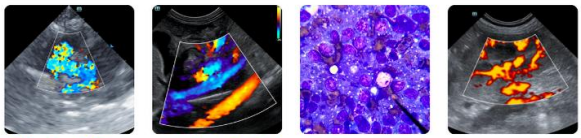




**PATIENT**

Cozy McDaniels

**SPECIES**

Canine

**BREED**

Pomeranian

**SEX**

FS

**AGE**

14years

**WEIGHT**

12lbs

**INTERPRETED BY**

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Loetitia Saint-Jacques, LVT

**HOSPITAL NAME**

Incline Veterinary Hospital

**REFERRING VET**

Dr. Sovyk

**INVOICE**

47396

**DATE**

4/1/26

## PRESENTING CLINICAL SIGNS

- History: - Acute pancreatitis - confirmed via cPL
- - Acute kidney injury VS CKD Stage 2-3 - r/o secondary to pyelonephritis, toxin, infectious cause -leptospirosis-, underlying chronic kidney disease, others
- - Spinal pain and hind limb muscle atrophy - r/o intervertebral disc disease, spondylosis, degenerative myelopathy, others
- - Bilateral medial patellar luxation, Grade 3/4 - r/o congenital condition, secondary osteoarthritis, others
- - Periodontal dz stage 3: chronic, unmanaged, due to poor home dental care, others
- -Chronic degenerative valve disease causing trace mitral and mild tricuspid regurgitation.
- - Mildly elevated liver enzymes -ALT, ALP- - r/o secondary to liver injury, pancreatitis, degenerative joint disease, age-related changes, others
- - Severe peritoneal effusion - r/o neoplastic process, reactive inflammatory process (pancreatitis), hemorrhage, others
- - Hepatomegaly
- - Left coxofemoral osteoarthritis
- - Mild to moderate bilateral stifle osteoarthritis (historical finding)

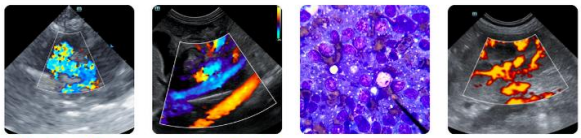
Abnormal PE/Chem/CBC/UA Results: Abdominal fluid aspirate transudate appearance RADS - Radiographs: - 3-view thoracic and lumbar spine and abdominal views performed. - Images sent to a board-certified radiologist for interpretation. - In-house review of abdominal films reveals bone fragments in the GI tract. - Bloodwork - Senior Panel - CBC: WNL. Neutrophils are slightly elevated, suggestive of minor inflammation. - Chemistry Panel: - BUN: 100 -H- -was 22 in Oct 2024- - Creatinine: 2.7 -H- -was 0.8 in Oct 2024- - SDMA: 30 -H- -was 11 in Oct 2024- - ALT: Mildly elevated. - ALP: 419 -H- -ref 23-200- - GGT: WNL - Electrolytes: WNL - Glucose: WNL, not diabetic. - Pancreatitis test -cPL-: >1000 -H- -ref 0-200-, confirming pancreatitis

## ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 25mm/s; 10mm/mV. The average heart rate is. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. No ectopic beats, pauses or dysrhythmias observed.
ECG diagnosis: Normal sinus bradycardia with respiratory variation.

## ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with mild prolapse into the left atrial lumen. Mild eccentric mitral regurgitation with mild left atrial dilation. Normal MR velocity. Normal LV diameter with adequate myocardial function. The tricuspid valve appears thickened with septal prolapse and mild tricuspid regurgitation. Normal velocity. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.





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## CARDIAC CHART

| **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 | 2.7 | NM | 1.45 | 50 | 84 | 0.2 |
| **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** | 114 | 1.2 | 0.9 | 5.5 | 1.7 | 2.0 | 1.0 |
| *Normal chamber parameters expressed as a mean value (SD) | | | | 3 | 1.27 (5.3) | 2.46 (2.46) | 1.36 (5.5) |
| **BODY WEIGHT DEPENDENT PARAMETERS** | | | | 5 | 1.40 (4.5) | 2.74 (5.2) | 1.60 (4.7) |
| ***Note: All measurements based upon multi-modal images and methods. An average value is reported.** | | | | 10 | 1.50 (3.8) | 3.27 (3.5) | 2.06 (3.1) |
| | | | | 15 | 1.83 (2.0) | 3.71 (2.4) | 2.43 (2.1) |
| | | | | 20 | 2.02 (1.9) | 4.14 (2.2) | 2.80 (2.0) |
| | | | | 25 | 2.18 (2.4) | 4.48 (2.9) | 3.10 (2.5) |
| Adapted from June Boon, Veterinary Echocardiography, 1998 | | | | 30 | 2.33 (3.3) | 4.83 (3.9) | 3.39 (3.4) |
| Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435 | | | | 35 | 2.48 (4.3) | 5.17 (5.0) | 3.69 (4.5) |
| Hansson et al, Vet Rad and Ultrasound 2002 | | | | 40 | 2.62 (5.2) | 5.48 (6.1) | 3.96 (5.4) |
| Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995 | | | | 50 | 2.88 (7.1) | 6.07 (8.3) | 4.46 (7.4) |

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing mild mitral and tricuspid regurgitation. Lack of significant left atrial enlargement indicates the current risk for complication is low. No concurrent issues such as systolic dysfunction or pulmonary hypertension are noted in this study. The ECG is unremarkable, with a normal sinus bradycardia and respiratory variation.

These findings would certainly suggest ascites is non-cardiogenic in origin, with no evidence of right-sided pressure elevation. Follow up as dictated by the results of the abdominal ultrasound.

In a dog with no significant left atrial enlargement, no cardiac medications are clearly indicated. Assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage. Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

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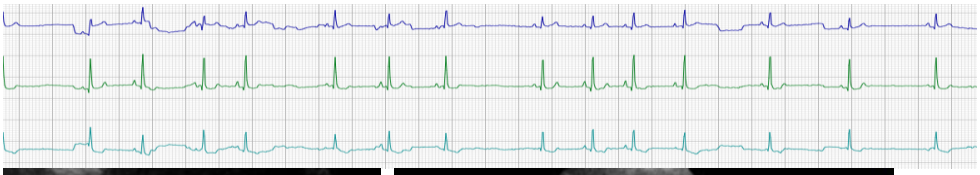
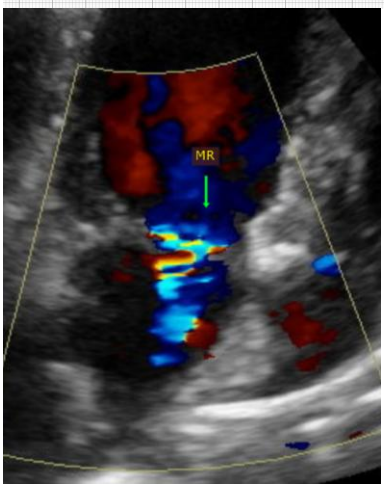
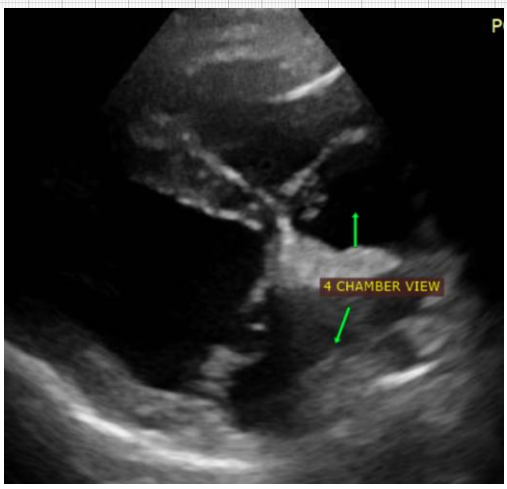
Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

**IMAGES**






**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. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

**Maggie Machen Lamy, DVM**
**Diplomate of the American College of Veterinary Internal Medicine (Cardiology)**
info@sonopath.com