

**PATIENT**

Titus Spina

**SPECIES**

Canine

**BREED**

Yorkie

**SEX**

Neutered Male

**AGE**

10 Years

**WEIGHT**

4.13 kg

**INTERPRETED BY**

Sara Brethel DVM,  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Amanda Stewart

**HOSPITAL NAME**

Graham Animal  
Hospital

**REFERRING VET**

Dr. Seager

**INVOICE**

15928

**DATE**

05/07/26

**PRESENTING CLINICAL SIGNS**

Findings: - Hx of collapsing trachea, on elixir but still coughs regularly - Presented for dental today but on PE noted increased respiratory effort and crackles in lungs bilaterally. No HMR or arrhythmia. - Rads show enlarged heart with dorsal deviation of trachea, very narrow trachea, somewhat messy but non-specific lung changes. - Suspicious that coughing may be related to more than just collapsing trachea but was not noticed at home due to presence of pre-existing cough. - BP's slightly increased (systolic avg 170) - pt very anxious in clinic. Current Medications Tracheal elixir (not given same day as Traz), Cerenia, Gabapentin, Trazodone, Furose

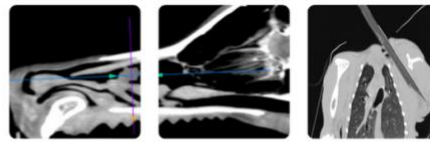
Abnormal PE/Chem/CBC/UA Results: CBC/prep 1 month ago: NSF - Will check electrolytes on day of app't. Radiographic Findings Rads show enlarged heart with dorsal deviation of trachea, very narrow trachea, somewhat messy but non-specific lung changes. Primary Question to Be Answered in This Exam Cause of heart enlargement, cause of increased cough, anesthetic safety, recommendations for treatment/prognosis. Rads attached

**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	5.08	--	1.48	1.46	41.66	--	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	NM	0.88	1.0	4.13	2.18	2.4	1.4

**Cardiac Presentation**

The mitral valve leaflets are mildly thickened with mild mitral regurgitation posteriorly directed. There is no prolapse of the mitral valve leaflets. The left atrial size is normal. Left ventricular internal dimensions during diastole are within normal limits and systolic function is preserved in the face of mitral regurgitation. There is normal right atrial size without tricuspid regurgitation. There is no prolapse of the tricuspid valve leaflets and no evidence of pulmonary hypertension based upon tricuspid regurgitant velocities. 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.



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**Chest Radiographs**

The cardiac silhouette does appear mildly enlarged, however, the images are rotated and expiratory. There is no evidence of cardiogenic pulmonary edema.

**ULTRASONOGRAPHIC FINDINGS**

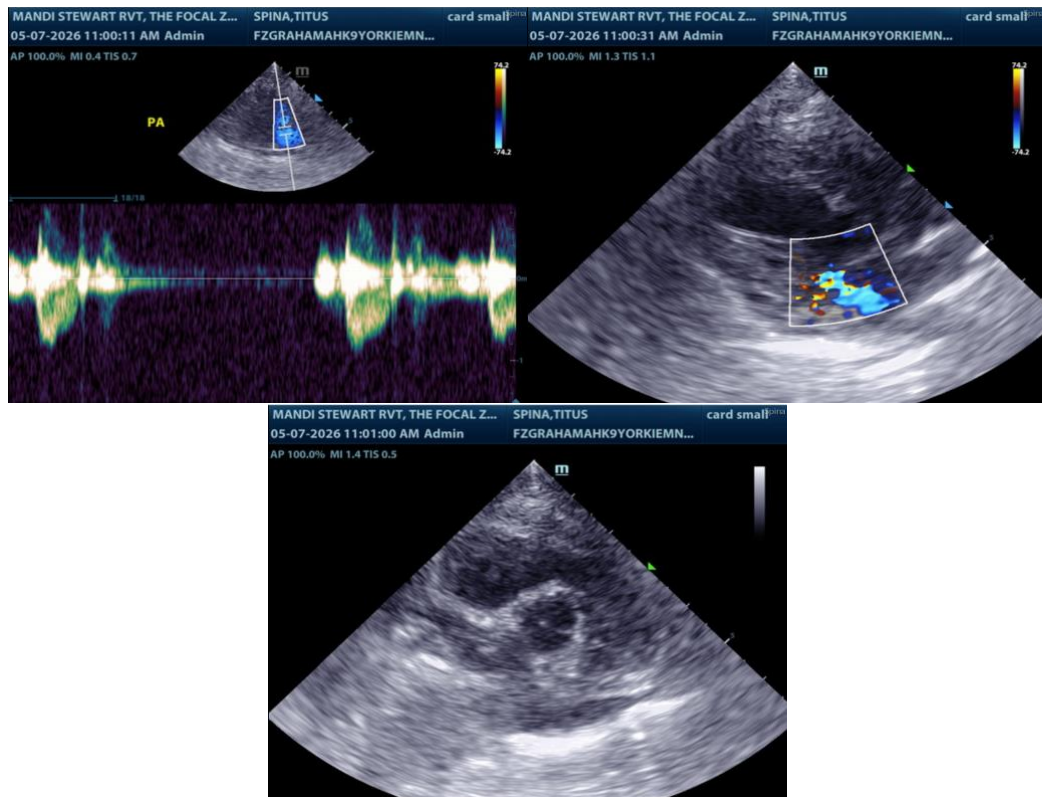
- Degenerative valve disease ACVIM stage B1.

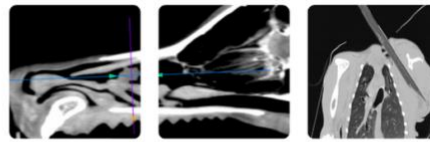
**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The patient has degenerative valve disease ACVIM stage B1 and no cardiac medications are indicated at this time. Since this can be a progressive condition, serial monitoring is recommended. A recheck echocardiogram is recommended in 10-12 months. A sooner recheck is recommended if the patient develops cardiovascular clinical signs or the heart murmur is worsening in intensity. Elective anesthetic procedures should be well tolerated.

Recommend obtaining a blood pressure on the patient to ensure it is <160mmHg. If the blood pressure is elevated recommend following ACVIM guidelines for systemic hypertension and treating if indicated.

The cause of the patient's pulmonary auscultation and clinical signs is not secondary to cardiac disease.





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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.

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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.

Sara Brethel DVM, DACVIM (Cardiology)

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