



PATIENT

Sparky MacKamie

SPECIES

Canine

BREED

Jack Russell Terrier

SEX

Male Neutered

AGE

15 years

WEIGHT

21.6lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

C. Belan, DVM

HOSPITAL NAME

Beddington Trail
Animal Hospital

REFERRING VET

Dr. Banahur

INVOICE

32403

DATE

8/17/23

PRESENTING CLINICAL SIGNS

History: Grade 3/6 heart murmur. Assess prior to dental.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild mitral valve thickening with minimal prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with mild left atrial dilation. Normal MR velocity. Normal LV diameter with adequate myocardial function. The tricuspid valve appears mildly thickened with mild tricuspid regurgitation. Normal velocity. The right heart dimensions are normal; however, a hypochoic well-demarcated lesion is identified associated with the right atrium (see below); 2.2 x 1.8cm. 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 effusion. 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	6.0	2.3	1.4	1.4	40	72	0.22
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	140	1.4	0.9	9.8	2.4	3.1	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)
*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)
Adapted from June Boon, Veterinary Echocardiography, 1998				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
Hansson et al, Vet Rad and Ultrasound 2002				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995				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

Chronic degenerative valve disease causing moderate mitral and mild tricuspid regurgitation. Mild left atrial enlargement indicates the current risk for complication is low. A small aortic valve insufficiency is noted, and a baseline BP is recommended. Of greater concern, cardiac neoplasia is suspected associated with the external surface of the right atrium. This is atypical to visualize on 2D ultrasound in the absence of effusion and is considered an incidental finding. While this cannot be definitive, there is high suspicion as the lesion can be seen from multiples planes. The most likely tumor type given this location is a hemangiosarcoma (HSA), with other tumor types less likely. No additional issues are identified.



PATIENT

Sparky MacKamie

SPECIES

Canine

BREED

Jack Russell Terrier

SEX

Male Neutered

AGE

15 years

WEIGHT

21.6lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

C. Belan, DVM

HOSPITAL NAME

Beddington Trail
Animal Hospital

REFERRING VET

Dr. Banahur

INVOICE

32403

DATE

8/17/23

Going forward the first step would be attempting to definitively diagnosis the abnormality. Options include screening for additional systemic lesions through abdominal workup that may be easily sampled. Alternatively, a thoracic CT scan would be the gold standard to view the outside surface of the heart. Discussion with the owner is advised.

If confirmed, the prognosis with cardiac hemangiosarcoma is poor, with an MST of <6 months. The emergent limiting factor is often hemorrhage into the pericardium. It is quite unusual to identify a discrete mass in an asymptomatic dog without a pericardial bleed; however, the risk for this 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.

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).

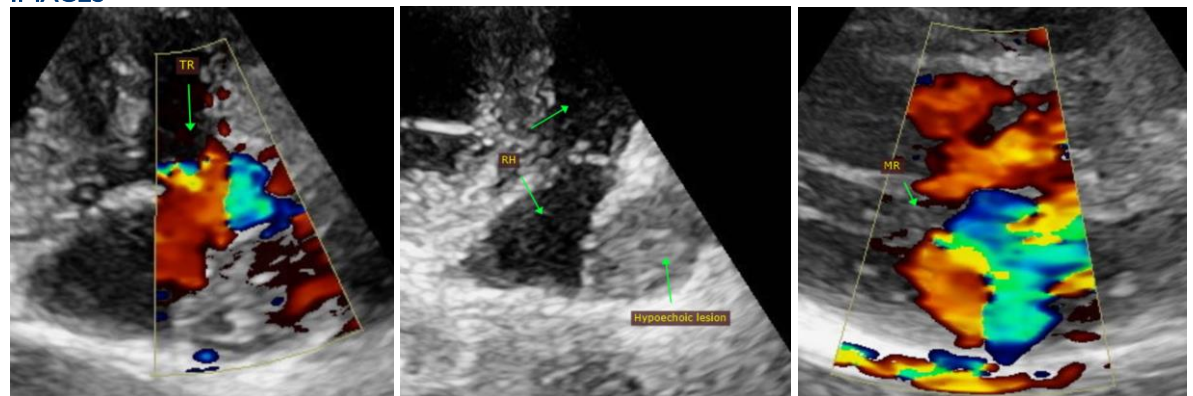
Anesthetic risk is considered mild. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated. This patient has an elevated risk for malignant ventricular arrhythmias, and close monitoring of the ECG is advised throughout and following the procedure.

PLAN

Consider further evaluation through thoracic CT scan, abdominal ultrasound, etc.

If declined, reassess the tumor dimension in 1-2 months.

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.



PATIENT

Sparky MacKamie

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.

SPECIES

Canine

Maggie Machen Lamy, DVM

Diplomate of the American College of Veterinary Internal Medicine (Cardiology)

info@sonopath.com

BREED

Jack Russell Terrier

SEX

Male Neutered

AGE

15 years

WEIGHT

21.6lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

**IMAGING
PERFORMED BY**

C. Belan, DVM

HOSPITAL NAME

Beddington Trail
Animal Hospital

REFERRING VET

Dr. Banahur

INVOICE

32403

DATE

8/17/23