Mitral valve repair: Residual MR matters

In the early days of transcatheter mitral valve repair, the goal was a successful procedure that reduced mitral regurgitation (MR) to less than 3+; residual MR grade 2+ was considered acceptable MR reduction.\(^1,2\)

Compelling new data on more than 3,700 patients show that residual MR grades 0–1+ are significantly associated with superior patient outcomes when compared with residual MR 2+, including reduced mortality and rehospitalisation.\(^3–6\)

**Significantly lower 1-year mortality and heart failure rehospitalisation for MR 0–1+**

Patients with residual MR ≥2+ have higher mortality and re-hospitalization rate than those with MR 0–1+ in this mostly DMR* patient population.

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*S Degenerative mitral regurgitation

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**Significantly lower 1-year mortality for MR 0–1+**

Patients with residual MR ≥ 2+ have a significantly worse prognosis and higher mortality rate than those with MR 0-1+ in balanced FMR and DMR population.

![Graph showing estimated 1-year mortality for different residual MR grades](image)


**Significantly higher freedom from endpoint* at 800 days for MR 0–1+**

Combined clinical efficacy is significantly higher for patients with residual MR 0-1+ compared to MR 2+ in balanced FMR and DMR population. Same effect observed in FMR and DMR subgroups.

![Graph showing freedom from endpoint at 800 days for different residual MR grades](image)

Significantly higher survival and freedom from endpoint at 6 months for MR 0–1+

Combined clinical efficacy is nearly doubled for patients with residual MR 0-1+ compared to MR 2+. Patient population is 2/3 FMR and 1/3 DMR

*S*Combined clinical efficacy endpoint of survival, freedom from mitral valve surgery, absence of post-implant congestive heart failure and persistent MR ≤2+ at 6-month follow-up


Significantly lower MR recurrence for MR 0 in the OR

Low residual MR in the OR decreases long-term MR recurrence

OR: operating room
Significantly higher survival for patients without MR recurrence

No MR recurrence improves survival

![Graph showing overall survival vs. follow-up years for patients with and without MR recurrence.](image)

*Adjusted for age

**Summary**

Recent evidence tends to confirm that achieving low residual MR of grade 0 or 1 may provide patient outcome benefits. This trend seems to be consistent across MR etiologies. Some trials are still not conclusive, and longer follow-up may help align results from different cohorts.

**References**


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