

Supplement data: Equation calculating process of the average 10 years risk probability.

The estimated partial regression coefficients, hazard ratio, and their corresponding 95% confidence intervals (CI) are shown in Table 2; the descriptive characteristics are shown in Table 1.

Based on the parameters and data above, the risk score for the ACS group was calculated as $f_{(ACS)}(X, M) = 0.0329 \times (\text{age} - 56.78) + 0.3153 \times (\text{sex} - 0.6386) + 0.2681 \times (\text{current tobacco use} - 0.8911) + 0.4821 \times (\text{BMI} - 26.83) + 0.3122 \times (\text{TC} - 2.192) + 0.5148 \times (\text{TG} - 6.613) + 0.3221 \times (\text{LDL} - 3.850)$. Thus, the average 10 years $RP_{(ACS)}$ was $1 - 0.9876^{\exp\{f_{(ACS)}[X, M]\}}$.

The CCAD group was calculated as $f_{(CCAD)}(X, M) = 0.0172 \times (\text{age} - 48.21) + 0.2198 \times (\text{sex} - 56.29) + 0.3621 \times (\text{current tobacco use} - 0.5409) + 0.1346 \times (\text{BMI} - 25.30) + 0.2153 \times (\text{TC} - 1.852) + 0.1428 \times (\text{TG} - 5.451) + 0.1392 \times (\text{LDL} - 3.511)$. Thus, the average 10-year $RP_{(CCAD)}$ was $1 - 0.9821^{\exp\{f_{(CCAD)}[X, M]\}}$.

The HRP group was calculated as $f_{(HRP)}(X, M) = 0.0119 \times (\text{age} - 52.99) + 0.2352 \times (\text{sex} - 63.73) + 0.2094 \times (\text{current tobacco use} - 0.7726) + 0.0986 \times (\text{BMI} - 23.01) + 0.1093 \times (\text{TC} - 1.822) + 0.1291 \times (\text{TG} - 6.142) + 0.1481 \times (\text{LDL} - 3.621)$. Thus, the average 10-year $RP_{(HRP)}$ was $1 - 0.9781^{\exp\{f_{(HRP)}[X, M]\}}$.

The HV group was calculated from $f_{(HV)}(X, M) = 0.0108 \times (\text{age} - 46.93) + 0.1035 \times (\text{sex} - 60.45) + 0.1653 \times (\text{current tobacco use} - 0.4824) + 0.0982 \times (\text{BMI} - 21.81) + 0.1754 \times (\text{TC} - 1.123) + 0.2532 \times (\text{TG} - 4.241) + 0.1987 \times (\text{LDL} - 2.352)$. Thus, the average 10-year $RP_{(HV)}$ was $1 - 0.9753^{\exp\{f_{(HV)}[X, M]\}}$.