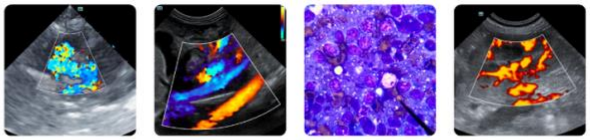

PATIENT

Cade Smith

SPECIES

Canine

BREED

Doberman Pinscher

SEX

Male

AGE

19 Months

WEIGHT

74.1 Pounds

INTERPRETED BY

Eric Lindquist, DMV, DABVP (CFM), Cert. IVUSS

IMAGING PERFORMED BY

Dr. Harold Mike Beard

HOSPITAL NAME

Animal Care VC

REFERRING VET

Dr. Harold Mike Beard

INVOICE

35731

DATE

12/2/25

PRESENTING CLINICAL SIGNS

History: 10/29/25 scan done due to heart murmur 3/6 not heard on previous exams. ECB = VPCs and variable heart rate (arrhythmia).

Abnormal PE/Chem/CBC/UA Results: Grade 2 Pulmonic murmur, heart rate of 120, occasional VCP.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	**MR VMAX** (m/s)	**TR VMAX** (m/s)	**LA/AO** (M-Mode)	**LA/AO** (Heart Base; Swe)	**FS** (%)	**EF** (%)	**EPSS** (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT			1.1	1.3	35	90	0.1
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (lb)	**LAD** LA MAX 4 Chamber	**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	--		.90	74.1	3.7	3.6	--

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 normal laminar flow and subjective structural integrity. 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. Periodic arrhythmia was noted in this patient. Holter monitor would be ideal given the breed and clinical presentation. The hepatic veins were not dilated.

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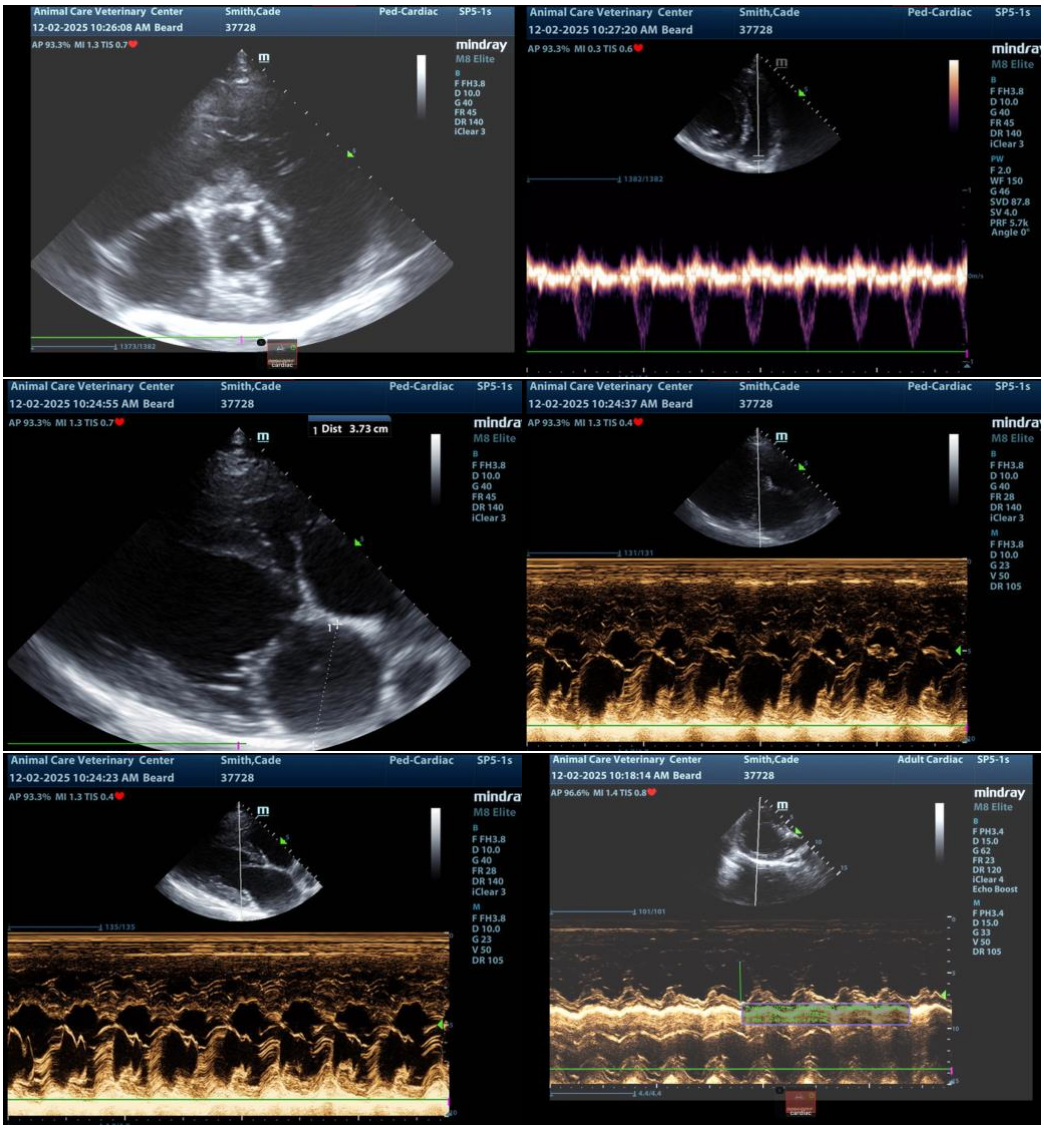
ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram
- The exact cause of the murmur was unclear

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Further color flow doppler assessment of the mitral and tricuspid valve, and spectral and color flow assessment of the aortic outflow is necessary, as acoustic interference was present on those views. No evidence of volume overload or pressure overload. I'm more concerned about arrhythmogenic disease at this time in this patient. I'm presuming that the murmur is likely mitral valvular disease yet there is no volume overload at this time. Management should be based on arrhythmogenic disease.



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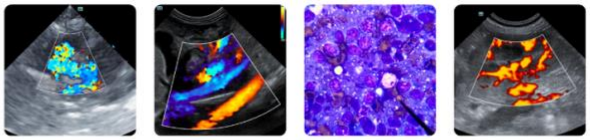

Clinical Sonography & Telecytology
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video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

Eric Lindquist, DMV, DABVP(CFM), Cert. IVUSS,
CEO, Owner, Founder -- SonoPath.com
info@SonoPath.com