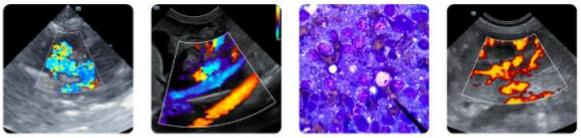

PATIENT

Cooper Russo

SPECIES

Canine

BREED

Mix

SEX

Neutered Male

AGE

4 Years 5 Months

WEIGHT

77.5 Pounds

INTERPRETED BY

Sara Brethel DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Kerri Becker

HOSPITAL NAME

St. Georges VH

REFERRING VET

Dr. Ng

INVOICE

35966

DATE

12/18/25

PRESENTING CLINICAL SIGNS

History: New murmur grade 1/6 new systolic murmur pre anesthetic workup
Abnormal PE/Chem/CBC/UA Results: HCT-61.1 HGB-22.1

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		~3.0	NM	1.6	48.64	--	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	174	Underest	Underest	35.23	4.0	3.7	1.9

Aortic root: 1.6

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; however, the ratio is skewed due to the small aortic root. Left ventricular systolic and diastolic function is within normal limits. There is normal right atrial size with mild 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 appear to have normal morphology. There is no evidence of pulmonic or aortic insufficiency. The aortic root appears decreased. The pulmonary artery and associated branches appear normal. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.

ULTRASONOGRAPHIC FINDINGS

- Tricuspid regurgitation
- Small aortic root

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Aortic and pulmonic outflow velocities are underestimated, and with the small aortic root, I recommend further evaluation of the aortic valve to ensure there isn't evidence of mild changes to the valve itself. The murmur could be due to either increased aortic/pulmonic outflow velocities, or the

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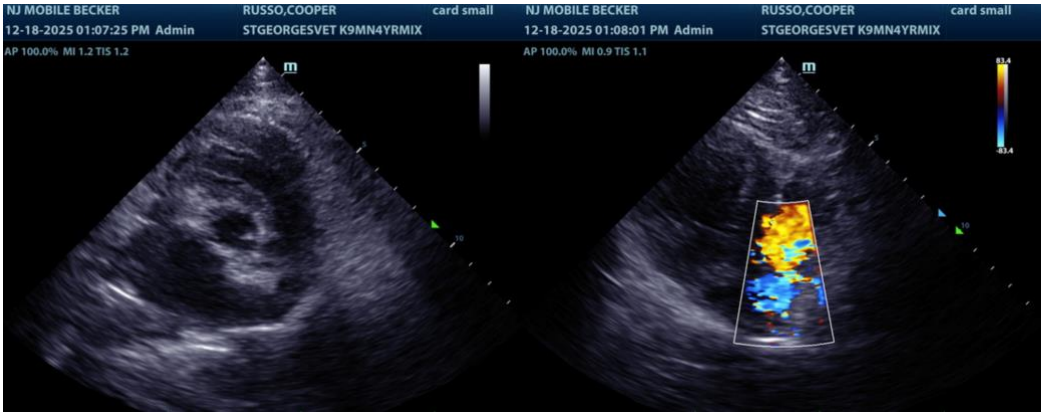
mild tricuspid regurgitation. The small aortic root can be a breed variant; however, it could also represent a mild form of underlying aortic versus subaortic stenosis. Recommend ensuring the patient is heartworm negative. Recommend ensuring full bloodwork is normal and not contributing to a physiologic murmur either. The significance of the tricuspid regurgitation could be early onset of degenerative changes. It could also be physiologic at this time.

A recheck echo is recommended in 6-9 months, sooner if the murmur is worsening in intensity or the patient is developing cardiovascular clinical signs.

Standard perioperative fluid rates should be well-tolerated. Medications like dexmedetomidine and other alpha 2 agonists are best avoided. Ketamine is also best avoided. Anticholinergics can be used in the case of a clinically significant bradyarrhythmia (i.e., bradycardia with concurrent hypotension). If the patient is on an ACEi, recommend not giving this therapy the day of anesthesia.



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)

info@SonoPath.com