



## PATIENT

Gus Conlon

## PRESENTING CLINICAL SIGNS

History: Grade 2 murmur identified at 12 weeks of age. Asymptomatic. Mildly sedated with butorphanol.

## SPECIES

Canine

## ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Normal mitral valve leaflets with no prolapse into the left atrial lumen. Trace mitral regurgitation with no left atrial dilation. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with trace tricuspid regurgitation. Normal velocity. 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. The LVOT appears mildly narrowed, potentially suggesting trivial SAS. Trace aortic and pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

## BREED

Golden Retriever

## SEX

Male Intact

## AGE

4 months

## CARDIAC CHART

## WEIGHT

31.7lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

| 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   | NM            | 2.11          | NM                  | 1.3                     | 34                              | 65                                       | 0.59                                     |
| 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   | 115           | 1.51          | 1.0                 | 14.4                    | 2.0                             | 2.8                                      | 1.6                                      |
| *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

## IMAGING PERFORMED BY

S. Barthelemy, DVM

## HOSPITAL NAME

Signal Hill Animal  
Clinic

## REFERRING VET

Dr. Cumyn

## INVOICE

29045

## DATE

2/16/23

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac structure and function with no cause of a murmur identified. Trace leaks are noted in all 4 valves; however, none are hemodynamically significant. This degree of MR/TR would be unlikely to be heard on exam. The LVOT does appear mildly narrowed, which in addition to a small insufficiency may suggest a trivial sub-aortic stenosis. The patient is relatively bradycardiac likely secondary to sedation which may be masking murmur origin. Follow up is recommended to screen for any progression. No obvious shunts or other congenital defects are visualized. It is worth noting that small defects are easily missed and referral to a local cardiologist should always be considered (particularly without a murmur origin identified).



**PATIENT**

Gus Conlon

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.

**BREED**

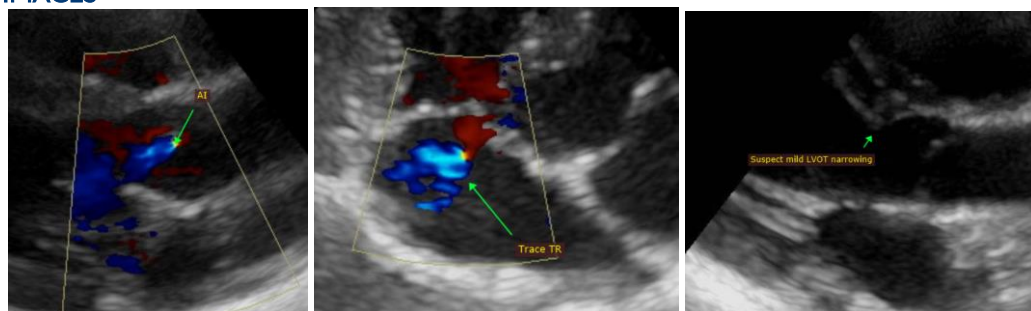
Golden Retriever

Recommend recheck echocardiogram at 9-12 months of age to reassess murmur origin (ideally without sedation).

**IMAGES**

**SEX**

Male Intact



**AGE**

4 months

**WEIGHT**

31.7lbs

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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