


**PATIENT**

Norman Noall

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Male Neutered

**AGE**

13 years

**WEIGHT**

14lbs

**INTERPRETED BY**

 Maggie Machen Lamy,  
 DVM DACVIM  
 (Cardiology)

**IMAGING PERFORMED BY**

Kelly Reschny, RVT

**HOSPITAL NAME**

 The Maples Animal  
 Hospital

**REFERRING VET**

Dr. Kazienko

**INVOICE**

20662

**DATE**

8/20/21

**PRESENTING CLINICAL SIGNS**

History: Recheck echo. Grade 5/6 heart murmur.

-Pertinent previous echo findings (2/2019 MML): Mild to moderate MR, mild LAE, normal LV, moderate TR: 1.5m/s. LA; 2.1, LV: 2.69.

**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. Mild to moderate eccentric mitral regurgitation with mild left atrial dilation. Mild LV dilation with adequate myocardial function. The tricuspid valve appears thickened with moderate tricuspid regurgitation. Borderline TR velocity. Normal right atrial and ventricular diameter and morphology. 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)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.4	2.8	1.2	1.5	54	87	NM
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	191	1.8	1.0	6.4	2.0	3.0	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)
<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 persists without evidence of significant progression. Quantitatively the MR and TR are similar to the prior study without significant change in LA dimension. The LV is increased; however, the overall progression given the time frame is mild. No additional issues are identified.



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Given these findings, no cardiac medications remain indicated at this time. Monitor for development of a worsening murmur, cough, labored breathing, exercise intolerance or collapse episodes. Omega fatty acid supplementation may be of some long-term benefit.

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Anesthetic risk remains 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.

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Recommend recheck echocardiogram every 6 months to monitor for progression, sooner if any development of clinical signs.

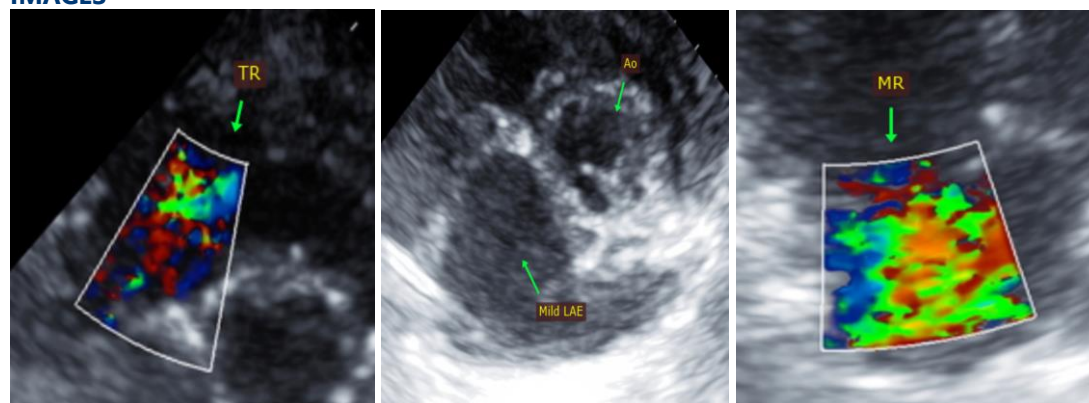
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**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

**HOSPITAL NAME**

The Maples Animal  
Hospital

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.

**REFERRING VET**

Dr. Kazienko

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