

PATIENT PRESENTING CLINICAL SIGNS

Max Gardner

Clinical Exam Findings: IV/VI left apical systolic murmur. heart murmur has been documented from at least 2023. on probiotics for small feces. O states during P's daily walks (generally done ~9am & 6pm); O noticed that P was walking slower and panting during walk and was having labored breathing after walk (but did recover with time). O noted an increase of water was well.

SPECIES

Canine

BREED

Shih Tzu Mix

ABNORMAL Labwork Values: BW performed 6/11/25. NSF CBC Chem.

SEX

Neutered Male

Is there a Heart Murmur? If so, please grade: yes, 4/6

Current Medications: Apoquel, Cytopoint, probiotic

Radiographic Findings: 7/23/23- Thoracic rads (R lateral and VD): Borderline cardiomegaly without apparent left atrial enlargement. Spinal DJD. Mild increased bronchial markings.

AGE

11 Years

Notes to Specialist (if any): Dr. Jenny Elsbree submitted this form (has not seen patient), but Dr. Pappas is primary

WEIGHT

17.8 pounds

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

INTERPRETED BY

Sara Brethel DVM,
 DACVIM (Cardiology)

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	6.73	3.68	1.6	1.37	44.83	--	0.13
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	2.0	0.71	8.1	3.12	2.9	1.6

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Santa Clara Animal Hospital

REFERRING VET

Dr. Pappas

INVOICE

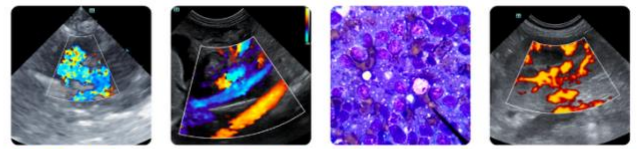
14752

DATE

03/30/26

Cardiac Presentation

The mitral valve leaflets are mildly thickened with mild mitral regurgitation posteriorly directed. There is no prolapse of the mitral valve leaflet. 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 with mild to moderate tricuspid regurgitation. There is no prolapse of the tricuspid valve leaflets and mild to moderate evidence of pulmonary hypertension based upon tricuspid regurgitant velocities. The right ventricle subjectively



PATIENT

Max Gardner

SPECIES

Canine

BREED

Shih Tzu Mix

SEX

Neutered Male

AGE

11 Years

WEIGHT

17.8 pounds

INTERPRETED BY

Sara Brethel DVM,
 DACVIM (Cardiology)

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Santa Clara Animal
 Hospital

REFERRING VET

Dr. Pappas

INVOICE

14752

DATE

03/30/26

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.

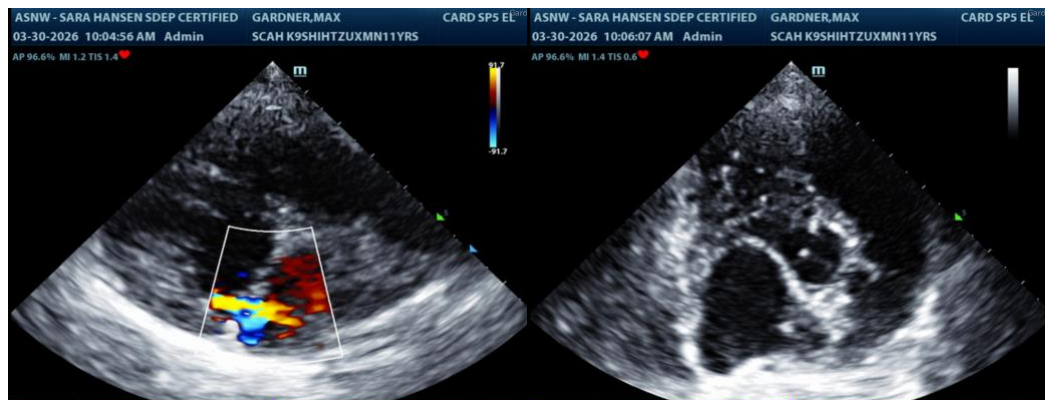
ULTRASONOGRAPHIC FINDINGS

- Degenerative valve disease ACVIM stage B1.
- Mild to moderate pulmonary hypertension.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

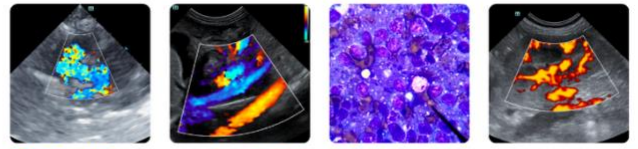
The patient has degenerative valve disease ACVIM stage B1 and no cardiac medications are indicated at this time. Since this can be a progressive condition, serial monitoring is recommended. A recheck echocardiogram is recommended in 6 months. A sooner recheck is recommended if the patient develops cardiovascular clinical signs or the heart murmur is worsening in intensity. Elective anesthetic procedures should be well tolerated. The significance of the pulmonary hypertension is unknown and does not appear to be a problem, secondary to the patient's underlying degenerative valve disease. Recommend ensuring the patient is heartworm negative. No therapies are indicated at this time. Serial monitoring is recommended.

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. 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.



PATIENT

Sara Brethel DVM, DACVIM (Cardiology)

Max Gardner

info@SonoPath.com

SPECIES

Canine

BREED

Shih Tzu Mix

SEX

Neutered Male

AGE

11 Years

WEIGHT

17.8 pounds

INTERPRETED BY

Sara Brethel DVM,
DACVIM (Cardiology)

**IMAGING
PERFORMED BY**

Sara Hansen

HOSPITAL NAME

Santa Clara Animal
Hospital

REFERRING VET

Dr. Pappas

INVOICE

14752

DATE

03/30/26