



**PATIENT**

Mable Eptler

**SPECIES**

Canine

**BREED**

Golden Retriever

**SEX**

Intact Female

**AGE**

6 months

**WEIGHT**

39.8 lbs.

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Kim Liedberg

**HOSPITAL NAME**

SVS Imaging WI

**REFERRING VET**

American VH

**INVOICE**

12925

**DATE**

12/29/21

**PRESENTING CLINICAL SIGNS**

4/6 heart murmur noted during PE for spay. This pup is from a litter that had 2 other puppies with heart murmurs. Echos done previously with dx of aortic stenosis.

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

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>		<2.0	--	1.38	34.1	67.5	0.15
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)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
<b>PATIENT</b>	103	2.4	0.8		3.3	2.9	

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated subjective turbulent systolic flow with dynamic profile. Subjectively, the aortic valve appeared to be sonographically unremarkable without evidence of thickening or other overt pathology. Aortic valve insufficiency was present on color doppler assessment of the LV outflow tract. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.



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**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

- Mild elevated LV outflow velocity with mild AV insufficiency - consistent with likely mild subaortic / aortic stenosis

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The cause of the murmur is most likely consistent with mild subaortic / aortic stenosis. No other evidence of valvular insufficiencies, additional stenotic disease, or overt shunts were noted, given the overall normal left and right heart volume and lack of left or right heart chamber enlargement. No overt evidence of secondary effects i.e., LV hypertrophy, owing to likely subaortic / aortic stenosis is noted at this time. Potentially, the reported higher-grade murmur may indicate underestimation of the LV outflow velocity. However, the overall heart appears to be overtly normal in structure and function at this time. Anesthetic risk is considered mild. Consultation with a veterinary cardiologist or anesthesiologist prior to anesthesia could be considered. Anesthetic protocol would be appropriate. Conservative monitoring at this stage would be appropriate without indication for cardiac medications. Recheck echocardiogram in 3-4 months is recommended.

Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.

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<https://www.antechdiagnostics.com/cadet-braf>

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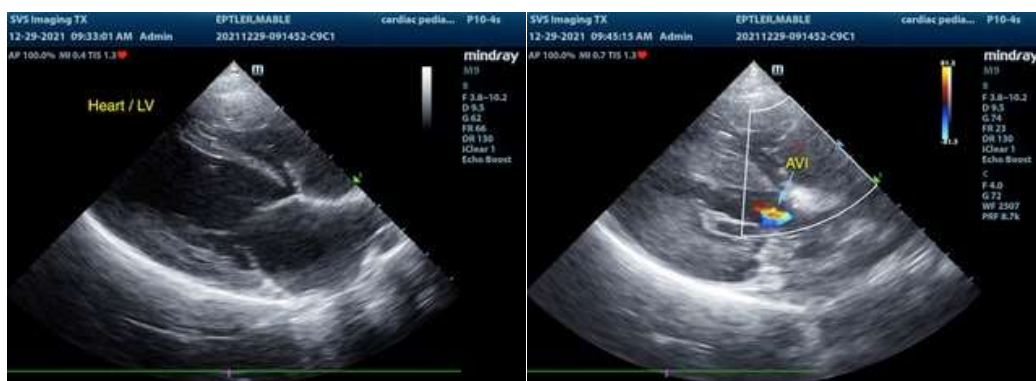
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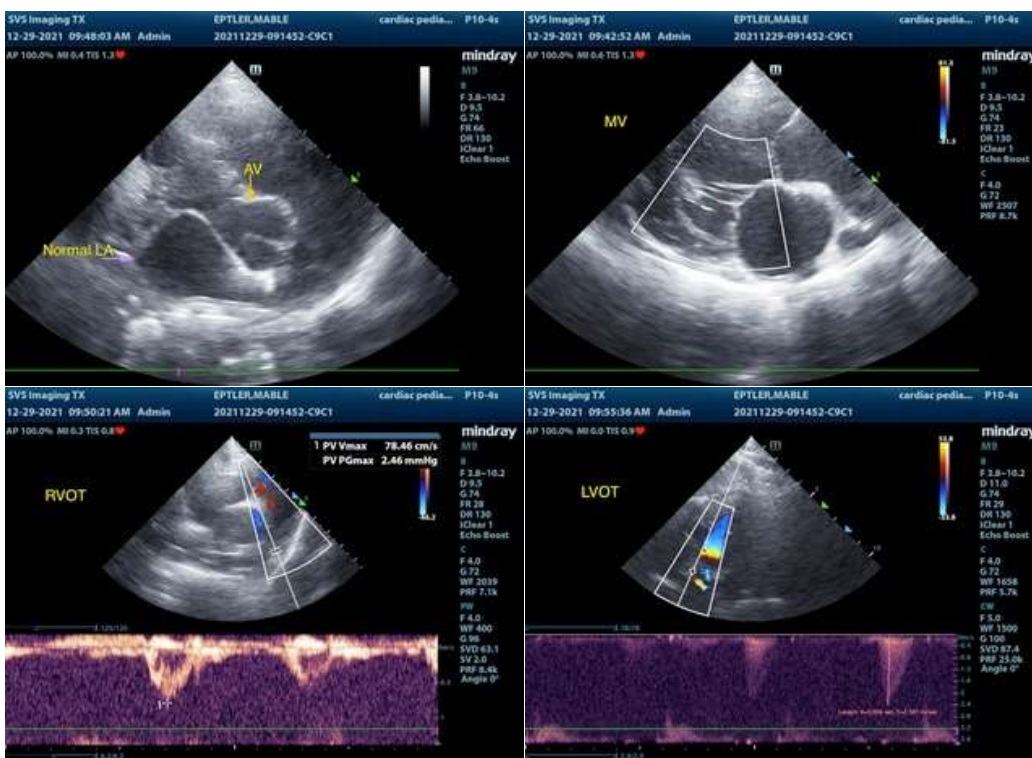
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**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**  
info@SonoPath.com