



**PATIENT PRESENTING CLINICAL SIGNS**

Noodles Caldera

History: 4-5/6 systolic murmur and needs dental, please assess for general anesthesia.  
Abnormal PE/Chem/CBC/UA Results: ALKP 175, T4 0.7

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

**BREED**

Pomeranian

The echocardiogram in this patient demonstrated borderline enlarged **left atrium**. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable insufficiency. 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 or chamber overload. **Tricuspid** insufficiency was noted. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** 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. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

**SEX**

Intact male

**AGE**

11 years

**WEIGHT**

9.9 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Diane McFadden, RVT

**HOSPITAL NAME**

Animal Care Center of  
Flanders

**REFERRING VET**

Dr. Casuli

**INVOICE**

32488

**DATE**

8/23/22

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	6.0	3.5	1.77	1.8	50	73	0.14
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	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	117	1.37		9.9 lbs	2.87	2.77	



**PATIENT                      ULTRASONOGRAPHIC FINDINGS**

Noodles Caldera

Mitral valve disease.

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Borderline enlarged left atrium.

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Pomeranian

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

If vertebral heart score is excessive then Pimobendan would be indicated. Blood pressure measurements are recommended. If the systolic pressure is > 160 then ace inhibitor therapy is indicated. There is mild anesthetic risk in this patient. Ideally early treatment for stage B2 valvular disease would be initiated with a recheck echocardiogram in 7-10 days prior to anesthetic procedure. Otherwise, Torbutrol premed, Propofol induction and Isoflurane maintenance is recommended with minimal necessary anesthesia time.

**SEX**

Intact male

The heart has some volume overload and is working to compensate for the valvular insufficiency. Target respiratory rate is < 20 resp/minute after therapy. After initiating therapy, I recommend recheck on the clinical exam, BUN, Creatinine, USG, Chest radiographs & Blood pressure in 5-7 days. Recheck echo in 1 month. Earlier if clinical decompensation is occurring. I do not recommend anesthesia at this time until stabilization has occurred on the recommended medications. Repeat preanesthetic echo is ideal if anesthesia is eventually necessary

**AGE**

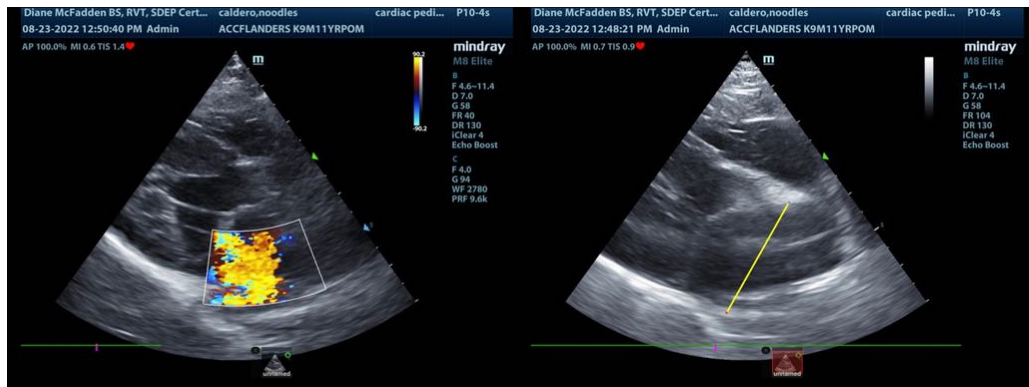
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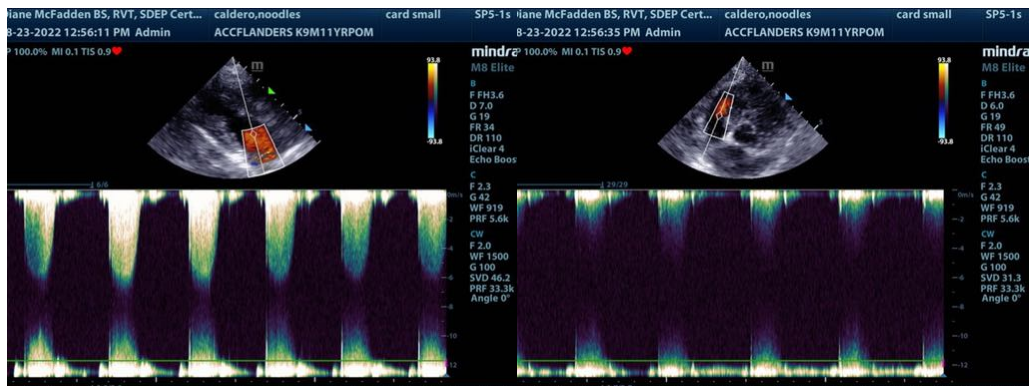
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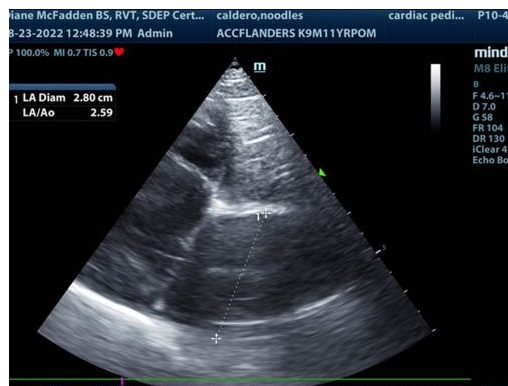
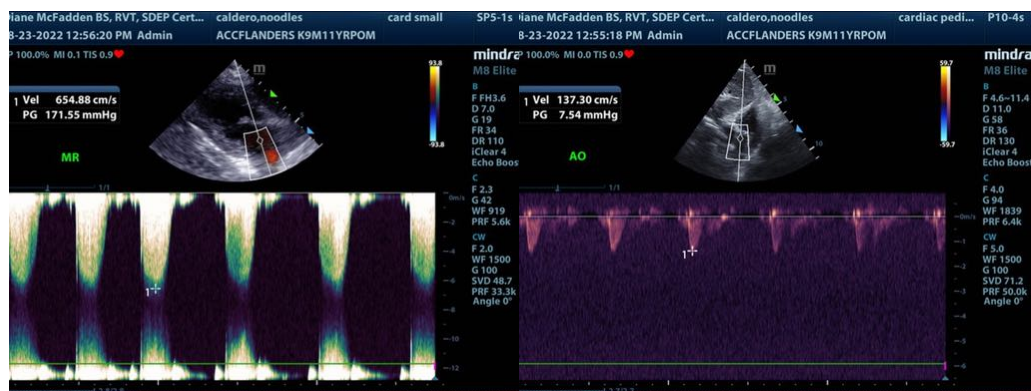
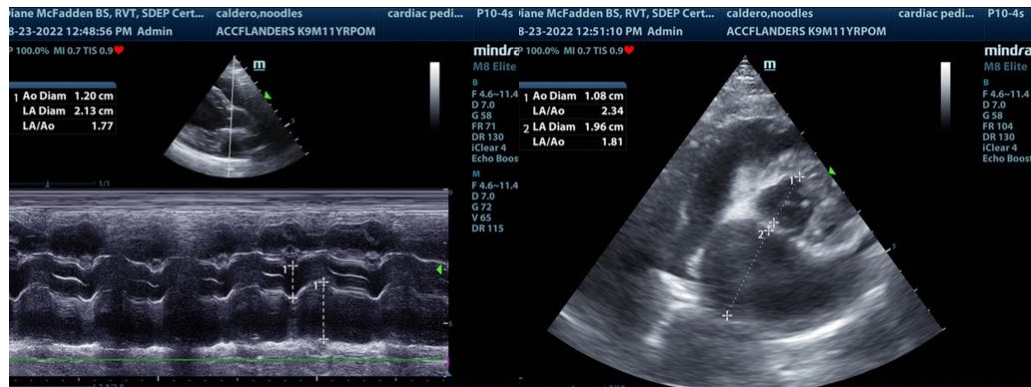
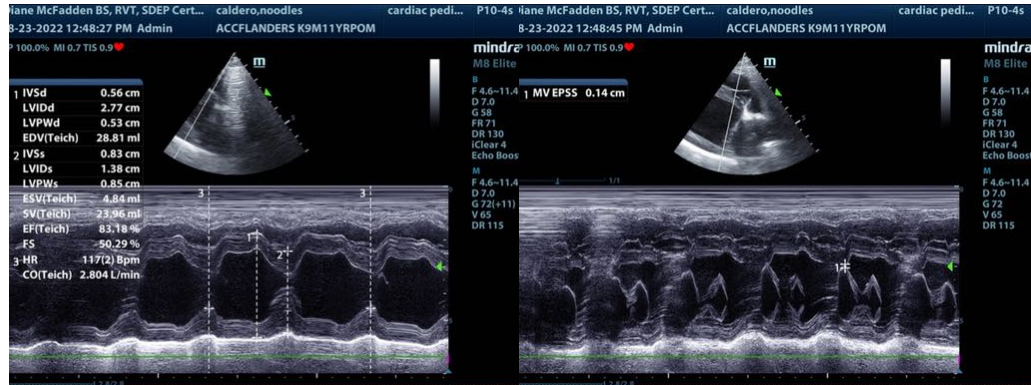
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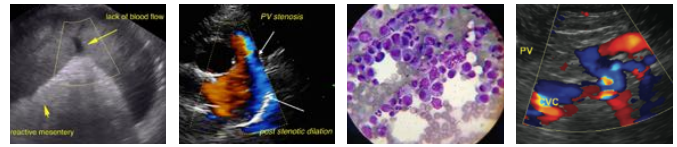
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
Info@SonoPath.com