

**PRESENTING CLINICAL SIGNS**

History: Consistently throwing VPCs yesterday.

**DATE**

11/24/21

**ECHOCARDIOGRAPHIC FINDINGS**

Multiple 2D, M-mode, and Doppler video loops and still images are submitted for review.

**PERFORMED BY:**

Dr. Gromalak

**INTERPRETED BY**

Keith Blass, DVM,  
MS, DACVIM  
(Cardiology)

Left atrial size is normal. The mitral valve appears normal, though very mild mitral regurgitation is present. Left ventricular dimensions are normal. Left ventricular systolic function is normal. The aorta and aortic valve are normal. Right atrial and right ventricular dimensions are normal. The tricuspid valve leaflets are mildly thickened, and a mild jet of tricuspid regurgitation is present. The pulmonary artery and pulmonic valve are normal. No heartworms are visualized. No pericardial effusion or cardiac masses are seen.

**PATIENT**

Gracie Helminiak

LA - 42.7 mm  
LVIDd - 31.1 mm  
LVIDs - 22.0 mm  
FS - 29%  
RA - 29.7 mm  
LVOT - 1.47 m/s  
RVOT - 0.95 m/s  
TR - 2.27 m/s

**RADIOGRAPHIC FINDINGS**

Orthogonal thoracic radiographs are submitted for review.

**SPECIES**

Canine

The cardiac silhouette is normal in size, with no specific chamber enlargement present. The pulmonary vessels are within normal limits. There are mild pulmonary bronchial markings. The pleural space is within normal limits. The trachea is normal. The remainder of the thorax is unremarkable.

**BREED**

Coonhound Mix

**ELECTROCARDIOGRAPHIC FINDINGS**

A single lead ECG is submitted for review.

**SEX**

HR: 150 bpm  
Rhythm: Sinus with VPCs

**FS**

The underlying rhythm is sinus in origin. All sinus complex amplitudes and intervals are within normal limits. There are frequent polymorphic VPCs, including a number of ventricular couplets and triplets. No runs of ventricular tachycardia are present. No atrial ectopy is present.

**AGE**

Noconduction blocks are seen.

**11 y**

**ASSESSMENT/RECOMMENDATIONS**

Degenerative mitral and tricuspid valve disease  
Ventricular premature complexes (VPCs)

**WEIGHT**

53 lb

Gracie's echocardiogram demonstrates mild regurgitation of blood across her mitral and tricuspid valves resulting from degenerative valve disease. The hemodynamic effects of each of the regurgitations appear to be mild, as Gracie does not have secondary dilation of any of her cardiac chambers. As such, Gracie's valvular diseases appear to be well-compensated, and it's unlikely that they are the cause of her arrhythmia.

**HOSPITAL NAME**

SVS Imaging

Gracie's ECG demonstrates the presence of frequent polymorphic VPCs, including a number of ventricular couplets and triplets. Given the complexity of her arrhythmia, Gracie is at risk for the development of clinical signs, such as exercise intolerance and syncope, as well as sudden death.

**REFERRING VET**

Dr. Bittner



Possible differentials for Gracie's arrhythmia include cardiac conduction system disease, splenic/hepatic disease, drug/toxin exposure, severe electrolyte abnormalities, and inflammatory/infectious disease, among other less common causes.

**DATE**

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Gracie's thoracic radiographs are unremarkable.

**PERFORMED BY:**

Dr. Gromalak

An abdominal ultrasound and chemistry profile can be considered to evaluate for non-cardiac causes of Gracie's arrhythmia.

**INTERPRETED BY**

Keith Blass, DVM,  
MS, DACVIM  
(Cardiology)

Recommended therapy for Gracie's arrhythmia is sotalol (30 mg BID). Moderate exercise restriction is recommended. No therapy is recommended for Gracie's valvular diseases at this time.

A recheck ECG is recommended in 2 weeks. A recheck echocardiogram is recommended in 6 months.

**PATIENT**

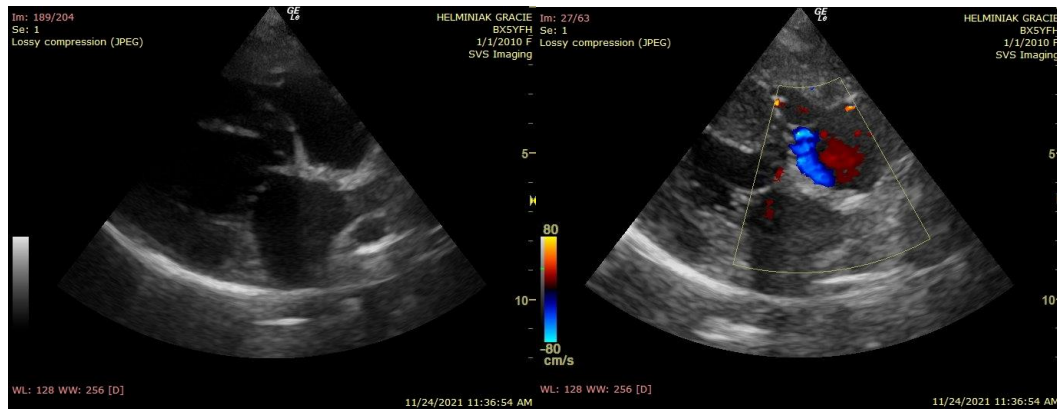
Gracie Helminiak

**SPECIES**

Canine

**BREED**

Coonhound Mix



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.

**SEX**

FS

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.

**AGE**

11 y

Keith Blass, DVM, MS, DACVIM (Cardiology)  
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**WEIGHT**

53 lb

**HOSPITAL NAME**

SVS Imaging

**REFERRING VET**

Dr. Bittner