



PATIENT

Luna Marrero

PRESENTING CLINICAL SIGNS

History: Luna presented for pain on rear limb. On x-ray enlarged cardiac silhouette and collapsing trachea was appreciated. She is intermittent coughing.

SPECIES

Canine

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Uniform echogenicity mass associated with the heart base; 1.8 x 1.7cm in best viewed cross section. The mass is well encapsulated and is overlying the pulmonary artery/LA. No obvious obstruction to blood flow or imposition on cardiac chambers is seen at this time with normal pulmonic outflow velocities; however, the right heart is prominent. Trace mitral regurgitation thickened mitral valve with no prolapse. LV function is adequate. Left atrium is mildly dilated. LV is normal in diameter. Mildly thickened TV with no obvious TR. The pulmonic and aortic valves are normal in appearance. Normal LVOT and RVOT velocity. No AI. Trace PI identified. No pericardial or pleural effusion.

BREED

Yorkshire Terrier

SEX

Female Spayed

CARDIAC CHART

AGE

12 years

WEIGHT

12lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Gabriel Ferrer, DVM

HOSPITAL NAME

Paseos Veterinary
Center

REFERRING VET

Dr. Davila

INVOICE

22966

DATE

3/8/22

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	NM	NA	NM	1.9	48	81	0.2
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	87	1.3	1.5	5.4	1.7	2.6	1.4
*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

Chronic degenerative valve disease is identified with trace mitral regurgitation. Mild left atrial enlargement indicates the current risk for complication is low. No significant right heart enlargement is seen, making the hepatomegaly unlikely to be cardiac in origin. No concurrent issues such as systolic dysfunction are noted in this study.

More importantly, there is also cardiac neoplasia associated with the heart base. The most likely tumor type given this location and the breed is a chemodectoma, however other more malignant differentials cannot be ruled out. Chemodectomas are often incidental findings as is suspected to be the case here, only causing clinical signs if blood flow is obstructed, pericardial effusion occurs, or a metastatic lesion causing systemic issues. It is difficult to definitively evaluate the mass



PATIENT

Luna Marrero

peripherally (i.e., cannot rule out peripheral obstruction of flow through distal PA's) and a **CT is recommended to screen for true extent of the lesion.**

SPECIES

Canine

The prognosis with cardiac chemodectomas is fair. The limiting factor is often hemorrhage into the pericardium, impingement of cardiac blood flow secondary to tumor growth, or metastasis to the thorax or abdomen. Chemotherapy and/or radiation therapy can also be discussed with an Oncologist.

BREED

Yorkshire Terrier

Given these findings, the tumor is unlikely to be causing issues at this size as discussed, although this may certainly change as the mass grows. Early PA compression is suspected, which is unlikely to lead to hepatomegaly. Full systemic evaluation is advised including abdominal ultrasound to screen for metastatic lesions, hepatic congestion, etc. That being said, there is certainly risk for the tumor to increase in dimension and lead to right-sided congestion (ascites/effusions) with increasing pulmonary pressures and syncope with exertion. Monitor for abdominal distention, syncope and/or respiratory changes.

SEX

Female Spayed

AGE

12 years

No cardiac medications are indicated at this time. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

WEIGHT

12lbs

Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

Anesthetic risk is considered mild if needed. 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.

IMAGING PERFORMED BY

Gabriel Ferrer, DVM

PLAN

Further systemic evaluation is advised. Consider further evaluation of tumor extent through thoracic CT as discussed.

HOSPITAL NAME

Paseos Veterinary
Center

Recheck tumor size via echocardiography in 6 months, sooner if clinical signs arise.

REFERRING VET

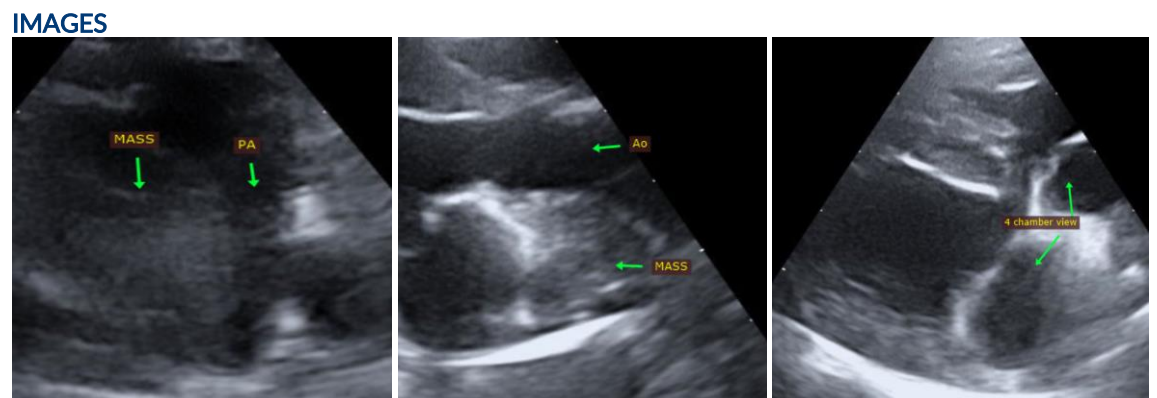
Dr. Davila

INVOICE

22966

DATE

3/8/22





PATIENT

Luna Marrero

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.

SPECIES

Canine

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.

BREED

Yorkshire Terrier

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

SEX

Female Spayed

AGE

12 years

WEIGHT

12lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

**IMAGING
PERFORMED BY**

Gabriel Ferrer, DVM

HOSPITAL NAME

Paseos Veterinary
Center

REFERRING VET

Dr. Davila

INVOICE

22966

DATE

3/8/22