



PATIENT

Noel Marinar

PRESENTING CLINICAL SIGNS

History: Presented for puppy wellness visit and vaccines. New soft grade 1-2/6 left sided basilar heart murmur was noted on exam.

SPECIES

Canine

BREED

Cocker Spaniel

SEX

Female

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Normal MV leaflets with no obvious prolapse. No mitral regurgitation. Normal left atrial dimension. Normal LV diameter with adequate myocardial function. Normal LV wall dimensions. The tricuspid valve appears subjectively normal, trace tricuspid regurgitation. The right heart is normal. No overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. No obvious aortic abnormalities identified, however the LVOT velocity is mildly elevated. Laminar flow. The RVOT is not extensively visualized; however, no stenosis is appreciated. Pulmonic outflow velocities are normal. No aortic and trace pulmonic insufficiency. No obvious congenital shunts. No pericardial or pleural effusion noted. No cardiac tumors observed.

CARDIAC CHART

AGE

18 weeks

WEIGHT

14lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

REFERRING VET

Dr. Boockmeier

INVOICE

29158

DATE

2/21/23

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	NM	1.2	1.4	38	72	0.1
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	130	2.0	1.3	6.4	1.7	1.8	1.1
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				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

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The only cause of a murmur identified is mildly increased flow velocity through the aortic root. No obvious aortic valve abnormalities visualized and there is no subaortic ridge seen. In the absence of structural abnormalities this is considered a benign flow murmur. This should be monitored as the puppy matures, as there is room for progression prior to 1 year of age. This type of outflow abnormality is heart rate dependent and will vary with hydration/volume changes as well. No obvious congenital shunts or defects are observed in this study; however, it is important to note that small abnormalities are easily missed without advanced diagnostics.

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No cardiac medications are indicated at this time. Monitor for any development of cough, labored breathing or exercise intolerance.

SPECIES

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No cardiac contraindication for general anesthesia is seen.

Assuming the murmur persists, recommend recheck echocardiogram in 6-12 months to ensure no progressive issues are seen, sooner if any clinical signs arise in the interim.

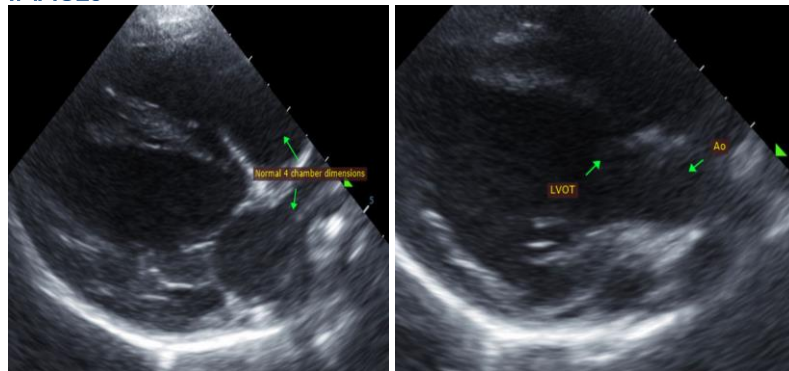
BREED

Cocker Spaniel

IMAGES

SEX

Female

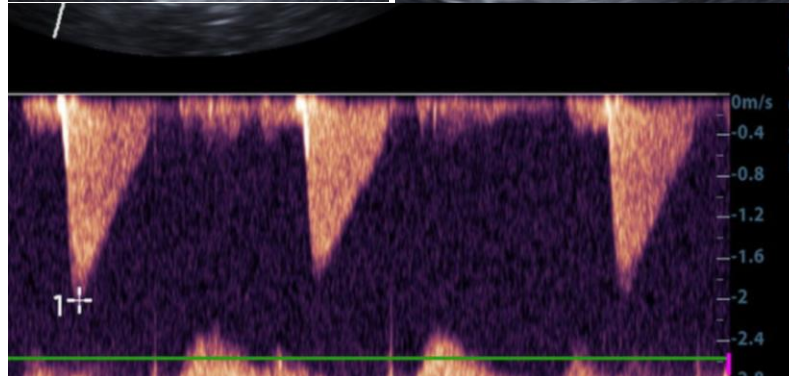


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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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Kim Liedberg

HOSPITAL NAME

SVS Imaging WI

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.

Maggie Machen Lamy, DVM
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