

Figure e-1. Participants flowchart

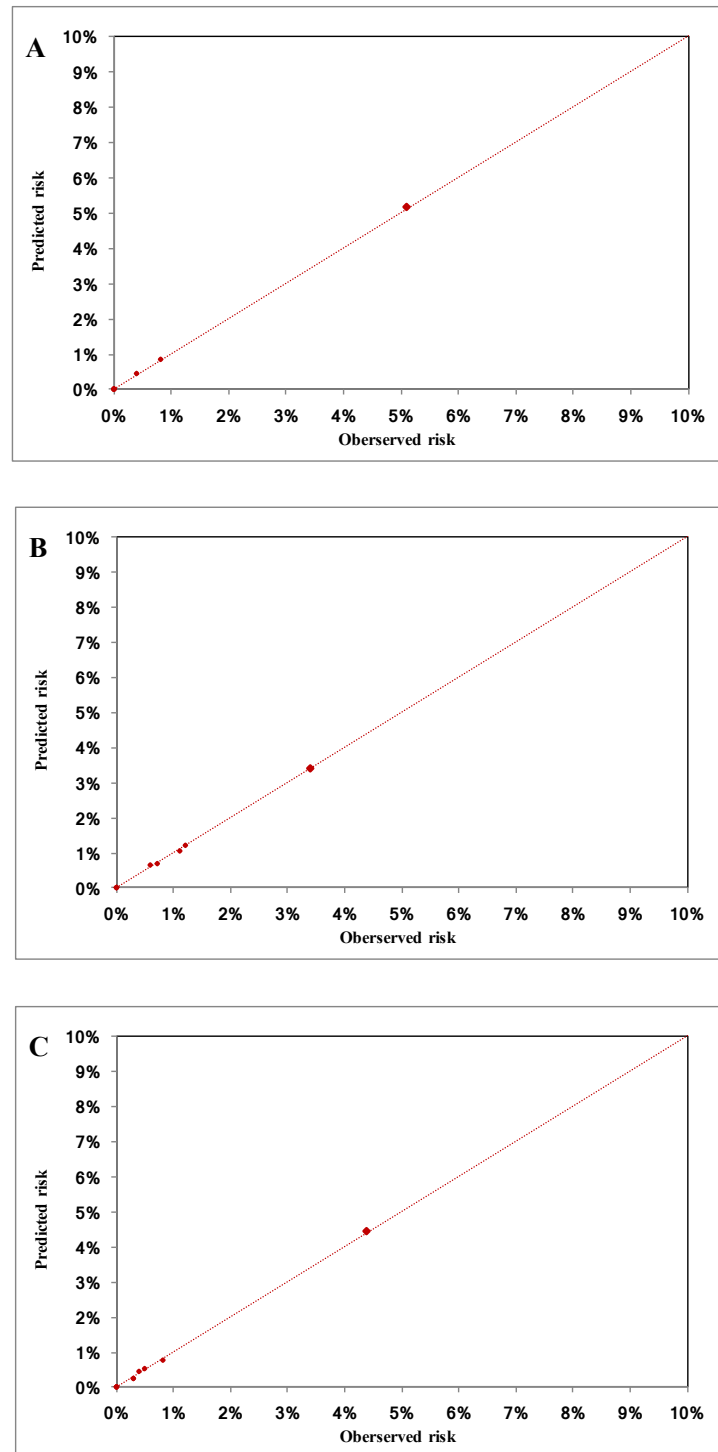


Figure e-2. Plot of observed versus predicted risk of progression of left carotid artery stenosis in the derivation, validation and overall study population

Figure e-2 legend

Plot of observed versus predicted risk of progression of left carotid artery stenosis according to 10 deciles of predicted risk. There was a high correlation between observed and predicted risk in the derivation cohort (A) ($n=2465$; $r=0.998$, $P<0.001$) and validation cohort (B) ($n=1646$; $r=0.997$, $P<0.001$), and overall cohort (C) ($n=4111$; $r=0.997$, $P<0.001$).

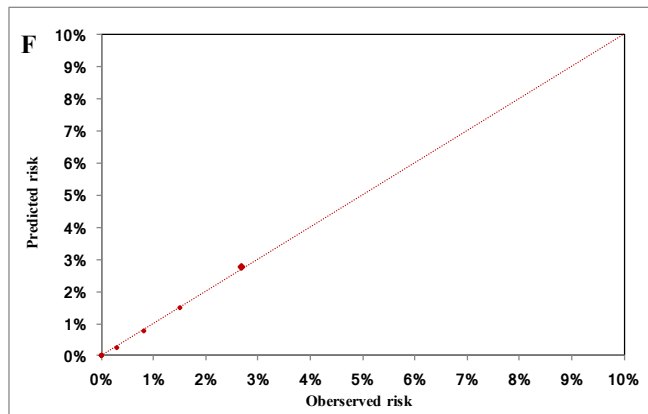
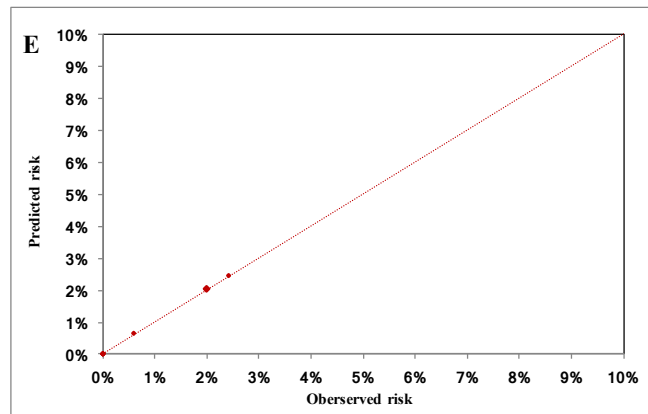
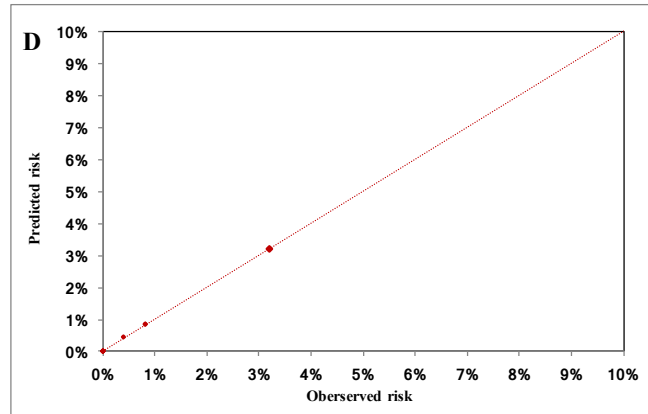


Figure e-3. Plot of observed versus predicted risk of progression of right carotid artery stenosis in the derivation, validation and overall study population

Figure e-3 legend

Plot of observed versus predicted risk of progression of right carotid artery stenosis according to 10 deciles of predicted risk. There was a high correlation between observed and predicted risk in the derivation cohort (A) ($n=2465$; $r=0.998$, $P<0.001$) and validation cohort (B) ($n=1646$; $r=0.999$, $P<0.001$), and overall cohort (C) ($n=4111$; $r=0.998$, $P<0.001$).

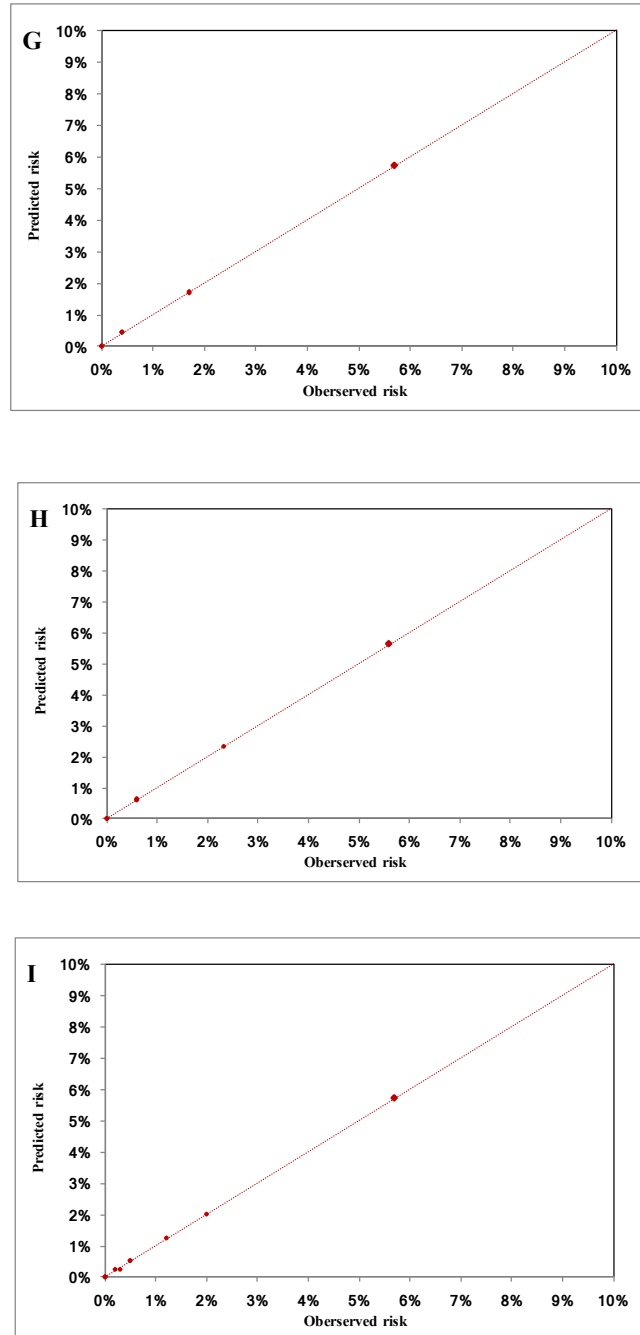


Figure e-4. Plot of observed versus predicted risk of progression of bilateral carotid artery stenosis in the derivation, validation and overall study population

Figure e-4 legend

Plot of observed versus predicted risk of progression of bilateral carotid artery stenosis according to 10 deciles of predicted risk. There was a high correlation between observed and predicted risk in the derivation cohort (A) ($n=2465$; $r=0.997$, $P<0.001$) and validation cohort (B) ($n=1646$; $r=0.996$, $P<0.001$), and overall cohort (C) ($n=4111$; $r=1.000$, $P<0.001$).

Table e-1. Sensitivity, specificity, PPV, NPV and accuracy of ECAS progression score at Younden index

	AUROC	95% C.I.	P value	Youden Index	Sensitivity	Specificity	PPV	NPV
Derivation cohort (n=2465)								
ECAS progression score-L	0.917	0.851-0.982	<0.001	0.750	0.824	0.927	0.072	0.999
ECAS progression score-R	0.868	0.791-0.945	<0.001	0.541	0.600	0.941	0.059	0.997
ECAS progression score-B	0.860	0.787-0.933	<0.001	0.550	0.690	0.860	0.055	0.996
Validation cohort (n=1646)								
ECAS progression score-L	0.842	0.740-0.973	<0.001	0.573	0.833	0.740	0.023	0.998
ECAS progression score-R	0.832	0.707-0.957	<0.001	0.633	0.889	0.744	0.019	0.999
ECAS progression score-B	0.824	0.729-0.918	<0.001	0.457	0.526	0.931	0.082	0.994
Overall cohort (n=4111)								
ECAS progression score-L	0.886	0.828-0.944	<0.001	0.580	0.655	0.925	0.058	0.997
ECAS progression score-R	0.854	0.786-0.922	<0.001	0.565	0.833	0.732	0.018	0.999
ECAS progression score-B	0.846	0.788-0.904	<0.001	0.506	0.646	0.860	0.052	0.995

Abbreviation; ECAS, extracranial cervical atherosclerotic stenosis; AUROC, Area Under the Receiver Operating Characteristic Curve; C.I., Confidence Interval; PPV, Positive Predictive Value; NPV, Negative Predictive Value; L, left side; R, right side; B-bilateral side.