



## PATIENT

Jax Moore

## SPECIES

Canine

## BREED

Canine

## SEX

Havanese

## AGE

11 years

## WEIGHT

17.6 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Holly Burluson, LVT

## HOSPITAL NAME

All Pets Medical  
Center

## REFERRING VET

Amy Hilburn, DVM

## INVOICE

12150

## DATE

8/31/21

## PRESENTING CLINICAL SIGNS

Jax is an 11 year old Male/neutered Havanese who presented 1 week prior for increased aggression and legs giving out. Exam at this time demonstrated marked aggressive behavior, hyperesthesia of the superficial pain response of the hind feet, pain with thoracic palpation, progressive weakness with exercise that leads to splay legs, proprioception was normal, cranial nerves were normal. Repeat exam 7 days later, after anti-inflammatory/gabapentin cage rest demonstrates progressive neurological symptoms with base narrow stance and absent proprioception of the right hind, ataxia, and weakness. Pain response is improved and mentation is less aggressive. Previous ProBNP was abnormal with a value of 1100, sample taken at initial visit. Unable to appreciate a heart murmur on previous exams. Spinal radiographs identified multiple thoracic lesions with a differential suggestive of IVDD.

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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			1.2	1.25	56.5	91.1	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	NM	NM	0.8		2.5	2.3	

## Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease.

**Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or



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free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

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## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

- Normal echocardiogram

## BREED

Canine

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

## SEX

Havanese

No evidence of structural or functional cardiomyopathy.

## AGE

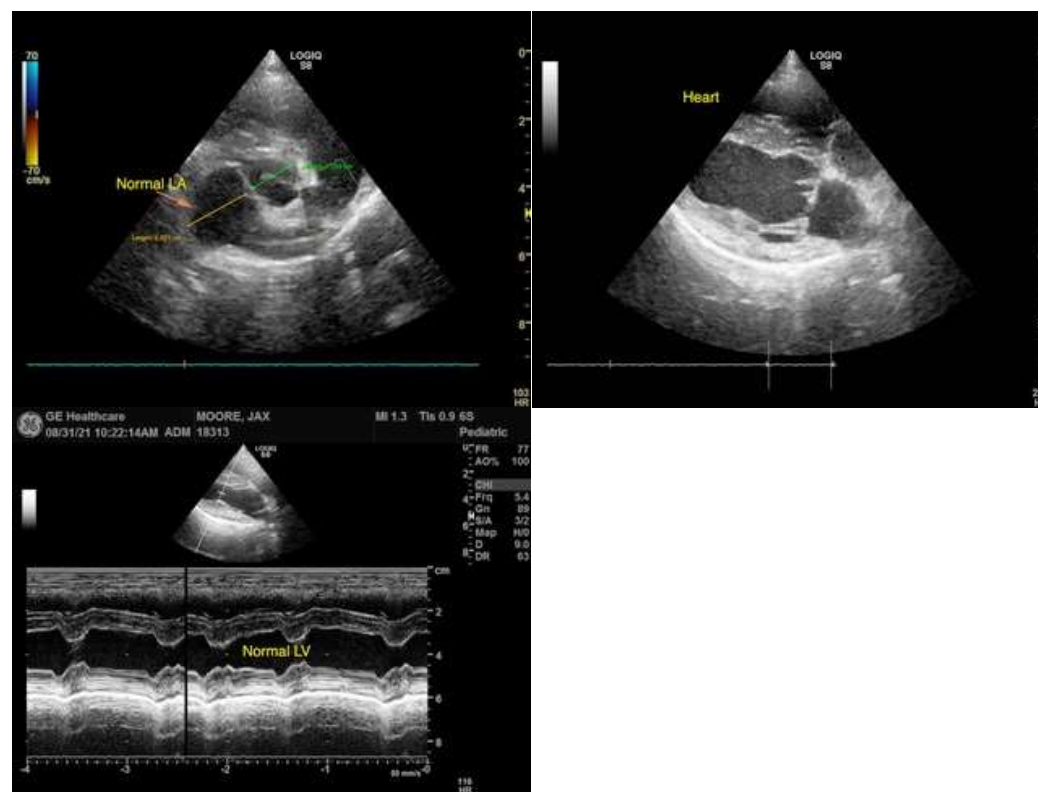
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**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

## DATE

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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.



**PATIENT**

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**  
**info@SonoPath.com**

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