



Supporting Information

Supplementary figures and tables

**This appendix was part of the submitted manuscript and has been peer reviewed.
It is posted as supplied by the authors.**

Appendix to: Albarqouni L, Doust JA, Magliano D, et al. External validation and comparison of four cardiovascular risk prediction models with data from the Australian Diabetes, Obesity and Lifestyle study. *Med J Aust* 2019; doi: 10.5694/mja2.12061.

Figure 1. Flow chart of AusDiab participants included in our analysis

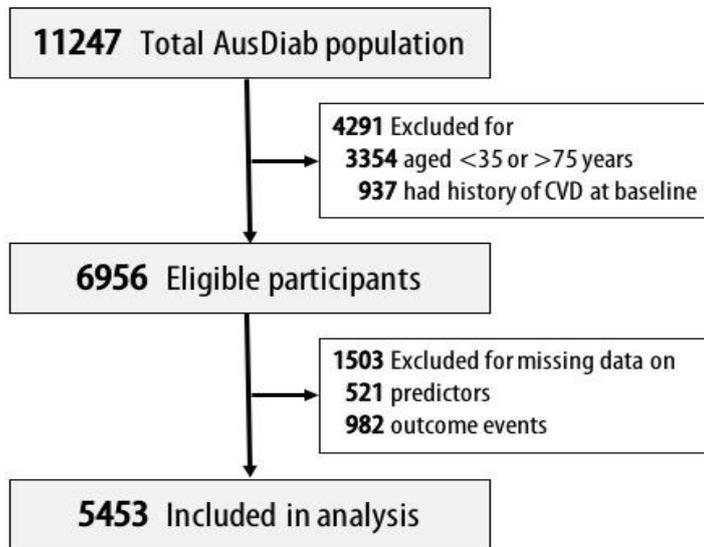


Figure 2. The distributions of predicted cardiovascular risk for each of the four cardiovascular risk models, by sex

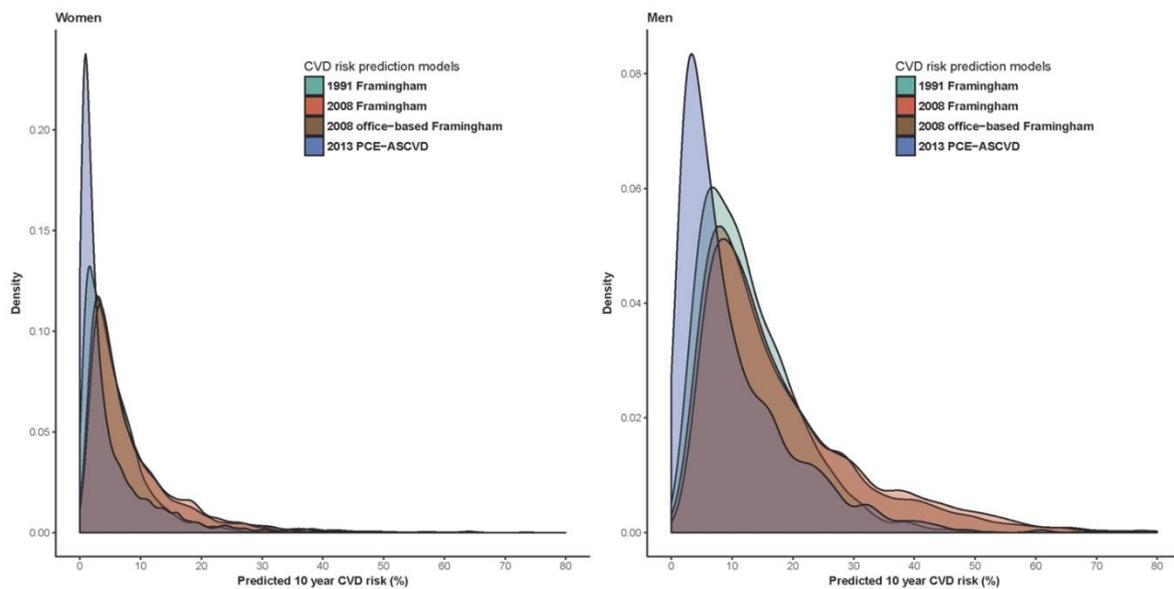
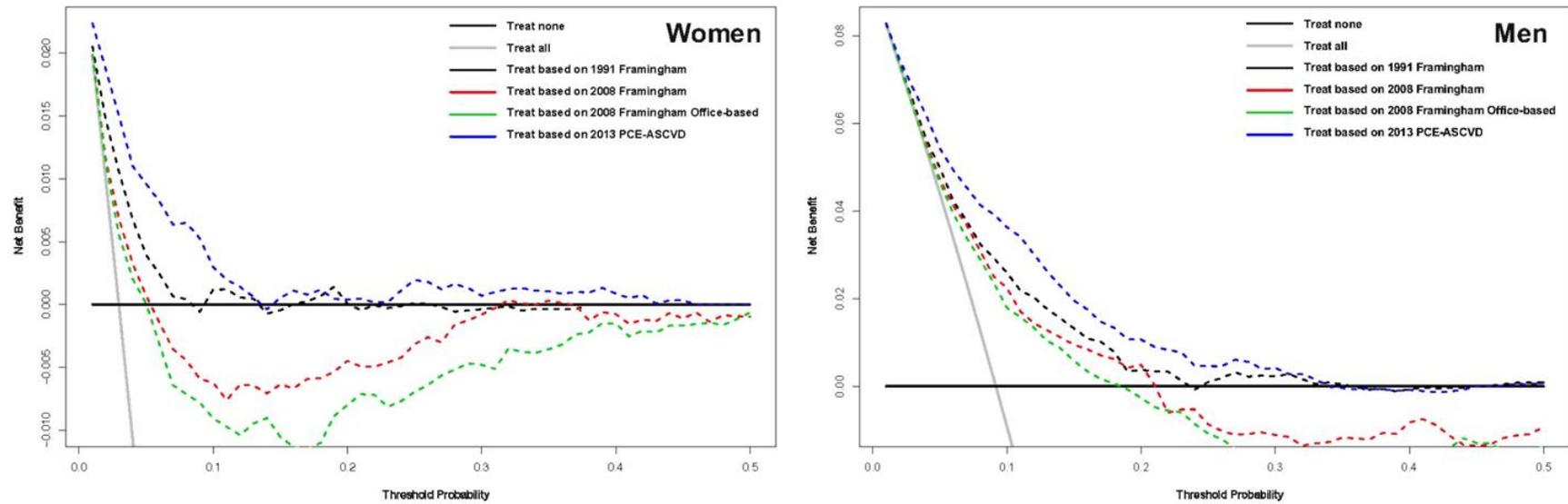


Figure 3. Decision curve analysis of the net benefit of the four cardiovascular risk models, by sex



Solid line: assume no patients are treated, net benefit is zero (no true-positive and no false-positive classifications). Grey line: assume all patients are treated. Dotted lines: patients are treated if predictions exceed a threshold. These figures were created with the *dca* function (www.decisioncurveanalysis.org).

Table 1. Predictors and measured outcomes for each of the four cardiovascular risk prediction models

Cardiovascular disease risk model	Predictors	Outcomes
1991 Framingham	Age, sex, systolic blood pressure, ratios of total to high-density lipoprotein cholesterol, smoking status, diabetes status, and electrocardiographic evidence of left ventricular hypertrophy	Myocardial infarction (myocardial infarction, including silent and unrecognized), non-fatal coronary heart disease, coronary heart disease death (sudden or non-sudden), stroke, non-fatal cardiovascular disease (including all of the above as well as congestive heart failure and peripheral vascular disease), and cardiovascular disease death
2008 Framingham	Age, sex, high-density lipoprotein, cholesterol, systolic blood pressure, treated blood pressure, smoking status, diabetes status	Composite of coronary heart disease (coronary death, myocardial infarction, coronary insufficiency, and angina), cerebrovascular events (including ischemic stroke, haemorrhagic stroke, and transient ischemic attack), peripheral artery disease (intermittent claudication), and heart failure
2008 office-based Framingham	Age, sex, body mass index, systolic blood pressure, treated blood pressure, smoking status, diabetes status	Same as D'Agostino Framingham
2013 Pooled Cohort Risk Equation (PCE- ASCVD)	Age, sex, high-density lipoprotein, cholesterol, systolic blood pressure, treated blood pressure, smoking status, diabetes status	Atherosclerotic cardiovascular disease risk events were defined as acute myocardial infarction, coronary heart disease death, and fatal or non-fatal ischemic stroke

Table 2. Risk classification of the AusDiab cohort by the four cardiovascular risk prediction models

	10-year cardiovascular disease risk based on:							
	1991 Framingham		2008 Framingham		2008 Framingham Office-based		2013 PCE-ASCVD	
	< 20%	≥ 20%	< 20%	≥ 20%	< 20%	≥ 20%	< 7.5%	≥ 7.5%
Men (n = 2386)								
Cardiovascular events								
Yes (n = 219)	131	88	68	151	68	151	40	179
No (n = 2167)	1851	316	1610	557	1538	629	1240	927
Total	1982	404	1678	708	1606	780	1280	1106
Women (n = 3067)								
Cardiovascular events								
Yes (n = 91)	80	11	58	33	56	35	30	61
No (n = 2976)	2933	43	2789	187	2738	238	2472	504
Total	3013	54	2847	220	2794	273	2502	565