

**PATIENT**

Thor Kennedy

SPECIES

Canine

BREED

Miniature Pincher

SEX

Male Neutered

AGE

3.15.08

WEIGHT

16.3lbs

INTERPRETED BYMaggie Machen Lamy,
DVM, DACVIM
(Cardiology)**HOSPITAL NAME**Nexus Veterinary
Specialists**REFERRING VET**

Dr. Steele

INVOICE

27976

DATE

12.13.22

PRESENTING CLINICAL SIGNS

History: Chronic progressive cough. Adopted from ill family member in March 2022 and cough present then, in questioning former owner cough present for at least 2 years prior to this. Had not been to vet in about 13 years when adopted. Cough is dry and paroxysmal with terminal retch that is sometimes productive w/clear mucus or white foam. Cough is exacerbated by exercise and excitement. Initially cough was milder but in early October acutely worsened and wheeze is now present along w/cough. Diffuse crackles have been noted on auscultation since July 2022 and remain present today. Normal effort. Questionable cardiomegaly on prior rDVM radiographs.

Pertinent abnormal PE/Chem/CBC/UA Results: 3/18/22: ALP 276, TG 347.

-Radiographs 11/10/22): Diffuse bronchointerstitial pattern, questionable cardiomegaly.

-Current medications: Zyrtec 12.5mg BID. Starting diphenoxylate-atropine 2.5mg q8h and theophylline

-Sedation used: Not required to complete full diagnostic ultrasound.

-Pertinent previous ultrasound results: No previous. STAT: Not requested

-Imaging performed by: Andi Parkinson, BS, RDMS.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental information only.

Normal cardiac silhouette. No obvious evidence of CHF.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild mitral valve thickening with no prolapse into the left atrial lumen. Trace mitral regurgitation with no left atrial dilation. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with no obvious 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. Normal pulmonic and aortic outflow velocities with laminar flow. Trace aortic and no pulmonic insufficiency. 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)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.2		NM	1.3	34	65	NM
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)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	135	1.1	1.0	7.7	1.6	2.5	1.7
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				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)

Adapted from June Boon, Veterinary Echocardiography, 1998
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435
Hansson et al, Vet Rad and Ultrasound 2002
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

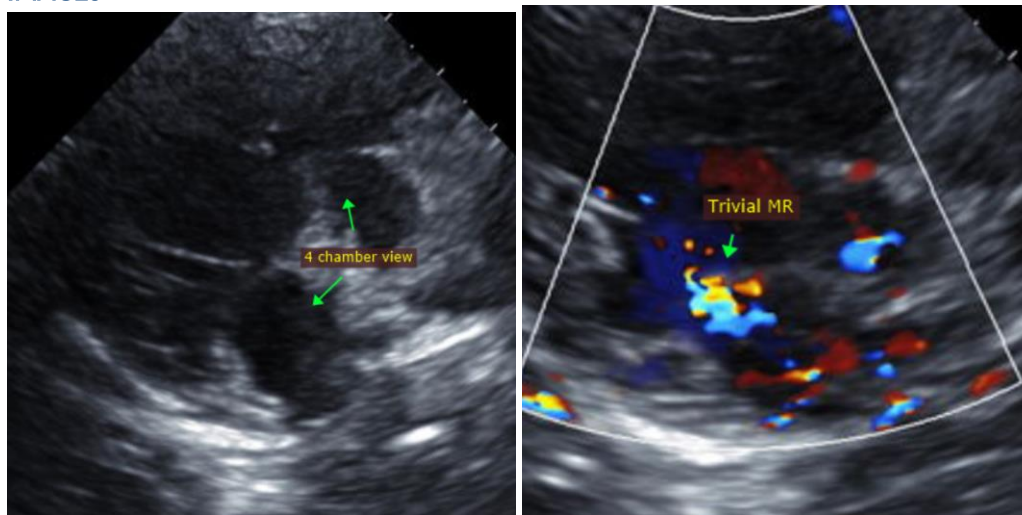
Overtly normal cardiac dimensions and function, with no obvious dysfunction or dilation of the left heart. Trace MR may suggest early valve disease, and follow up is advised if a murmur is heard in the future. A baseline Bp is recommended with an aortic insufficiency seen. No significant valvular leaks are visualized, and no evidence of pulmonary hypertension.

No cardiac medications are indicated at this time as the cough appears non-cardiac in origin. Continued work up for infectious/inflammatory respiratory causes is recommended. Options include Baytril or similar antibiotic, anti-inflammatory prednisone, aggressive hydrocodone, etc. If refractory, may consider TTW/BAL for further information.

Monitor for development of a heart murmur, cough, labored breathing, exercise intolerance or collapse episodes.

Chronic respiratory issues can lead to pulmonary hypertension if poorly controlled and a recheck echocardiogram is recommended should any exertional syncope/dyspnea occur, or a murmur be noted in the future.

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.

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