



**PATIENT**

Opie Miller

**SPECIES**

Canine

**BREED**

Pitbull Cross

**SEX**

Neutered male

**AGE**

4 years

**WEIGHT**

81 lbs

**INTERPRETED BY**

Bradley Harris, DVM,  
DACVECC, DACVIM  
(cardiology)

**IMAGING PERFORMED BY**

Sara Hansen

**HOSPITAL NAME**

Aumsville AC

**REFERRING VET**

Dr. Remy

**INVOICE**

75343

**DATE**

5/12/26

**PRESENTING CLINICAL SIGNS**

Recent onset quiet 2/6 L sided systolic murmur. Originally heard 3/27/26, rechecked and heard again 4/24/27. No clinical signs.

HR 110; RR panting  
Grade II/VI left sided systolic murmur

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

The left atrium is normal in dimension. The left ventricle measure normal in dimension (both diastolic and systolic), with a borderline to marginally decreased fractional shortening. Subjectively, the left ventricle appears mildly dilated with a slightly reduced systolic function. The right atrium and ventricle are normal in dimension, with normal systolic function. The anterior and posterior mitral valve leaflets are appropriately thin with adequate apposition, intact chordae, and there is no significant prolapse. There is mild mitral regurgitation identified. The tricuspid valve leaflets are appropriately thin with adequate apposition, intact chordae, no significant tricuspid regurgitation and no evidence of pulmonary hypertension. The left ventricular outflow tract demonstrated normal laminar flow and the visible aorta is unremarkable. The right ventricular outflow tract assessment revealed normal laminar flow, with appropriate main pulmonary artery diameter and right pulmonary artery distensibility. There is no pulmonic and no aortic valve insufficiency identified. There is no visible pericardial, pleural, or free peritoneal fluid documented. No evidence of hepatic venous congestion is noted. The cardiac chambers, pericardial and visible extra-cardiac regions were free of masses, spontaneous echo contrast, or thrombi

CANINE CARDIAC PARAMETERS	Body Weight kg	HR BPM	LAD 4 ch Long	RAD 4 ch Long	La/Ao Heart Base	LVIDd	LVIDs
NORMAL PARAMETER		50-100			<1.6		
PATIENT	36.82 kg	NM	4.77	3.42	1.01	4.98	3.9
CANINE CARDIAC PARAMETERS	FS	EPSS	PV V MAX (m/s)	AV V Max (m/sec)	MR Vmax	TR Vmax	RPA distensibility (normal >30%)
NORMAL PARAMETER	28-40	<0.6	0.7-1.6	0.7-1.7	4.5-5.5	< 2.7	
PATIENT	22	0.5	1.3	2.4	5.0	NM	NM

**ULTRASONOGRAPHIC FINDINGS**

These findings are most consistent with a functional murmur, with increased velocity in both the left and right ventricular outflow tracts. Given the marginally reduced LV function in the setting of a subjectively enlarged LV (despite normal measurements), intrinsic myocardial dysfunction (ie DCM) is a concern. While it is possible that this is a variant of normal, the degree of dysfunction may also be real. Other possibilities, including primary valve disease with secondary ventricular changes or myocardial depressant effects of systemic disease must also be considered. It would also be important to verify that the owners are not feeding a grain free diet, as a secondary nutritional cardiomyopathy would then also be considered likely



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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The degree of ventricular changes do not necessarily warrant therapy, nor is there an overt contraindication for anesthesia (if surgery is needed). A follow-up echo is recommended in 3 months. In the meantime, the owners should watch for any signs of coughing, respiratory difficulty, exercise intolerance/weakness, as a sooner evaluation may be needed. If the owners are feeding a grain free diet, an immediate diet change would be necessary, and the addition of taurine (50 mg/kg BID) would be appropriate.

The following sources for supplemental taurine are recommended:  
Mega taurine caps by Twinlab (1000mg capsule)  
Taurine by Swanson Health Products (500mg capsule)  
Taurine by NOW foods (500mg capsule)  
Taurine 500 by GNC (500mg tablet)

Anesthesia considerations:

If anesthesia is necessary, then alpha-2 agonists, ketamine, high dose acepromazine, and Telazol should be avoided. Fluid therapy during anesthesia should be considered at a reduced rate (e.g., 5 ml/kg/hour) if possible (i.e., if not hypotensive). A shorter anesthetic duration will reduce the risk of complications. Pre-oxygenation is advised. Premedication with an opioid (i.e., butorphanol, hydromorphone, oxymorphone) with or without a benzodiazepine is generally the safest protocol. An induction agent such as Propofol, alfaxalone, or diazepam/etomidate can be used to effect. Maintenance of anesthesia with isoflurane or sevoflurane is reasonable. Dobutamine (2.5-10 µg/kg/min as a CRI, starting at 2.5 µg/kg/min and increasing the dosage incrementally) may be used in lieu of fluid boluses to augment systemic blood pressure.

Diet:

A high-quality food from Hills, Royal Canin, Science Diet, Eukanuba, Iams, or Purina that is highly palatable with adequate protein and calories for maintaining optimal body condition. Consider omega-3 fatty acid supplementation. Ensure the patient is not currently receiving a boutique, exotic, or grain-free diet.

Activity:

Moderate physical activity (meandering walks, exploring the backyard, playing with toys inside, getting excited when family gets home, etc.) is encouraged, but periods of strenuous aerobic activity (jogging, strenuous outdoor ball play, prolonged play at the dog park, etc.) should be avoided, especially during periods of high heat (> 80 F) and humidity. Dogs with heart disease tend to tolerate cool and cold temperatures much better than high temperatures. Avoid sudden increases in activity (e.g. 2 block walks during the week but 2 mile walks followed by 30 minutes at the dog park on the weekends) as this may be difficult for the cardiovascular system to deal with.



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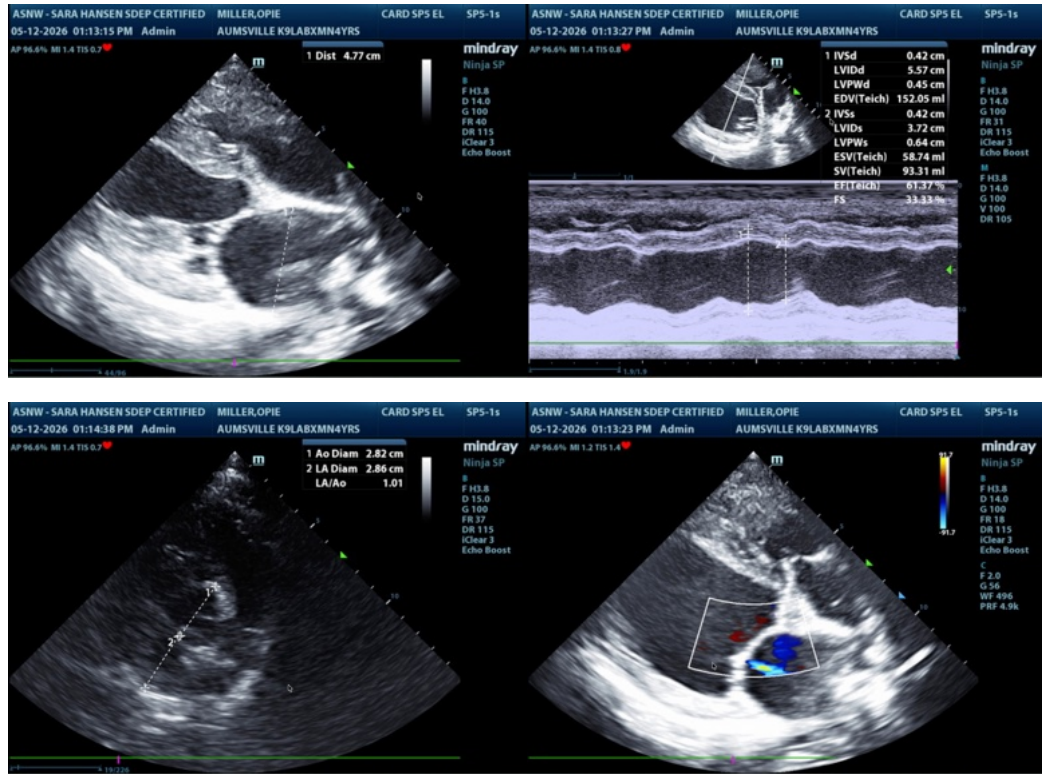
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

[info@SonoPath.com](mailto:info@SonoPath.com)