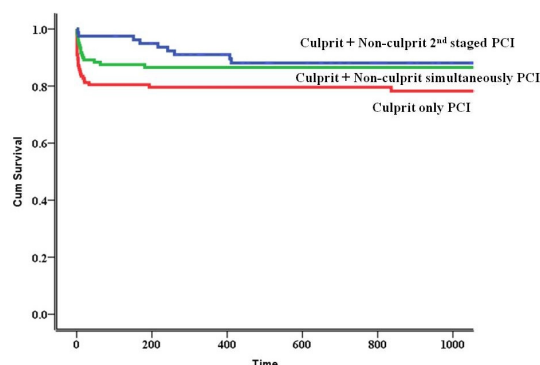


## Comparison of timing of non-culprit lesion intervention in patients with myocardial infarction

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**Background:** The percutaneous coronary intervention (PCI) of a noninfarct artery at the time of primary PCI for patients with acute myocardial infarction (AMI) is still debatable. The purpose was to evaluate the long-term outcomes of the primary or second staged PCI of non-culprit lesions among the AMI patients with multivessel disease who underwent primary PCI or early invasive PCI. **Methods:** Among 615 AMI patients, 333 patients with multivessel disease were analyzed retrospectively in a single center. Among them, 133 patients underwent culprit lesion only PCI (group 1), 120 patients underwent non-culprit lesion PCI at the time of primary culprit lesion PCI simultaneously (group 2), and 80 patients underwent second staged PCI for non-culprit lesion shortly after culprit lesion primary PCI (group 3). The clinical outcomes including all-cause mortality, non-fatal MI and repeated admission because of heart failure were assessed for 36 months. **Results:** Group 1 showed older and had more Non-ST elevation AMI. During 36-month follow-up, there were higher incidence of MACE in group 2 [28 (21%) group 1, 16 (13%) group 2, 9 (12%) group 3,  $p=0.02$ , Figure]. During 6-month follow-up, staged PCI showed better tendency, but there were no significant difference of event occurrence between staged and simultaneously PCI of non-culprit lesion. **Conclusions:** In AMI patients with multivessel disease, PCI for non-culprit lesion could be performed by staged manner.



## Impact of Hypertension on Insulin Resistance in Asian Population

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**Background:** Hypertension is a well-known risk factor for cardiovascular and metabolic diseases. However, it is not clear that whether hypertension is associated with increased insulin resistance, especially in Asian population. **Methods:** We investigated the relationship between hypertension and insulin resistance of 4,983 consecutive patients during a mean follow-up of 2 years. To adjust potential confounders including age, gender, body mass index, diabetes mellitus, hyperlipidemia, chronic kidney disease, lipid profile, and medications, a propensity score matching (PSM) analysis was performed using the logistic regression model. Insulin resistance index based on the homeostatic model assessment-insulin resistance (HOMA-IR). We also compared fasting blood glucose (FBS), glycated hemoglobin (HbA1c), fasting serum insulin (Insulin) between the subset of hypertension and normotension group. **Results:** After PSM analysis, 1,590 patients (795 hypertension vs 795 normotension) with the mean follow-up duration of 594±266 days were analyzed. Baseline characteristics were similar between the two groups. In paired t-test, hypertension group increased HOMA-IR by 15% significantly ( $p<0.001$ ). However, normotension group increased HOMA-IR by 3% without significance. In contrast to HOMA-IR, Insulin level was significantly increased in both groups and no significant change in FBS were observed in two groups (Table). **Conclusions:** In the present study, hypertension is associated with increased insulin resistance in Asian population.

Table. Two-year clinical outcomes between hypertension and insulin resistance

| Variable       | Hypertension after PSM<br>(n = 795) |           |           |         | Normotension after PSM<br>(n = 795) |           |           |         |
|----------------|-------------------------------------|-----------|-----------|---------|-------------------------------------|-----------|-----------|---------|
|                | Baseline                            | Follow-up | Delta     | p-value | Baseline                            | Follow-up | Delta     | p-value |
| FBS            | 118±38                              | 117±32    | -0.7±36.0 | 0.546   | 120±44                              | 118±31    | -1.7±41.0 | 0.220   |
| HbA1c          | 6.5±1.1                             | 6.4±1.1   | -0.0±1.0  | 0.071   | 6.6±1.3                             | 6.5±1.0   | -1.1±0.0  | 0.010   |
| Insulin        | 8.7±6.5                             | 10.7±7.0  | 1.9±7.7   | <0.001  | 9.0±7.0                             | 10.0±5.9  | 1.0±6.8   | <0.001  |
| HOMA-IR        | 2.6±2.7                             | 3.1±2.6   | 0.4±3.1   | <0.001  | 2.7±2.8                             | 2.9±1.9   | 0.1±2.7   | 0.139   |
| Mean follow up | 590 day                             |           |           |         | 597 day                             |           |           |         |

PSM; propensity score matching, FBS; fasting blood glucose, HbA1c; glycated hemoglobin A1c, Insulin; fasting serum insulin, HOMA-IR; homeostatic model assessment-insulin resistance