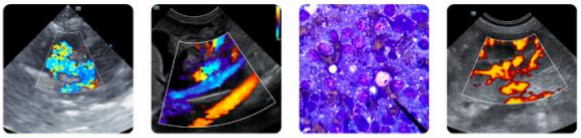




**PATIENT**

Hudson Garcia

**SPECIES**

Canine

**BREED**

Mix

**SEX**

Neutered Male

**AGE**

9 Years 3 Months

**WEIGHT**

Not Provided

**INTERPRETED BY**

Tam Mengine, DVM, DABVP (canine/feline practice)

**IMAGING PERFORMED BY**

Rebecca Hamilton

**HOSPITAL NAME**

Midland Park Veterinary Hospital

**REFERRING VET**

Dr. Shokoff

**INVOICE**

13755

**DATE**

02/13/26

## PRESENTING CLINICAL SIGNS

- Coughing
- coughing at rest X 1 week
- Grade 3/6 systolic murmur over L side
- Rads reveal cardiomegaly w/ LA enlargement and pulmonary vessels/ unstructured interstitial lung pattern
- Meds: Furosemide 12.5 mg BID (cough has improved since starting 2/9)

Abnormal PE/Chem/CBC/UA Results: NSF on routine BW, Ehrlichia positive, urine pending

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

| CANINE CARDIAC PARAMETERS | MR VMAX (m/s) | TR VMAX (m/s) | LA/AO (m-mode long axis) | 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 | 5.1 | 3.1 | 2.5 | 1.8 | 51 | 81 | 0.3 |
| **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 | 152 | 1.2 | 0.7 | NP | NM | 4.5 | 2.2 |

### *Cardiac Presentation*

The **left atrium** is significantly enlarged, with no evidence of smoke or thrombus formation. The **left ventricle** is increased in diameter with normal wall thickness and demonstrates good systolic function. The **right atrium** is subjectively of normal size and **right ventricle** dimensions, and systolic function are subjectively normal. There is severe **mitral valve** regurgitation and mild trivial **tricuspid valve** regurgitation noted, with irregular thickening of the valve leaflets. There is prolapse of both mitral valve leaflets. No vegetative lesions were seen. Estimates of left ventricular filling pressure are significantly elevated (Mitral E-vel >1.3 m/s – aliasing; A-vel 0.6 m/s). Tricuspid regurgitation velocity is mildly elevated, without other evidence of clinically significant pulmonary hypertensions. The **aortic** and **pulmonary valves** both exhibit normal appearance and function. The **main pulmonary artery** appears normal. No pericardial/pleural effusion or cardiac masses are seen. There is no evidence of an arrhythmia.

## ULTRASONOGRAPHIC FINDINGS

Myxomatous mitral valve disease – Stage C.

**PATIENT**

Hudson Garcia

**SPECIES**

Canine

**BREED**

Mix

**SEX**

Neutered Male

**AGE**

9 Years 3 Months

**WEIGHT**

Not Provided

**INTERPRETED BY**

Tam Mengine, DVM, DABVP (canine/feline practice)

**IMAGING PERFORMED BY**

Rebecca Hamilton

**HOSPITAL NAME**

Midland Park Veterinary Hospital

**REFERRING VET**

Dr. Shokoff

**INVOICE**

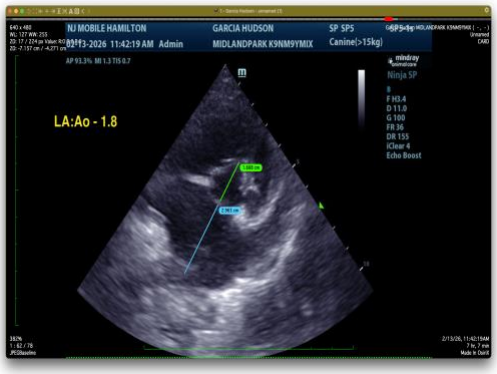
13755

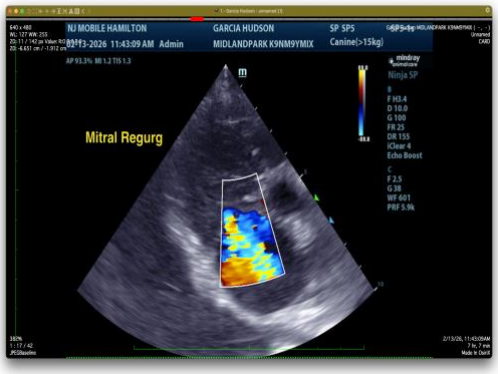
**DATE**

02/13/26

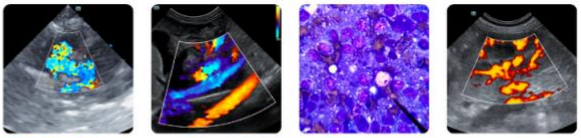
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Given that the patient is already on furosemide, it is likely that the increased left atrial and ventricular size, and elevated left ventricular filling pressures, would be further increased without diuretic therapy. Thus, it is likely that the patient has gone into congestive heart failure (CHF). Long-term prognosis in dogs with CHF is variable, but most patients will stabilize for 6 -12 months with therapy, until eventually their disease progresses – most canine patients in CHF succumb to their disease within 12 months.
- Begin Pimobendan at 0.2 – 0.3 mg/kg PO BID. If the clinical signs are controlled, and renal values are normal, then continue furosemide at the current dose. If the sleeping respiratory is elevated (>30 breaths per minute), then consider increasing the furosemide dose as needed (up to 4 mg/kg TID) until signs are controlled.
- Once the patient is stabilized, if renal values are normal, then the addition of an ACE inhibitor (enalapril at 0.5mg/kg q24h or benazepril at 0.25mg/kg q24h) and spironolactone (2mg/kg q24h) would also be recommended.
- The mildly elevated tricuspid regurgitation velocity is most likely secondary to congestive heart failure and does not warrant treatment unless syncopal episodes occur. Should the patient develop syncopal episodes, recheck echocardiogram would be recommended to determine whether clinically significant pulmonary hypertension, or a significant arrhythmia, has developed.
- Daily monitoring of the sleeping respiratory rate at home is recommended, and if the sleeping respiratory exceeds 35 breaths per minute, then a prompt recheck physical examination and chest radiographs to assess for pulmonary edema would be warranted.
- The patient may benefit from a cardiac diet such as Purina's "CardioCare" veterinary diet. Salty treats should be avoided.
- If the patient is doing clinically well, then recheck echocardiogram is recommended in 6-8 months. MMVD is a progressive disease, and it can be expected that the patient's disease will progress over time.
- Anesthesia should be avoided if at all possible. If an anesthetic procedure must be performed, then referral to a facility with a board-certified anesthesiologist or cardiologist on staff is recommended.



New Jersey Mobile
FUELED BY SONOPATH VETERINARY ULTRASOUND



Clinical Sonography & Telecytology
Educational Teleconsultation Services™

SonoPath
FOSTERING THE ART OF VETERINARY MEDICINE™
www.SonoPath.com
info@sonopath.com
800.838.4268

**PATIENT**

Hudson Garcia

**SPECIES**

Canine

**BREED**

Mix

**SEX**

Neutered Male

**AGE**

9 Years 3 Months

**WEIGHT**

Not Provided

**INTERPRETED BY**

Tam Mengine, DVM, DABVP (canine/feline practice)

**IMAGING PERFORMED BY**

Rebecca Hamilton

**HOSPITAL NAME**

Midland Park Veterinary Hospital

**REFERRING VET**

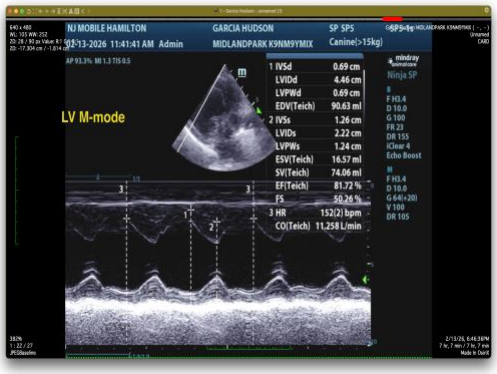
Dr. Shokoff

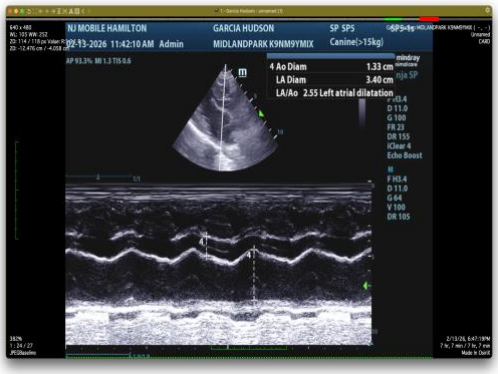
**INVOICE**

13755

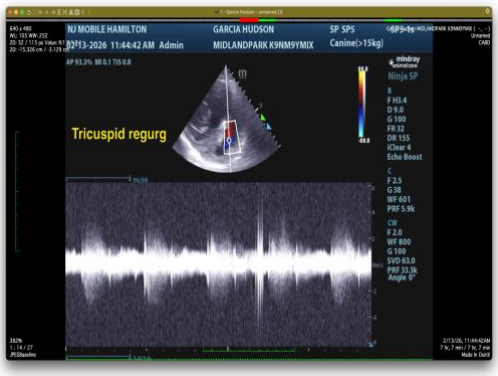
**DATE**

02/13/26








**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.

**Tam Mengine, DVM, DABVP (canine/feline practice)**

info@SonoPath.com