



**PATIENT**

Luna Vega

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Female Spayed

**AGE**

13 years

**WEIGHT**

19lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

G. Ferrer, DVM

**HOSPITAL NAME**

Pulse: Pet Ultrasound  
Services

**REFERRING VET**

Dr. Socarraz

**INVOICE**

46258

**DATE**

12/18/25

**PRESENTING CLINICAL SIGNS**

History: Presented for grade 4-5/6 heart murmur and episodes of collapse. Diagnosed with heart disease in 2023 and started on Pimobendan. Was doing well until 8/2025; developed occasional syncope episodes at night, but now they are almost every day and triggered by excitement. BP: 196mmHg.

-Current medications: Pimobendan 2.5mg: 1/2 BID.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The mitral valve is thickened with prolapse into the left atrial lumen. There is marked eccentric mitral regurgitation present. The MR velocity is normal. There is marked left atrial enlargement. There is moderate left ventricular dilation. Left ventricular systolic function is hyperdynamic. There is normal systolic flow velocity across the aortic valve. The aortic valve appears trileaflet with normal mobility. The main pulmonary artery is mildly dilated. Moderate right atrial and right ventricular dilation. The tricuspid valve is thickened with moderate tricuspid regurgitation. Elevated TR velocity consistent with significant pulmonary hypertension. Mild pulmonic insufficiency, no aortic insufficiency. Scant pericardial effusion. No pleural effusion or cardiac masses are seen.

**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	5.6	4.5	NM	2.3	63	92	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	150	0.8	0.5	8.6	3.3	3.5	1.3
*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)
*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)
				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 marked mitral and moderate tricuspid regurgitation. Marked left atrial and ventricular enlargement indicates the risk for spontaneous left-sided congestive heart failure is elevated. Additionally, there is significant pulmonary hypertension present, which puts the patient at risk for right-sided congestion, and/or **syncope**. The finding of pericardial effusion likely reflects just that, and full lifelong cardiac supportive medications



## PATIENT

Luna Vega

## SPECIES

Canine

## BREED

Shih Tzu

## SEX

Female Spayed

## AGE

13 years

## WEIGHT

19lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING PERFORMED BY

G. Ferrer, DVM

## HOSPITAL NAME

Pulse: Pet Ultrasound  
Services

## REFERRING VET

Dr. Socarraz

## INVOICE

46258

## DATE

12/18/25

including diuretics and Sildenafil are recommended as below. A left atrial tear would be an alternative explanation, which is difficult to prove.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a worsening cough, labored breathing, exercise intolerance or worsening collapse episodes. Monitoring of sleeping breathing rates is recommended as the best way to screen for progression to CHF at home. Unfortunately, there is high risk for spontaneous CHF, worsening cough and/or malignant arrhythmias and sudden death in the future. The prognosis with this degree of disease is poor, with most dogs able to maintain a good QOL on medications for an average of 8-12 months.

Elective anesthesia is not advised.

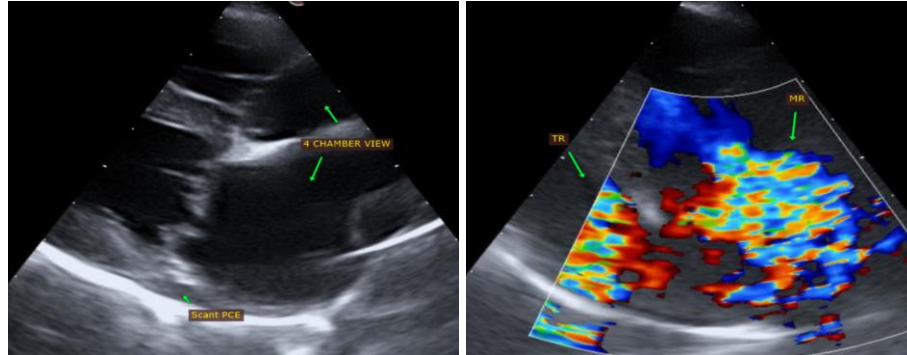
## PLAN

Institute Furosemide 1-2mg/kg PO q12h. Continue Pimobendan 0.3mg/kg PO q12h. Institute Spironolactone 12.5mg PO q12h. Institute Sildenafil 1-2mg/kg PO q8h. Institute ACE-I 0.5mg/kg PO q12h, pending BP >130mmhg.

Recheck renal values and BP in 1-2 weeks, then every 3-4 months on diuretic therapy.

A recheck echocardiogram is recommended in 6 months to screen for progression, sooner if clinical signs arise.

## 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

Luna Vega

## SPECIES

Canine

## BREED

Shih Tzu

## SEX

Female Spayed

## AGE

13 years

## WEIGHT

19lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING PERFORMED BY

G. Ferrer, DVM

## HOSPITAL NAME

Pulse: Pet Ultrasound  
Services

## REFERRING VET

Dr. Socarraz

## INVOICE

46258

## DATE

12/18/25