



**PATIENT PRESENTING CLINICAL SIGNS**

Venom Spadoni  
History: Recheck echo. Presented for vomited, increased RE.  
-Current medications: Atenolol 6.25 BID, Lasix 40mg tapering dose.  
-Pertinent previous echo findings (8/2022 MML): Suspect mild LVOTO/SAS, mild RAE, significant RVH, dynamic RVOTO, PS without valve visualization.

**SPECIES**

Canine

**BREED**

Bulldog Mix

**SEX**

Female

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Mild thickening of the mitral valve with no obvious prolapse into the left atrial lumen. No obvious mitral regurgitation. Normal left atrial dimension. Normal LV diameter with normal myocardial function. The LV wall appears normal. Mild subaortic narrowing is suspected, although not extensively visualized. The tricuspid valve appears mildly thickened with trace TR. Mild right atrial dilation. Significant right ventricular hypertrophy and remodeling indicative of pressure overload. Right ventricle is mildly dilated. A dynamic RVOT obstruction is suspected. Pulmonic outflow velocities are elevated, although the max is suspected to be an underestimation. PV is not visualized. There is marked post-stenotic dilation of the main pulmonary artery and branches. Mildly elevated aortic outflow velocity. No obvious aortic insufficiency. No obvious cardiac shunts are present. No pericardial or pleural effusion noted.

**AGE**

4 years

**CARDIAC CHART**

**WEIGHT**

44lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT  
ARDMS/RVT

**HOSPITAL NAME**

Maple Hills VH

**REFERRING VET**

Dr. Eckman

**INVOICE**

32443

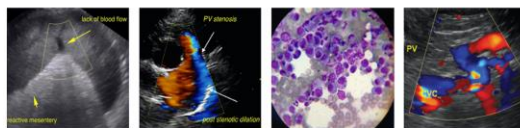
**DATE**

8/21/23

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>	NA	NM	NM	1.3	50	92	0.33
CANINE CARDIAC PARAMETERS	HR (BP M)	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>	NM	2.5	3.9	20.0	2.0	3.0	1.5
*Normal chamber parameters expressed as a mean value				3	1.27	2.46	1.36
BODY WEIGHT DEPENDENT PARAMETERS							
*Note: All measurements based upon multi-modal images and methods. An average value is reported.							
Adapted from June Boon, Veterinary Echocardiography, 1998				5	1.40	2.74	1.60
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435				10	1.50	3.27	2.06
Hansson et al, Vet Rad and Ultrasound 2002				15	1.83	3.71	2.43
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995				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

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Compared to the prior study, findings are similar. The pulmonic outflow velocity has improved, although this may be an underestimation. A positive response to Atenolol is also possible. The pulmonic valve remains elusive and unable to be extensively described. The right heart enlargement is similar to previous with significant hypertrophy, yet only mild RA dilation. No additional issues are identified.



**PATIENT**

Venom Spadoni

Given these findings, the respiratory changes are non-cardiac in origin. Right-sided CHF is not present with no effusions seen, although the abdomen is not evaluated for ascites. Based upon this, Lasix is unnecessary and should be discontinued. **Highly recommend repeat CXR for further evaluation.**

**SPECIES**

Canine

Continue Atenolol in this case lifelong. Referral should be considered, as was previously discussed. Monitor for development of associated clinical signs (collapse, abdominal distention, cough, labored breathing). Mild exercise restriction is advised.

**BREED**

Bulldog Mix

Anesthetic risk is mild to moderate at this time. Avoid heart rate stimulating drugs such as atropine or glycopyrrolate unless absolutely necessary. Avoid vasodilators such as acepromazine. Mild IV fluid restriction is advised. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction and recover in O2 if possible. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary.

**SEX**

Female

**PLAN**

Recommend referral as previously discussed. Baseline CXR are recommended to further evaluate respiratory issues. Continue Atenolol as prescribed. Discontinue Lasix.

**AGE**

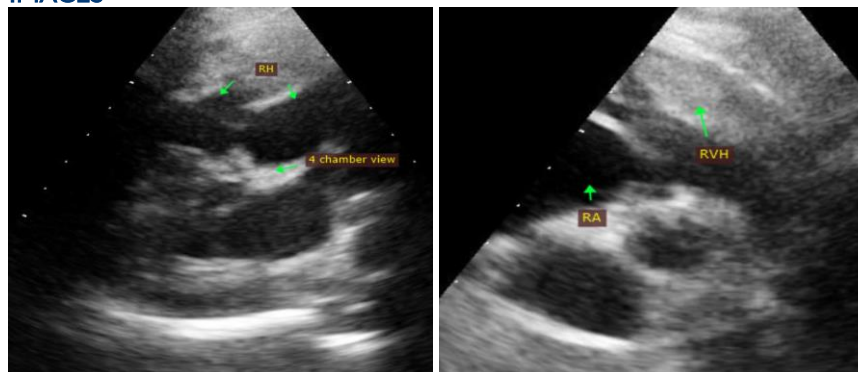
4 years

If referral is declined, recommend recheck echocardiogram in 1 year to assess for progression.

**IMAGES**

**WEIGHT**

44lbs



**INTERPRETED BY**

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT ARDMS/RVT

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.

**HOSPITAL NAME**

Maple Hills VH

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.

**REFERRING VET**

Dr. Eckman

Maggie Machen Lamy, DVM  
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)  
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