



**PATIENT**

Charlie Pinot

**PRESENTING CLINICAL SIGNS**

History: Grade 2/6 heart murmur. Assess prior to spay.

**SPECIES**

Canine

**BREED**

Golden Retriever

**SEX**

Female

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Normal MV leaflets with no obvious prolapse. No mitral regurgitation. Normal left atrial dimension. Normal LV diameter with low normal myocardial function. Normal LV wall dimensions. The tricuspid valve appears subjectively normal, trace tricuspid regurgitation. The right heart is normal. No overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. No obvious aortic abnormalities identified, however the LVOT velocity is mildly elevated. Laminar flow. Pulmonic outflow velocities are normal. No aortic or pulmonic insufficiency. No obvious congenital shunts. No pericardial or pleural effusion noted. No cardiac tumors observed.

**CARDIAC CHART**

**AGE**

7 months

**WEIGHT**

44.2lbs

**INTERPRETED BY**

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT ARDMS/RVT

**HOSPITAL NAME**

Maple Hills Veterinary Hospital

**REFERRING VET**

Dr. Eckman

**INVOICE**

24480

**DATE**

5/31/22

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	1.2	25	50	0.3
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	NM	2.3	1.4	20.0	2.4	3.8	2.5
*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)
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							

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The only cause of a murmur identified is mildly increased flow velocity through the aortic root. The aortic valve is not extensively visualized; however, no obvious subaortic ridge or valvular abnormalities are visualized. In the absence of structural abnormalities this is considered a benign flow murmur. This should be monitored as the puppy matures, as there is room for progression prior to 1 year of age. This type of outflow abnormality is heart rate dependent and will vary with hydration/volume changes as well. No obvious congenital shunts or defects are observed in this study; however, it is important to note that small abnormalities are easily missed without advanced diagnostics.



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Charlie Pinot

No cardiac medications are indicated at this time. Monitor for any development of cough, labored breathing or exercise intolerance.

**SPECIES**

Canine

No cardiac contraindication for general anesthesia is seen.

Assuming the murmur persists, recommend recheck echocardiogram in 6-12 months to ensure no progressive issues are seen, sooner if any clinical signs arise in the interim.

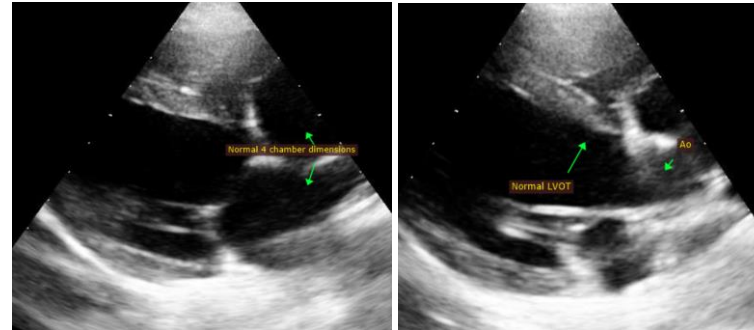
**BREED**

Golden Retriever

**IMAGES**

**SEX**

Female



**AGE**

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**WEIGHT**

44.2lbs

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.

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

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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