



**PATIENT**

Chi Chi Vokurka

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Neutered male

**AGE**

13 years

**WEIGHT**

3.7 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**PRESENTING CLINICAL SIGNS**

History: thoracic ausc: grade 4/6 L systolic murmur, no adventitious lung sounds  
 Abnormal PE/Chem/CBC/UA Results: Arrhythmia seen on ultrasound: EKG results: There are no pathologic arrhythmias noted on this ECG tracing. Sinus arrhythmia is present. Sinus arrhythmia is a normal ECG finding in dogs and is associated with high vagal tone. The reported heart murmur noted in this patient raises concern for underlying structural heart disease. **DIAGNOSTIC RECOMMENDATIONS:** Given the reported heart murmur, additional diagnostics including thoracic radiographs and an echocardiogram (if possible) are recommended. Recommend a blood pressure if not previously performed. If an intermittent arrhythmia was identified on auscultation but not captured on this ECG, a repeat ECG is recommended.

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. 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. Slight aortic insufficiency was noted in this patient 4.8 m/sec. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. Trivial **tricuspid** insufficiency was noted. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** insufficiency was noted. 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. Periodic arrhythmia was noted. This may be sinus arrhythmia. There was no evidence of any significant volume overload at this time.

**IMAGING PERFORMED BY**

Dr. McFarlen

**HOSPITAL NAME**

Van Isle VH

**REFERRING VET**

Dr. Crook

**INVOICE**

42434

**DATE**

1/30/23

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base;)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.83	4.0	1.26	1.6	51	84	0.1
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA (cm) 2D short axis Base view	LVIDd (cm) Avg; 2D and m-mode short axis	LVIDs (cm) Avg; 2D and m-mode short axis
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	110	1.33	0.74	3.7	2.6	2.32	



**PATIENT**

Chi Chi Vokurka

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Neutered male

**AGE**

13 years

**WEIGHT**

3.7 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. McFarlen

**HOSPITAL NAME**

Van Isle VH

**REFERRING VET**

Dr. Crook

**INVOICE**

42434

**DATE**

1/30/23

**ULTRASONOGRAPHIC FINDINGS**

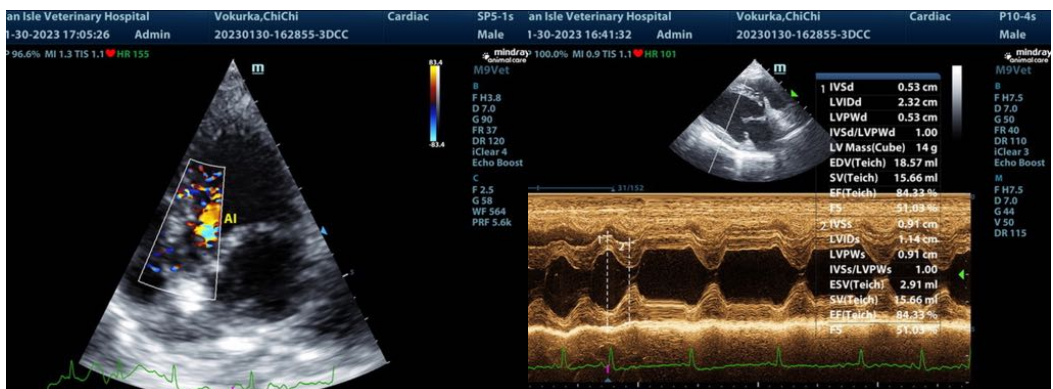
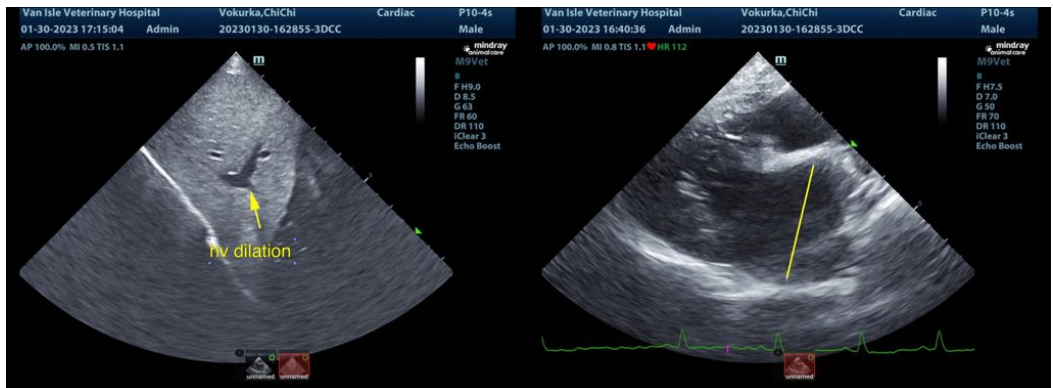
Mitral and tricuspid insufficiency. Early pulmonary hypertension.

Pulmonic and aortic insufficiency, all compensated.

Stage B1 valvular disease with pulmonary hypertension.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Recheck echocardiogram is recommended in 2-3 weeks. Sildenafil can be considered. If the patient does not exhibit any clinical signs such as exercise intolerance or cyanosis upon exercise then you can wait to utilize Sildenafil at this point. There is no consensus when Sildenafil should be implemented in these type of patients with subclinical pulmonary hypertension.





**PATIENT**

Chi Chi Vokurka

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Neutered male

**AGE**

13 years

**WEIGHT**

3.7 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. McFarlen

**HOSPITAL NAME**

Van Isle VH

**REFERRING VET**

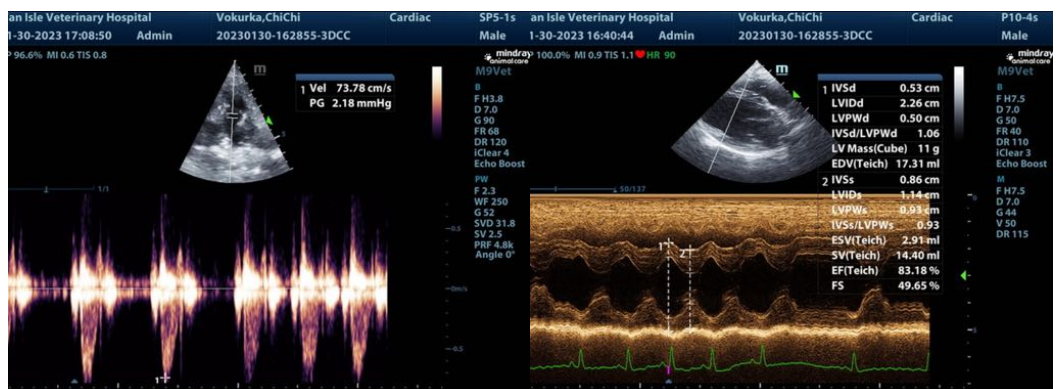
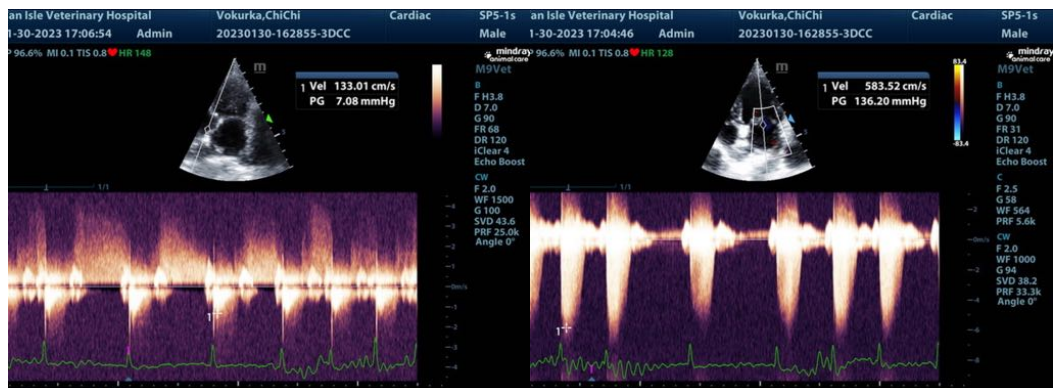
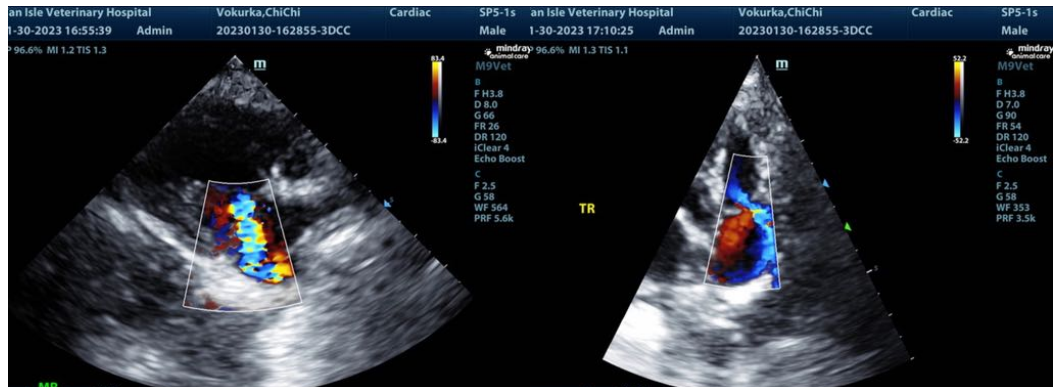
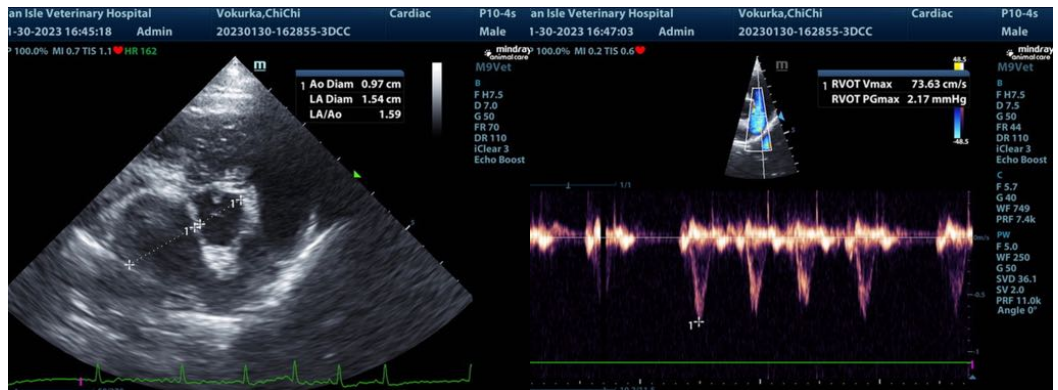
Dr. Crook

**INVOICE**

42434

**DATE**

1/30/23





**PATIENT**

Chi Chi Vokurka

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.

**SPECIES**

Canine

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.

**BREED**

Chihuahua

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

**SEX**

Neutered male

**AGE**

13 years

**WEIGHT**

3.7 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING  
PERFORMED BY**

Dr. McFarlen

**HOSPITAL NAME**

Van Isle VH

**REFERRING VET**

Dr. Crook

**INVOICE**

42434

**DATE**

1/30/23