

**Supplementary material****Burden of Recurrent Hospitalizations Following an Admission for Acute Heart Failure: Preserved Versus Reduced Ejection Fraction****Table 1 of the supplementary material**

Crude Incidence Rates of Specific Causes of CV Death in HFpEF Vs HFrEF

| | Rates (per 100 person-years) | | <i>P</i> -value |
|-----------------------------|------------------------------|-------|-----------------|
| | HFpEF | HFrEF | |
| AMI-related death | 0.3 | 0.5 | .134 |
| Stroke-related death | 0.4 | 0.5 | .452 |
| HF-related death | 4.3 | 5.7 | .015 |
| Sudden cardiac death | 0.9 | 1.5 | .098 |
| Other CV deaths | 0.7 | 0.7 | .854 |

AMI, acute myocardial infarction; CV, cardiovascular; HF, heart failure; HFpEF, heart failure with preserved ejection fraction; HFrEF, heart failure with reduced ejection fraction.

Table 2 of the supplementary material

All the Covariates and Their Estimates in the Final Multivariate Model for All-cause Repeat Hospitalizations

| | IRR | 95%CI | P-value |
|---|------|-----------|---------|
| Age (per 10-y increase) | 1.14 | 1.08-1.20 | <.001 |
| Male sex | 0.99 | 0.87-1.11 | .817 |
| NYHA class III/IV | 1.16 | 1.02-1.32 | .024 |
| First HF admission | 0.47 | 0.42-0.52 | <.001 |
| Hypertension | 1.14 | 1.00-1.30 | .049 |
| Diabetes | 1.19 | 1.07-1.32 | .001 |
| Former tobacco use | 1.34 | 1.14-1.49 | <.001 |
| Peripheral artery disease | 1.17 | 0.98-1.40 | .079 |
| Dementia | 1.49 | 0.99-2.27 | .058 |
| COPD | 1.29 | 1.13-1.46 | <.001 |
| Previous stroke | 1.16 | 0.99-1.37 | .072 |
| ICD carrier | 1.64 | 1.20-2.26 | .002 |
| Previous MI | 1.28 | 0.98-1.68 | <.001 |
| Interaction atrial fibrillation*type of rhythm | | | <.001* |
| Heart rate in sinus rhythm, per increase in 10 bpm | 1.02 | 0.99-1.05 | .170 |
| Heart rate in atrial fibrillation, per increase in 10 bpm | 0.96 | 0.94-0.98 | .002 |
| Atrial fibrillation*Heart rate | 0.99 | 0.99-1.00 | .002 |
| Urea (per 10 mg/dL increase) | 1.04 | 1.02-1.06 | <.001 |
| Hemoglobin (per 1.0 gr/dL increase) | 0.91 | 0.88-0.93 | <.001 |
| Sodium (per 1.0 mEq/L increase) | 0.99 | 0.98-0.99 | .034 |
| NT-proBNP (per 1000 pg/mL increase) | 1.02 | 1.01-1.03 | <.001 |
| Beta-blockers | 0.77 | 0.69-0.85 | <.001 |
| HFpEF | 1.04 | 0.93-1.17 | .461 |

95%CI, 95% confidence interval; COPD, chronic obstructive pulmonary disease; HF, heart failure; HFpEF, heart failure with preserved ejection fraction; ICD, Implantable cardioverter defibrillator; IRR, incident rate ratios; NYHA, New York Heart Association; NT-proBNP, N-terminal pro-B-type natriuretic peptide; MI, myocardial infarction.

*P-value for interaction.

Table 3 of the supplementary material

All the Covariates and Their Estimates in the Final Multivariate Model for CV Repeat Hospitalizations

| | IRR | 95%CI | P-value |
|---|------|-----------|---------|
| Age (per 10-y increase) | 1.16 | 1.10-1.23 | <.001 |
| Male sex | 0.94 | 0.82-1.08 | .397 |
| First HF admission | 0.27 | 0.24-0.31 | <.001 |
| Diabetes | 1.21 | 1.08-1.36 | .001 |
| Former tobacco use | 1.25 | 1.08-1.46 | .003 |
| Dementia | 1.62 | 1.01-2.63 | .047 |
| Previous stroke | 1.19 | 0.99-1.44 | .069 |
| ICD carrier | 1.54 | 1.08-2.21 | .017 |
| Previous MI | 1.34 | 1.18-1.53 | <.001 |
| Interaction atrial fibrillation*type of rhythm | | | .008* |
| Heart rate in sinus rhythm, per increase in 10 bpm | 1.01 | 0.90-0.98 | .452 |
| Heart rate in atrial fibrillation, per increase in 10 bpm | 0.96 | 0.93-0.98 | .002 |
| Urea (per 10 mg/dL increase) | 1.03 | 1.01-1.05 | .025 |
| Hemoglobin (per 1.0 gr/dL increase) | 0.92 | 0.89-0.96 | <.001 |
| Sodium (per 1.0 mEq/L increase) | 0.98 | 0.97-0.99 | .016 |
| NT-proBNP (per 1000 pg/mL increase) | 1.03 | 1.02-1.04 | <0.001 |
| Beta-blockers | 0.85 | 0.76-0.96 | 0.007 |
| HFpEF | 0.93 | 0.82-1.06 | 0.304 |

95%CI, 95% confidence interval; HF, heart failure; HFpEF, heart failure with preserved ejection fraction; ICD, Implantable cardioverter defibrillator; IRR, incident rate ratios; NYHA, New York Heart Association; NT-proBNP, N-terminal pro-B-type natriuretic peptide; MI, myocardial infarction.

*P-value for interaction

Table 4 of the supplementary material

All the Covariates and Their Estimates in the Final Multivariate Model for non-CV Repeat Hospitalizations

| | IRR | 95%CI | P-value |
|---|------|-----------|---------|
| Age (per 10-y increase) | 1.12 | 1.04-1.21 | .004 |
| Male sex | 1.05 | 0.88-1.27 | .545 |
| NYHA class III/IV | 1.36 | 1.11-1.66 | .003 |
| Diabetes | 1.27 | 1.08-1.48 | .003 |
| Former tobacco use | 1.34 | 1.14-1.49 | <.001 |
| Peripheral artery disease | 1.20 | 0.91-1.58 | .199 |
| Malign neoplasia | 1.24 | 1.05-1.47 | .010 |
| COPD | 1.69 | 1.40-2.01 | <.001 |
| Previous stroke | 1.17 | 0.90-1.51 | .231 |
| ICD carrier | 1.92 | 1.16-3.19 | .011 |
| Previous MI | 1.09 | 0.90-1.31 | .384 |
| Interaction atrial fibrillation*type of rhythm | | | .063* |
| Heart rate in sinus rhythm, per increase in 10 bpm | 1.03 | 0.98-1.08 | .241 |
| Heart rate in atrial fibrillation, per increase in 10 bpm | 0.97 | 0.94-1.01 | .182 |
| Urea (per 100 mg/dL increase) | 1.05 | 1.02-1.08 | .001 |
| Hemoglobin (per 1.0 g/dL increase) | 0.89 | 0.85-0.93 | <.001 |
| Beta-blockers | 0.71 | 0.60-0.83 | <.001 |
| HFpEF | 1.24 | 1.05-1.47 | .012 |

95%CI, 95% confidence interval; COPD, chronic obstructive pulmonary disease; HFpEF, heart failure with preserved ejection fraction; ICD, Implantable cardioverter defibrillator; IRR, incident rate ratios; NYHA, New York Heart Association; MI, myocardial infarction.

*P-value for interaction

Table 5 of the supplementary material

All the Covariates and Their Estimates in the Final Multivariate Model for HF-related Repeat Hospitalizations

| | IRR | 95%CI | P-value |
|---|------|-----------|---------|
| Age (per 10-y increase) | 1.02 | 1.01-1.03 | <.001 |
| Male sex | 1.02 | 0.88-1.18 | .749 |
| NYHA class III/IV | 1.11 | 0.94-1.31 | .208 |
| First HF admission | 0.22 | 0.19-0.26 | <.001 |
| Diabetes | 1.14 | 1.00-1.31 | .044 |
| Dementia | 1.67 | 0.98-2.83 | .057 |
| COPD | 1.18 | 1.00-1.39 | .040 |
| ICD carrier | 1.55 | 1.04-2.31 | .031 |
| Previous MI | 1.29 | 1.11-1.50 | .001 |
| SBP | 0.99 | 0.99-1.00 | .289 |
| Atrial fibrillation | 2.23 | 1.35-3.69 | .002 |
| Interaction atrial fibrillation*type of rhythm | | | .013* |
| Heart rate in sinus rhythm, per increase in 10 bpm | 1.02 | 0.98-1.06 | .300 |
| Heart rate in atrial fibrillation, per increase in 10 bpm | 0.96 | 0.93-0.99 | .010 |
| Urea (per 10 mg/dL increase) | 1.03 | 1.01-1.05 | .029 |
| Hemoglobin (per 1.0 gr/dL increase) | 0.92 | 0.89-0.96 | <.001 |
| Sodium (per 1 mEq/L increase) | 0.98 | 0.97-0.99 | .010 |
| NT-prpBNP (per 1000 pg/mL increase) | 1.03 | 1.02-1.04 | <.001 |
| Beta-blockers | 0.79 | 0.69-0.90 | .001 |
| ACEI inhibitors or ARB | 0.88 | 0.77-1.02 | .091 |
| HFpEF | 0.96 | 0.83-1.13 | .677 |

ACEI inhibitors, angiotensin converting-enzyme inhibitors; ARB, angiotensin receptor blockers; CI, Confidence interval; COPD, chronic obstructive pulmonary disease; HF, heart failure; HFpEF, heart failure with preserved ejection fraction; ICD, Implantable cardioverter defibrillator; IRR, incident rate ratios; NYHA, New York Heart Association; NT-proBNP, N-terminal pro-B-type natriuretic peptide; MI, myocardial infarction; SBP, systolic blood pressure.

*P-value for interaction