

**PATIENT**

Leo McHugh

**SPECIES**

Canine

**BREED**

Cavalier KC

**SEX**

Neutered Male

**AGE**

11/17/2011

**WEIGHT**

28 lbs

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

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

**HOSPITAL NAME**

Salt Marsh AH

**REFERRING VET**

Wiles

**INVOICE**

12277

**DATE**

2.24.23

**PRESENTING CLINICAL SIGNS**

Clinical Exam Findings: Will email recent visit information and lab results.

Abnormal lab-work values: Will email recent visit information and lab results.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately distended. The wall is normal in thickness. The mucosal surface in the region of the apex is slightly irregular. Several cystic calculi are observed within the lumen. One of the larger stones measures 1.30 cm in diameter. The region of the trigone and the prostatic urethra, visible to a depth of 2 cm, are normal.

The prostate is normal in size (0.91 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 (5.10 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. Several nonobstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal in size (5.59 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. Several nonobstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size (0.65 cm at cranial pole) (0.51 cm at caudal pole) with a normal shape and smooth peripheral contours. A 0.80 x 0.64 cm hyperechoic nodule is observed at the cranial pole. Glandular echogenicity and detail at the caudal pole are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is in normal size (0.60 cm at cranial pole) (0.49 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.

**Spleen**

The spleen is subjectively normal in size (1.27 cm in width at the level of the hilus) with normal curvilinear peripheral contours. At least one small, ill-defined hypoechoic nodule (0.63 cm in diameter) is observed. Splenic vasculature is normal with no evidence of thrombosis.

**Liver**

The liver is subjectively enlarged with slightly swollen peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely homogeneous in appearance. No distinct focal lesions are observed. Vascular and 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.

### ***Gastrointestinal***

The gastric lumen is mildly to moderately distended with ingesta. 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 segmentally dilated with chyme. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

### ***Pancreas***

The right limb of the pancreas is normal to slightly prominent 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***

There is no obvious evidence free fluid. A 1.46 cm medial iliac lymph node is visualized. In addition, one to two prominent mesenteric lymph nodes are also seen (the largest measuring 1.74 cm in length). All nodes are normal in shape and echogenicity.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- Cystic calculi
- The hepatic parenchymal changes are most consistent with a benign process. Vacuolar hepatopathy (i.e., idiopathic/endocrine) is considered likely, with a lower possibility of other more insidious hepatopathies.

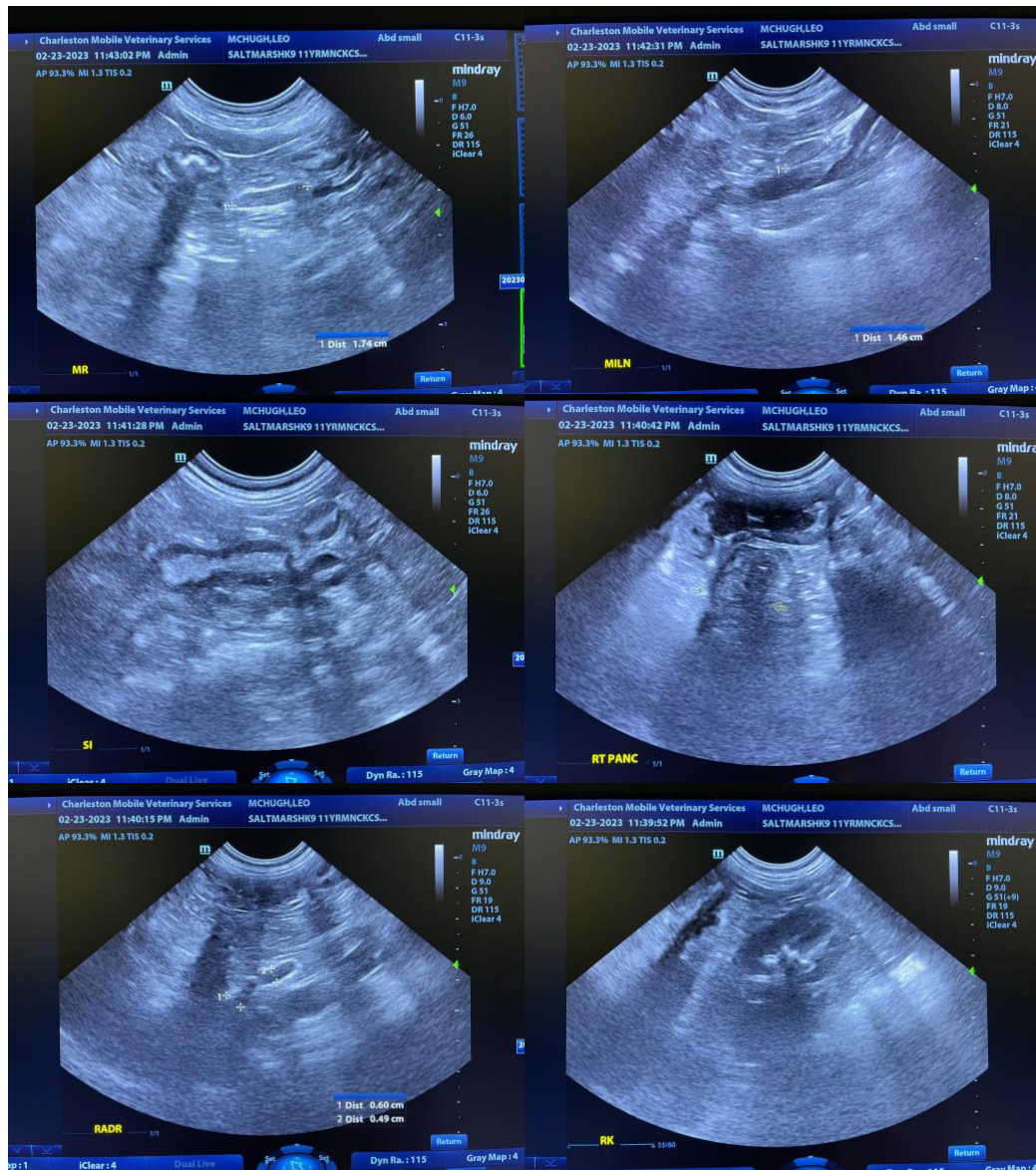
### **Secondary Findings**

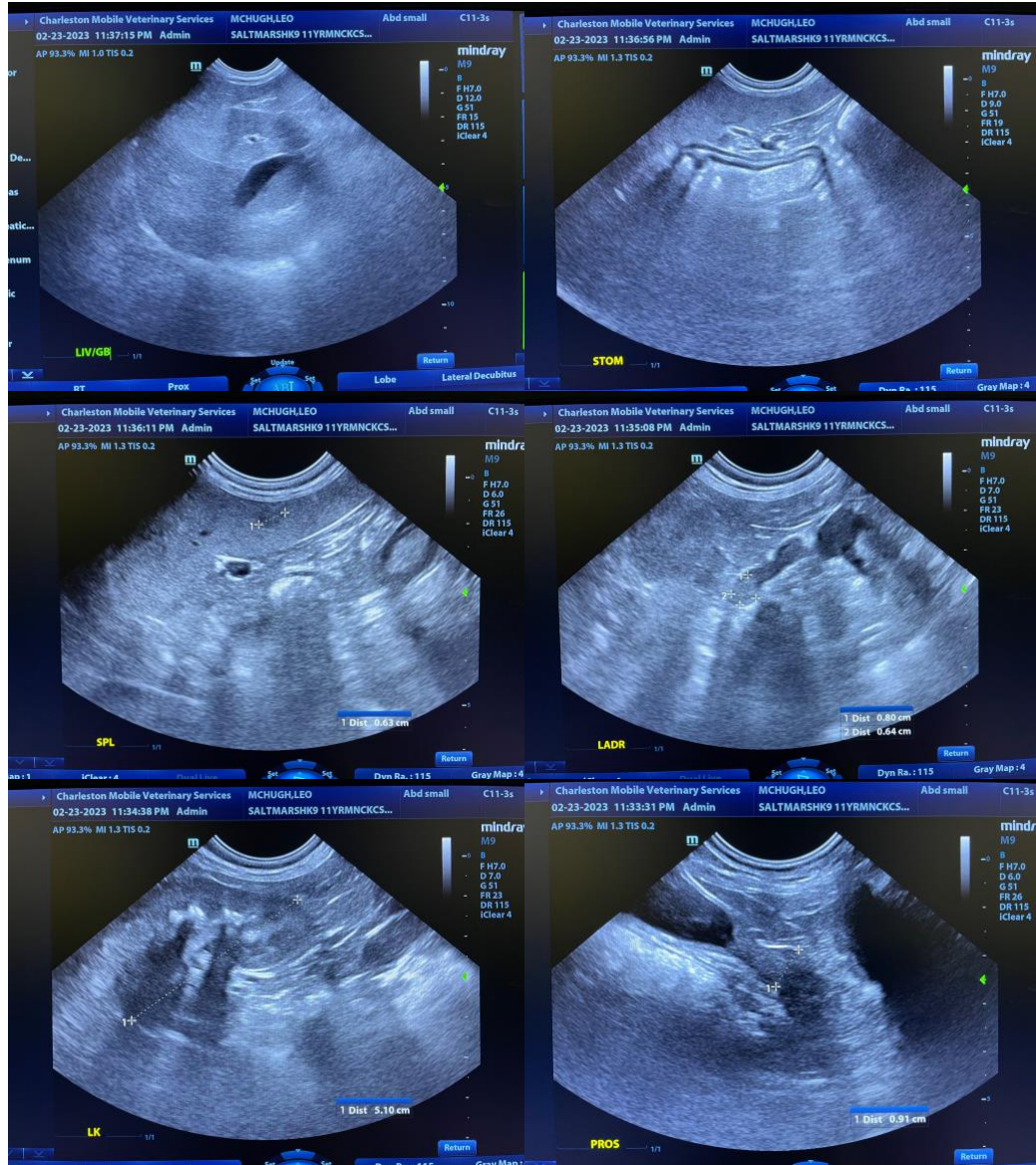
- Mild bilateral age-related renal changes with nonobstructive nephrolithiasis
- Minor age-related pancreatic remodeling
- The left adrenal nodule could be consistent with benign nodular hyperplasia or an emerging tumor (i.e., adenoma, adenocarcinoma, pheochromocytoma). A benign process is favored at this time.
- The splenic parenchymal changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis, splenitis or antigenic stimulation with a low possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia).
- If the patient was fasted for this study, the presence of ingesta within the gastric lumen could suggest delayed gastric emptying.
- Gall bladder debris, non-mucocele

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- With regard to the urinary bladder stones, a cystotomy with stone removal, analysis and culture would be ideal. However, the risk of anesthesia (with the patient's heart condition) should be weighed against the benefits of surgery. Whether or not to proceed with a cystotomy should be based on the cardiologist's echocardiogram report.

- Serial monitoring (i.e., every 3-4 months) of the patient's liver values is recommended. If values continue to increase, a repeat abdomen ultrasound +/- a more advanced hepatic work-up (i.e., tissue sampling) may be warranted.
- Regarding the left adrenal nodule, consider a repeat ultrasound in 3-6 months to assess for progression.





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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