



PATIENT

Buc George

SPECIES

Canine

BREED

Mix

SEX

Neutered Male

AGE

10 Years

WEIGHT

64 Pounds

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

American AH

REFERRING VET

Dr. Pascucci

INVOICE

14171

DATE

3/4/22

PRESENTING CLINICAL SIGNS

History: Weight loss (10# in 3 months), elevated ALP and ALT since 12/2021. Was picky eating, in house u/s showed GB sludge and mild liver enlargement. Tried Denamarin-no change to LE. Tried Amoxi and Metro-now LE's doubled. Chronic heart murmur, fell off the bed twice last week (unsure if syncope episodes). Current meds: Pepcid

Abnormal PE/Chem/CBC/UA Results: ALP 5740, ALT 317, Tbili 0.4, T4 0.6. USG 1.029, 2+ prot.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

| CANINE CARDIAC PARAMETERS | MR VMAX (m/s) | TR VMAX (m/s) | LA/AO (Boon method) | LA/AO (Heart Base; Swe) | FS (%) | EF (%) | EPSS (cm) |
|---------------------------|---------------|---------------|---------------------|-------------------------|---------------------------------|--|--|
| NORMAL PARAMETER | 4.5-5.5 | <2.7 | 1.3 | <1.6 | 28-40 | 40-100 | <0.6 |
| PATIENT | 5.0 | -- | 1.27 | 1.22 | 33 | 63 | 0.1 |
| CANINE CARDIAC PARAMETERS | HR (BPM) | AV VMAX (m/s) | PV MAX (m/s) | BODY WEIGHT (kg) | LA 2D short axis Base view (cm) | LVIDd Avg; 2D and m-mode short axis (cm) | LVIDs Avg; 2D and m-mode short axis (cm) |
| NORMAL PARAMETER | 50-100 | 0.7-1.7 | 0.7-1.6 | BELOW | BELOW | BELOW | BELOW |
| PATIENT | 98 | .96 | 1.05 | -- | 4.32 | 3.7 | -- |

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. The **left ventricle** presented 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 of the myocardium. Trivial aortic insufficiency noted at 3.0 m/s. 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. 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. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

Urinary System



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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 were noted. Ureteral papillae were normal. The pelvic urethra was imaged 3.0 cm beyond the cystourethral junction.

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The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some minor 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 6.2 cm. The left kidney measured 6.2 cm.

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Adrenal Glands

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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 3.13 cm x 1.94 cm at the cranial pole and 1.08 cm at the caudal pole. The left adrenal gland measured 2.87 cm x 0.76 cm at the cranial pole and 0.9 cm at the caudal pole.

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Spleen

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The **spleen** was largely smooth with subtle heterogeneous parenchymal changes while maintaining normal echogenic relationship to the liver and kidney. These changes are minor and consistent with normal age-related alteration. The capsule was smooth without noticeable impingement from within the spleen or from pathology in the adjacent abdomen. The splenic vasculature demonstrated normal volume without signs of congestion or significant contraction. No evidence of active acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

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Liver

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The **liver** was uniformly swollen with minor, excessive gallbladder debris and over distension with dependent and suspended bile without evidence of overt mucocele formation. However, excessive sludge was present. The common bile duct was normal, measuring 2.0 mm. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with mild vacuolar hepatopathy and some level of remodeling and history of inflammatory component. Minor hyperechoic nodular changes were noted in the liver, non-disruptive. A larger hyperechoic granulomatous type nodule in the left liver measured approximately 1.3 cm.

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Gastrointestinal

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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.

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Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

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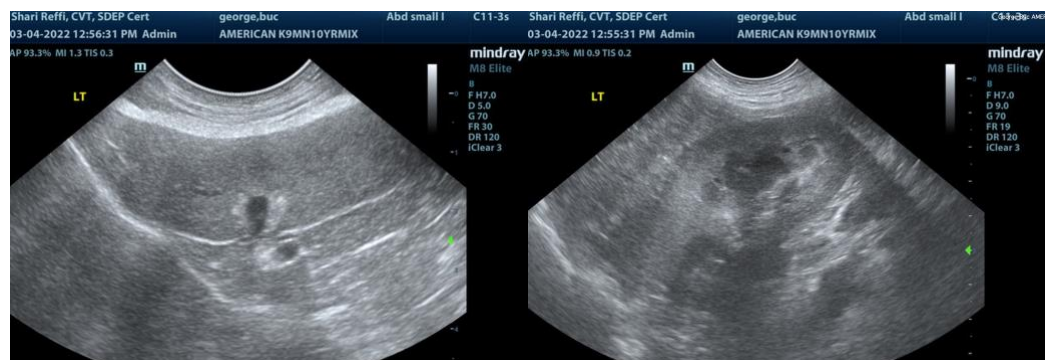
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ULTRASONOGRAPHIC FINDINGS

- Stage B-1 valvular disease
- Trivial Aortic insufficiency
- Subjectively benign hepatopathy with minor hyperechoic nodular changes- FNA could be considered for further definition. The changes are subjectively mild.
- Age-related renal and splenic changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of clinical cardiac disease at this time. The cause of hyporexia is unclear. Leptospirosis titers warranted. Given the lack of response to medical management, FNA indicated. Blood pressure measurement recommended, if not already performed. Maldigestion panel, three view chest radiographs and full CNS examination is recommended to examine for occult disease that could be responsible for the weight loss. Evaluation for competitive eating environments should also be considered.





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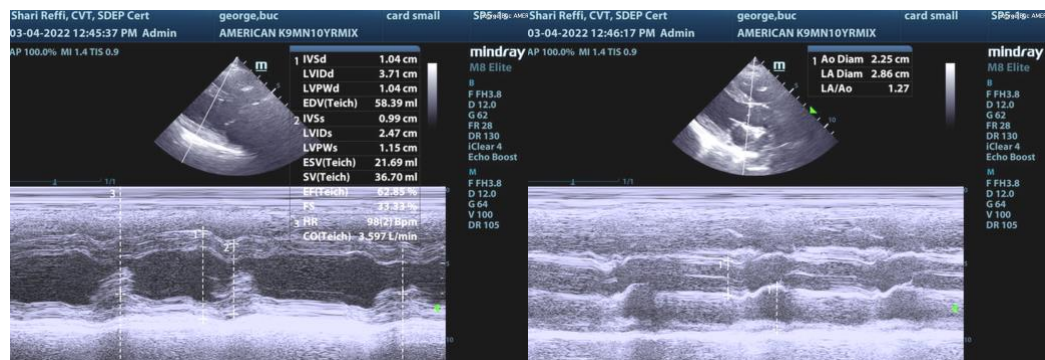
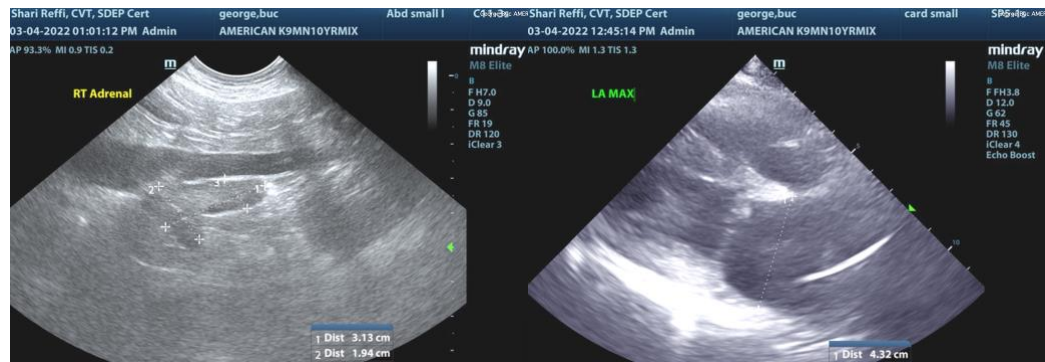
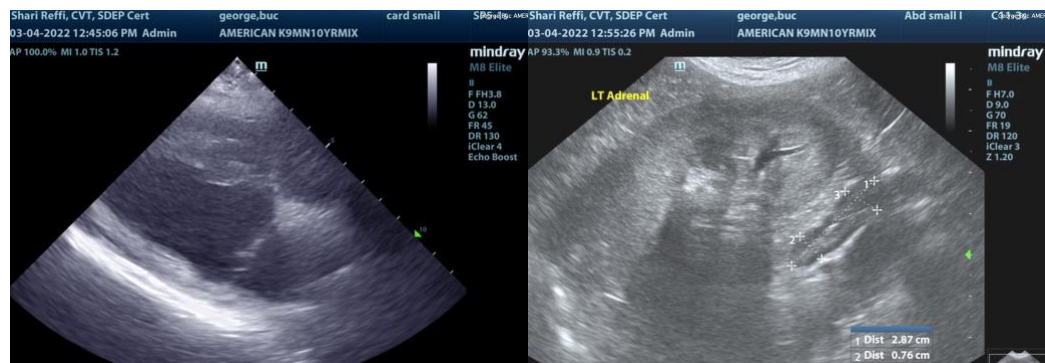
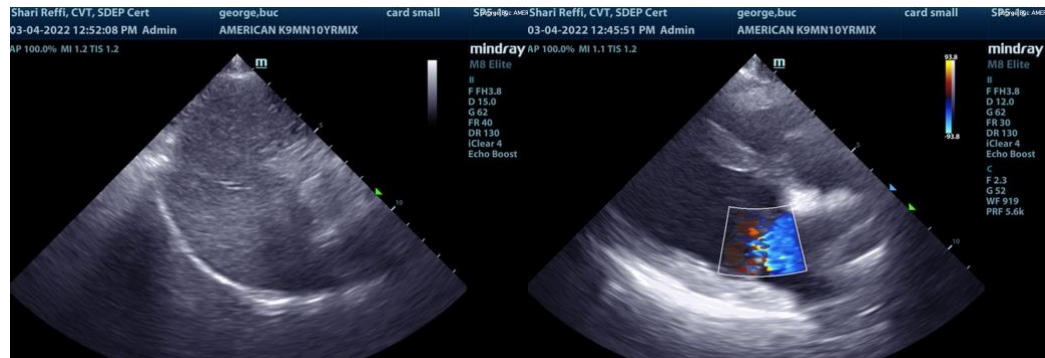
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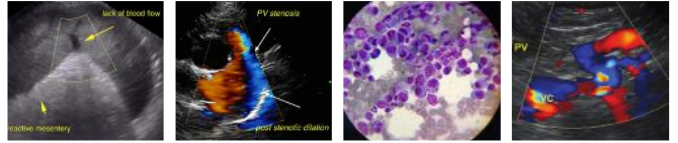
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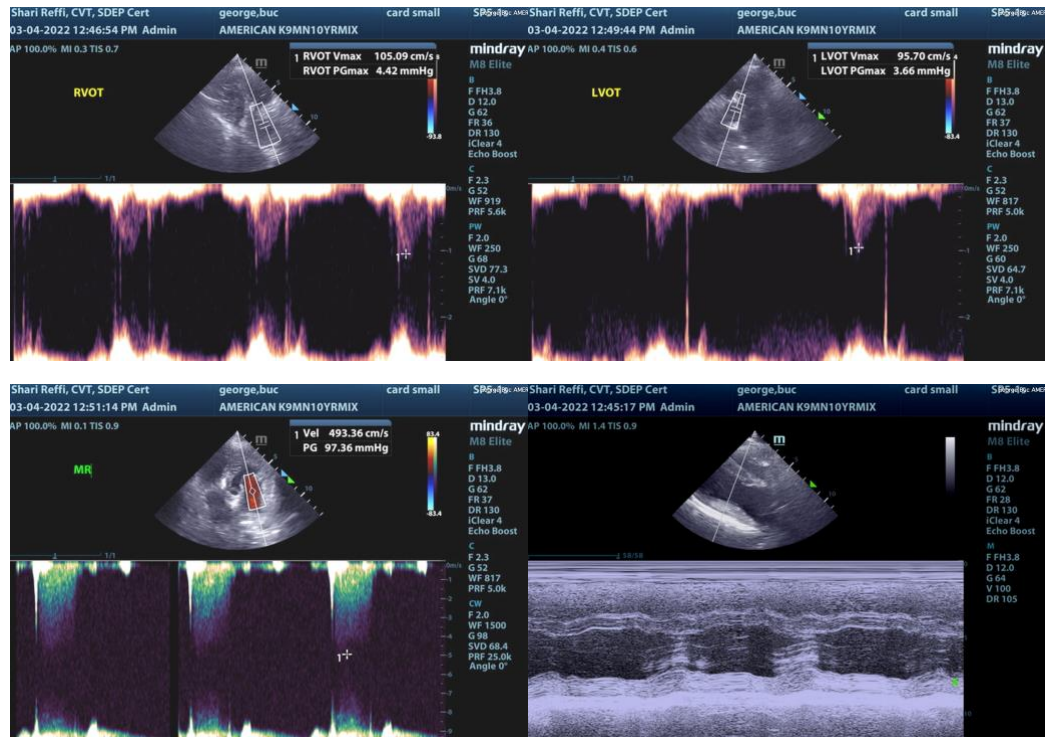
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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