


**PATIENT PRESENTING CLINICAL SIGNS**

Ruby Doone Ruby always had arrhythmia since a puppy. Recently she was diagnosed with mammary gland tumor. No obvious murmur today. Needs to undergo anesthetic for surgery.  
 Abnormal PE/Chem/CBC/UA Results: BW performed in June of 2021. normal

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

BREED	CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
Chihuahua	<b>CARDIAC PARAMETERS</b>	<b>VMAX</b> (m/s)	<b>VMAX</b> (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
<b>SEX</b>	<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
FI	<b>PATIENT</b>			NM	1.1	34.8	67.5	0.2
<b>AGE</b>	<b>CANINE</b>	<b>HR</b> (BPM)	<b>AV</b> <b>VMAX</b> (m/s)	<b>PV</b> <b>MAX</b> (m/s)	<b>BODY WEIGHT</b> (kg)	<b>LA</b> 2D short axis Base view (cm)	<b>LVIDd</b> Avg; 2D and m-mode short axis (cm)	<b>LVIDs</b> Avg; 2D and m-mode short axis (cm)
7 Years	<b>CARDIAC PARAMETERS</b>							
<b>WEIGHT</b>	<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
3.5kg	<b>PATIENT</b>	133	1.1	0.92		1.9	1.84	

**INTERPRETED BY**

 R. McKenzie Daniel,  
 DVM, DABVP

**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 free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window. No obvious arrhythmia.

**IMAGING PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Downtown AH

**REFERRING VET**

Ahn

**INVOICE**

50075

**ULTRASONOGRAPHIC FINDINGS**

- Normal echocardiogram.

**DATE**

2-4-22



**PATIENT**

Ruby Doone

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

FI

**AGE**

7 Years

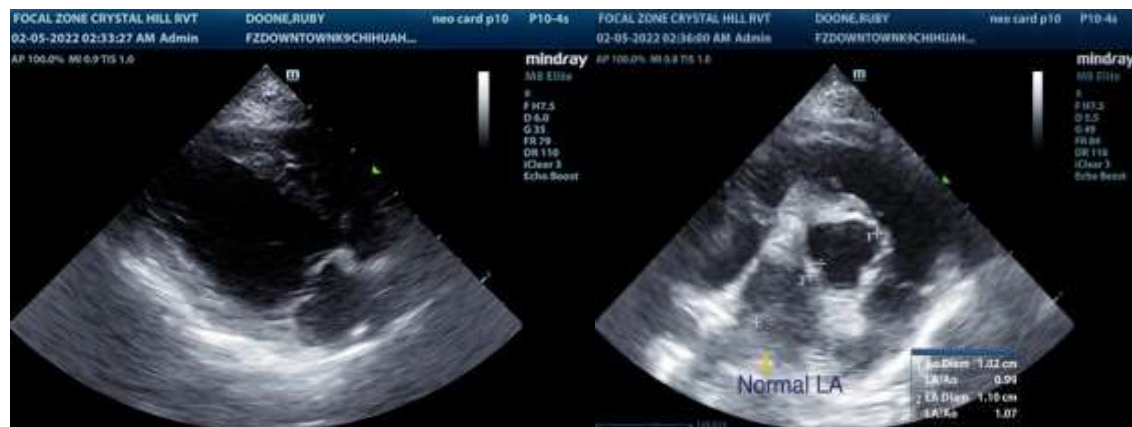
**WEIGHT**

3.5kg

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No evidence of structural, functional, or arrhythmogenic cardiac disease. No clinical issues such as systolic dysfunction or evidence of significant valvular insufficiencies were present. No indication for cardiac medications. If recurrent arrhythmia, ECG assessment recommended. Potential for Holter monitor may be required in this case for further assessment or if clinical signs suggestive of arrhythmogenic disease are noted. No anesthetic contraindications.

Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.



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**DATE**

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. 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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

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