

**PATIENT**

Leo Mullaney

**SPECIES**

Canine

**BREED**

Goldendoodle

**SEX**

Neutered Male

**AGE**

11 Years

**WEIGHT**

77.4 Lbs.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Shari Reffi, CVT

**HOSPITAL NAME**

Shohola AH

**REFERRING VET**

Dr. Gramazio

**INVOICE**

13595

**DATE**

1/24/22

**PRESENTING CLINICAL SIGNS**

History: Elevated liver enzymes and seizure. No current meds.

Abnormal PE/Chem/CBC/UA Results: ALT 402(121H), AST 80(55H), ALP 279(160H), GGT 16(13H), Chol 369(345H), USG 1.048, Prot 2+,

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **bladder** in this patient was mildly thickened with slight echogenic mural changes. No calculi or masses were noted. Slight micropolypoid changes were noted. This is a frequent finding in older animals and may be linked to a history of chronic urinary tract infection or active urinary tract infection. Urinalysis would be recommended with culture if any evidence of inflammatory sediment is present. The region of the trigone and visible pelvic urethra were normal. This is a minor change.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some mild age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The right kidney measured 7.35 cm. The left kidney measured 6.87 cm.

**Adrenal Glands**

The **left adrenal gland** was enlarged at the cranial pole, measuring 3.11 cm x 0.98 cm at the cranial pole and 0.7 cm at the caudal pole.

The **right adrenal gland** was also swollen yet technically within normal limits for this size patient. The right adrenal gland measured 2.91 cm x 1.13 cm at the cranial pole and 0.78 cm at the caudal pole.

**Spleen**

The **spleen** was normal size and relatively normal contour with multifocal hyperechoic areas of mineralization. This is a benign change; however, can be related to Cushing's disease or other endocrinopathies.

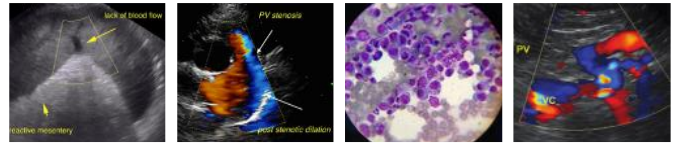
**Liver**

The **liver** revealed coarse architecture, mild increased portal marking and multifocal hypoechoic nodular changes (1.18 cm x 1.0 cm at the left medial liver). An isoechoic swollen lobe of the right liver was noted, measuring 5.6 cm x 3.4 cm, consistent with pronounced hyperplasia or hepatoma, FNA indicated. The gallbladder and common bile duct were unremarkable.

**Gastrointestinal**

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

**Pancreas**



**PATIENT**

Leo Mullaney

**SPECIES**

Canine

**BREED**

Goldendoodle

**SEX**

Neutered Male

**AGE**

11 Years

**WEIGHT**

77.4 Lbs.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Shari Reffi, CVT

**HOSPITAL NAME**

Shohola AH

**REFERRING VET**

Dr. Gramazio

**INVOICE**

13595

**DATE**

1/24/22

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxyphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

**Other**

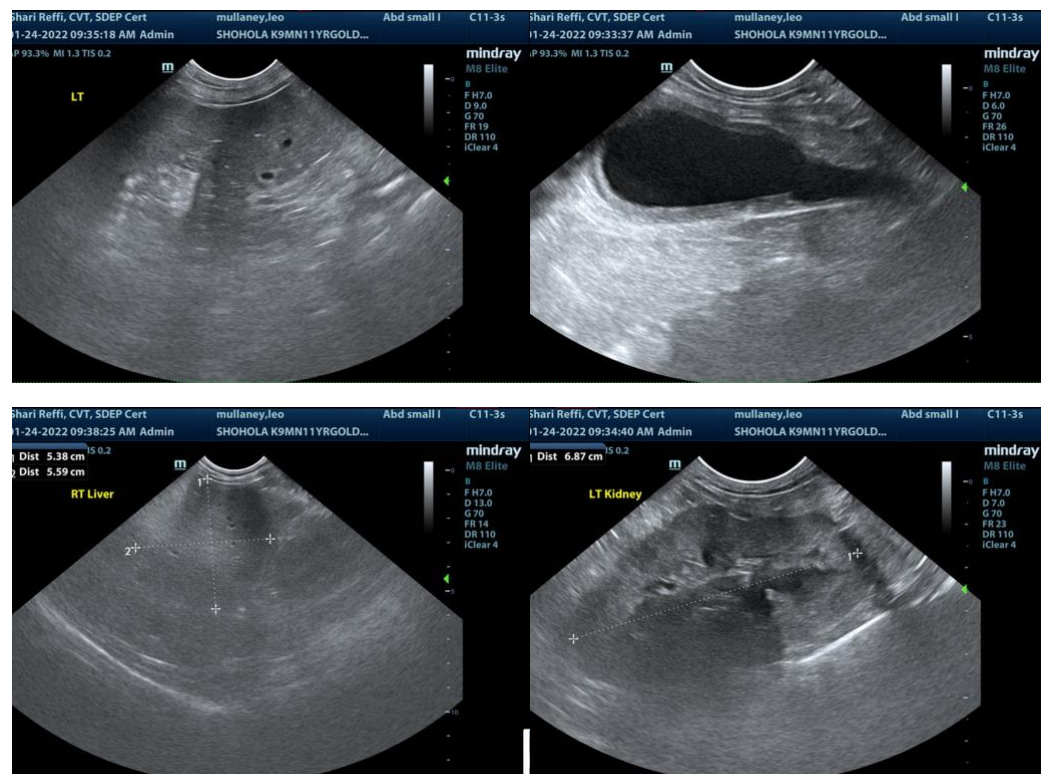
A rapid view of the **heart** revealed no evident pathology.

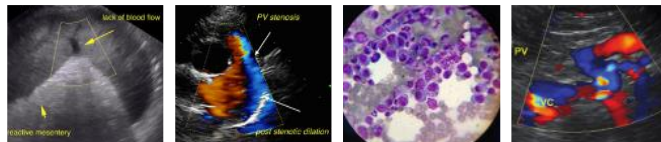
**ULTRASONOGRAPHIC FINDINGS**

- Swollen adrenal glands, irregular on the left
- Undefined nodular hepatic changes with irregular swelling, likely benign hepatopathy with nodular hyperplasia. FNA indicated.
- Mineralized spleen, possibly owing to underlying endocrinopathy
- Age-related pancreatic, urinary bladder and renal changes

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Given that the urine specific gravity is well concentrated, complete Cushings status is unlikely, However, atypical Cushings may be an issue. Full adrenal panel (sent to University of Tennessee) would be ideal.





**PATIENT**

Leo Mullaney

**SPECIES**

Canine

**BREED**

Goldendoodle

**SEX**

Neutered Male

**AGE**

11 Years

**WEIGHT**

77.4 Lbs.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Shari Reffi, CVT

**HOSPITAL NAME**

Shohola AH

**REFERRING VET**

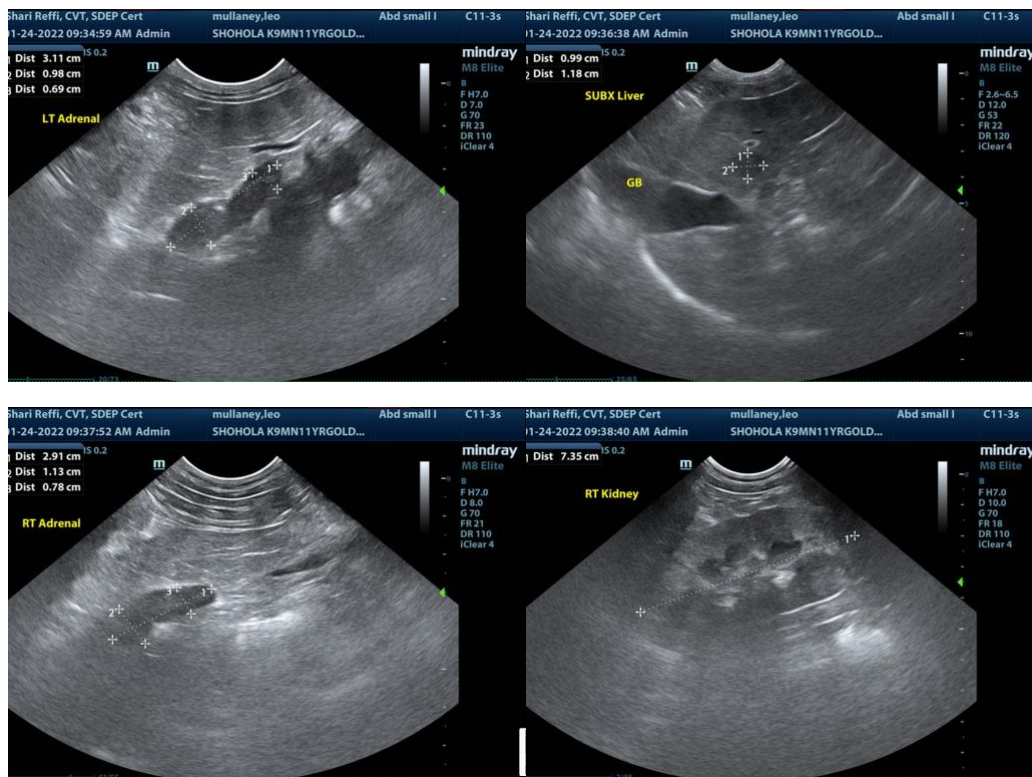
Dr. Gramazio

**INVOICE**

13595

**DATE**

1/24/22



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.

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
info@SonoPath.com