



**PATIENT**

Maiky Santiago

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Male Intact

**AGE**

8 years

**WEIGHT**

8.2lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

G. Ferrer, DVM

**HOSPITAL NAME**

Pulse: Pet Ultrasound  
Services

**REFERRING VET**

Dr. Rivera

**INVOICE**

46858

**DATE**

2/17/26

**PRESENTING CLINICAL SIGNS**

History: Historic heart murmur. Occasional cough/panting. Started on Pimobendan 1 week ago. Assess prior to anesthesia for hernia surgery.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets (anterior>posterior) with mild prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with moderate left atrial dilation. Normal MR velocity. Mildly increased LV diameter with hyperdynamic myocardial function. The tricuspid valve appears mildly thickened with septal prolapse and moderate tricuspid regurgitation. Normal velocity. Normal right atrial and ventricular diameter. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. No aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

**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)                                |
|---|---------------|---------------|---------------------|-------------------------|---------------------------------|--|--|
| <b>NORMAL PARAMETER</b>   | 4.5-5.5       | <2.7          | 1.3                 | <1.6                    | 28-40                           | 40-100                                   | <0.6                                     |
| <b>PATIENT</b>  | 5.5           | 2.3           | NM                  | 1.8                     | 50                              | 83                                       | 0.13                                     |
| 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) |
| <b>NORMAL PARAMETER</b>   | 50-100        | 0.7-1.7       | 0.7-1.6             | BELOW                   | BELOW                           | BELOW                                    | BELOW                                    |
| <b>PATIENT</b>  | 190           | 0.9           | 0.9                 | 3.7                     | 1.9                             | 3.0                                      | 1.5                                      |
| *Normal chamber parameters expressed as a mean value (SD)   |               |               |                     | 3                       | 1.27 (5.3)                      | 2.46 (2.46)                              | 1.36 (5.5)                               |
| <b>BODY WEIGHT DEPENDENT PARAMETERS</b>   |               |               |                     | 5                       | 1.40 (4.5)                      | 2.74 (5.2)                               | 1.60 (4.7)                               |
| <i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i> |               |               |                     | 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)                               |
|   |               |               |                     | 30                      | 2.33 (3.3)                      | 4.83 (3.9)                               | 3.39 (3.4)                               |
|   |               |               |                     | 35                      | 2.48 (4.3)                      | 5.17 (5.0)                               | 3.69 (4.5)                               |
|   |               |               |                     | 40                      | 2.62 (5.2)                      | 5.48 (6.1)                               | 3.96 (5.4)                               |
|   |               |               |                     | 50                      | 2.88 (7.1)                      | 6.07 (8.3)                               | 4.46 (7.4)                               |

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Chronic degenerative valve disease causing moderate mitral and tricuspid regurgitation. Moderate left atrial enlargement indicates there is relatively low risk for imminent complication; however, risk for progression to spontaneous congestive heart failure in the future is elevated. No additional issues such as pulmonary hypertension are identified.

Given these findings, continued Pimobendan is indicated in this patient as below. Assessment of progression in the future will help predict long term outcome; however, prognosis is guarded at



## PATIENT

Maiky Santiago

## SPECIES

Canine

## BREED

Chihuahua

## SEX

Male Intact

## AGE

8 years

## WEIGHT

8.2lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING PERFORMED BY

G. Ferrer, DVM

## HOSPITAL NAME

Pulse: Pet Ultrasound  
Services

## REFERRING VET

Dr. Rivera

## INVOICE

46858

## DATE

2/17/26

this stage (B2). Fifty percent of stage B2 patients typically develop CHF within 2-2.5 years of diagnosis. The median time to development of CHF in B2 cases treated with pimobendan is 3.5 years.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

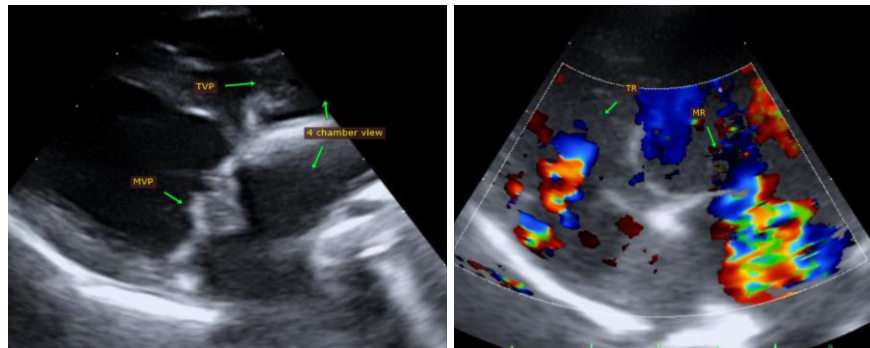
Anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV fluid rates are recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

## PLAN

Baseline BP recommended. Continue Pimobendan 0.25-0.3mg/kg PO q12h.

Recommend monitor for progression 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



## PATIENT

Maiky Santiago

## SPECIES

Canine

## BREED

Chihuahua

## SEX

Male Intact

## AGE

8 years

## WEIGHT

8.2lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING PERFORMED BY

G. Ferrer, DVM

## HOSPITAL NAME

Pulse: Pet Ultrasound  
Services

## REFERRING VET

Dr. Rivera

## INVOICE

46858

## DATE

2/17/26