



## PATIENT

Jake Fitts

## SPECIES

Canine

## BREED

Labrador X

## SEX

MN

## AGE

7 years

## WEIGHT

70.7 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Sara Hansen

## HOSPITAL NAME

Albany Animal  
Hospital

## REFERRING VET

Dr. Fletcher

## INVOICE

13758

## DATE

4/28/22

## PRESENTING CLINICAL SIGNS

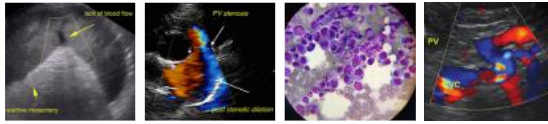
Mild heart murmur

## 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)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT			1.34	1.3	40.9	75.1	0.44
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				
PATIENT	94	1.6	1.1		4.8	4.4	

## Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented mild subjective thickening which is suggestive of mild endocardiosis. No evidence of valvular prolapse was noted. Doppler indicated mild eccentric insufficiency. 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 normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology. Minor TR on doppler was noted. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** 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. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.



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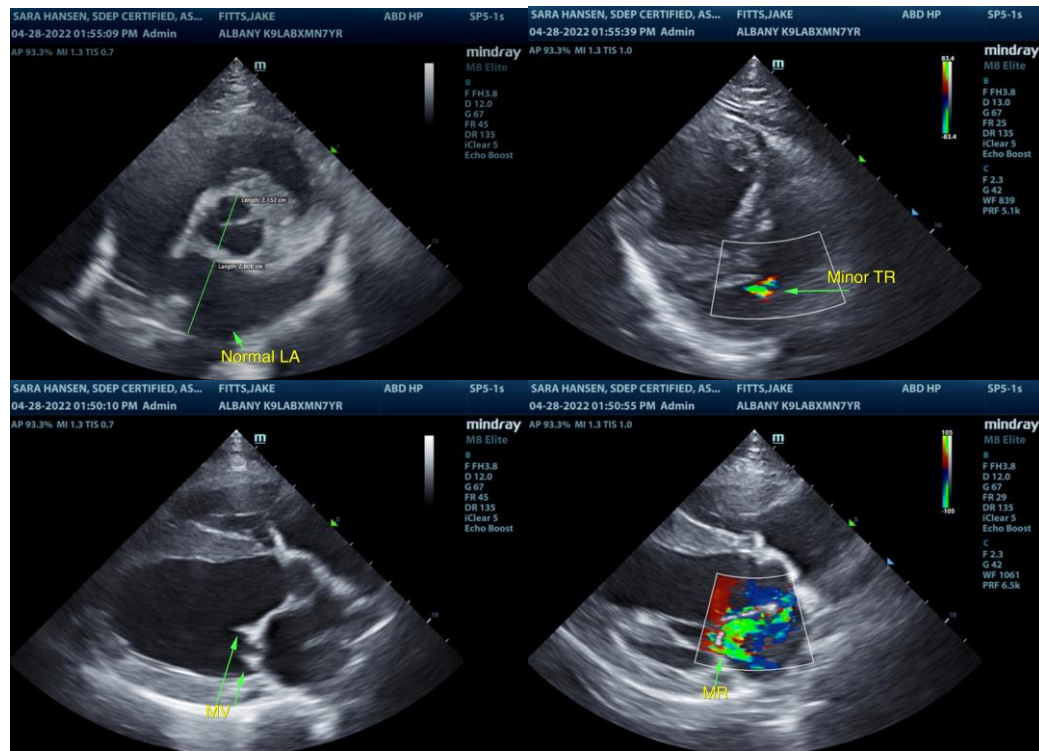
**ULTRASONOGRAPHIC FINDINGS**

- Overtly normal cardiac structure and function
- Mild MR / TR

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No evidence of significant structural or functional cardiomyopathy. The cause of the murmur is most likely secondary to mild mitral valve Insufficiency. No other clinical issues such as LV systolic dysfunction or clinical pulmonary hypertension, as well as no evidence of additional significant valvular insufficiencies, were present. This finding may indicate early chronic degenerative mitral valve changes. The lack of left atrium enlargement indicates that the relative risk of complication at this stage is low.

In a nonclinical patient without evidence of significant cardiac changes, medications are not overtly indicated. However, serial sonographic monitoring is required for further prognosis. Recheck echocardiogram is suggested in 6 months, sooner if clinical signs arise.





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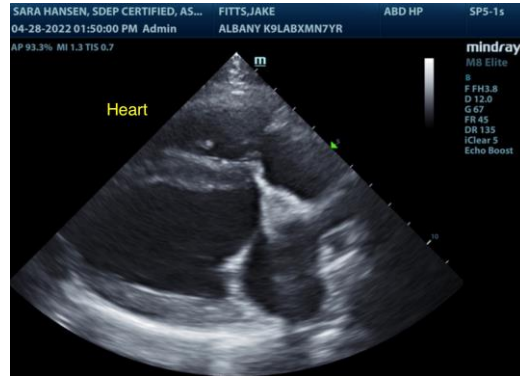
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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