

Risk Stratification in CVD Prevention in Korea

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Over the past few decades, the incidence of cardiovascular disease (CVD) has rapidly increased in most Asian populations. Consequently, CVD prevention in Asia has become a major global health concern. In the guidelines, tailored approaches following risk stratification based on CVD risk models are recommended for the primary prevention of CVD in asymptomatic people. However, models for predicting CVD in Asian populations are limited.

We recently performed a study to develop a model to predict global cardiovascular risk in a Korean population. A total of 57,393 consecutive asymptomatic Korean individuals aged 30 to 80 years without known CVD were enrolled between January 2007 and June 2011. Thirty-one possible clinical risk factors and biomarkers were assessed. The cardiovascular event was defined as a composite of cardiovascular death, myocardial infarction, and stroke. Study participants were randomly classified into the train cohort (n=45,914) to develop the CVD risk model and the validation cohort (n=11,479) to test the model performance. The Korean CVD risk model was developed using 11 variables, including age, diabetes mellitus, hypertension, current smoking, family history of coronary heart disease, white blood cell count, creatinine level, glycohemoglobin level, atrial fibrillation, and blood pressure and cholesterol indices. This Korean CVD risk model showed a feasible model performance in predicting cardiovascular events in an asymptomatic Korean population.