



**PATIENT**

Minerva Lichtman

**SPECIES**

Canine

**BREED**

Irish Glen of Imaal  
Terrier

**SEX**

FS

**AGE**

12 years

**WEIGHT**

57 lbs.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING  
PERFORMED BY**

Dr. Sorbo

**HOSPITAL NAME**

Cambridge  
Veterinary Care

**REFERRING VET**

Dr. Sorbo

**INVOICE**

16622

**DATE**

4/18/23

**PRESENTING CLINICAL SIGNS**

O has noticed increased panting and possibly polydipsia (water intake measurement pending).

Abnormal PE/Chem/CBC/UA Results: Alp 300 (5-131) Precision PSL 148 (24-140). Exam largely unremarkable. Ver sweet dog.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

No evidence of pathology was noted in the area of the uterine remnant.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. Discrete medullary mineral was noted in both kidneys. No evidence of pelvic dilation was present. The left kidney measured 6.2 cm in length. The right kidney measured 6.3 cm in length.

**Adrenal Glands**

A mildly expansive, homogeneous, mildly hyperechoic, non-mineralized nodule was present in the mid to cranial left adrenal gland measuring 3.2 cm x 2.4 cm with associated mild symmetrical capsule distortion secondary to the nodule yet maintained capsule integrity without evidence of capsular escape or vascular invasion. The overall left adrenal gland measured 4.2 cm length x 2.4 cm width at the cranial pole and 0.87 cm width at the caudal pole.

The right adrenal gland was overtly normal in size, position, and shape without evidence of parenchymal pathology measuring 0.67 cm width at the caudal pole.

**Spleen**

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

**Liver/ Gallbladder**

The liver presented moderately enlarged in size with the ventral liver extending caudally to the level or potentially just past the gastric axis. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. Intermittent nondisruptive homogeneous intraparenchymal nodules to macronodules were present exhibiting subtle hypoechoic parenchyma compared to adjacent hepatic



<b>PATIENT</b>	parenchyma. An example of a nodule to macronodule measured 1.5-3.0 cm in diameter. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. Normal hepatic vascular volume was noted. The gallbladder was non-distended in size containing primarily anechoic content with mild to moderate, nondependent, nonorganized, echogenic gallbladder debris. No evidence of gallbladder inflammatory criteria was noted. The cystic and common bile ducts were normal.
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<b>SPECIES</b>	
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<b>BREED</b>	<b><i>Gastrointestinal</i></b>
Irish Glen of Imaal Terrier	The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained variably echogenic to focally shadowing ingesta sonographically consistent with food without signs of obstruction or foreign material. No evidence of mechanical pyloric outflow obstruction was noted.
<b>SEX</b>	
FS	
<b>AGE</b>	The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.
12 years	Normal visible colon wall layers were present with apparent formed feces in lumen.
<b>WEIGHT</b>	<b><i>Pancreas</i></b>
57 lbs.	The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.
<b>INTERPRETED BY</b>	<b><i>Free Abdomen</i></b>
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	No overt lymphadenopathy or peritoneal effusion was present.
<b>IMAGING PERFORMED BY</b>	<b>ULTRASONOGRAPHIC FINDINGS</b>
Dr. Sorbo	<ul style="list-style-type: none"> <li>• Variable left adrenomegaly secondary to nonspecific nodule - functional vs. nonfunctional adenoma, benign hyperplasia, potential for emerging neoplasia, i.e., pheochromocytoma or other</li> <li>• Hepatomegaly exhibiting intermittent homogeneous intraparenchymal nodule / macronodules - hyperplasia, hematopoiesis, hepatoma-like nodules, low-grade to emerging neoplasia thought less likely</li> <li>• Mild gallbladder debris (non-mucocele)</li> <li>• Mild chronic renal changes</li> <li>• Mild pancreatic remodeling - suspect age-related pancreatic changes, potential remodeling owing to previous inflammation, or low-grade chronic pancreatitis possible</li> </ul>
<b>HOSPITAL NAME</b>	<b><u>INTERPRETATION OF THE FINDINGS &amp; FURTHER RECOMMENDATIONS</u></b>
Cambridge Veterinary Care	Full urinalysis +/- renal staging to include screening C/S and baseline UPC level if evidence of proteinuria is suggested.
<b>REFERRING VET</b>	Adrenal workup if clinical concern for Cushing's Syndrome, given the adrenal nodule, as well as assessment and monitoring of systemic BP for evidence of hypertension, which may potentially allude to emerging left pheochromocytoma is recommended.
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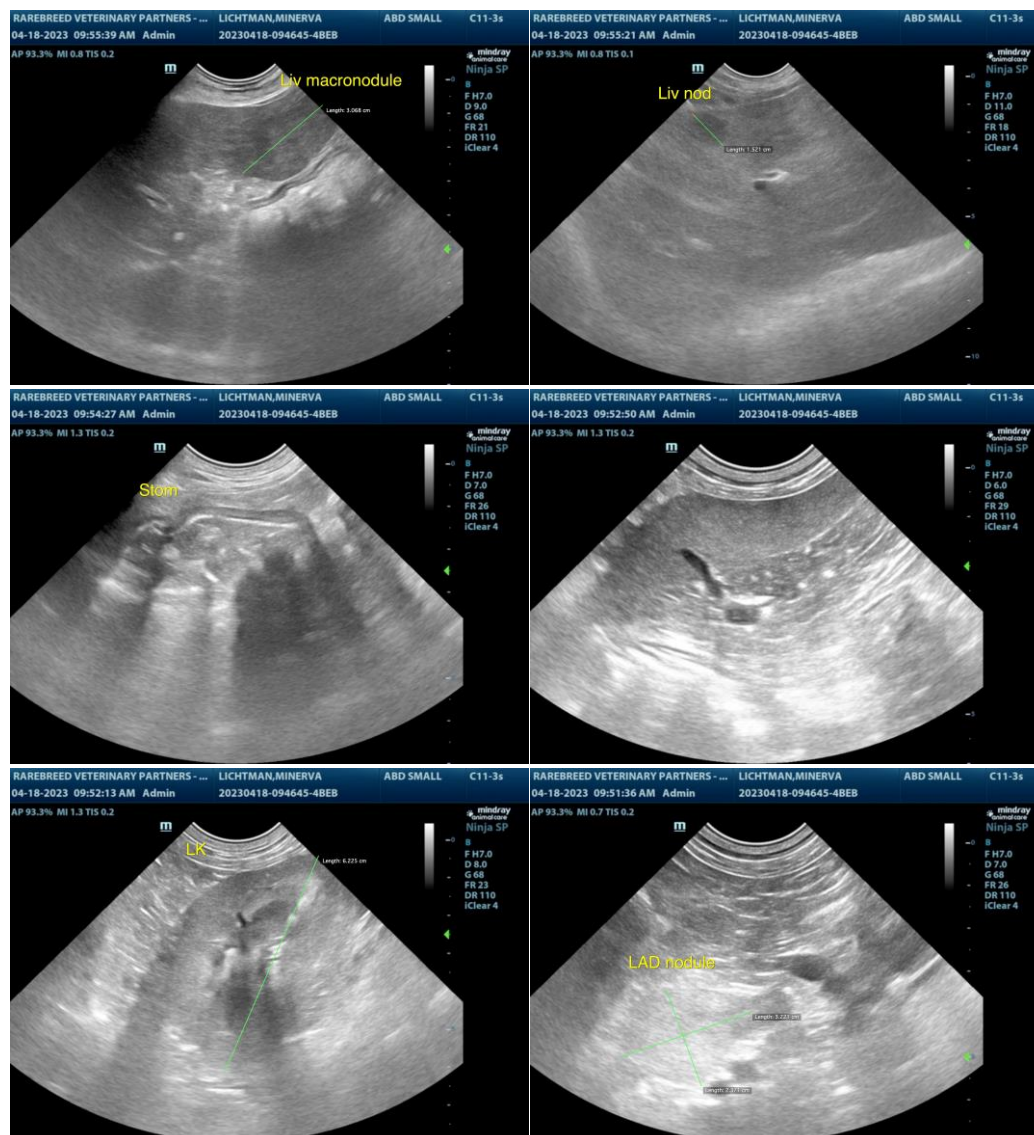
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Assuming normal clotting status, screening hepatic FNA cytology, specifically within the area of the hepatic nodule / macronodule is warranted for further clarification. Hepatosupportive medications including Denamarin and Ursodiol may prove beneficial if increasing evidence of cholestasis. Pending additional diagnostics, sonographic monitoring of the left adrenal nodule, as well as hepatic nodule for evidence of progression with an initial recheck in 4 weeks would be ideal.





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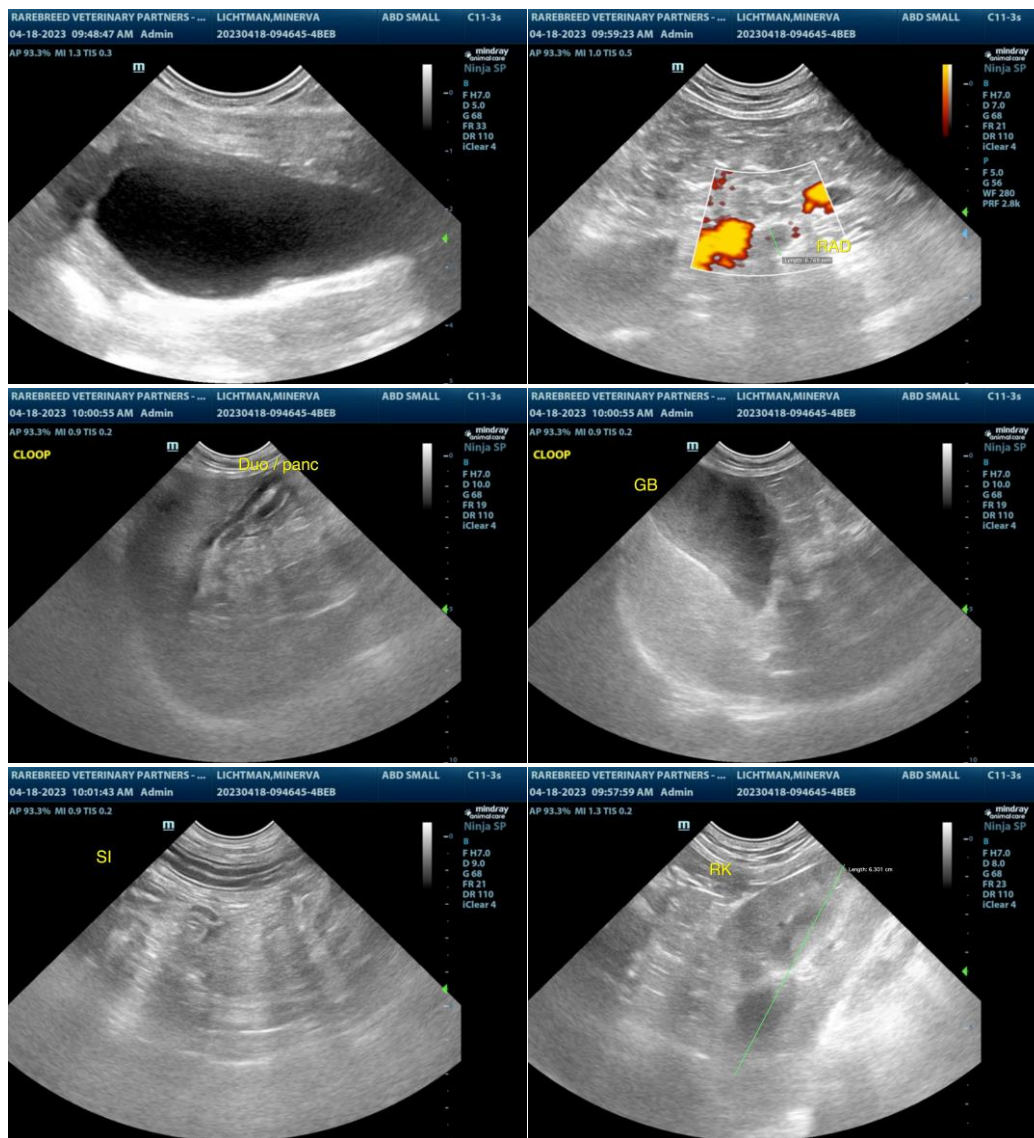
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)  
info@SonoPath.com