

**Accession/Encounter No:** CV34800230  
**DOB:** 1951-08-01 **Age:** 70  
**Gender:** F  
**Height:** 70 in **Weight:** 309 lbs  
**BSA:** 2.71 m<sup>2</sup>  
**BMI:** 44.34

**Study Time:** 02:42 PM  
**Reading Group:** Cardiac MR Reading Group  
**Referring Group:** Emergency Physician  
**Sonographer:** meduser

**Study Quality:** Good

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### Final Impression:

1. BILEAFLET MITRAL VALVE PROLAPSE WITH MODERATE-SEVERE PRIMARY MR (rvol 56ML; RF 44%).
2. THERE IS AN ADDITIONAL LARGE PROLAPSE VOLUME OF 22 ML, WITH A POTENTIALLY SEVERE TOTAL MITRAL REGURGITANT LOAD OF 78 ML (52%).

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### Summary

Left Ventricle: Quantitative LVEF 68%. LV wall thickness is normal. LV cavity is mild/moderately enlarged (LVEDVi 125 mL/m<sup>2</sup>). LV Systolic function is normal. There is no LV mass/thrombus.

Viability: No evidence of myocardial infarction or scar.

Right Ventricle: Quantitative RVEF 54%. RV wall thickness is normal. RV cavity size is normal. RV systolic function is normal. There is no RV mass/thrombus.

Left Atrium: LA is severely enlarged (LAVi 115 mL/m<sup>2</sup>). There is no LA mass/thrombus.

Right Atrium: RA cavity size is enlarged. There is no RA mass/thrombus.

Pericardium: Pericardium is normal in thickness. There is a small inferior and lateral pericardial effusion.

Pleural Effusion: There is no pleural effusion.

Aortic Valve: Aortic valve is trileaflet. There is no aortic stenosis. There is trivial aortic regurgitation.

Mitral Valve: Mitral valve is myxomatous. There is bileaflet mitral valve prolapse with the prolapse appearing most prominent at the level of A2, with a resultant eccentric posteriorly directed jet at A2-P2 region. There is moderate-severe mitral regurgitation. Mitral regurgitant volume 56 mL. Mitral regurgitant fraction 44%. There is an additional large prolapse volume of 22 mL, with a potentially severe total mitral regurgitant load of 78 mL (52%). There is no mitral stenosis.

Tricuspid Valve: Tricuspid valve leaflets are normal. Tricuspid regurgitation is present but was not (could not be) quantified.

Pulmonic Valve: Pulmonic valve leaflets are normal. There is no pulmonic stenosis. There is mild pulmonic regurgitation. Pulmonic regurgitant volume 6 mL. Pulmonic regurgitant fraction 8%.

Aortic Root: The aortic root is normal in size.

Chest The thoracic aorta is normal in caliber with no evidence of aneurysm, coarctation, or dissection.

Pulmonary Artery: The main pulmonary artery is normal in size without evidence of central pulmonary emboli. The right and left pulmonary arteries are normal in size.

### Core Exam

Measurements:

Volumetric Analysis:

EDV: 221 ml (LV Normal Value 95-159)

ESV: 71 ml (LV Normal Value 29-58)

CO: 12.43 L/min

MASS: 87 grams (LV Normal Value 85-138)

SV 150 ml (LV Normal Value 65-110)

EF 68% (LV Normal Value 59-77%)

Cardiac Output HR: 83 bpm

LV Dimensions:

Wall Thickness: Anteroseptal 0.7 cm

Wall Thickness - Inferolateral 0.8 cm

LV EDD - 5.5 cm

LV ESD - 3.8 cm

LA Dimension (LV Systole):

Area- 2 Chamber 28 cm<sup>2</sup>

Length - 2 Chamber 4.9 cm

Area - 4 Chamber 42 cm<sup>2</sup>

Length - 4 Chamber - 6.2 cm  
Volume - 204 ml  
Volume Normalized - 115.3 ml/m<sup>2</sup>  
RA Dimensions (RV Systole):  
Area - 4 Chamber 5.0 cm<sup>2</sup>  
Length - 4 Chamber - 4.8 cm  
Aortic Root Dimensions:  
Annulus - 2.4 cm  
Sinus of Valsalva - 3.5 cm  
Sinotubular Junction - 2.8 cm  
Extracellular Volume Measurement:  
Hematocrit: 44%  
Hematocrit Date: 2022-May-31

**17 Segment LV Analysis:**

Segment/WM/Hyperenhancement/Interpretation

Base Anteroseptal: Normal/Hyper, None

Base Inferoseptal: Normal/Hyper, None

Base Inferior: Normal/Hyper, None

Base Inferolateral: Normal/Hyper, None

Base Anterolateral: Normal/Hyper, None

Mid Anterior: Normal/Hyper, None

Mid Anteroseptal: Normal/Hyper, None

Mid Inferoseptal: Normal/Hyper, None

Mid Inferior: Normal/Hyper, None

Mid Inferolateral: Normal/Hyper, None

Mid Anterolateral: Normal/Hyper, None

Apical Anterior: Normal/Hyper, None

Apical Septal: Normal/Hyper, None

Apical Inferior: Normal/Hyper, None

Apical Lateral: Normal/Hyper, None

Apex: Normal/Hyper, None

RV Analysis:

RV Basal Anterior: Normal/Hyper, None

RV Basale Inferior: Normal/Hyper, None

RV Mid: Normal/Hyper, None

RV Apical: Normal/Hyper, None

Findings:

LV Scar Size (17 segment): 0%

**Scan Info**

Scanner:

Manufacturer: Siemens

Model: Aera

Scanner Serial Number: HMH Aera (Serial #: 152050)

Pulse Sequences: SSFP cine, 2D LGE segmented, 2D LGE single-shot, Pre-contrast T1 mapping, Post-contrast T1 mapping, Phase contrast Imaging, HASTE morphology, Bright-blood SSFP morphology,

Contrast Agent:

Type--Dotarem

Lot Number P368B

Expiration Date: 2026-Sep-30

Sedation Used: No

Gd Concentration - 0.5 M

Volume Administered: 20 ml

Dosage for 0.5 M - 0.15 mmol/kg



## Cardiac MR Valve Assessment Study Report

CMR 2, PATIENT  
May 23, 2022

Serum Creatinine - 0.8 mg/dL

GFR - 78.30 ml/min/1.73 m<sup>2</sup>

Creatinine Date: 2022-May-31

Setup:

Scan Type: Both

Patient Type: Outpatient

Location: OPC-Aera

Incomplete Scan: No

Reason for Scan: Other Symptoms, eval native valve(s)

Referring Physician

Attending Physician: Carlos El-Tallawi

Technicians: Jonse, Jasmine M

Billing:

Patient Account

CPT Codes--75561, 75565

HCPCS Codes: A9577

ICD10 Codes: I34.0, I34.1

### Additional Notes

AOFF = 72 ml

PAFF = 73 ml

LVSV = 150 ml

RVSV = 89 ml

Total MR RVol (mL) = LVSV - LV Forward Flow (AOFF) = 78

Total MR RF (%) = RVol/(LVSV-AR) = 52%

Prolapse Volume (mL) 22

Transvalvular MR (mL) 56

Transvalvular MR RF (%) 44%

TR

TR RVol (mL) = RVSV - RV Forward Flow (PAFF) = 11

TR RF (%) = Rvol/(RVSV-PR) = 13%

PR

RVol (mL) = 6

RF (%) = 8%

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April 27, 2023 10:43 AM EDT

CSI Admin Staff  
Electronically Signed on Studycast

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