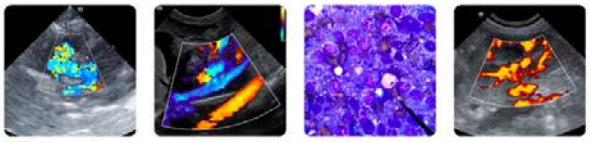




**PATIENT**

Vader Ladehoff

**SPECIES**

Canine

**BREED**

Golden Doodle

**SEX**

Spayed Female

**AGE**

16 Years

**WEIGHT**

23 lbs

**INTERPRETED BY**

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

**IMAGING PERFORMED BY**

Julia Bakker, DVM

**HOSPITAL NAME**

Orange Blossom Veterinary Imaging

**REFERRING VET**

Eric Steinberg, DVM

**INVOICE**

75699

**DATE**

6/4/26

## PRESENTING CLINICAL SIGNS

Patient presents for hematuria and pollakiuria. History of liver lobectomy of neoplasia, monitoring recurrence. UA shows >50 RBC and WBC/hpf but no bacteria. USG 1.024. Recommend AUS and urine culture

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is moderately distended with mild primarily suspended echogenic debris present. The Bladder wall appears thickened, measuring at 0.39 cm. The trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of mucosal irregularities, masses or calculi. Echogenic debris of this type can be associated with small crystals, cellular debris and proteinaceous debris.

The left kidney has a normal shape and size (5.07 cm) with a non-obstructive nephrolith visualized measuring 0.22 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.54 cm) with a non-obstructive nephrolith visualized measuring 0.32 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

### *Adrenal Glands*

The left adrenal gland is normal in size measuring 0.61 cm at the cranial pole and 0.65 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

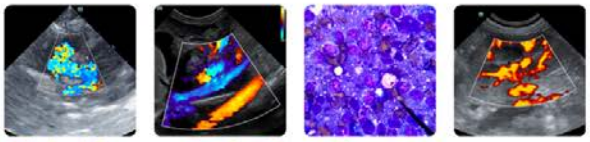
The right adrenal gland is normal in size measuring 1.0 cm at the cranial pole and 0.60 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

### *Spleen*

The spleen is normal in size and shape. The blood flow through the hilus and splenic parenchyma appears normal. There is a moth-eaten hypoechoic nodule at the periphery of the spleen near the hilus measuring 1.02 cm x 0.56 cm. A smaller hypoechoic lesion is visualized towards the tail of the spleen measuring 0.53 cm x 0.59 cm.

### *Liver*

The liver is large in size and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are numerous very large expansile mass lesions visualized associated with the liver. A hyperechoic mixed echogenicity lesion is visualized in the left mid region measuring 4.52 cm x 6.82 cm. A larger hyperechoic mixed echogenicity/possibly coalescing multiple mass lesion(s) is visualized on the right side of the liver measuring >8.53 cm x 7.3 cm.





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The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

### *Gastrointestinal*

The stomach contains mild fluid and gas. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.39 cm. Jejunum wall measures 0.30 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### *Pancreas*

The left limb of the pancreas is prominent and hypoechoic as compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### *Free Abdomen*

There is scant free fluid present. No significant lymphadenopathy. The omentum is diffusely mildly hyperechoic.

## ULTRASONOGRAPHIC FINDINGS

- Mildly thickened urinary bladder with echogenic urine – Findings could be consistent with cystitis. Recommend urinalysis and culture.
- Age related changes and non-obstructive nephroliths visualized associated with both kidneys.
- Two hypoechoic nodules visualized in the spleen – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis.
- Pancreatic changes most consistent with chronic pancreatic remodeling +/- mild pancreatitis.
- Large, heterogeneous liver with numerous large, expansile, mixed echogenicity mass lesions. The lesions are extensive and very large, most consistent with primary hepatic mass lesions. Correlate with previous histopathology.
- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

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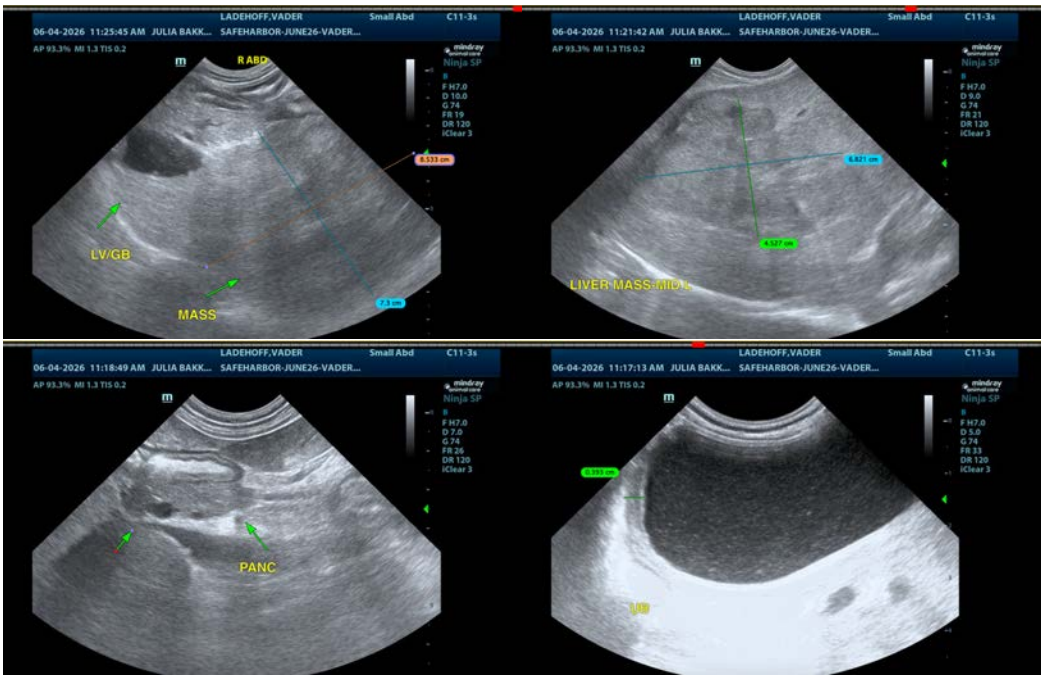
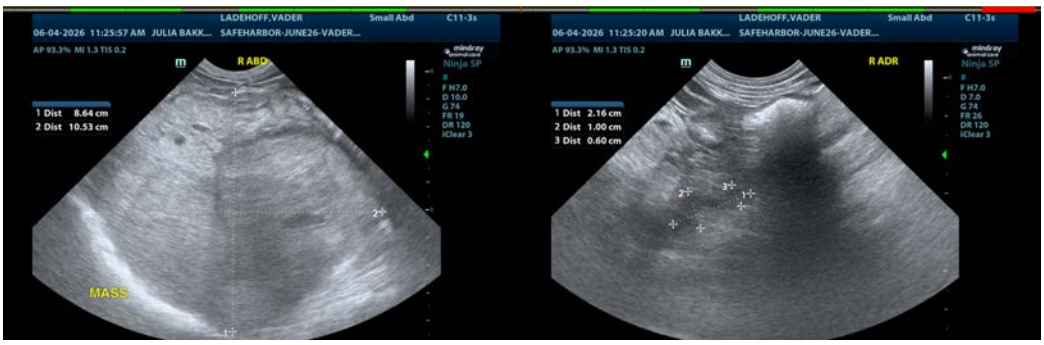
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There are numerous very large, expansile mass lesions visualized associated with the liver. Findings are suggestive of recurrence of the previously reported hepatic mass lesion as well as possible metastatic lesions. Liver involvement is extensive, and surgical options may be limited. If palliative surgery would be considered, then a contrast CT scan should be considered to further evaluate.

The urinary bladder appears mildly thickened with some echogenic urine, possibly consistent with cystitis. Recommend a urinalysis and culture to further evaluate.

There are two hypoechoic nodules in the spleen. Options would include continued monitoring or a fine needle aspirate. Location may make sampling challenging.



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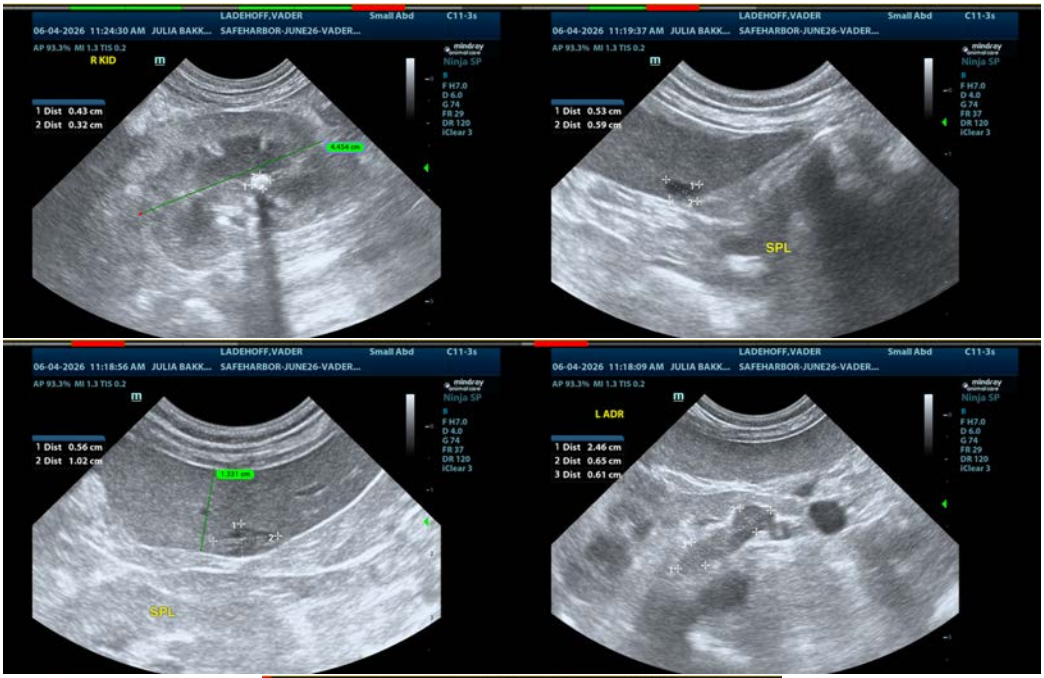



**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

info@sonopath.com