudal vena cava is diffusely dilated (up to 2.19 cm) throughout most of the lumen. An echogenic thrombus is observed.

## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

- Mass in the right cranial quadrant, the origin of which is unclear. It may be arising from right adrenal gland, liver, mesentery, other. It appears to be invading into the caudal vena cava, creating a thrombus that extends caudally throughout most of the caval lumen.
- Numerous hepatic nodules/masses. Metastatic disease suspected, with a lower possibility of a benign process (i.e., multifocal inflammatory disease, regenerative nodules, other).
- Splenic mass. Again, neoplasia (i.e., sarcoma, carcinoma, round cell tumor) is suspected with a lower possibility of a focal benign process (i.e., lymphoidhyperplasia or similar).

### Secondary Findings

- Bilateral chronic renal changes with left severe pyelectasia +/- proximal hydroureter
- Minor age-related pancreatic remodeling in the right limb
- The small intestinal wall changes are most consistent with inflammatory bowel disease, with some potential for emerging lymphoma.
- The urinary bladder wall changes could be consistent with cystitis or may be artifactual due to lack of full repletion.



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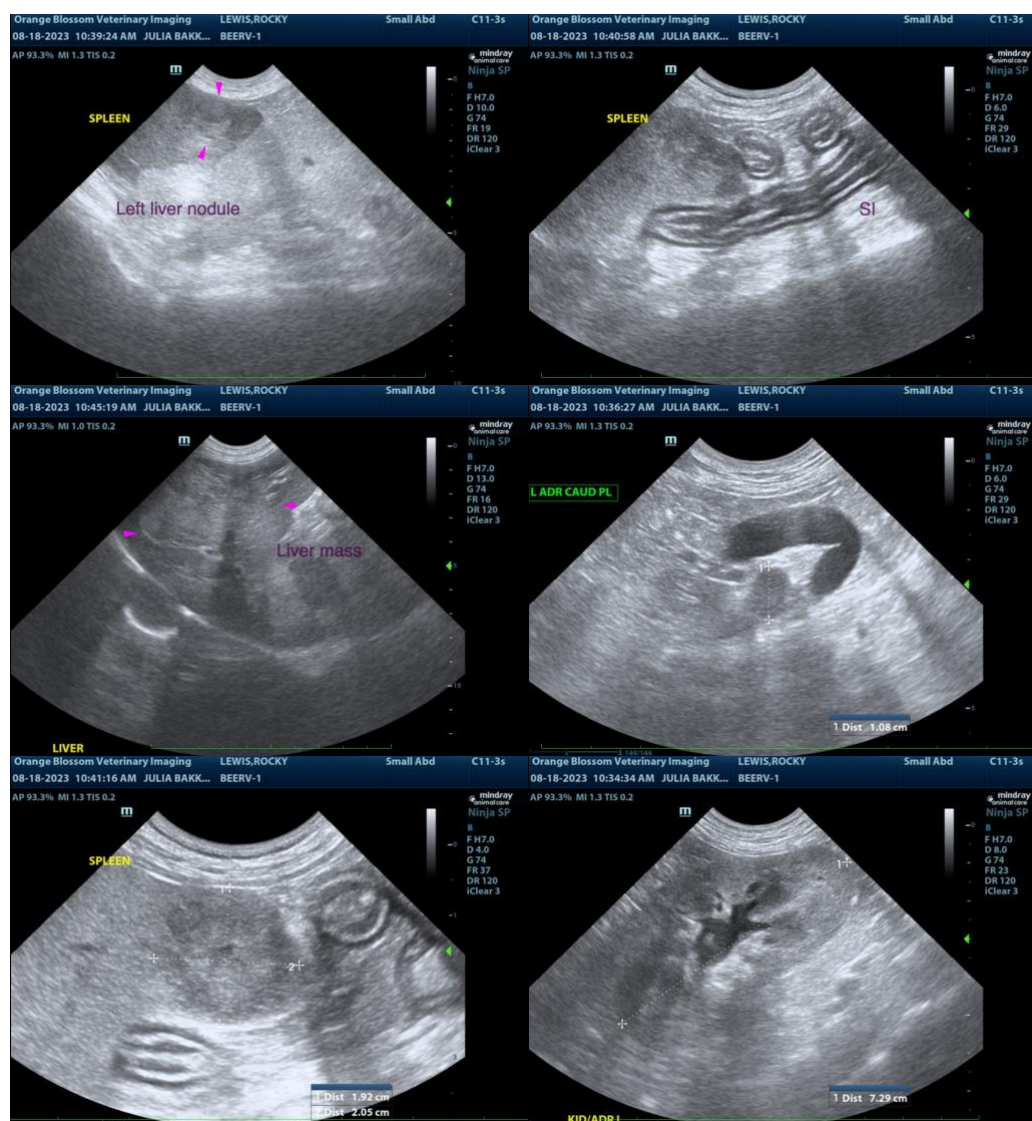
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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Three-view thoracic radiographs are recommended to assess for pulmonary metastases.
- Given the likelihood of multiorgan neoplasia, palliative care (i.e., pain medication, symptomatic management) is recommended in lieu of invasive diagnostics and treatment.
- If a more aggressive approach is desired, consider aspiration of the hepatic +/- splenic lesions (if clotting status is appropriate). Care should be taken to avoid any cavitated areas, due to the potential for iatrogenic hemorrhage with the procedure.





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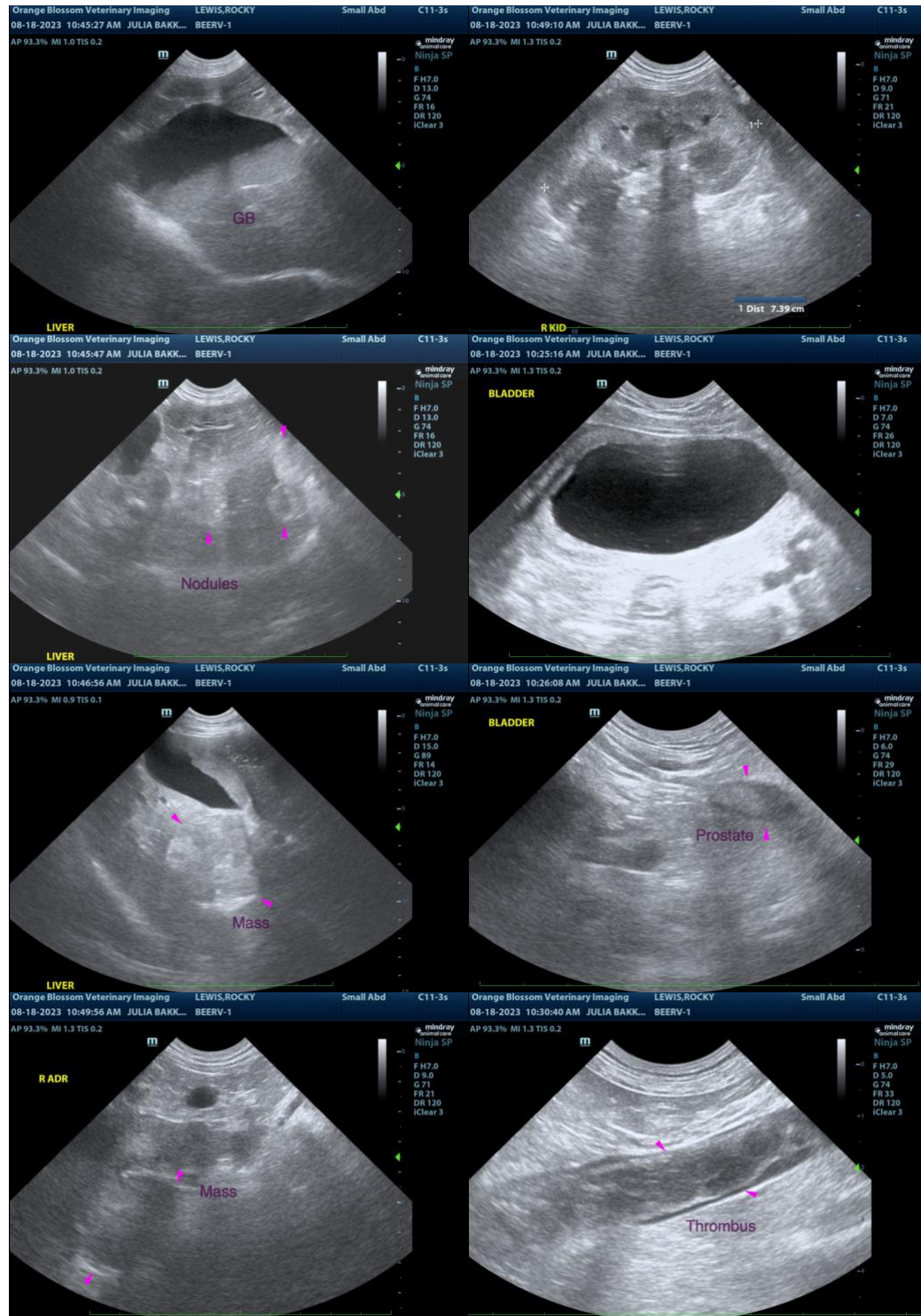
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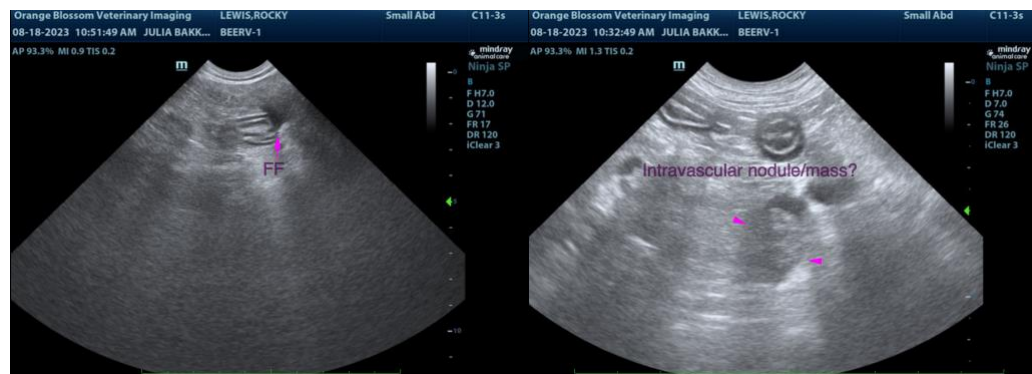
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)**  
[info@SonoPath.com](mailto:info@SonoPath.com)