



PATIENT

Zoey Altschuler

SPECIES

Canine

BREED

Boxer Mix

SEX

Female Spayed

AGE

12.5 years

WEIGHT

NP

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kelly Vazquez, CVT

HOSPITAL NAME

Ho Ho Kus Veterinary
Hospital

REFERRING VET

Dr. Gwiazdowski

INVOICE

30072

DATE

4/5/23

PRESENTING CLINICAL SIGNS

History: Presents for recent collapsing episodes. DCM vs. pericardial effusion seen on FAST scan.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Moderate volume pericardial effusion with early diastolic collapse of the right atrial wall consistent with cardiac tamponade. Hypochoic well-demarcated lesion associated with the right AV groove (see below); 3.0 x 2.3cm. LV function is adequate. Left atrium is normal in diameter. LV is normal in dimension and function. The pulmonic and aortic valves are normal in appearance. Normal outflow velocities. No obvious pleural effusion. The caudal vena cava appears mildly dilated.

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	NA	1.4	1.2	43	75	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	100	1.0	0.95	NP	2.0	3.2	1.8
*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)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the clinical signs is cardiac tamponade due to pericardial effusion secondary to cardiac neoplasia associated with the right AV groove. The most likely tumor type given this location is a hemangiosarcoma (HSA). Other tumor types are less likely, including chemodectoma or ectopic parathyroid tumor. The patient is in early cardiac tamponade due to hemorrhage from the tumor causing volume depletion, hepatic congestion and a drop in cardiac output. **Emergency pericardiocentesis is indicated, and cytology of the pericardial fluid is recommended in search of a definitive diagnosis. If this cannot be done safely at your facility, immediate referral to emergency hospital is recommended.**

The prognosis with cardiac hemangiosarcoma is poor, with an MST of only 2-3 months. The emergent limiting factor is often recurrent hemorrhage, and a pericardial window or subtotal pericardiectomy may relieve clinical signs. Chemotherapy and/or radiation can also be discussed



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with an Oncologist and may extend average survival time. HSA also has a high metastatic rate, and full systemic screening is recommended for metastatic lesions. Patients with cardiac neoplasia are at high risk for recurrent hemorrhage and development of tamponade, malignant arrhythmias/sudden death in the future.

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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).

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Once symptoms are relieved via pericardiocentesis and fluid resuscitation, a recheck of tumor dimension and fluid status can be considered in 1-2 months, sooner if recurrence of clinical signs.

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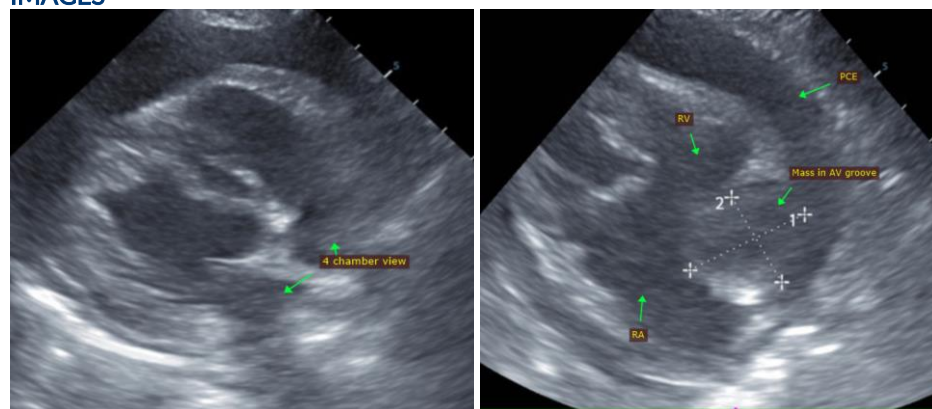
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IMAGES



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(Cardiology)

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.

IMAGING PERFORMED BY

Kelly Vazquez, CVT

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.

HOSPITAL NAME

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Hospital

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