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APPENDIX: STATISTICAL METHODS

1. MULTIPLE IMPUTATION OF MISSING DATA

To reduce bias and to allow comparisons of regression models based on all subjects, we used multiple imputation of missing data with switching regression^{20,21} rather than complete case analysis. All prognostic variables, log of the survival times for coronary heart disease (CHD) and cardiovascular disease (CVD), and both censoring indicators were used in the

imputation regressions. After imputation, five imputed data sets were analysed and the results combined appropriately by using Rubin's rules.²² Women with prevalent CHD at baseline were excluded from all regression analyses and those with a previous diagnosis of stroke were also excluded from analyses with CVD as the end point. The point estimates were similar when the analysis was repeated on the subset of subjects with complete data.

2. ASSESSMENT OF DISCRIMINATION BY RECEIVER OPERATING CHARACTERISTIC ANALYSIS

The receiver operating characteristic (ROC) curve is a graph of sensitivity versus 1 – specificity of the classification. The area under the ROC curve (AUROC) can be interpreted as the probability that a randomly selected subject who experiences the event has a higher predicted risk than a randomly selected person who does not experience the event. Overall discrimination of the Framingham models was assessed with the AUROC. As an area of 0.5 would be expected by chance allocation, a good prediction model would have an AUROC of 0.75 or higher. For comparison, the maximum possible AUROC for these data and models, calculated with the ranked risk scores and thus independent of any choice of classification threshold, was determined.

We calculated the AUROC on the ranked risk scores predicted by the candidate models and compared them with the AUROC of the model that included only the standard Framingham risk factors. To determine how well the published Framingham equations and the candidate Weibull prognostic models could classify the women into high and low-risk groups, we calculated the sensitivity and specificity of the model predictions for both CHD and CVD events at 30% and 15% 10-year risk thresholds.

IMAGES IN CARDIOLOGY

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Double chambered left ventricle in cardiac magnetic resonance imaging

A 27-year-old man was referred for evaluation of right-sided thoracic pain. Physical examination revealed no cardiac murmur. ECG showed left bundle branch block. At transthoracic echocardiography an additional chamber, attached to the left ventricle, was noted.

For further investigation cardiac magnetic resonance imaging with black blood sequences and multiphased SSFP sequences were performed. In all projections we saw a ventricle-like "pouch", appending to the posterior and lateral wall of the left ventricle (panel shows four chamber view, with a septal defect*). Its size was 5.1 cm in long axis and 2.0 cm in short axis. The pouch had no inflow portion and was not part of the apex. The wall thickness of the pouch was 8 mm in end-diastole and equal to the remaining left ventricular myocardium. The septum separating the pouch from the regular left ventricle was interrupted by two septal defects of 1.9 cm and 0.5 cm in size.

In the cine sequences we saw a slightly reduced left ventricular contraction (ejection fraction 46%) (to view video files 1 and 2 visit the *Heart* website—<http://www.heartjnl.com/supplemental>). There was normal systolic contraction of the pouch without any regional wall motion abnormality.

After injection of Gd-DTPA the first pass perfusion in a short axis view showed normal myocardial perfusion. No evidence for myocardial scarring in the late enhancement in short and long axis could be demonstrated.

To view video footage visit the *Heart* website—<http://www.heartjnl.com/supplemental>

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