



## PATIENT

Oli Bon Jovi  
Lorenzana

## SPECIES

Canine

## BREED

Goldendoodle

## SEX

Male

## AGE

3 years

## WEIGHT

28.8lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING PERFORMED BY

G. Ferrer, DVM

## HOSPITAL NAME

Paseos Veterinary  
Center

## REFERRING VET

Dr. Simeonidis

## INVOICE

20830

## DATE

8/31/21

## PRESENTING CLINICAL SIGNS

History: The patient presented for an echocardiogram evaluation as a referral. Pt was diagnosed with high blood pressure in April 2021 ( at the ophthalmologist) when patient underwent surgery for a juvenile cataract. Patients BPs were 190-210mmHg and was started Amlodipine 2.5mg PO SID, Methazolamide 60mg: 1/2 SID, and Prednisone 5mg BID tapered x 3 weeks. On 8-2-2021 a cardiac arrhythmia was auscultated. PE: P: 150bpm R: panting CRT < 2secs Heart and lungs were wnl and nor murmurs were auscultated.

-Abnormal PE/Chem/CBC/UA Results: (8-31-21): BP was done Left recumbency right front limb with 5.5cm cuff: 177/90 mean 119 HR 139 169/86 mean 113 HR 136 156/88 mean 111 HR 143

-ECG (Idexx): Heart rate of 151bpm and rhythm was normal sinus rhythm.

## ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild mitral valve thickening with no prolapse into the left atrial lumen. Trivial mitral regurgitation with a normal left atrial dimension. Normal LV diameter with adequate myocardial function. No LV hypertrophy. 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 pulmonic or aortic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

## 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	NA	NA	NM	1.1	31	60	0.19
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	134	1.3	1.0	13.1	2.6	3.5	2.4
*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)

Adapted from June Boon, Veterinary Echocardiography, 1998  
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435  
Hansson et al, Vet Rad and Ultrasound 2002  
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995



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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

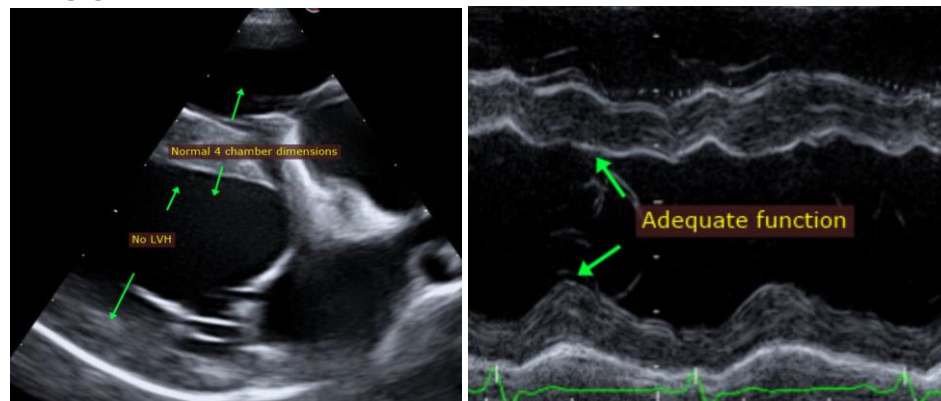
Overtly normal cardiac dimensions and function, with no obvious dysfunction or dilation of the left heart. No significant valvular leaks are visualized, and no evidence of pulmonary hypertension. Follow up is advised should a murmur be ausculted in the future. No additional issues are identified.

Hypertension is mentioned in the history which appears reasonably controlled based upon a stressed BP of 180mmHg. Presumably this is an active young dog which will always elevate these values. Hypertension in this age patient is surprising and consider screening for predisposing underlying causes (such as Cushings, PLN, adrenal tumor, etc.). Primary SHT is relatively uncommon and a rule out diagnosis. It is important to note that cardiac changes do not cause SHT; rather the opposite is true. Consultation with an Internist may be helpful in this case.

Monitor for development of a heart murmur, cough, labored breathing, exercise intolerance or collapse episodes.

A recheck echocardiogram is recommended should a significant murmur develop, or signs of cardiac compromise be noted in the future.

## 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**

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