



**PATIENT**

Alice Kallinteris

**SPECIES**

Canine

**BREED**

Husky Mix

**SEX**

Female Spayed

**AGE**

12 years

**WEIGHT**

60lbs

**PRESENTING CLINICAL SIGNS**

History: Grade 2/6 holosystolic murmur. Assess prior to surgery.  
-Current medications: Apoquel, Galliprant, HepatotruBenefits, Keflex.  
-ECG report (Idexx): NSR with tall P waves.

**RADIOGRAPHIC FINDINGS** \*NOTE: Images submitted for supplemental cardiac information only.

A single lateral film is included. Bulge in the region of the aortic root. Normal cardiac silhouette. No obvious evidence of CHF.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no prolapse into the left atrial lumen. Trace mitral regurgitation. Normal left atrial dimension. No LV dilation with adequate myocardial function. No significant LV wall thickening. The tricuspid valve appears subjectively normal, with trivial tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic valve is normal in morphology and mobility. Normal pulmonic outflow velocity with laminar flow. No pulmonic insufficiency. The aortic valve is not extensively visualized nor the LVOT; however, the aortic valve appears mildly thickened. A valvular stenosis is suspected with mild flow elevation through the region (max pressure gradient: 40mmHg). Mild aortic insufficiency. Significant dilation of the aortic root and ascending segment. No pericardial or pleural effusion noted.

**CARDIAC CHART**

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT  
ARDMS/RVT

**HOSPITAL NAME**

Pocono Peak  
Veterinary Clinic

**REFERRING VET**

Dr. Thompson

**INVOICE**

25627

**DATE**

8/8/22

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	NA	NA	NM	0.9	41	73	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	3.0	1.0	27.2	3.0	3.5	2.1
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
<b>BODY WEIGHT DEPENDENT PARAMETERS</b>				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)
Adapted from June Boon, Veterinary Echocardiography, 1998 Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435 Hansson et al, Vet Rad and Ultrasound 2002 Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995							



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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The cause of the murmur is mild aortic stenosis (AS) causing elevated blood flow velocity through the aortic valve. The LV walls are not significantly hypertrophied secondary to the stenosis, the remainder of the cardiac structure and function appears adequate. There is a trace leaks noted in the mitral and tricuspid valve, which may be physiologic or may reflect early valve disease. Most importantly, the LA is normal in dimension indicating the risk for complication remains low. It is worth noting that the aortic root and ascending segment are significantly dilated, which is unexpected with a mild stenosis. Highly recommend a baseline blood pressure. If BP is normal, consider advanced thoracic imaging, such as a CT scan to ensure no additional issues are present (such as a peripheral narrowing).

Aortic stenosis is most commonly a congenital disease, which is present from birth. If this is a new murmur, an atypical onset is possible, and reassessment is certainly advised.

Prognosis is guarded, with most dogs in the mild category will never experience associated clinical signs. Given that this is a 12-year dog this is likely of little clinical relevance; however, the dilation of the aorta is somewhat concerning. Serial echocardiography is recommended lifelong to continue assessment for progression and risk for complication. Monitor for development of labored breathing, exercise intolerance or collapse episodes, as AS patients are more predisposed to development of arrhythmias than to CHF which is actually very uncommon. Mild exercise restriction is advised. Omega fatty acid supplementation (1000mg 1-2x daily) is of some long-term benefit for dogs predisposed to arrhythmias.

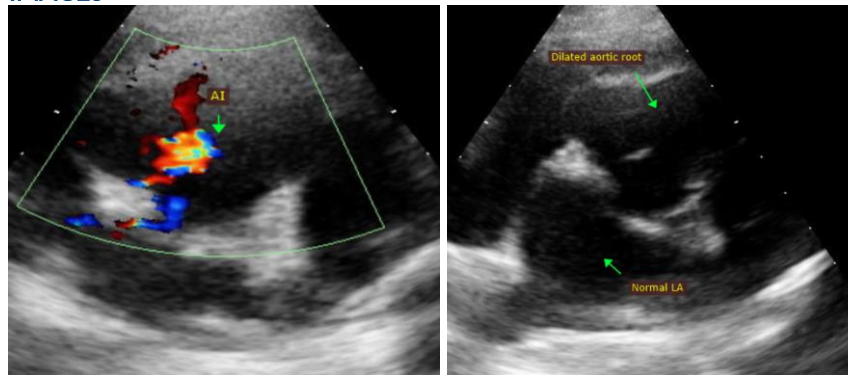
If needed, anesthetic risk is mildly elevated pending BP and further aortic assessment. Avoid heart rate stimulating drugs such as atropine or glycopyrrolate unless clinically indicated. Avoid ketamine and acepromazine due to peripheral vascular effects. Mild IV fluid restriction is advised. **Recommend prophylactic antibiotics prior to and during any orthopedic or dental procedure** in the future given predisposition to endocarditis.

**PLAN**

Baseline BP recommended. Consider advance thoracic imaging, such as a CT scan if desired.

Recommend recheck echocardiogram in 6-12 months, sooner if clinical signs arise.

**IMAGES**



**HOSPITAL NAME**

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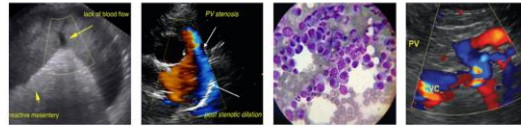
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

**SPECIES**

Canine

Thank you for this referral. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

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Maggie Machen Lamy, DVM  
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)

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