



PATIENT

Cooper Teague

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

15 Years

WEIGHT

13.4 Pounds

INTERPRETED BY

James Wood, DVM,
DACVIM (Cardiology)

IMAGING PERFORMED BY

Dr. Sang Han

HOSPITAL NAME

Oso Pet Care Center

REFERRING VET

Dr. Sang Han

INVOICE

37305

DATE

PRESENTING CLINICAL SIGNS

History: Cooper was diagnosed with a grade 2-3/6 systolic parasternal murmur in April 2024. He has been on Atenolol since June 2023. He had a previous Echo done in Nov 2024 and an EKG in May 2025. During his last visit in January 2026 (for abdominal pain, vomiting, and bloody diarrhea, which have resolved), a 3/6 systolic murmur was noted.

Abnormal PE/Chem/CBC/UA Results: Cardiovascular: systolic murmur 3/6

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	6.1	135	0.89	1.15	0.65	41.7	--
FELINE CARDIAC PARAMETERS	LA/AO (M-mode)	LA/AO HEART BASE (Sisson)	LAD LA MAX 4 Chamber		LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)
NORMAL PARAMETER	<1.5	1.6	0.7-1.7		<1.6	<1.3	40-60
PATIENT	1.4	1.14	1.08		--	1.26	NM
Adapted from June Boon, Veterinary Echocardiography, 1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

Radiographic Interpretation

There is equivocal cardiomegaly on the right lateral projection that is not corroborated on the left lateral or VD projection. The visible pulmonary vasculature is within normal limits. The pulmonary parenchyma is normal with no evidence of cardiogenic pulmonary edema.

Cardiac Presentation

The mitral valve leaflets are normal and there is mild mitral regurgitation. There is no prolapse of the mitral valve leaflets. The left atrial size is within normal limits. Left ventricular systolic function appears preserved. Left ventricular diastolic dimensions are within normal limits. There is systolic anterior motion of the mitral valve resulting in a mild dynamic LVOT obstruction and mild eccentric mitral valve insufficiency. The left ventricular end-diastolic wall thicknesses are symmetrically increased. There is normal right atrial size without evidence of tricuspid regurgitation. There is no prolapse of the tricuspid valve leaflets and no evidence of pulmonary hypertension on the images provided. The right ventricle appears normal in structure and function subjectively. The aortic and pulmonary valves have normal morphology, and the corresponding outflow velocities are within normal limits. There is no



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evidence of pulmonary 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.

ULTRASONOGRAPHIC FINDINGS

- Hypertrophic obstructive cardiomyopathy - ACVIM stage B1
- Mild systolic anterior motion of the mitral valve

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The echocardiogram revealed thickening of the left ventricular walls. This is consistent with a hypertrophic cardiomyopathy phenotype, or HCM. In HCM, there is hypertrophy (thickening) of the muscle fibers that make up the walls of the heart. Many cases are a primary heart muscle disease (genetic in origin), however in some cases this can be a secondary process that may improve with treatment of the underlying condition (i.e. high blood pressure or hyperthyroidism among others). A blood pressure and total T4 are recommended in cats >6yr to rule these out as underlying causes (if not already performed). Regardless of the cause, the thickening causes diastolic dysfunction, and progressive left atrial enlargement. Eventually, cats with left atrial enlargement are at risk of developing congestive heart failure (pulmonary edema, pleural effusion, or both), blood clot formation and arrhythmias/sudden death. Some cats with mild HCM may live a normal lifespan with no further progression of disease. However, it is also possible that his HCM will progress over time and further therapy may be required for congestive heart failure, blood clots, or arrhythmias.

Fortunately, this patient does not have evidence of significant left atrial enlargement, so the risk of adverse cardiovascular outcomes is considered low at this time. No cardiac medications are recommended at this stage of the disease, but a recheck echocardiogram is recommended in 9-12 months to determine if there is any progression.

The mild bradycardia noted during echocardiogram today is suspected to reflect the patient's ongoing beta blockade. He appears to be tolerating the atenolol well. No adjustment to therapy is recommended.

Monitoring

It is very important to catch any clinical signs concerning for emerging CHF as early as possible. The client should be closely monitoring and ideally tracking the sleeping respiratory rate. The sleeping RR should be between 10-30 breaths per minute or less (ideally in the teens or low 20s). **If the resting RR is trending upward**, consistently >35/min while resting/sleeping, the patient should be seen urgent for evaluation to determine if CHF is developing. If your pet is ever unable to use one or more of their limbs, seek emergency veterinary attention. *RECHECK ASAP for thoracic radiographs if there is increase in RR to detect early CHF and avoid ER presentation**



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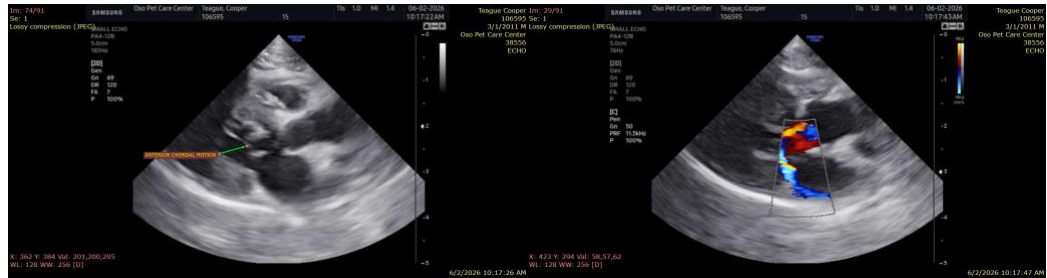
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

James Wood, DVM, DACVIM (Cardiology)

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