



PATIENT

Barkley Cramer

SPECIES

Canine

BREED

Havanese Mix

SEX

Male Neutered

AGE

11 years

WEIGHT

13.1lbs

INTERPRETED BY

Maggie Machen
 Lamy, DVM, DACVIM
 (Cardiology)

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Willvet Salem

REFERRING VET

Dr. Wepprich

INVOICE

23262

DATE

5/18/22

PRESENTING CLINICAL SIGNS

History: Enlarged soft tissue structure adjacent to larynx. On palpation there may be mild enlargement of thyroid but no firm swellings. No further history provided.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 50mm/s, 10mm/mV. The average heart rate is 140bpm (range 103-176bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive. No ectopic beats, pauses or dysrhythmias observed. ECG diagnosis: Normal sinus rhythm with respiratory variation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild mitral valve thickening with no prolapse into the left atrial lumen. Mild eccentric mitral regurgitation with no left atrial dilation. Normal MR velocity. Normal LV diameter with adequate myocardial function. The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. The right heart dimensions are normal; however, a large hypoechoic well-demarcated lesion is identified associated with the right AV groove (see below); 2.0 x 2.0cm. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic or pulmonic insufficiency. Small volume pericardial effusion without obvious tamponade. No pleural effusion noted.

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	5.9		NM	1.2	42	80	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	0.95	1.2	5.94	1.4	2.6	1.5
*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)
				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)

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



PATIENT

Barkley Cramer

SPECIES

Canine

BREED

Havanese Mix

SEX

Male Neutered

AGE

11 years

WEIGHT

13.1lbs

INTERPRETED BY

Maggie Machen
 Lamy, DVM, DACVIM
 (Cardiology)

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Willvet Salem

REFERRING VET

Dr. Wepprich

INVOICE

23262

DATE

5/18/22

	50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)
--	----	------------	------------	------------

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing mild mitral and tricuspid regurgitation. Lack of left atrial enlargement indicates the current risk for complication is low. **Of greater concern, cardiac neoplasia is identified associated with the right atrium.** The most likely tumor type given this location is a hemangiosarcoma (HSA), with other tumor types less likely.

Of great concern, there is small volume pericardial effusion. Without further historical information such as clinical signs, this is of unknown relevance in the acute phase. What is seen here should not be causing clinical signs as there is no obvious tamponade; **however, any further fluid accumulation may lead to collapse and an emergent situation. Should any symptoms such as collapse, vomiting, acute lethargy, etc develop, immediate reevaluation for pericardiocentesis is recommended. This could happen at any time and should be expressed to the owner.**

The prognosis with cardiac hemangiosarcoma is poor, with an MST of only 2-3 months. The emergent limiting factor is often recurrent hemorrhage into the pericardium. It is quite unusual to identify a discrete mass in an asymptomatic dog even with a pericardial bleed; however, the risk for this worsening acutely persists going forward. A pericardial window or subtotal pericardiectomy may relieve clinical signs, however, is not typically recommended due to poor prognosis. Patients with cardiac neoplasia are at high risk for recurrent hemorrhage and development of tamponade, malignant arrhythmias/sudden death in the future. Chemotherapy and/or radiation can be discussed with an Oncologist and may extend average survival time. HSA has a high metastatic rate, and full systemic screening is recommended.

Going forward there is high risk for collapse, right-sided congestive signs (ascites), and or lethargy. Reassess on an emergent basis should any clinical signs occur.

The ECG is unremarkable, without obvious abnormalities.

No cardiac medications are clearly indicated at this time. Over the counter herbal supplement Yunnan Baiyao may help decrease risk of bleeding, however true benefit is speculative (1 capsule PO BID).

Anesthesia should be avoided.

PLAN

Assuming the patient is asymptomatic, simple monitoring at home is advised as a pericardiocentesis may become necessary in the near future.

If the patient continues to do well, a recheck of tumor dimension and fluid status can be considered in 1month, sooner if development of clinical signs.



PATIENT

Barkley Cramer

SPECIES

Canine

BREED

Havanese Mix

SEX

Male Neutered

AGE

11 years

WEIGHT

13.1lbs

INTERPRETED BY

Maggie Machen
Lamy, DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Willvet Salem

REFERRING VET

Dr. Weprich

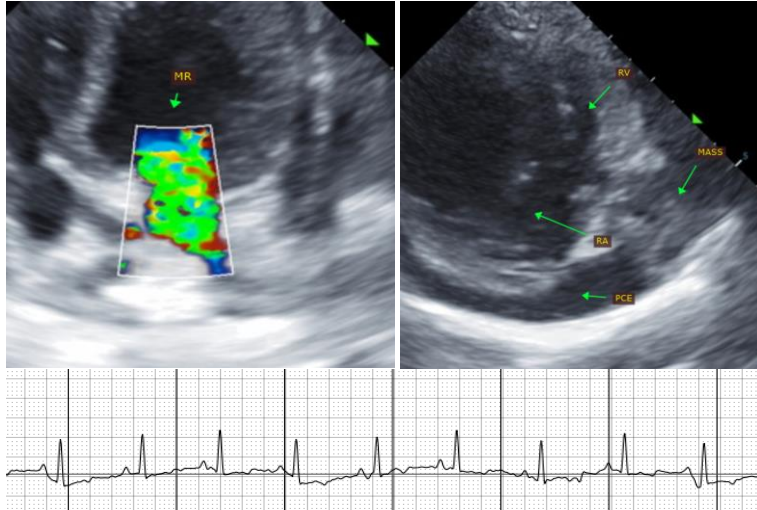
INVOICE

23262

DATE

5/18/22

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