

AHA/ACC Guideline-Based Risk in Asymptomatic Women Classified As Low Risk Using the Framingham Risk Score

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Background

- Framingham risk score (FRS) underestimates lifetime risk of cardiovascular (CVD) events in asymptomatic women.
- Low-risk women with multiple coronary heart disease (CHD) risk factors, especially in the presence of a family history of premature CHD, are potential candidates for additional risk stratification by Coronary artery calcium (CAC) screening.¹
- Therefore, AHA/ACC guidelines recommend classifying women as high risk, at risk, or optimal risk.²

Objective

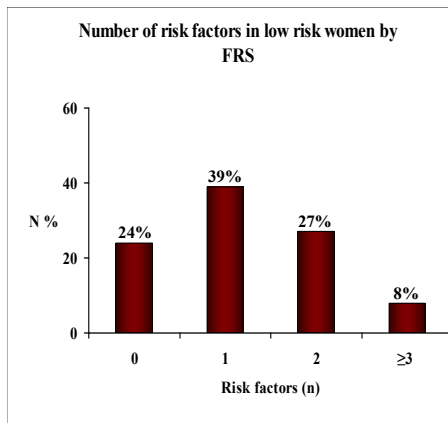
- To determine what percentage of asymptomatic women classified as “low risk” by FRS are classified as “at risk” by AHA/ACC guidelines.

Methods

- Baseline demographics and traditional CVD risk factors were analyzed in the first 100 asymptomatic women, aged 35 - 74 years, with no known history of CVD evaluated at hospital-based women's CVD screening program.
- CVD risk factors assessed were: (1) current smoking, (2) obesity (BMI ≥ 30), (3) family history of premature CHD (myocardial infarction in first degree relative, male < 55 yrs or female < 65 yrs), (4) hypertension (SBP > 140 or DBP > 90 mm Hg), (5) hyperlipidemia (TC > 200 mg/dL).
- FRS was calculated for all women.
- Seven women with history of diabetes were considered “high risk” and were excluded from further analyses.
- “At risk” women were defined as having ≥ 1 of the above risk factors.

Variable	Women with low FRS (N=85)
Age, years	54±10
Caucasian	74%
Dyslipidemia	32%
Hypertension	27%
Current smoking	2%
Positive family history	56%
Physical inactivity	31%
Body mass index ≥ 30	15%
Waist circumference >35	25%
Abnormal EKG	25%
Peripheral vascular disease	5%
Total Cholesterol, TC	186±34
LDL	104±33
HDL	60±15
Non HDL	125±36
Triglycerides	102±53
Blood Glucose	91±11
hs CRP	1.8±1.7
Total risks	4±2
FRS	2±2
Reynold's score	3±3
Abnormal sleep score	47%
Positive Depression score	8%
Metabolic syndrome	16%

Table: Clinical Characteristics of the women with low FRS



Results

- The sample consisted predominantly of middle aged white women.
- 85 of the 100 women were classified as “low risk” by Framingham's risk score.
- The greatest percentage of women had 1 risk factor (39%), with 24% having no risk factors and 8% having 3 or more risk factors.

Conclusions

- Only 24% of “low risk” women by FRS are defined as “optimal risk” by AHA/ACC guidelines.
- For 76% of women, there was a discrepancy in risk assessment between the FRS and the AHA/ACC guidelines.
- Low risk women by FRS likely have risk factors amenable to intervention. Therefore, lifestyle and risk factor modification is indicated.

References

1. Framingham risk equation underestimates subclinical atherosclerosis risk in asymptomatic women. *Atherosclerosis* 2006; 84:201-206.
2. Evidence-Based Guidelines for Cardiovascular Disease Prevention in Women: 2007 Update. *Circulation* 2007; 115:1481-501.