

# Impacts of gender on clinical outcome after percutaneous coronary intervention

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**Background/Aims:** We sought to investigate the gender impact on clinical outcome of patients undergoing concurrent percutaneous coronary intervention using claims data of the National Health Insurance in Korea. **Methods:** Among 191,926 patients who underwent PCI from July 2011 to June 2015, 81,115 patients with the first episode of coronary artery disease were classified either as angina ( $n=49,228$ ) or acute myocardial infarction (AMI,  $n=31,887$ ). A propensity-score matching method was used to identify gender impacts on mortality of in-hospital and post-discharge. **Results:** The proportion of women was 30.3% and women were older than men ( $71.0 \pm 10.3$  versus  $61.5 \pm 11.8$  years old,  $p<0.001$ ). The Charlson comorbidity index was significantly higher than men ( $1.54 \pm 1.42$  versus  $1.10 \pm 1.32$ ,  $p<0.001$ ) because most of comorbidities including diabetes, hyperlipidemia, hypertension, congestive heart failure, peripheral vascular disease, cerebrovascular disease and renal disease were more frequent in women. After propensity-score matching, women's in-hospital mortality was not significantly different in patients with angina (15,212 pairs, hazard ratio (HR), 1.19; 95% Confidence Interval (CI): 0.99–1.44;  $p=0.061$ ) and AMI (7,241 pairs, HR, 1.08; 95% CI: 0.95–1.24,  $p=0.249$ ). During median follow up of 2.2 years (interquartile range, 1.2–3.2), women's mortality was even lower in angina (HR, 0.83; 95% CI: 0.76–0.90,  $p<0.001$ ) and AMI (HR, 0.90; 95% CI: 0.82–0.98,  $p=0.020$ ). **Conclusions:** Women's post-discharge mortality is lower than men under the contemporary PCI treatment in nationwide cohort. Altered gender impact on clinical outcome might be attributed to improved medical and procedural strategies.

Figure 1

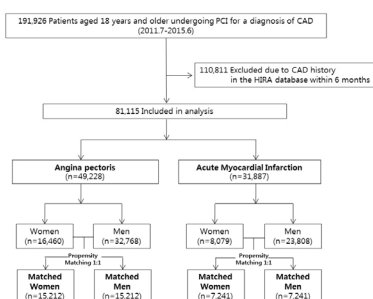


Figure 1. Overview of the study population.  
PCI = percutaneous coronary intervention; CAD = coronary artery disease;  
HIRA = Health Insurance Review & Assessment Service

Figure 2

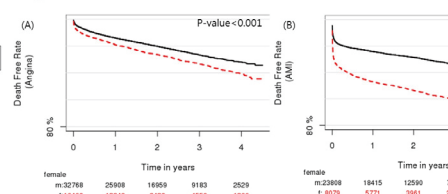


Figure 2. Kaplan-Meier curves for all-cause death.  
Shown is the cumulative incidence rates for all-cause death in angina (A) acute myocardial infarction (AMI) between genders, respectively.  
The numbers in each figure represents the cumulative incidence rates at each time point.  
AMI = acute myocardial infarction