



**PATIENT**

Tiny Tim Koeth

**SPECIES**

Canine

**BREED**

Mix

**SEX**

Male Intact

**AGE**

9 years

**WEIGHT**

42lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

A. Nicastro, DVM

**HOSPITAL NAME**

Sun Dog Cat Moon

**REFERRING VET**

Dr. Clayton

**INVOICE**

30196

**DATE**

4/12/23

**PRESENTING CLINICAL SIGNS**

History: Prior history of heartworm disease - was treated. Assess prior to anesthesia.

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

Normal cardiac silhouette. No obvious evidence of CHF. Concern for lower airway disease.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Normal mitral valve leaflets 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 trace tricuspid regurgitation. Normal velocity; however, early pulmonary hypertension is suspected. Mild right heart prominence. The MPA and branches are prominent. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic and mild 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	NM	2.6	NM	1.1	51	92	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	NM	1.1	0.83	19.1	2.7	3.7	1.8
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
<b>BODY WEIGHT DEPENDENT PARAMETERS</b>				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				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)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Overtly normal cardiac dimensions and function, with no obvious dysfunction or dilation of the left heart. No significant valvular leaks are visualized. There is however evidence of mild pulmonary hypertension, which is likely secondary to historical heartworm disease. The right heart is minimally enlarged, indicating this is subclinical at this time and does not warrant specific therapy. No additional issues are identified.



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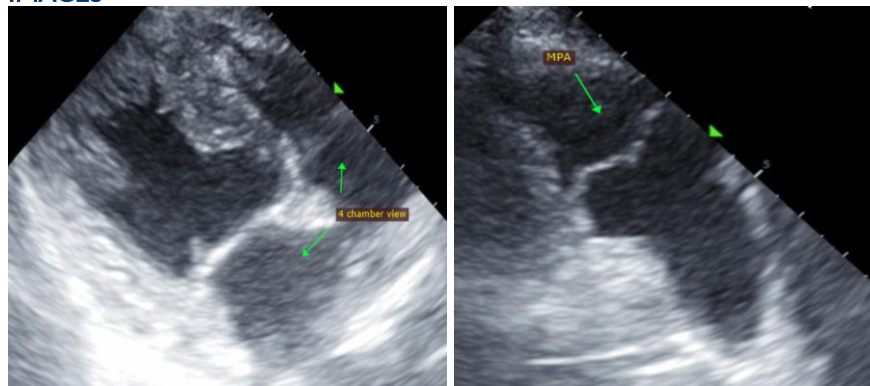
No symptoms are mentioned; however, prior HW patients are at risk for development of lower airway disease as they age. The radiographs are concerning for this development and a Radiologist review is recommended for advanced pulmonary evaluation. While what is seen here does not pose a contraindication for anesthesia from a cardiac standpoint, lower airway changes may lead to hypoxia and must also be considered.

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

No cardiac contraindication for general anesthesia. Pre-oxygenate for 5-10 minutes prior to induction.

Chronic respiratory issues can lead to worsening pulmonary hypertension if this develops in the future. 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.

Maggie Machen Lamy, DVM  
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)  
info@sonopath.com



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