



PATIENT

Tommy Klippel

SPECIES

Canine

BREED

Boxer

SEX

Male

AGE

10 Weeks

WEIGHT

15.8 Pounds

INTERPRETED BY

Sara Brethel DVM,
DACVIM (Cardiology)

IMAGING PERFORMED BY

Julia Bakker, DVM

HOSPITAL NAME

Orange Blossom VI

REFERRING VET

Zachary Pearl, DVM

INVOICE

35030

DATE

12/22/25

PRESENTING CLINICAL SIGNS

History: Patient's littermate died suddenly. Family of this puppy would like to screen for possible inherited cardiac defects out of caution. Patient does not have a known murmur or arrhythmia.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	--	--	1.46		52.38	--	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LAD LA MAX 4 Chamber	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				
PATIENT	--	~1.8	0.94	7.18	--	2.1	1.0

Cardiac Presentation

The mitral valve leaflets are normal and there is no mitral regurgitation. There is no prolapse of the mitral valve leaflets. The left atrial size is normal. Left ventricular systolic and diastolic function is within normal limits. There is normal right atrial size without evidence of tricuspid regurgitation. There is no prolapse of the tricuspid valve leaflets and no evidence of pulmonary hypertension on today's evaluation. The right ventricle subjectively appears normal in structure and function. The aortic and pulmonic valves have normal morphology and the corresponding outflow velocities are within normal limits. There is no evidence of pulmonic or aortic insufficiency. The aorta appears normal. The pulmonary artery and associated branches appear normal. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.

ULTRASONOGRAPHIC FINDINGS

- Structurally normal heart

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The patient's heart is structurally normal. Of the images provided, no congenital defects are identified. Given the patient's breed and the history of the litter mate, I would consider another echocardiogram when the patient is a year old. If the echo is normal at a year of age, then I recommend yearly



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screening, starting at the age of 4, for Holter monitors and echocardiograms, to screen the patient for arrhythmogenic cardiomyopathy. Sooner evaluation is recommended if the patient develops a heart murmur or an arrhythmia within the year.



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.

Sara Brethel DVM, DACVIM (Cardiology)

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