

## PATIENT

Clark Larrieu

## SPECIES

Canine

## BREED

Border Collie

## SEX

Neutered Male

## AGE

12 Years

## WEIGHT

60 Pounds

## INTERPRETED BY

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

## IMAGING BY

Loetitia Saint-Jacques,  
LVT

## HOSPITAL NAME

North Hills VC

## REFERRING VET

Dr. Gonzales

## INVOICE

35971

## DATE

3/1/22

## PRESENTING CLINICAL SIGNS

diabetic managed- blind- r/o causes of elevated ALP and GGT

Abnormal PE/Chem/CBC/UA Results: GLU 270, ALB 2.6, GLOB 4.1, ALP 301, GGT 79, CHOL 42

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The prostate appears normal at 1.9 cm in height, measuring in the sagittal view.

The left kidney has a normal shape and size (5.7 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney has a normal shape and size (5.9 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

### Adrenal Glands

The left adrenal gland is normal in size measuring 0.85 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 0.70 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 subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There is an iso- to hypoechoic mass lesion visualized in the region of the hilus measuring 3.25 cm x 3.87 cm. This mass effect deviates the splenic capsule.

### Liver

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is a small cystic lesion near the gallbladder measuring 1.45 cm in diameter. Additionally, there is a larger, slightly hyperechoic, solid mass lesion on the right side of the liver measuring 5.37 cm x 4.36 cm.



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The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

### **Gastrointestinal**

The stomach contains minimal luminal contents. 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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. 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 pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### **Free Abdomen**

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

### **Other**

No significant pericardial effusion.

## ULTRASONOGRAPHIC FINDINGS

- Isoechoic splenic mass – A focal, solid, mixed echogenic mass is present within the splenic parenchyma. This mass distorts the splenic capsule. Differentials include benign lesions such as lymphoid hyperplasia, hemangioma, etc., or neoplastic lesions such as hemangiosarcoma, lymphoma, histiocytic sarcoma, etc.
- Large, heterogeneous liver with small cystic lesion and a larger solid mass effect – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The non-focal lesions could be consistent with a diabetic hepatopathy, but the larger mass lesion could be consistent with a benign lesion or neoplastic lesion (primary hepatic lesion or metastatic lesion).



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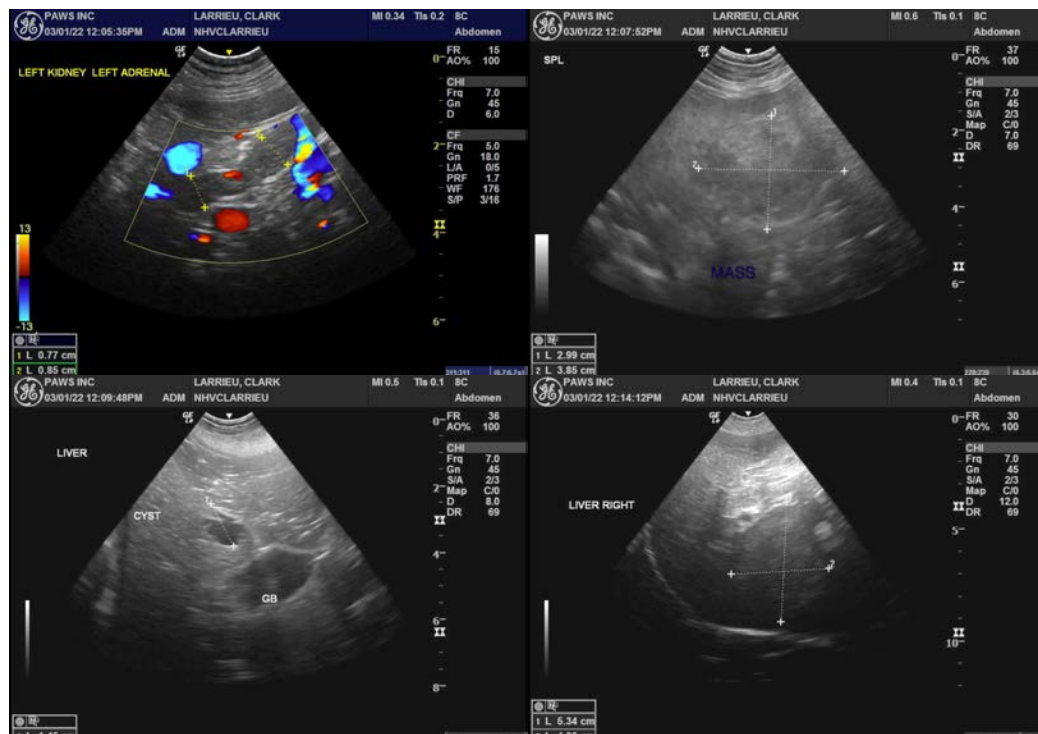
3/1/22

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

I suspect the parenchymal hepatic lesions are secondary to the a diabetic hepatopathy. The nature of the splenic and hepatic lesions is more difficult to determine. Options moving forward would include:

- A more aggressive track with 3-view thoracic radiographs, splenectomy, and resection of the liver mass lesion. This would be potentially both diagnostic and therapeutic, but if this is metastatic neoplasia, other non-visualized lesions could be present.
- A more conservative route would be to consider a fine needle aspirate of these lesions, but both are relatively deep and could be challenging.
- Lastly, you could consider a contrast CT scan of the abdomen with higher resolution to look for the possibility of small metastatic lesions.

There is a chance that both of these lesions could represent benign processes, but there is always the risk for rupture, particularly with the splenic lesion, even with the benign mass effect, so close monitoring is warranted.





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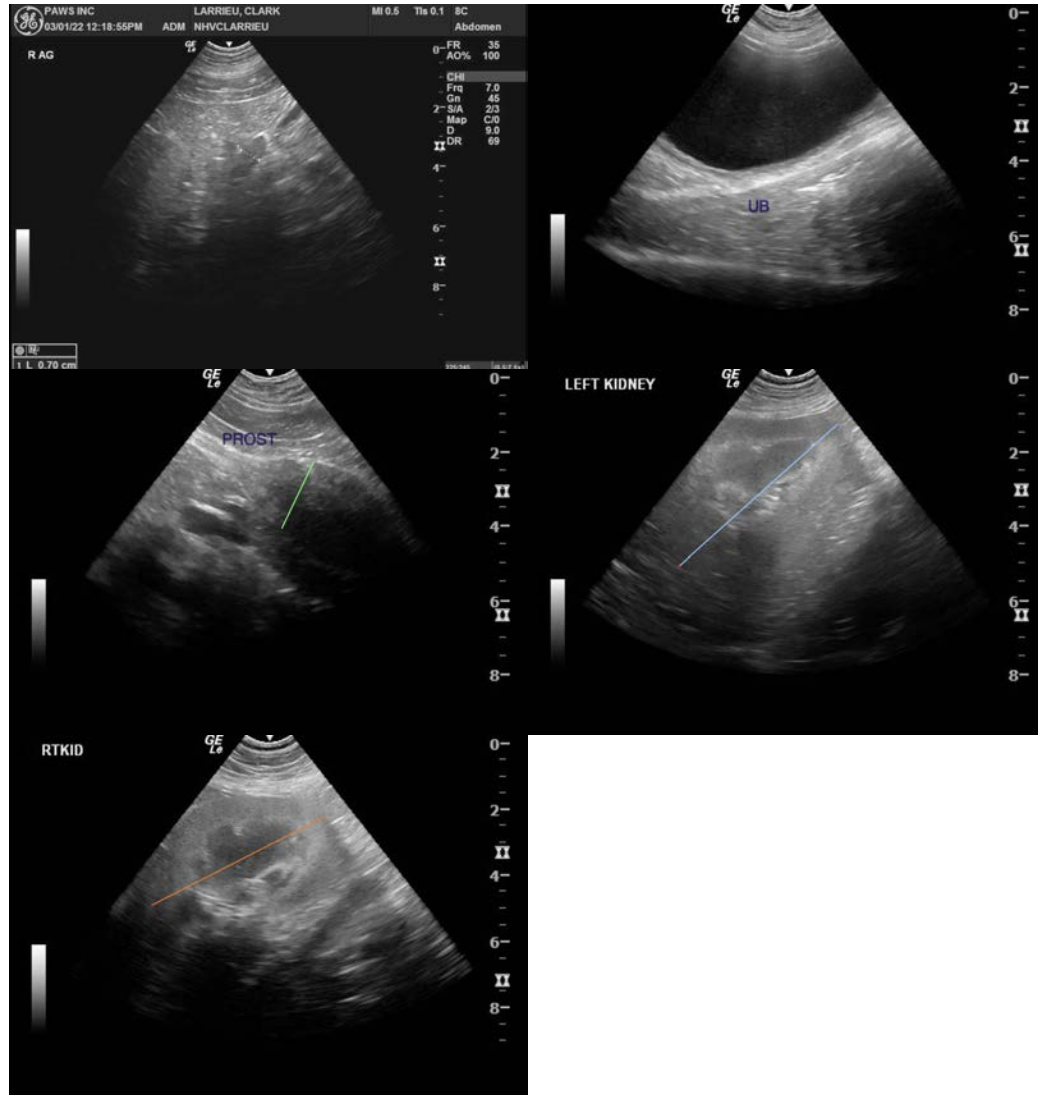
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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