



**PATIENT**

Sparky Shubitowski

**SPECIES**

Canine

**BREED**

Jack Russell Terrier

**SEX**

Male Neutered

**AGE**

13 years

**WEIGHT**

21lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING**

**PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

Norfolk Couty  
Veterinary Service

**REFERRING VET**

Dr. Richards

**INVOICE**

24186

**DATE**

5/13/22

**PRESENTING CLINICAL SIGNS**

History: Presented to ER on April 16, 2022, for sudden onset labored breathing. Pericardial effusion and cardiac tamponade was noted; a pleural effusion was present as well. Pericardiocentesis was performed - hemorrhagic fluid removed. Currently, doing well at home with good appetite and normal activity level.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and Doppler imaging is available.

**Left ventricle:** The LV diameter is normal with adequate myocardial function. LV wall thicknesses are normal.

**Left atrium:** The left atrium is normal.

**Mitral valve:** The mitral valve is normal; no MR.

**Aortic valve/Aorta:** The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.

**Right ventricle:** Normal right ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension.

**Right atrium:** Normal RA dimension. Mass associated with the external surface of the right heart/MPA. An exist origin is difficult to determine. The mass does not appear to be impinging on the body of the RA; however, it is overlaying the chamber in some views. The mass is heterogenous in appearance; 2.6 x 4.4cm in best view cross section.

**Tricuspid valve:** The tricuspid valve appears mildly thickened with mild double jet of tricuspid regurgitation. Normal velocity.

**Pulmonic valve/Pulmonary artery:** The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow.

**Pericardium/other:** No pericardial or pleural effusion noted.

**Heart rhythm:** ECG reveals a sinus rhythm with an average HR of 130bpm.

**2-Dimensional Measurements**

Ao diam (cm)	1.6
LA diam (cm)	1.6
LA:Ao (Swe)	1.0
IVS thickness (cm)	0.79
LVID diastole (cm)	2.6
PW thickness (cm)	0.75
LVID systole (cm)	1.8
FS (%)	30

**Doppler Measurements**

PV Vmax (m/s)	0.65
AoV Vmax (m/s)	1.3
MR Vmax (m/s)	NA
TR Vmax (m/s)	2.5
TR PG (mmHg)	25

**INTERPRETATION OF THE FINDINGS**

Cardiac neoplasia likely associated with the right heart/MPA. The exact origin is difficult to visualize; however, no obvious chamber infiltration is seen. The most likely tumor type given this appearance is a hemangiosarcoma (HSA), although ectopic parathyroid tumor is also a possibility in this location. Advanced thoracic imaging such as a CT scan may be beneficial to determine exact origin. No significant structural issues are identified and there is no recurrent pericardial effusion.

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. In this case, there is no significant



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effusion at this time; however, the risk for development in the future is high. 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.

At this time, no cardiac medications are clearly indicated as unfortunately there is little to treat safely in this case. Over the counter herbal supplement Yunnan Baiyao may help decrease risk of bleeding, however true benefit is speculative.

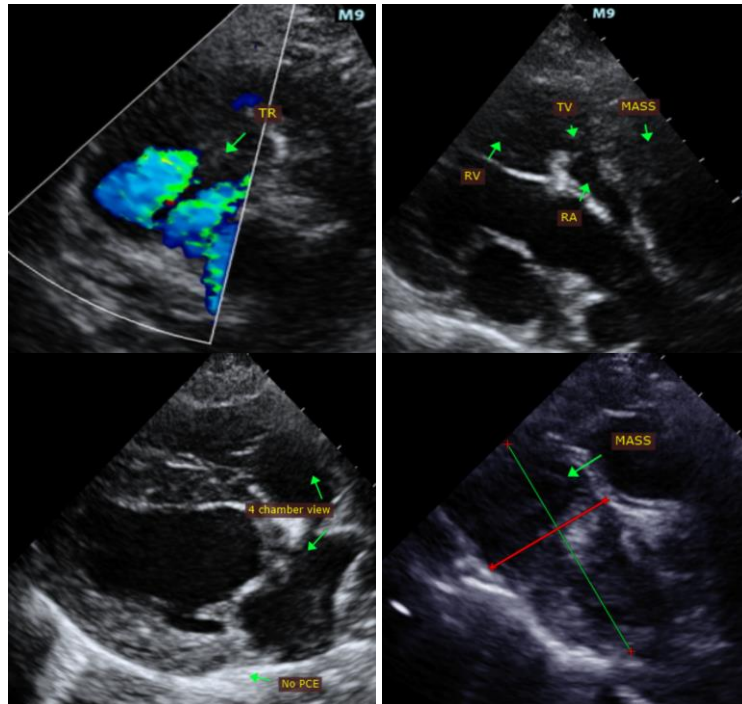
**RECOMMENDATIONS**

- Recommend OTC Yunnan Baiyao 1 capsule PO BID.
- No cardiac medications are clearly indicated.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Consider advanced imaging such as thoracic CT, full systemic screening (CXR, labs, AUS) to identify any metastatic lesions.
- Chemotherapy and/or radiation can also be discussed with an Oncologist and may extend average survival time.
- Monitor for syncopal episodes, acute lethargy, development of a cough, labored breathing, exercise intolerance or vomiting.

**PLAN**

- Reassess tumor dimension in 1-2 months, sooner if recurrence of clinical signs.

**IMAGES**





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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.

**BREED**

Jack Russell Terrier

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.

**SEX**

Male Neutered

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

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