



**PATIENT**

Marlo Hilton

**SPECIES**

Canine

**BREED**

Bichon Frise

**SEX**

Male Neutered

**AGE**

11.16.12

**WEIGHT**

14.2lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**HOSPITAL NAME**

DocSide Veterinary  
Medical Center

**REFERRING VET**

Dr. Herling

**INVOICE**

27665

**DATE**

11.28.22

**PRESENTING CLINICAL SIGNS**

History: Recently seen at ER- dx with cardiac tamponade and rt atrial mass at CVRC. Heart sounds muffled on left side. Saw patient to do ultrasound and possible pericardiocentesis- can evaluate for pericardial fluid. Multiple views reveal only scant pericardial fluid at this time.

-Pertinent abnormal PE/Chem/CBC/UA Results: ALT (SGPT) 202, ALKP 615, Precision PS 178.

-Current medications: Gabapentin 250mg/mL 2cc BID, Yunnan Baiyao 1 BID. Will give Gabapentin and Trazodone prior for pre-meds.

-Sedation used: Gabapentin and Trazodone PO.

-Pertinent previous ultrasound results: No previous.

-STAT: Declined at this time.

-Imaging performed by: Stephanie Warga RDCS, RVT.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Homogenous hypoechoic mass seen adjacent to the heart base/pulmonary artery; 3.2cm x 3.2cm. An exact origin cannot be identified (rule out external surface of the right heart vs. PA/Ao vs. other). No mitral regurgitation. LV function adequate. Left atrium is normal in diameter. LV is normal. The pulmonic and aortic valves are normal in appearance. No pulmonic or aortic insufficiency. Normal outflow velocities. Trace tricuspid regurgitation. Normal velocity. No pericardial effusion. No pleural effusion.

**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	NA	2.5	NM	1.2	50	84	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	0.9	1.0	6.4	1.4	2.1	1.1
*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

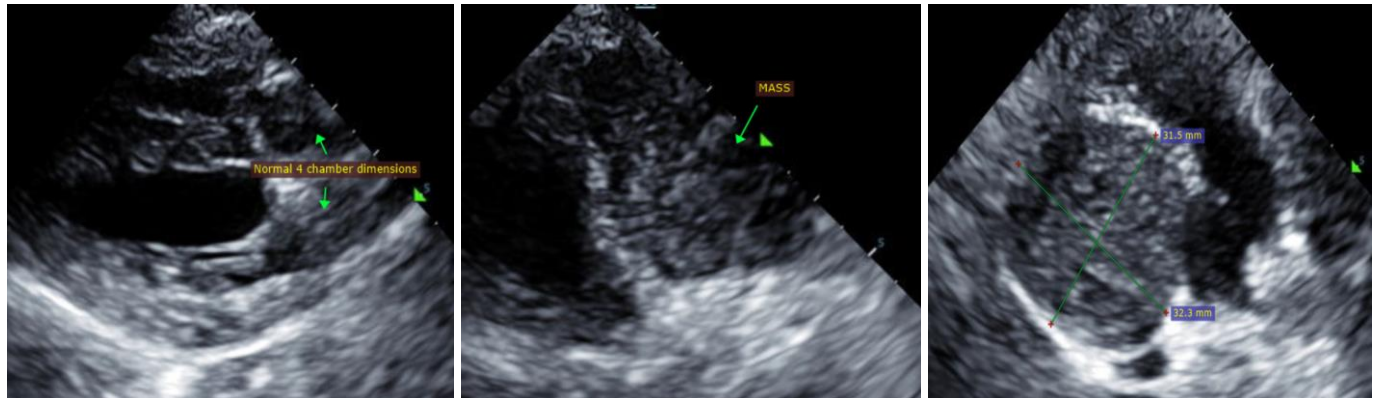
Cardiac neoplasia is identified as the cause of recent pericardial effusion. The exact origin of the tumor is difficult to determine; however, the main pulmonary artery or right auricular tip are suspected. The most likely tumor type is a hemangiosarcoma (HSA); however ectopic parathyroid tumors and/or chemodectomas can also be found near the heart base. The signalment is unusual for cardiac tumor development, making speculation difficult. Pericardiocentesis was successful without any obvious re-bleeding at this time. No additional issues are identified, and the remainder of the study is unremarkable.

The prognosis in this case is highly dependent upon tumor type, as a hemangiosarcoma is often fatal within a few months whereas chemodectoma, patients can be stable for some time. Highly recommend full systemic evaluation to screen for ancillary lesions that may be sampled safely. Referral to a Multi-specialty center may be warranted for advanced thoracic imaging and to discuss chemotherapeutic and/or other possible treatment options. Regardless of tumor type, patients with cardiac neoplasia are at high risk for recurrent hemorrhage, development of tamponade and malignant arrhythmias/sudden death in the future.

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).

If referral is declined, a recheck of tumor dimension and fluid accumulation can be considered in 1-2 months if patient does well, sooner if recurrence of clinical signs.

## 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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