Stages of Mitral Regurgitation

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Mitral regurgitation

Degenerative MR: primary valve disease
Functional MR: primary myocardial disease
### Stages of Valvular Heart Disease

<table>
<thead>
<tr>
<th>Stage</th>
<th>Definition</th>
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<tbody>
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<td>A</td>
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<td>Mild - moderate asymptomatic disease</td>
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| C     | Severe valve disease but asymptomatic  
  C1: Normal LV function  
  C2: Depressed LV function |
| D     | Severe, symptomatic valve disease |
### Stages of Degenerative MR

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Imprecision in grading severity of secondary MR

Defining “Severe” Secondary Mitral Regurgitation
Emphasizing an Integrated Approach

Paul A. Grayburn, MD, Blasé Carabello, MD, Judy Hung, MD, Linda D. Gillam, MD, David Liang, MD, Michael J. Mack, MD, Patrick M. McCarthy, MD, D. Craig Miller, MD, Alfredo Trento, MD, Robert J. Siegel, MD

J Am Coll Cardiol 2014;54:2792-2801

What is “severe” secondary MR?
Ischemic Mitral Regurgitation
Long-Term Outcome and Prognostic Implications With Quantitative Doppler Assessment

Francesco Grigioni, MD; Maurice Enriquez-Sarano, MD; Kenton J. Zehr, MD; Kent R. Bailey, PhD; A. Jamil Tajik, MD


Survival After MI

- MI without MR: 61%
- ERO 1-19: 47%
- ERO ≥20: 29%

*p<0.001*
Ischemic Mitral Regurgitation
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*Circulation, 2001;103:1759-1764.*

Survival After MI

Survival (percent)

Time (years)

Grigioni et al. *Circulation* 2001;103:1759-1764
Ischemic Mitral Regurgitation
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*Circulation, 2001;103:1759-1764.*
Independent prognostic value of functional mitral regurgitation in patients with heart failure. A quantitative analysis of 1256 patients with ischaemic and non-ischaemic dilated cardiomyopathy

Andrea Rossi,1 Frank L Dini,2 Mariantonietta Cicoira,1 Silvia Mariottini,3 Stefano Ghio,5 Maurice Enriquez-Sarano,4

Heart 2011;97:1675–1680

Ischemic or Nonischemic Cardiomyopathy

Hospital-Free Survival (%)

No MR

Mild-Mod MR

Severe MR

ERO >20

n=965

n=661

n=304

n=335

p<0.001

51%

24%

11%

Time (years)

Rossi et al. Heart 2011;97:1675-1680
Valvular Heart Disease

Influence of Mitral Regurgitation Repair on Survival in the Surgical Treatment for Ischemic Heart Failure Trial

Marek A. Deja, Paul A. Grayburn, Benjamin Sun, Vivek Rao, Lilin She, Michal Krejca, Anil R. Jain, Yeow Leng Chua, Richard Daly, Michele Senni, Krzysztof Mokrzycki, Lorenzo Menicanti, Jae K. Oh, Robert Michler, Krzysztof Wróbel, André Lamy, Eric J. Velazquez, Kerry L. Lee and Robert H. Jones

Circulation. 2012;125:2639-2648

Ischemic Cardiomyopathy

Mortality (percent)

Time (years)

p<0.001

Mod-Severe MR

55%

n=377

Mild MR

47%

n=116

No MR

30%

n=261

n=222

Deja et al. Circulation 2012;125:2639-2648
Prevalence of Heart Failure
United States

Source: NHANES, CDC, and American Heart Association
Prevalence of Atrial Fibrillation
The ATRIA Study

Go et al, *JAMA* 2001;285:2370-2375
Prevalence of Mitral Regurgitation