



**PATIENT**

Astro Dixon

**PRESENTING CLINICAL SIGNS**

History: 48 hours of intermittent rapid breathing and hyporexia. Intermittent irregular arrhythmia, HR ranges from 84-200bpm. Some pulse deficits. No murmur.  
-Radiographs: Mild cardiomegaly, no obvious pulmonary edema.  
-Abnormal PE/Chem/CBC/UA Results: Mildly elevated CK, remainder NSF

**SPECIES**

Canine

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Mild thickening of mitral valve leaflets with no prolapse into the left atrial lumen. Moderate central mitral regurgitation with severe left atrial dilation. Significant LV dilation with hyperdynamic myocardial function. The tricuspid valve appears mildly thickened with mild TR. Mildly elevated velocity. Mild right heart enlargement. The pulmonic and aortic valves are normal in morphology and mobility. Normal aortic and pulmonic outflow velocities with laminar flow. No AI/PI. No pericardial or pleural effusion noted. No obvious cardiac masses.

**BREED**

English Bulldog

**SEX**

Male Intact

**CARDIAC CHART**

**AGE**

11 years

**WEIGHT**

77.8lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM DACVIM  
(Cardiology)

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	3.0	2.3	2.2	51	90	0.33
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	135	1.5	1.8	35.3	4.7	5.3	2.3
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
<b>BODY WEIGHT DEPENDENT PARAMETERS</b>				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)
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)

**IMAGING PERFORMED BY**

Crystal Hill, RVT

**HOSPITAL NAME**

Southside Animal  
Clinic

**REFERRING VET**

Dr. Delitala

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Chronic degenerative valve disease is suspected with moderate mitral and mild tricuspid regurgitation. There is a mismatch between the degree of regurgitation (mild to moderate) and degree of left heart enlargement (severe), which may suggest a component of tachycardia-induced cardiomyopathy given a reported arrhythmia. Early pulmonary hypertension is identified which is likely secondary to chronic LA pressure elevation. No additional issues are identified; however, it is important to note that this patient was uncooperative during the study and small abnormalities may certainly have been missed. **Consider reassessing the structure and function with sedation. Additionally, the included**

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**DATE**

9/16/21



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**ECG was non-diagnostic due to patient motion and should be reassessed ASAP.** The reported arrhythmia is highly concerning and tachycardia is noted during the exam which certainly may be contributing to clinical signs.

**SPECIES**

Canine

In the interim, there is great concern for decompensation in this patient and full cardiac support is recommended as below. Monitoring of sleeping respiratory rates will be paramount to screen for congestive heart failure at home. Cough suppression to improve QOL can also be considered (hydrocodone, 0.2-0.4mg/kg up to q4-6h PRN) for any residual mechanical cough in the face of normal sleeping respiratory rates. The average survival time of canine patients with active pulmonary edema is 8-9 months on medications, however they generally are able to maintain a good quality of life for that period. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.

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Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for acute progression of the cough, labored breathing, exercise intolerance or collapse episodes in the future.

**WEIGHT**

77.8lbs

**PLAN**

Institute Pimobendan 0.3mg/kg PO q12h. Institute Furosemide 1-2mg/kg PO q12h. Institute spironolactone 1-2mg/kg PO q12h. Reassess ECG and echocardiogram with sedation if possible. Consider referral for reevaluation/hospitalization if patient appears unstable.

**INTERPRETED BY**

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DVM DACVIM  
(Cardiology)

Monitor SRRs at home. Monitor renal values and BP in 10-14 days, then every 3-4 months while on diuretics. If doing well and BP >130mmHg, institute ACEI 0.5mg/kg PO q12h. Consider hydrocodone if needed for QOL.

Recommend conservative monitoring with a recheck pending clinical progression and reassessment.

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**REFERRING VET**

Dr. Delitala

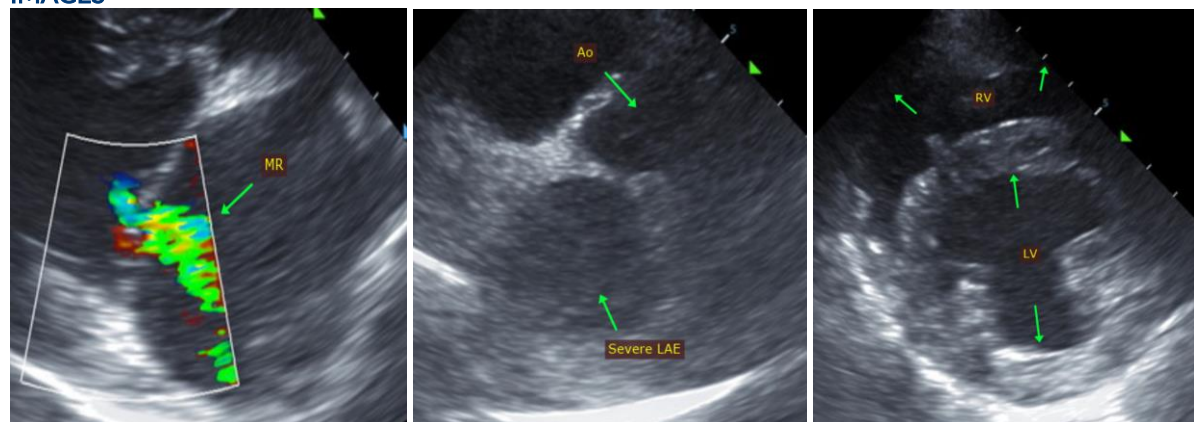
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**IMAGES**





#### PATIENT

Astro Dixon

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

English Bulldog

Maggie Machen Lamy, DVM  
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info@sonopath.com

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Male Intact

#### AGE

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#### WEIGHT

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