



**PATIENT**

Jax VanDenbergh

**SPECIES**

Canine

**BREED**

Great Dane

**SEX**

Male Neutered

**AGE**

5.8 years

**WEIGHT**

127lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

T. Tenorio, DVM

**HOSPITAL NAME**

Wauwatosa  
Veterinary Clinic

**REFERRING VET**

Dr. Oakes

**INVOICE**

23446

**DATE**

4/5/22

**PRESENTING CLINICAL SIGNS**

History: Patient presented for an exam to check teeth and a dental cleaning was recommended. A ProBNP was run with preanesthetic blood work. ProBNP was elevated.  
-Abnormal PE/Chem/CBC/UA Results: ProBNP: 1360.

**RADIOGRAPHIC FINDINGS** \*NOTE: Images submitted for supplemental cardiac information only.  
Normal cardiac silhouette. No obvious evidence of CHF.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no obvious prolapse into the left atrial lumen. Trivial central mitral regurgitation with no left atrial dilation. Normal LV dimension in diastole (LVIDdN: 1.64) with a mild increase in systole (LVIDsN: 1.2). Mild decline in systolic function. The tricuspid valve appears normal with trivial tricuspid regurgitation. 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. Mildly decreased pulmonic and aortic outflow velocities with laminar flow. No AI or PI. No pericardial or pleural effusion noted. No obvious cardiac masses.

**CARDIAC CHART**

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>			NM	1.2	20	36	0.7
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>	NM	1.9	1.3	57.6	3.0	5.4	4.3
*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)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Mild left heart changes are identified, with mild systolic dysfunction. The LV dimension is normal in diastole with a mildly increased systolic dimension and mildly decreased fractional shortening. No additional issues are identified, and the LA is normal, indicating a low risk for complication at this time. A baseline ECG and BP are strongly recommended, particularly prior to anesthesia.



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While primary disease is suspected in this predisposed breed, consider ancillary causes that may be treatable. Given the recent evidence of grain free/boutique diets leading to DCM in some (but certainly not all) dogs, highly recommend a thorough diet history in this patient. If grain free or boutique brand, recommend immediate change to a more standard well formulated diet. A taurine supplement is also recommended. Additionally, hypothyroidism can cause decreased myocardial function, and this patient's T4 is borderline. A full thyroid panel is recommended if not submitted. No medications are indicated.

Monitor for development of a heart murmur, cough, labored breathing, exercise intolerance or collapse episodes. Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.

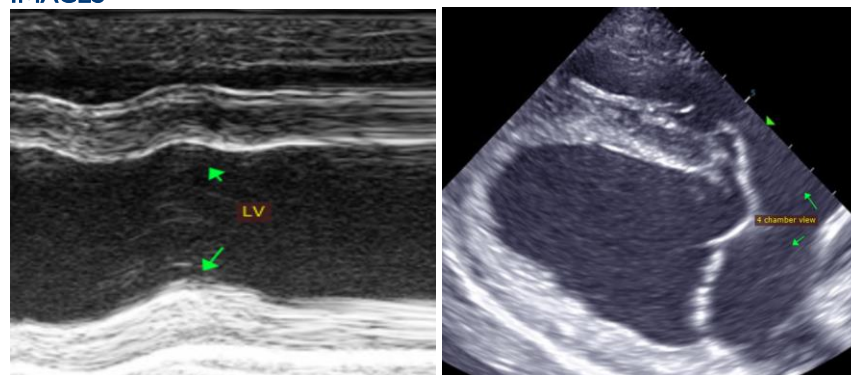
Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

**PLAN**

Diet history recommended as discussed. Recommend taurine supplement, 1000mg PO q12h. Consider full thyroid panel. Baseline ECG/BP.

Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs or a heart murmur.

**IMAGES**



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. 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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