



**PATIENT**

Drax Daves

**SPECIES**

Canine

**BREED**

Boxer Mix

**SEX**

Neutered Male

**AGE**

6 Years 6 Months

**WEIGHT**

85.6 Pounds

**INTERPRETED BY**

Sara Brethel, DVM,  
 DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Kathleen Byrnes

**HOSPITAL NAME**

AH of Lake Brandt

**REFERRING VET**

Dr. Wallace

**INVOICE**

35414

**DATE**

1/15/26

**PRESENTING CLINICAL SIGNS**

History: P presented for Echo due to new murmur and ProBNP 1500 BP 80-102 6 measurements.

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

<b>CANINE CARDIAC PARAMETERS</b>	<b>MR VMAX (m/s)</b>	<b>TR VMAX (m/s)</b>	<b>LA/AO (M-Mode)</b>	<b>LA/AO (Heart Base; Swe)</b>	<b>FS (%)</b>	<b>EF (%)</b>	<b>EPSS (cm)</b>
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
<b>PATIENT</b>	Underest	2.5	1.26	1.42	31.47	--	NM
<b>CANINE CARDIAC PARAMETERS</b>	<b>HR (BPM)</b>	<b>AV VMAX (m/s)</b>	<b>PV MAX (m/s)</b>	<b>BODY WEIGHT (kg)</b>	<b>LAD LA MAX 4 Chamber</b>	<b>LVIDd Avg; 2D and m-mode short axis (cm)</b>	<b>LVIDs Avg; 2D and m-mode short axis (cm)</b>
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	126	1.56	1.0	38.9	4.1	4.67	3.2

**Cardiac Presentation**

The mitral valve leaflets appear of normal thickness and there is mild mitral regurgitation. There is no prolapse of the mitral valve leaflets. The left atrial size is at the upper limits of normal. Subjectively, there is eccentric left ventricular hypertrophy, however, systolic and diastolic function on M-Mode is within normal limits in the face of mitral regurgitation. There is normal right atrial size with trivial evidence of tricuspid regurgitation. There is no prolapse of the tricuspid valve leaflets and no evidence of significant pulmonary hypertension. Subjectively, the right ventricle appears normal in structural and function. The aortic and pulmonic valves have normal morphology and normal corresponding outflow velocities. There is no evidence of pulmonic or aortic insufficiency. The aorta appears normal. The pulmonary artery and associated branches appear normal. There is a region of increased continuous turbulence at the level of the heart base in the region of the ductus. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.

**ULTRASONOGRAPHIC FINDINGS**

- Mitral regurgitation
- Subjective eccentric left ventricular hypertrophy
- Tricuspid regurgitation
- Continuous flow at the level of the heart base



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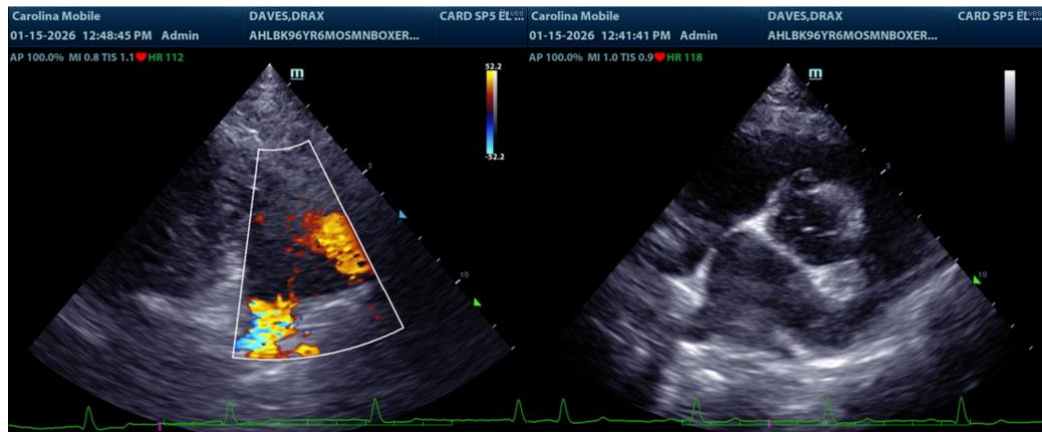
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

There is continuous flow at the level of the heart base, and the source is unknown. Given the location, there is concern for a possible patent ductus arteriosus. There is also mitral regurgitation and tricuspid regurgitation. The source of the mitral regurgitation is not entirely known. There appears to be subjective eccentric hypertrophy, however, M-Mode measurements are normal. Volumetric measurements cannot be obtained. If there is a PDA that could be causing some eccentric hypertrophy and causing mitral regurgitation, along with tricuspid regurgitation, if there is a PDA, it is likely they're small, given the patient's age. Repeat imaging of the ductal area is recommended to further investigate this region of continuous flow. I would consider referral to a cardiologist for an additional echocardiogram and a further work up. If not moving forward with a referral to a cardiologist, then try to obtain more images in the region of the ductus, to try and get better information about whether or not a PDA is present. At this time, no medications re indicated and pending additional evaluation of the ductus would determine further recommendations.



**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.

Sara Brethel DVM, DACVIM (Cardiology)

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