



PATIENT

Daisy Bartosic

SPECIES

Canine

BREED

Chihuahua Mix

SEX

Spayed Female

AGE

10 years

WEIGHT

12 lbs

INTERPRETED BY

Bradley Harris, DVM,
DACVECC, DACVIM
(cardiology)

IMAGING PERFORMED BY

Dr. Jennifer Todd

HOSPITAL NAME

Lambs Gap Animal
Hospital

REFERRING VET

Dr. Jennifer Todd

INVOICE

10709

DATE

11/7/2025

PRESENTING CLINICAL SIGNS

Daisy is a ten year old, FS, Chihuahua mix with a history of grade IV/VI left sided heart murmur. Her last echo was on 5/13/25 and read by Dr. Machen Lamy. Daisy's current medications are vetmedin 1.25 mg PO Q12 hours and Nordic Naturals Omega 3 Pet fish oil. Daisy's owner reports no cough, exercise intolerance or cough. At home sleeping respiratory rate is averaging 15. ECG is attached as a pdf to be included in this study Blood pressure today was: 131/71, 131/73, 129/76.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	BW	HR BPM	LAD 4 ch Long	RAD 4 ch Long	La/Ao Heart Base	LVIDd	LVIDs
NORMAL PARAMETER		50-100			<1.6		
PATIENT	5.45 kg	90	3.29	NM	1.69	2.3	1.13
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	51	0.1	0.7	1.3	4.3	NM	44%

Cardiac Presentation

The left atrium is mild to moderately enlarged. The left ventricle is normal in dimension, with normal systolic function. The right atrium and ventricle are subjectively normal in dimension and systolic function. The mitral valve is thickened and redundant consistent with myxomatous changes, and there is moderate prolapse. There is evidence of moderate mitral regurgitation. The tricuspid valve leaflets are thickened and redundant with mild 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, and appropriate diameter and distensibility. There is no evidence of semilunar valve insufficiency. There is no visible pericardial, pleural, or free peritoneal fluid noted. The cardiac chambers, pericardial and visible extra-cardiac regions were free of masses, spontaneous echo contrast, or thrombi.

ECG:

There is a single-lead ECG available for review. The underlying rhythm appears mildly irregular with variation in the R-R interval consistent with respiratory variation with an average rate of 90 bpm. The rhythm is sinus in origin (PQ 40ms) with narrow QRS complexes (< 70ms). There is no overt evidence of atrioventricular block or ventricular ectopy. This is most consistent with a sinus arrhythmia (normal physiologic change).

ULTRASONOGRAPHIC FINDINGS



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- These findings are consistent with degenerative/myxomatous mitral valve disease with moderate hemodynamic effects consistent with ACVIM Stage B2. There appears to have been mild progression since the previous evaluation.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the degree of chamber dilation, cardiac therapy with enalapril (0.5 mg/kg BID assuming normotension and lack of renal insult) with continued Vetmedin (0.25-0.35 mg/kg BID) is recommended. While there is an increased risk of IV fluids, corticosteroids, or anesthesia, there is no overt objection, as the need likely outweighs the risks. If not already performed, baseline thoracic radiographs and blood pressure are recommended. A repeat chest X-rays, BP, and chemistry should be performed again in 1-2 weeks. A repeat echo is indicated in 6 months. Consideration could be given to mitral valve repair (open heart surgery or transcatheter edge to edge repair). Owners should monitor resting respiratory rate at home. Values above 30 breaths/minute or an increase in respiratory rate 10% above baseline should prompt veterinary re-evaluation.

Anesthesia considerations:

While there is no CHF present, there is likely an increased anesthetic risk which must be considered prior to any anesthetic procedure. If anesthesia is necessary, then alpha-2 agonists, ketamine, high dose acepromazine, and Telazol should be avoided. If an ACE inhibitor (enalapril, benazepril) or spironolactone is being given, it should not be administered on the morning of general anesthesia. Other cardiac medications should be administered per the normal dosing schedule. Fluid therapy during anesthesia should be considered at a reduced rate (e.g., 5 ml/kg/hour) if possible. 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 an optimal body condition is recommended. Consider omega-3 fatty acid supplementation. Avoid any boutique, exotic, or grain-free diets.

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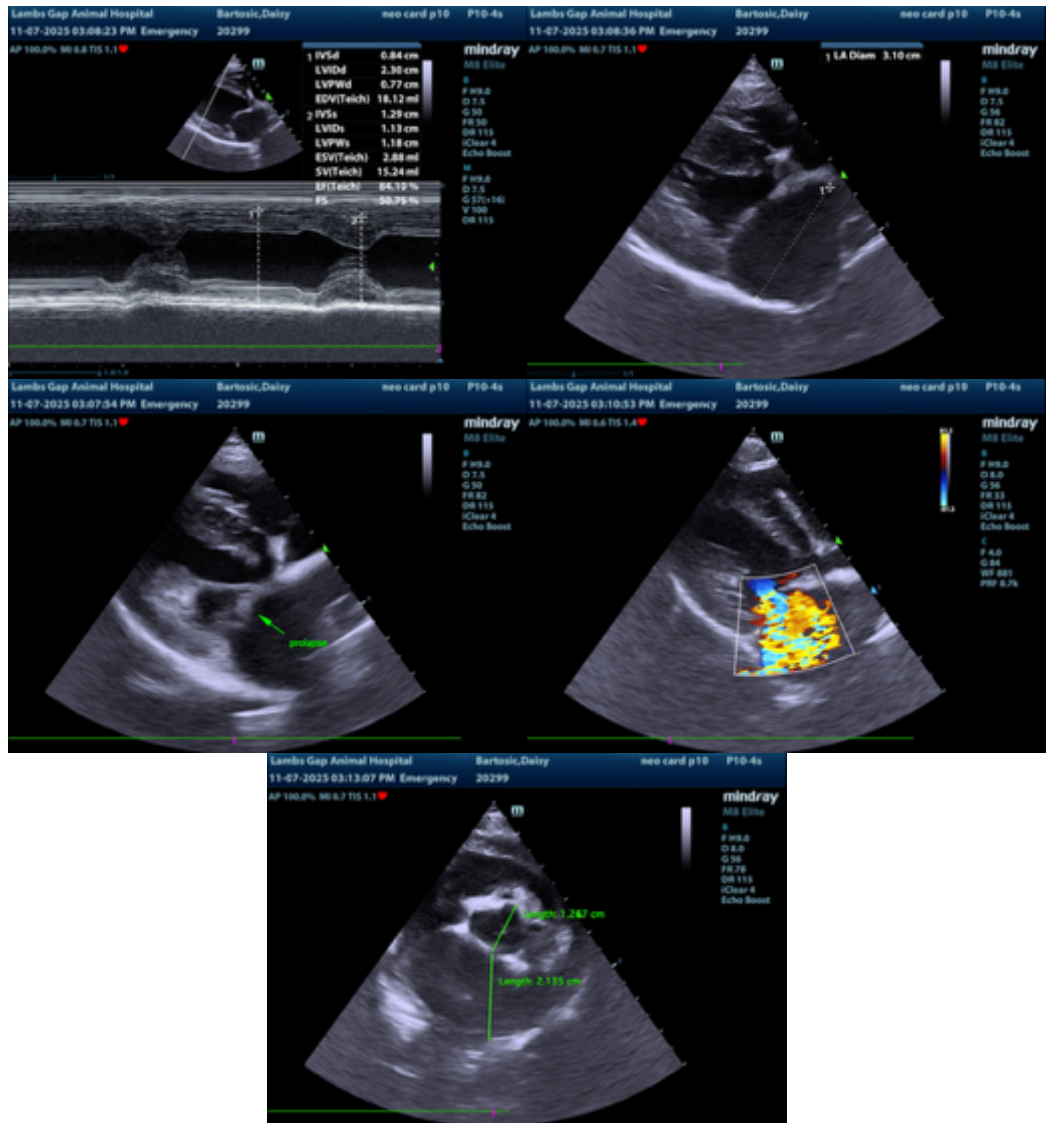
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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