Comparison of 10-year Cardiovascular Risk Predictor Tools: Framingham’s Risk Score, UKPDS Risk Score, Rama EGAT Score, ACC/AHA Atherosclerotic Cardiovascular Disease Risk Calculator Tools

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Objective: To compare the 10-year CVD risk in patients who were followed up at endocrine and nutrition out-patient clinic, Phramongkutklao Hospital using the Framingham, UKPDS, RAMA-EGAT and ACC/AHA risk calculator tool.

Methods: A cross-sectional survey of cardiovascular disease risk factors in patients who were followed at out-patient endocrinology and nutritional clinic, Phramongkutklao hospital, Bangkok, Thailand, was carried out between December 2014 and February 2015.

Results: A total of 340 participants were enrolled into the study. There were 195 female (57.4%) and 145 male (42.6%). Mean age was 60 ± 12.1 and 59.9 ± 12.9 years in female and male groups, respectively. In term of diabetes status, there were 241 participants with diabetes (70.9%). Comparison of mean percentage of UKPDS, ACC/AHA, Framingham, and RAMA EGAT risk scores were 24.2 ± 16.7, 19.8 ± 15.3, 10.5 ± 7.6, and 8.7 ± 6.2 in the male group, respectively. The same orders of risk scores were observed in the female group (16.1 ± 13.4, 12.9 ± 13.5, 3.6 ± 3.9, 7.2 ± 6.0) and also participants with diabetes (19.7 ± 15.5, 19.3 ± 14.9, 7.6 ± 7.1, 9 ± 6.5).

Conclusion: The 10-year CVD risk scores by UKPDS and ACC/AHA calculator tools might be overestimated when compared with Framingham and RAMA EGAT in male, female, and participants with diabetes.

Keywords: 10-year CVD risk, Framingham, UKPDS, RAMA-EGAT, ACC/AHA risk calculator tools