



**PATIENT PRESENTING CLINICAL SIGNS**

Spencer Russo

History: History of left sided CHF - hospitalized at emergency clinic earlier this year (Jan. 2022), has occasional mild cough. Presented to WWRVH March 2022 for exam and med. refill. CXR (3/22): cardiomegaly, no CHF/edema noted. Current meds: Pimobendan 3.75 BID, furosemide 25mgs BID, Enalapril 5mgs BID, and Clindamycin for teeth.  
 Abnormal PE/Chem/CBC/UA Results: BUN 11, creat. 0.8. CBC: WNL. BP: 168/100, 172/69, 169/89.

**SPECIES**

Canine

**BREED**

King Charles Cavalier

**SEX**

Neutered male

**AGE**

8 years

**WEIGHT**

27.04 lbs

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kelly Vazquez, CVT

**HOSPITAL NAME**

Westwood Regional  
 VH

**REFERRING VET**

Dr. Hartwick

**INVOICE**

32157

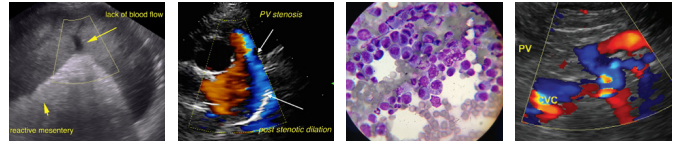
**DATE**

8/4/22

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

The echocardiogram in this patient demonstrated enlarged **left atrial** size based on 3 different LA measurement methods. Complete filling of the left atrium was noted on color flow assessment. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Prolapse of the anterior mitral valve leaflet was noted. 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** valvular assessment demonstrated adequate linear morphology. 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. Comet tail lung pattern/B lines were noted in the peripheral lung fields. This is consistent with pulmonary edema.

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	5.5	2.5	1.8	2.5	38	68	0.23
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	123		0.85	27.04 lbs	5.16	4.37	



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**ULTRASONOGRAPHIC FINDINGS**

Mitral and tricuspid insufficiency with stage C1 valvular disease.

Early pulmonary edema noted on radiographs.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

I recommend quadrotherapy in this patient with Pimobendan at 0.3 mg/kg b.i.d., Furosemide 2-3 mg/kg b.i.d., Enalapril at 0.5 mg/kg b.i.d. and adding Spironolactone at 1-2 mg/kg b.i.d. If necessary I recommend an increase in Furosemide or Torsemide if necessary. Prognosis is guarded.

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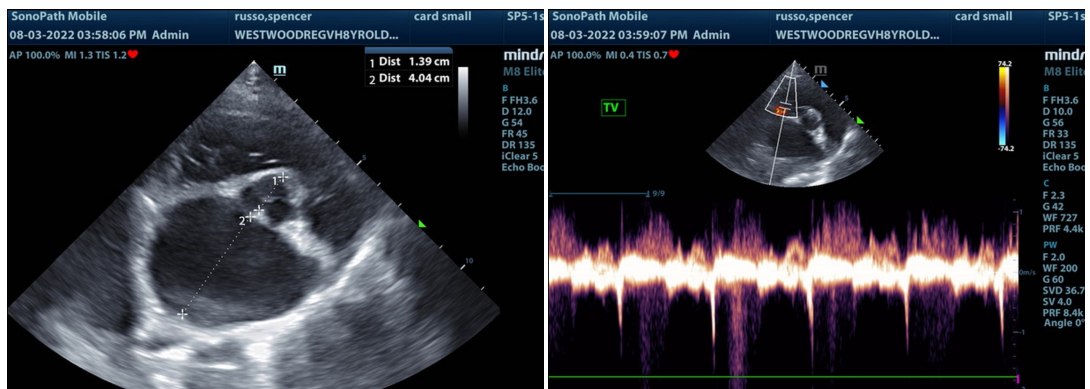
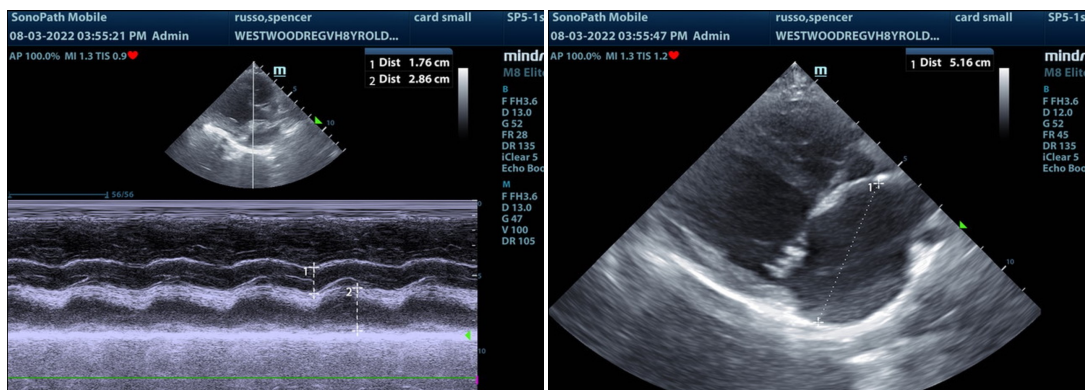
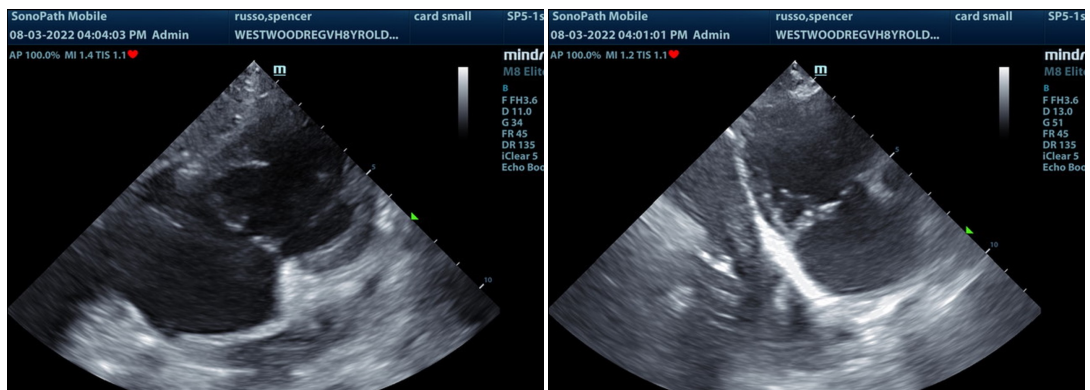
Dr. Hartwick

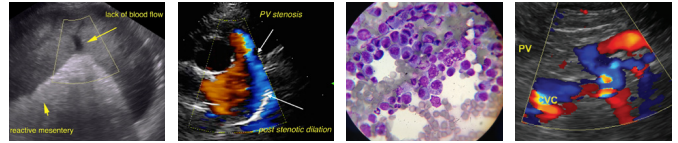
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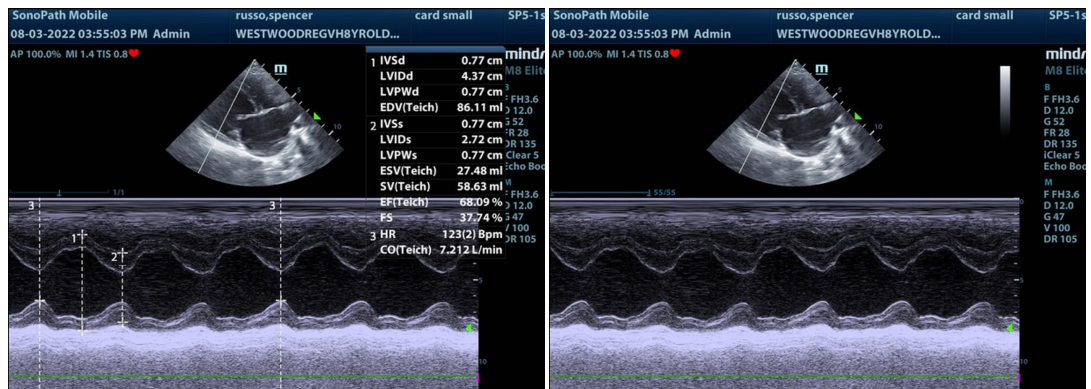
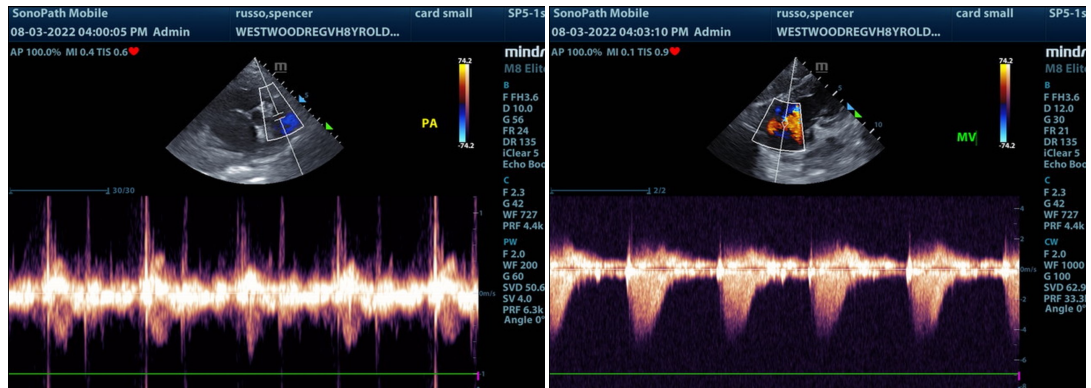
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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

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