



**PATIENT PRESENTING CLINICAL SIGNS**

Pippi Amato  
History: Recheck echo – previous echo showed CVD with trace MR and TR. Patient has always been cyanotic with stress. Grade 1-2/6 heart murmur. Heavy panting. Assess prior to dental.  
-Current medications: Omega Benefits, Fish Oil.

**SPECIES RADIOGRAPHIC FINDINGS** \*NOTE: Images submitted for supplemental cardiac information only.  
Canine Normal cardiac silhouette. No obvious evidence of CHF.

**BREED ECHOCARDIOGRAM FINDINGS**  
Terrier Mix 2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no 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 normal with no tricuspid regurgitation. 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.

**AGE CARDIAC CHART**

12 years	<b>CANINE CARDIAC PARAMETERS</b>	<b>MR VMAX</b> (m/s)	<b>TR VMAX</b> (m/s)	<b>LA/AO</b> (Boon method)	<b>LA/AO</b> (Heart Base; Swe)	<b>FS</b> (%)	<b>EF</b> (%)	<b>EPSS</b> (cm)
	<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
	<b>PATIENT</b>	5.2	NA	NM	1.5	42	74	NM
	<b>CANINE CARDIAC PARAMETERS</b>	<b>HR</b> (BP M)	<b>AV VMAX</b> (m/s)	<b>PV MAX</b> (m/s)	<b>BODY WEIGHT</b> (kg)	<b>LA</b> 2D short axis Base view (cm)	<b>LVIDd</b> Avg; 2D and m-mode short axis (cm)	<b>LVIDs</b> 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>	100	2.3	1.6	13.3	2.1	3.6	2.1
	*Normal chamber parameters expressed as a mean value				3	1.27	2.46	1.36
	<b>BODY WEIGHT DEPENDENT PARAMETERS</b>				5	1.40	2.74	1.60
	*Note: All measurements based upon multi-modal images and methods. An average value is reported.				10	1.50	3.27	2.06
					15	1.83	3.71	2.43
					20	2.02	4.14	2.80
					25	2.18	4.48	3.10
					30	2.33	4.83	3.39
					35	2.48	5.17	3.69
					40	2.62	5.48	3.96
					50	2.88	6.07	4.46

**INTERPRETED BY**  
Maggie Machen  
Lamy, DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**  
Rebekah Jakum, CVT  
ARDMS/RVT

**HOSPITAL NAME**  
Alburtis AH  
**REFERRING VET**

Dr. Smith  
**INVOICE**  
30551  
**DATE**  
5/2/23

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**  
Chronic degenerative valve disease causing mild mitral regurgitation. Lack of 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.

These findings would suggest a noncardiac cause for cyanosis is likely. Consider respiratory disease as a potential explanation.



**PATIENT**

Pippi Amato

In a dog with no significant left atrial enlargement, no cardiac medications are clearly indicated. 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.

**SPECIES**

Canine

Anesthetic risk is considered mild. 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.

**BREED**

Terrier Mix

Recommend conservative monitoring with a recheck echocardiogram in 6-12 months, sooner if any development of clinical signs.

**SEX**

Female Spayed

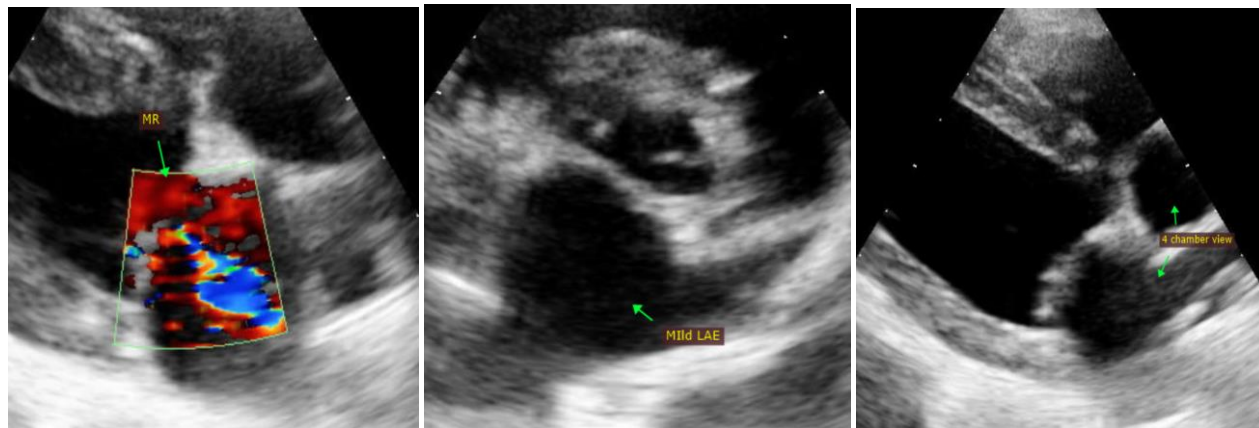
**AGE**

12 years

**WEIGHT**

29.3lbs

**IMAGES**



**INTERPRETED BY**

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

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.

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT ARDMS/RVT

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.

**Maggie Machen Lamy, DVM**  
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