



PATIENT PRESENTING CLINICAL SIGNS

Juno Mandato Elevated BNP. Current meds: joint support.
Abnormal PE/Chem/CBC/UA Results: ALT normal, AST/ALP elevated. No PU/PD.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

BREED

Munstlander

SEX

Spayed Female

AGE

12 Years

WEIGHT

89 Pounds

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			1.28	1.2	49.6	81.9	0.16
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				
PATIENT	131	1.4	0.85		3.9	3.43	

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size and structure. Chamber volume and blood echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented minor irregular age-related changes that are not clinically significant at this time with adequate extension in systole and union in diastole. The **left ventricle** presented normal free wall and septal thicknesses with linear contour. The **myocardium** presented some echogenic remodeling consistent with expected age-related change. **Contractility** of the ventricular walls was adequate and in normal range for this breed and patient size. The **left ventricular outflow** tract demonstrated normal laminar flow with subjectively unremarkable structure. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated expected findings for this age patient. The **right ventricle** was of normal size (1/3 diameter of LV), echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No dilation due to heartworm disease, cuor pulmonale, stenosis, or pulmonic hypertension was noted. No visible **pericardial** or free pleural fluid was noted. The **mediastinum** was free of masses in the visible window.

ULTRASONOGRAPHIC FINDINGS

- Overtly normal cardiac structure and function

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of overt cardiomyopathy, including no evidence of left or right heart chamber enlargement, systolic dysfunction, clinical pulmonary hypertension, or significant valvular insufficiencies noted. No indication for cardiac medication. Conservative monitoring for the development of a heart murmur as well as monitoring BNP levels with recheck echocardiogram if BNP levels continue to increase or if a murmur is noted would be appropriate.

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Legacy Animal Hospital

REFERRING VET

Dr. Potenzone

INVOICE

25370

DATE

9/13/21



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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.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

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