

**How Should We Approach Ischemic
Mitral Regurgitation?
Evaluation and Treatment Decisions**

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- MV leaflets structurally normal
- NOT intrinsic (“organic”, “primary”) MV disease with serendipitously associated CAD

Generally, outcome with ischemic MR...

- **substantially worse than for comparably severe primary MR**
 - **LV dysfunction from ischemic injury/infarction with superimposed volume load**

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 - no randomized, contemporaneously controlled data exist
- ***BUT*** several observational series allow reasonable guesses until better data are available

Acute Ischemic MR (during Acute MI)

- **Establish pathophysiology/cause**
 - **Papillary muscle rupture (common in cardiogenic shock)**
 - **Papillary muscle displacement/leaflet tethering**
 - **Annular dilatation due to LV dilatation**

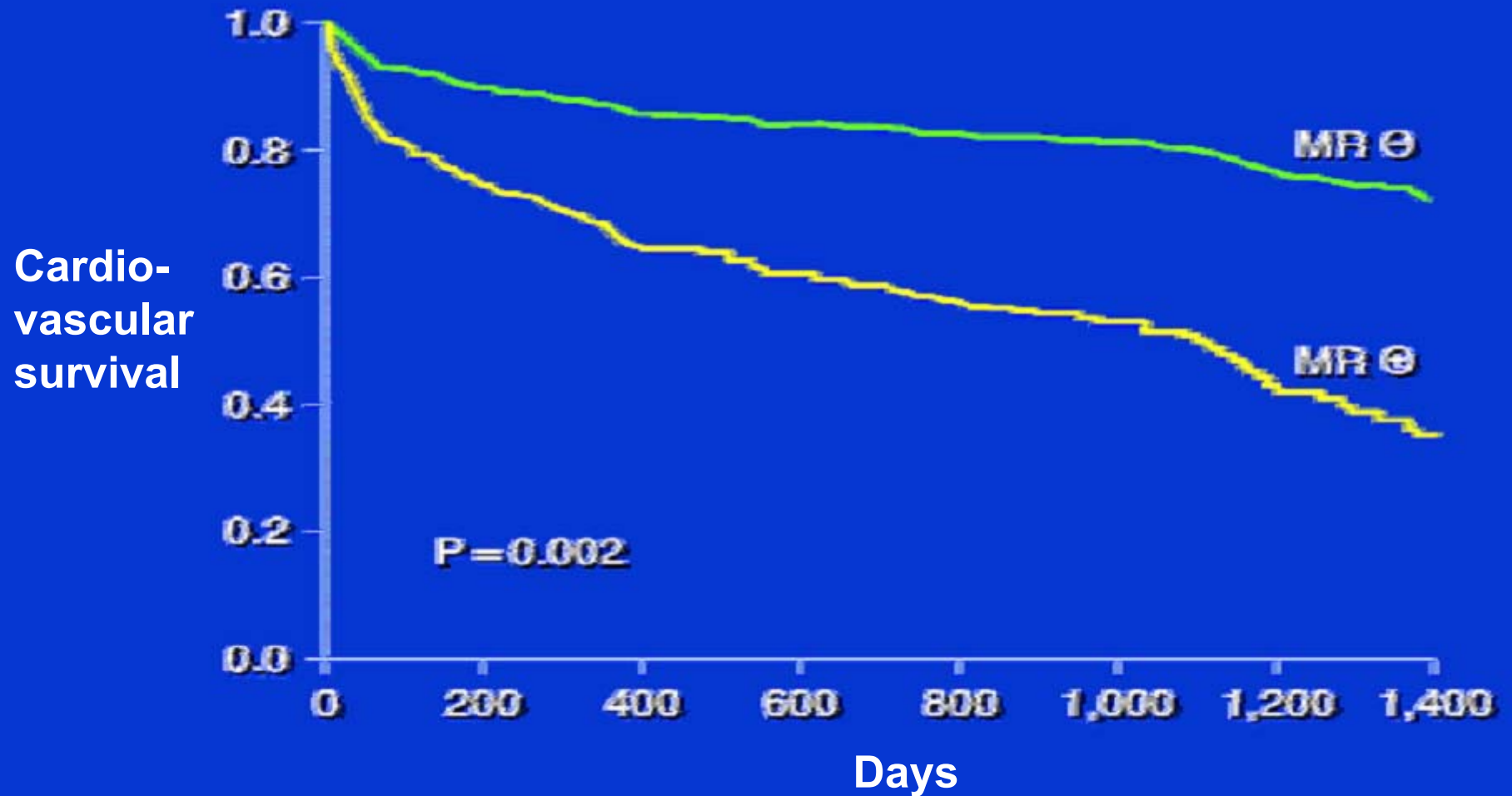
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 - HEMODYNAMIC STABILIZATION (DRUGS, IABP)
 - IF NO SUBSTANTIAL EARLY IMPROVEMENT, CONSIDER SURGERY

Long-term Survival When Ischemic MR Is Assessed ≤ 16 days Post MI (SAVE)



Lamas GA et al: Circulation 96:827, 1997

What is Severe MR?

	RVol (mL)	ERO (mm²)
Primary MR	≥60	≥40
Ischemic MR	≥30	≥20

Chronic Ischemic MR

- Pharmacological therapy?
- CRT?
- Valve surgery + CABG?
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- When and for whom?

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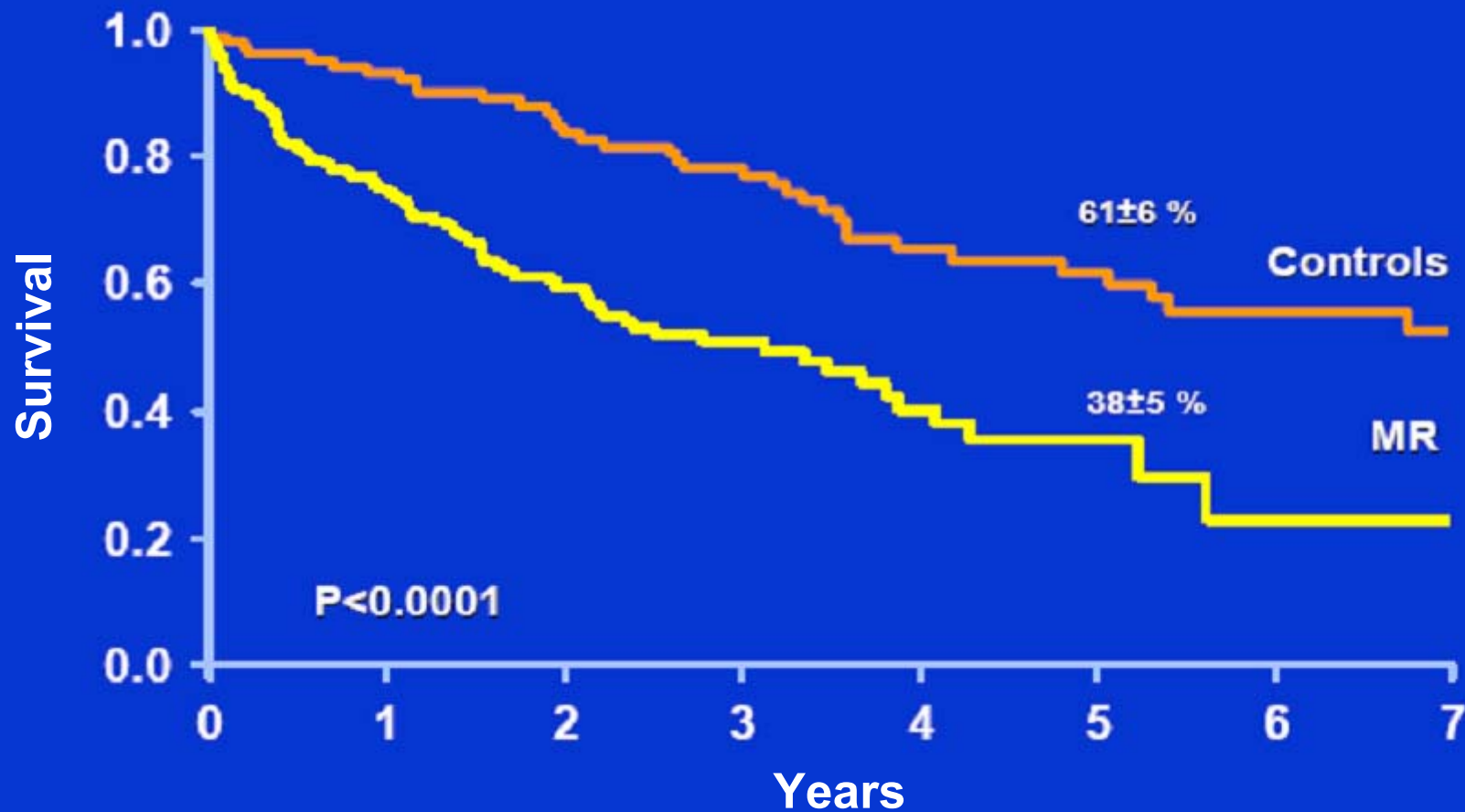
Chronic Ischemic MR

- Pharmacological therapy?
 - What's good for ischemia may be bad for MR
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- CRT?
 - May be useful, but only for dyssynchrony (minority)
- Valve surgery + CABG?
- CABG only?
- When and for whom?

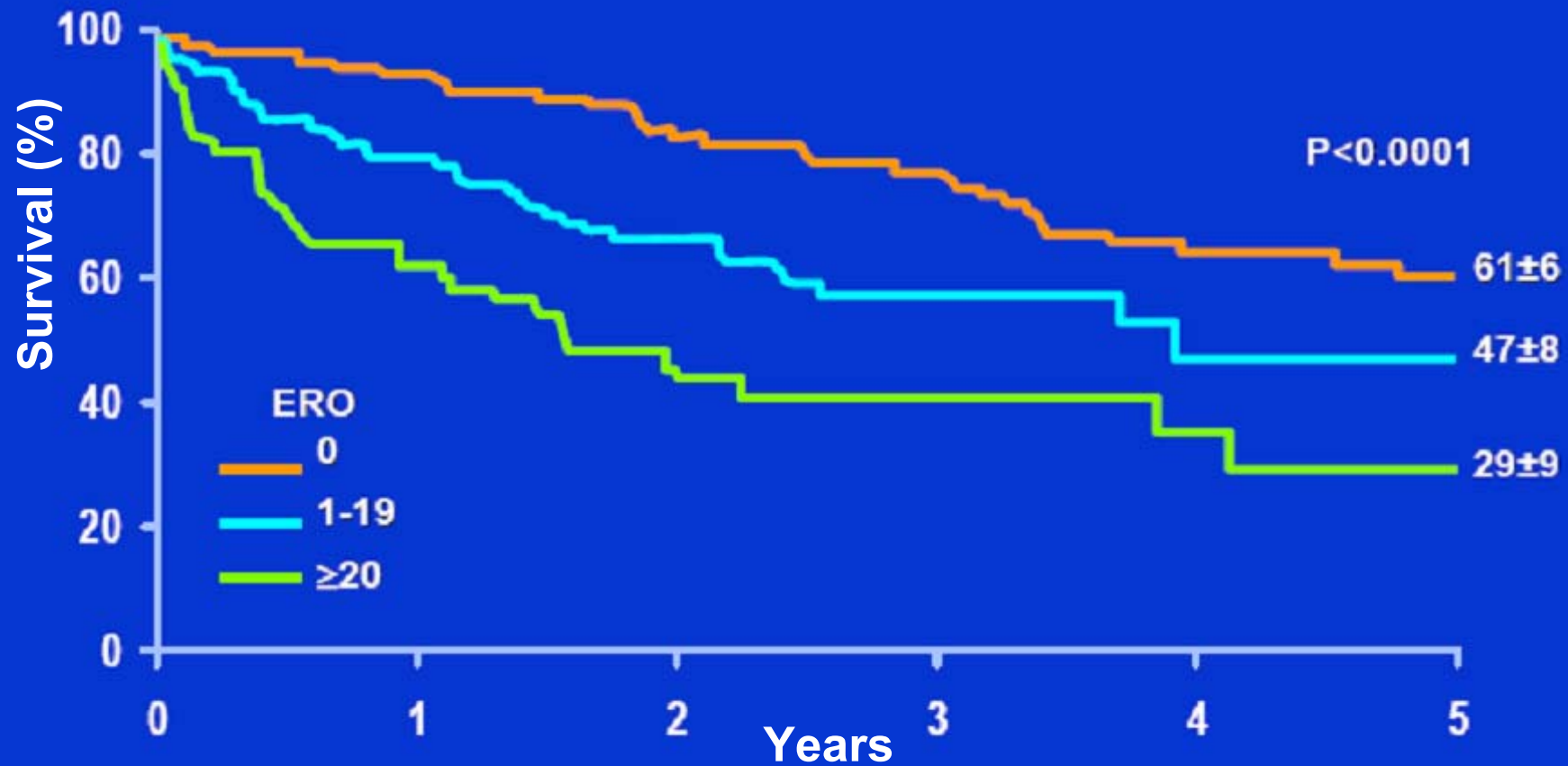
Evaluation Strategy

- History: HF symptoms require intensive evaluation
- Physical exam: *misleading* – murmur neither sensitive nor specific for detecting MR (50% wrong); ventricular impulse not useful for assessing volume loading
- Echo necessary early and late post-MI to detect and quantify MR

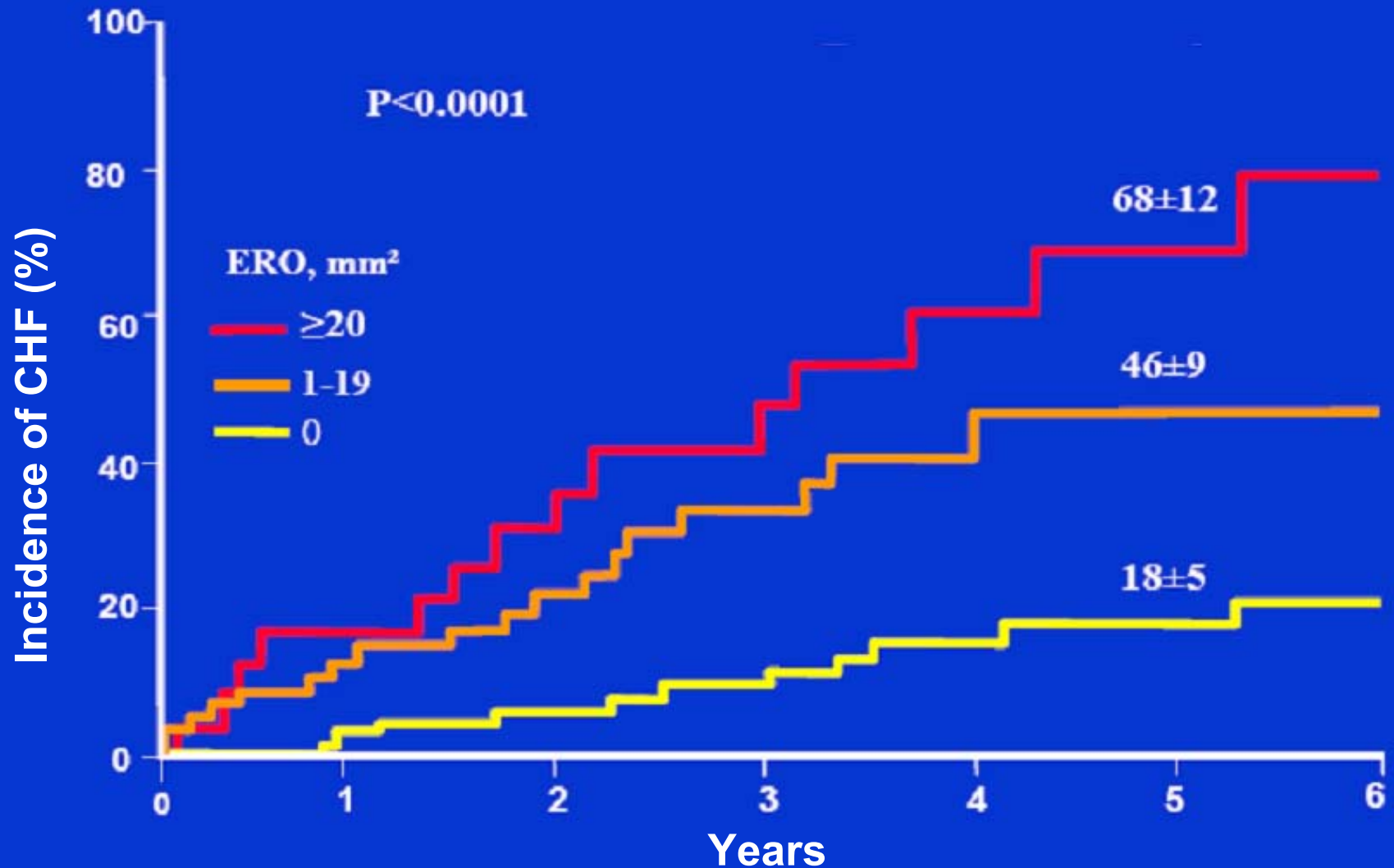
Long-term Survival When Ischemic MR Is Assessed >16 days Post MI (Mayo): Groups matched for LVEF



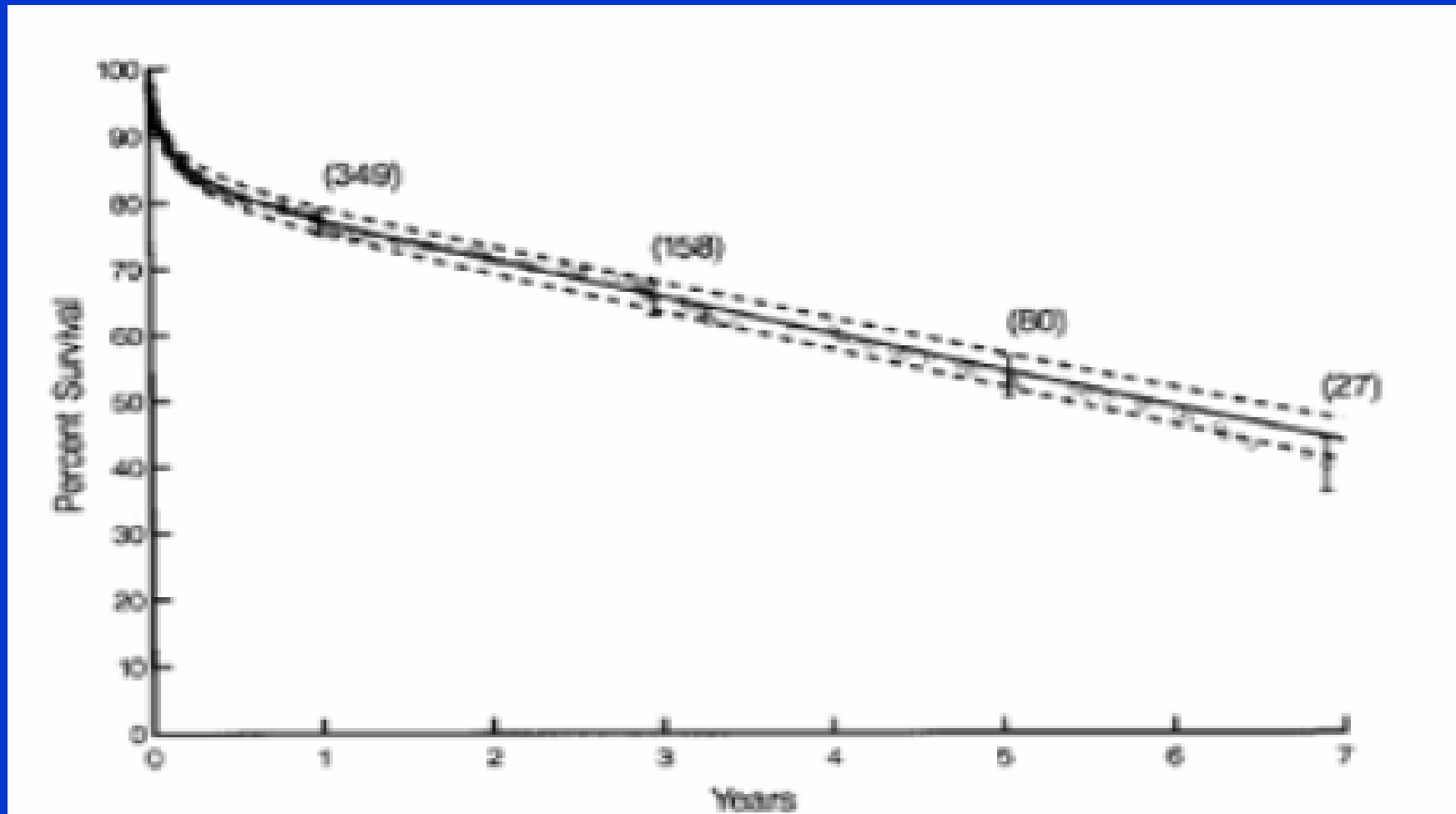
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Development of HF as a Function of Ischemic MR in Patients Initially Asymptomatic >16days Post-MI: Patients Matched for LVEF



Ischemic MR: Survival After MV Repair (predominantly 3-4+ MR pre-op)

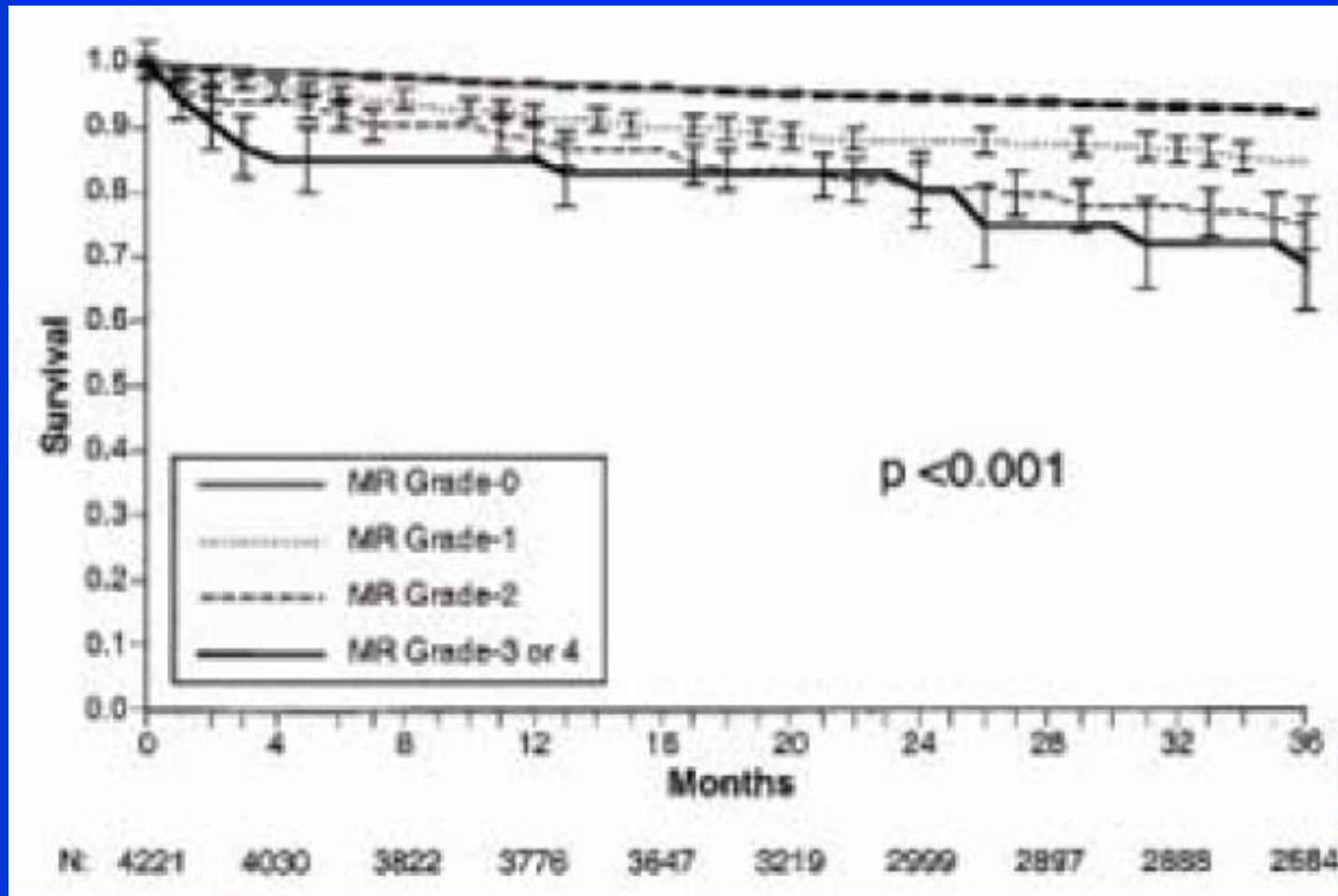


BUT MR RECURS IN 25% OF PATIENTS DURING F/U

For ischemic MR, is MV surgery indicated? If so, for whom?

- No rigorous trial data
- Relatively high late post-op mortality and MR recurrence
- In some patients, even relatively severe MR can be relieved by CABG alone
 - responders cannot be easily predicted
 - consensus of surgeons is that most patients need MV surgery, as well (50% of severe MR remains with only CABG)
- No evidence supports MV surgery, alone, for mild-moderate ischemic MR
 - **BUT** MV surgery (particularly annuloplasty) may be reasonable if CABG is being performed with moderate MR

Ischemic MR: Impact on Outcome after PCI



Ellis et al AJC 2002;89:315

Severe Ischemic MR: An Indication for MV Surgery

- **ERO area $\geq 20\text{mm}^2$**
 - **29% 5 yr survival without op (vs $>60\%$ if similar CAD/MI but no MR)**

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- Regurgitant volume $\geq 30\text{ml}$
 - 35% 5 yr survival without op (vs 75% if similar CAD/MI but no MR)
- Given very poor survival without surgery, acceptable perioperative survival and suggestion of better long-term outcome, *surgery is appropriate for this group, especially if symptomatic*