



**PATIENT**

Moop Greene

**SPECIES**

Feline

**BREED**

Domestic Longhair

**SEX**

Spayed female

**AGE**

14 years

**WEIGHT**

9.6 lbs

**PRESENTING CLINICAL SIGNS**

History: Murmur Grade 1, presented for vomiting and diarrhea. Abdominal mass on radiographs.

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate LA measurements. Trivial **mitral** valve insufficiency was noted in this patient. This is not clinically significant. The **left ventricle** presented normal thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions and angles of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinetics. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted or extra cardiac pathology in the visible planes. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Shari Reffi, CVT

**HOSPITAL NAME**

Marsh Hospital for  
 Animals

**REFERRING VET**

Dr. Armani

**INVOICE**

70007

**DATE**

1/12/26

| FELINE CARDIAC PARAMETERS  | BODY WEIGHT    | HR (BPM)                  | IVSd (cm)            | LVIDd (cm) | LVWd (cm)       | FS (%)          | EF (%)    |
|--|----------------|---------------------------|----------------------|------------|-----------------|-----------------|-----------|
| NORMAL PARAMETER   | -----          | 150-240                   | 0.3-0.6              | 1.0-2.1    | 0.25-0.6        | 35-67           | 80-100    |
| PATIENT  | 9.6 lbs        | 180                       | 0.5                  | 1.4        | 0.5             | 45              | 85        |
| FELINE CARDIAC PARAMETERS  | LA/AO (M-mode) | LA/AO HEART BASE (Sisson) | LAD LA MAX 4 Chamber |            | LVOT VEL. (m/s) | RVOT VEL. (m/s) | IVRT (m/) |
| NORMAL PARAMETER   | <1.5           | 1.6                       | 0.7-1.7              |            | <1.6            | <1.3            | 40-60     |
| PATIENT  | 1.4            | 1.5                       | 1.4                  |            | 0.8             | 1.0             | NM        |
| Adapted from June Boon, Veterinary Echocardiography, 1998<br>Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705 |                |                           |                      |            |                 |                 |           |



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**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 3.85 cm. The left kidney measured 3.43 cm.

**Adrenal Glands**

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 0.5 cm. The left adrenal gland measured 0.49 cm.

**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

**Liver**

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Slight, microcystic nodule was noted in the left caudal liver measuring 0.8 cm. This is consistent with cystadenoma. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.



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***Gastrointestinal***

The **gastrointestinal** presentation revealed mild uniform prominence of the gastric mucosa as well as areas of "ropey" small intestinal wall. The muscularis layer was hypertrophied inverting the normal ratio (1:3). The intestinal submucosa was slightly irregular, thickened and hyperechoic suggestive of low grade, chronic inflammation. A distal small intestinal mass was noted in this patient. The mass appears to be jejunum. The mass measured 4.4 x 3.9 cm. Areas of mineralization were noted within the mass. The mass is cranial to the urinary bladder and appears resectable. Slight regional lymph node enlargement was noted and measured 0.57 cm.

***Pancreas***

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 subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

**ULTRASONOGRAPHIC FINDINGS**

Normal echocardiogram with trivial mitral valve insufficiency, benign.

Diffuse intestinal thickening without neoplastic criteria with focal intestinal mass. Appears resectable.

Mild regional inflammation appeared to be present as well.

Slight regional lymph node enlargement was noted.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

I recommend ultrasound-guided FNA and potential chemotherapy; however, given the mineralization of the mass, I am strongly concerned for carcinoma which would require surgical intervention with resection and anastomosis. Regional lymph node removal is also indicated. Intestinal biopsies are warranted elsewhere for further definition of the minor muscularis thickening. Differentials include intestinal carcinoma, round cell neoplasia, non-neoplastic fibroplasia is also possible. There is no contraindication to anesthetic procedure based on the echocardiogram.



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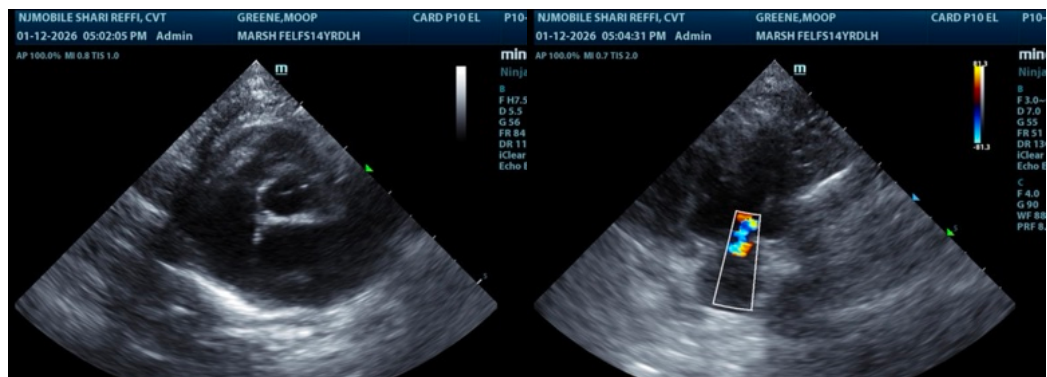
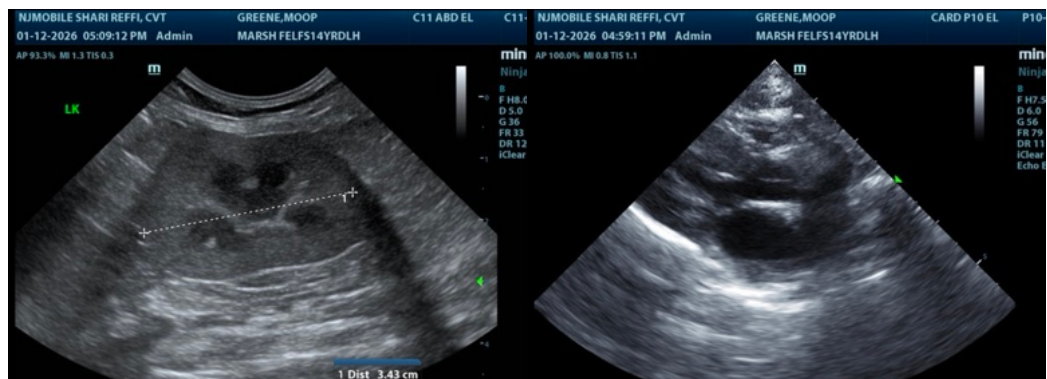
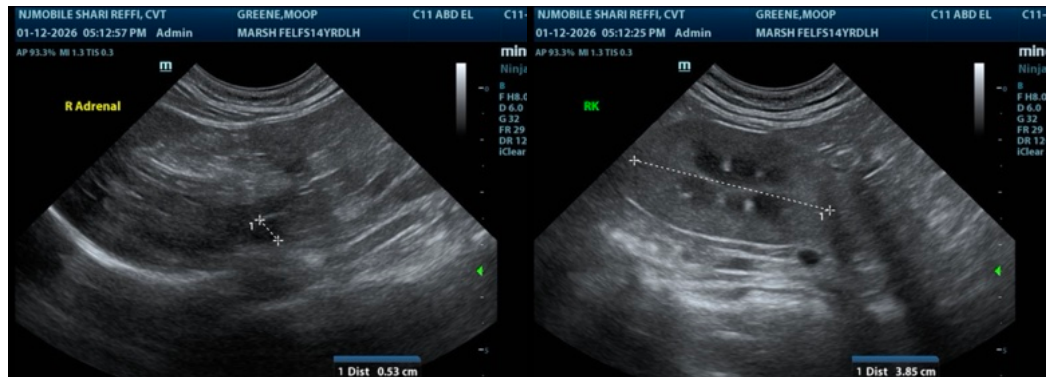
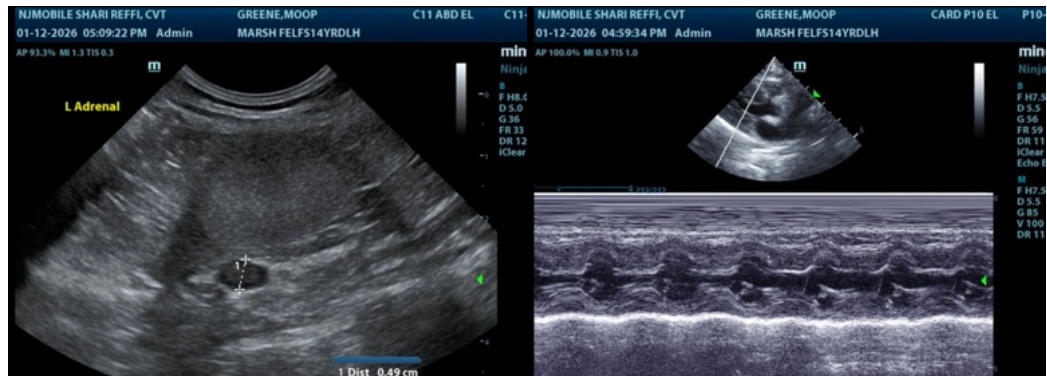
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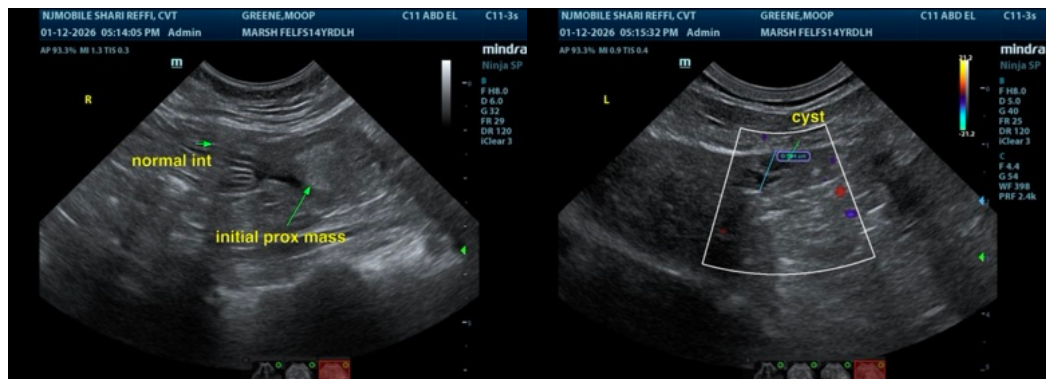
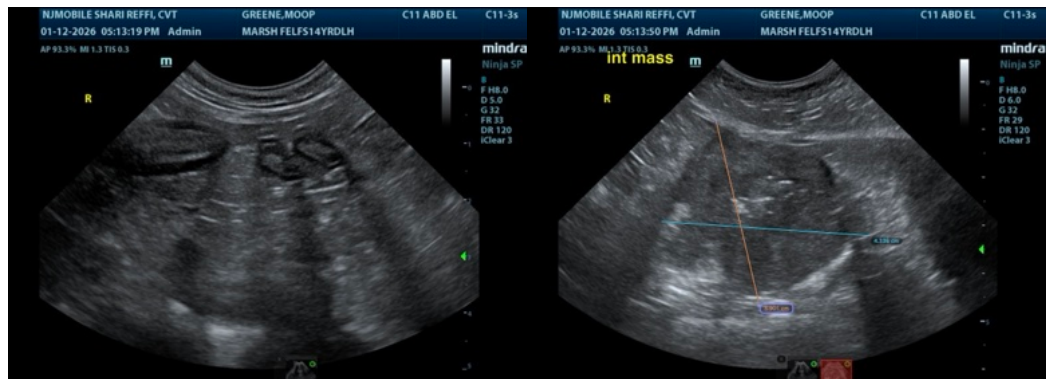
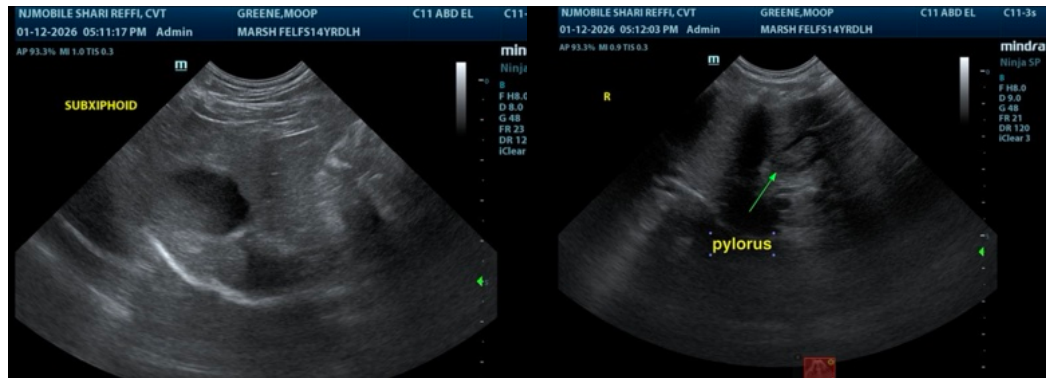
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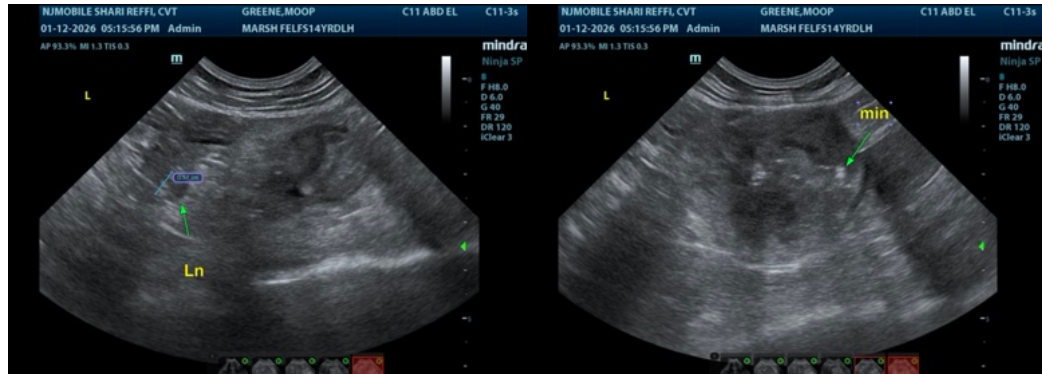
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

Info@SonoPath.com