PATIENT

Jazmine LightheartWest

SPECIES

Canine

BREED

Chiahuahua

SEX

Spayed Female

AGE

10 Years

WEIGHT

7 pounds

INTERPRETED BY

Sara Brethel DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Amanda Stewart

HOSPITAL NAME

Dover Animal Hospital

REFERRING VET

Dr. Foster

INVOICE

14949

DATE

04/08/26

PRESENTING CLINICAL SIGNS

Hx of coughing since January 2026 - has been ongoing but we only started seeing them in 2026. Anything can set cough off, barking, stretching, laying on chest, etc. Sounds wheezy. still e/d fine. Had good improvement on diuretics but still occasional cough. Grade 4 Left systolic heart murmur unchanged. March 17, 2026: rough night, had sudden nosebleed, diff breathing, lots of sneezing and rev sneeze, uncomfy, tongue not always fully pink. Sent more furosemide and that seems to help. was feeling much better 3 days post appt. Discussed US at recheck, no new concerns, heart doing much better!

Current Medications: Furosemide 20mg - 1/2 tab PO BID

Abnormal PE/Chem/CBC/UA Results: ECG attached Primary Question to Be Answered in This Exam Assess to determine stage of heart disease and what adequate treatment would be recommended.

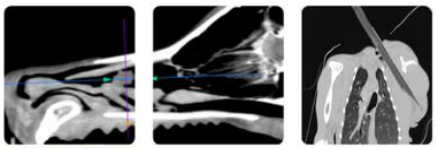
ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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	6.0	3.21	1.77	1.89	55.68	--	NM
CANINE CARDIAC PARAMETERS	**HR** (BPM)	**AV VMAX** (m/s)	**PV MAX** (m/s)	**BODY WEIGHT** (kg)	**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	NM	0.97	0.59	3.18	2.63	2.55	1.13

Cardiac Presentation

The mitral valve leaflets are moderately thickened with moderate mitral regurgitation posteriorly directed. There is moderate prolapse of the mitral valve leaflets. The left atrial size is moderately to severely increased. Left ventricular internal dimensions during diastole are increased and systolic function is preserved in the face of mitral regurgitation. There is normal right atrial size with mild tricuspid regurgitation. There is **no** prolapse of the tricuspid valve leaflets and mild pulmonary hypertension based upon tricuspid regurgitant velocities. The right ventricle subjectively appears normal in structure and function. The aortic and pulmonic valves have normal morphology and the corresponding outflow velocities are within normal limits. There is no evidence of pulmonic or aortic insufficiency. The aorta appears normal. The pulmonary artery and associated branches appear normal. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.

ECG



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Sinus rhythm with occasional baseline artifact.

ULTRASONOGRAPHIC FINDINGS

- Degenerative valve disease with moderate to severe left atrial enlargement.
- Mild subclinical pulmonary hypertension.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The patient has degenerative valve disease, ACVIM suspect stage B2. Given the history of coughing and no history of respiratory distress, it does not appear that the patient has experienced an episode of congestive heart failure, therefore it is not entirely clear if the patient requires diuretic therapy.

Often, furosemide can help with coughing due to decreasing left atrial pressures and acting as a mild anti-inflammatory, but this is not a recommended cough suppressant. Pimobendan (Vetmedin) therapy is indicated for this patient at a dose of 0.27 to 0.32 mg/kg twice daily lifelong.

I would recommend also obtaining chest radiographs to evaluate for any evidence of cardiogenic pulmonary edema given the history of coughing. However, based upon the echocardiogram, left atrial pressures do not appear increased and it does not appear that the patient is in active congestive heart failure at this time. The patient is also on a high dose of diuretic therapy and ideally would not be on this dose long term.

As long as there has been no history of respiratory distress or documented cardiogenic pulmonary edema, I would encourage stopping furosemide at this time, starting Vetmedin, also starting a cough suppressant with therapies such as hydrocodone at a dose of 0.2 mg/kg twice daily while the clients closely monitor breathing rates. It is possible diuretic therapy may need to be restarted in the future, but this therapy should only be utilized in the case of active heart failure documented with cardiogenic pulmonary edema on chest radiographs.

If the patient has had an episode of heart failure and continued diuretic therapy is needed, I would recommend trying to optimize and get them closer to a 0.2 mg/kg dose twice daily with monitoring of kidney values every four to six months and if the patient remains on furosemide due to RAS activation, additional therapies such as ACE inhibitors and spironolactone for aldosterone antagonism are recommended.

Recheck echo in four to six months. Recommend obtaining a blood pressure on the patient to ensure it is <160mmHg. If the blood pressure is elevated recommend following ACVIM guidelines for systemic hypertension and treating if indicated. The client should start monitoring respiratory rate and effort at home if not already doing so. The resting respiratory rate should be < 35-40 breathes/minute when the patient is resting or sleeping. If the breathing rates are increasing then chest radiographs are recommended.

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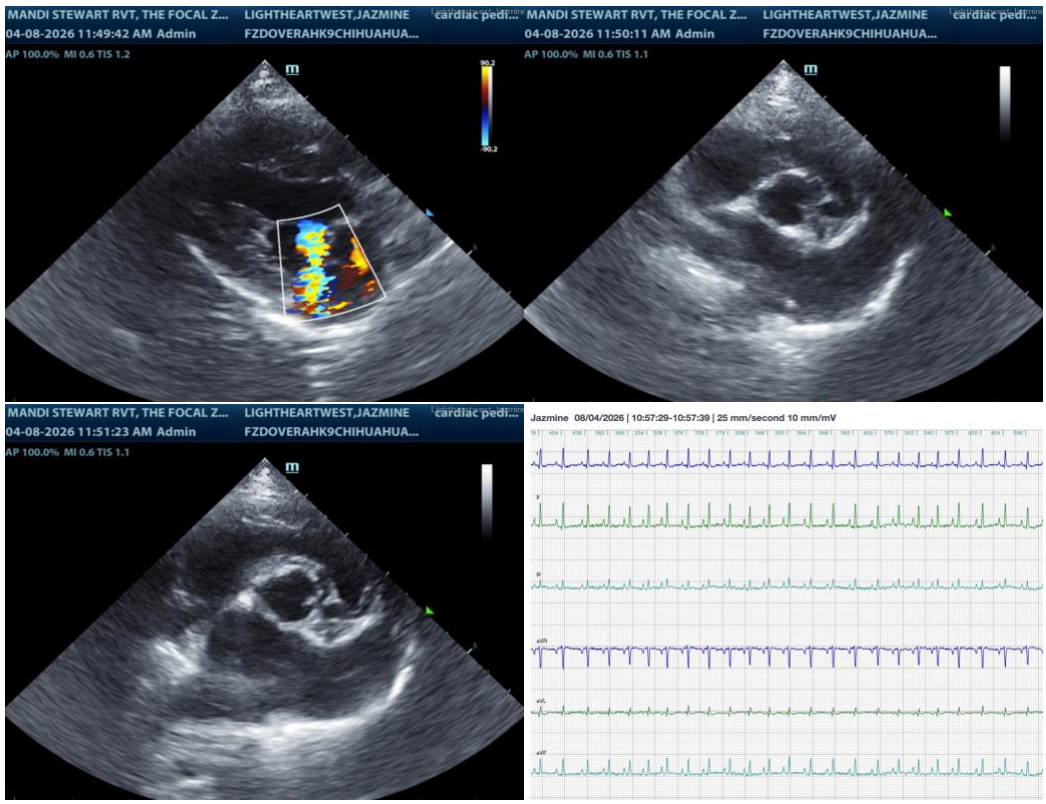

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Sara Brethel DVM, DACVIM (Cardiology)

info@SonoPath.com