

### Is it important to maintain the reverse remodeling?

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**Background:** Consistent advances in Heart Failure (HF) treatment have generated a new phenotype: reverse remodelling (RR). These patients have better outcomes than those who don't achieve the RR, however little is known about the long-term remodelling maintenance and its predictors or about a new worsening on ejection fraction (EF).

**Purpose:** To analyze the difference between patients who maintain the RR, those who can not maintain it and those who have not improved.

**Methods:** Observational study that analyzed features in outpatients with HF and initial EF lower than 40%, an intermediary EF, and last EF in 2014, 2015 and 2016, with a minimal interval of 6 months. Patients were divided into 3 groups: Negative RR (NRR - All EF <40%); non-maintained RR (NMRR – 2nd EF >40% and 3rd EF <40%) and Maintained RR (MRR – 2nd and 3rd EF >40%). Comparisons were made by Kruskal-Wallis test and the survival was analyzed by Kaplan Meyer and Log-Rank tests.

**Results:** 1762 medical records were analyzed and 1484 were included. 993 patients had NRR, 201 patients had NMRR and 290 patients had

MRR. The initial EF was lower in the NRR group. In the first 3 years, the groups NMRR and MRR improve the EF by 16.4% (±1.2) and 18.1% (±1.1), respectively. During the next 3 years, the NMRR group lost this improvement (-16.1% ±1.1), while the MRR group maintained it (0.7% ±1.4). The MRR group had more hypertension (0.75±0.05) as comorbidity, while the NMRR had more myocardial infarction (0.39±0.07) and myocardial revascularization (0.17±0.05). Chagasic and alcoholic aetiologies predominated in the NRR group (0.05±0.01 and 0.19±0.02) and these patients had less valvar cause (0.04±0.01). The NMRR group had more ischemic aetiology (0.41±0.07), and the MRR had more hypertensive (0.22±0.05). General survival was different between the three groups (p<0.001) major in MRR, NMRR and NRR group, respectively. Survival after the last EF also was significantly different between the groups (p<0.001) with the same pattern. **Conclusion:** Achieving RR is important, but maintaining it can bring better outcomes and prognosis. Therefore, it is important to identify factors and therapeutic goals for the RR maintenance.

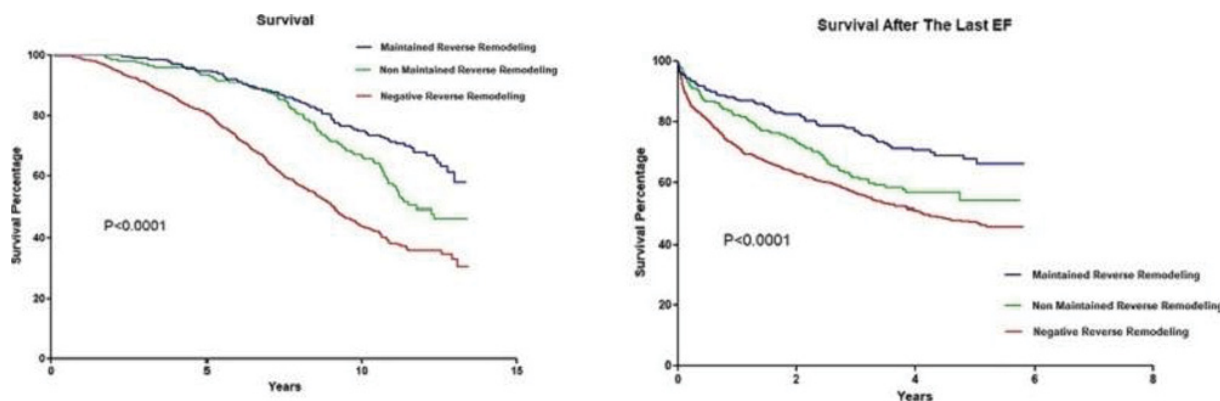


Figure 1

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