## The impact of low diastolic blood pressure on 30-day mortality of patients with acute myocardial infarction

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**Background:** It is known that low diastolic blood pressure (DBP) is associated with long-term cardiovascular events after acute myocardial infarction (AMI). However, the impact of low diastolic blood pressure on short-term outcome has not yet been well investigated.

**Methods and results:** We included 15,208 patients who were hospitalized for AMI and registered in the Tokyo CCU network registry between 2013 and 2016. Thirty-day in-hospital mortality rate was 4.8% (728/15,208). To assess the relationship between DBP at the time of admission and 30-day mortality non-linearly, spline regression model was applied with the

stratification of the cohort according to tercile of systolic blood pressure (SBP, low:≤122 mmHg, intermediate:123–148 mmHg, high:≥149 mmHg) and J-curve phenomenon was observed in the low and high SBP groups. In multivariate logistic regression analysis, adjusted odds ratio of the lowest quintile of DBP (≤64 mmHg) was 1.65 (95% CI:1.02–2.66) in low SBP group and 4.55 (95% CI:1.72–12.00) in high SBP group.

**Conclusion:** Low DBP was associated with increased 30-day in-hospital mortality rate after AMI even in patients with high SBP.

