

SUPPLEMENTAL MATERIAL.

Prediction of Ischemic Stroke or Transient Ischemic Attack in Atrial Fibrillation Using the CHA₂DS₂-VASc Score in Whites, Blacks, and Hispanics

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Table I. ICD-9 Codes for Covariates

Heart failure	398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.13, 404.91, 404.93, 425.4x, 425.9x, 428.xx
Hypertension	401.xx, 402.xx, 403.xx, 404.xx, 405.xx
Diabetes	250.xx
Myocardial infarction	410.xx, 412.xx
Peripheral artery disease	440.0x, 440.2x, 440.9x, 443.9x
Ischemic stroke	433.xx, 434.xx, 435.xx, 436.xx, 437.xx, 438.xx

Table II. Incidence of Ischemic Stroke or TIA Among Atrial Fibrillation Patients, Stratified by Race/Ethnicity (censoring at initiation of oral anticoagulants), Optum Clinformatics, 2009-2015				
	All	Whites	Blacks	Hispanics
Ischemic stroke or TIA, N	5,168	4,257	503	408
Person-years	392,701	333,412	30,137	29,153
Incidence rate*	1.32 (1.28, 1.35)	1.28 (1.24, 1.32)	1.67 (1.53, 1.82)	1.40 (1.27, 1.54)
Ischemic stroke, N	4,217	3,461	419	337
Person-years	393,968	334,485	30,245	29,238
Incidence rate*	1.07 (1.04, 1.10)	1.03 (1.00, 1.07)	1.39 (1.26, 1.52)	1.15 (1.03, 1.28)

* Per 100 person-years (95% confidence interval)

Table III. Negative Predictive Value and Positive Predictive Value of the CHA₂DS₂-VASc Score for Ischemic Stroke or TIA

Without censoring for initiation of OAC

CHA ₂ DS ₂ -VASc	No ischemic stroke or TIA	Ischemic stroke or TIA	
≥1	251560	6160	PPV: 2.4
<1	9657	42	NPV: 99.6
≥2	229965	6054	PPV: 2.6
<2	31252	148	NPV: 99.5
≥3	199578	5726	PPV: 2.8
<3	61639	476	NPV: 99.2
NPV: Negative predictive value. PPV: Positive predictive value			

Censoring for initiation of OAC

CHA ₂ DS ₂ -VASc	No ischemic stroke or TIA	Ischemic stroke or TIA	
≥1	252583	5137	PPV: 2.0
<1	9668	31	NPV: 99.7
≥2	230967	5052	PPV: 2.1
<2	31284	116	NPV: 99.6
≥3	200522	4782	PPV: 2.3
<3	61729	386	NPV: 99.4
NPV: Negative predictive value. PPV: Positive predictive value			

Table IV. Odds Ratio of the CHA₂DS₂-VASc Score for Ischemic Stroke or TIA One Year After Diagnosis of Atrial Fibrillation

Without censoring for initiation of OAC		
CHA ₂ DS ₂ -VASc score	OR	95% CI
0	1 (REF)	
1	1.13	(0.79, 1.61)
2	2.48	(1.80, 3.42)
≥3	6.59	(4.86, 8.94)
Censoring for initiation of OAC		
CHA ₂ DS ₂ -VASc score	OR	95% CI
0	1 (REF)	
1	1.23	(0.81, 1.85)
2	2.76	(1.90, 4.01)
≥3	7.43	(5.22, 10.6)

Table V. C-statistic of CHA₂DS₂-VAsC for 1-Year Prediction of Ischemic Stroke or TIA Among Atrial Fibrillation Patients, Optum Clinformatics, 2009-2015

	C-statistic	95% CI
CHA ₂ DS ₂ -VAsC variables	0.691	0.683, 0.699
CHA ₂ DS ₂ -VAsC variables + race/ethnicity	0.692	0.684, 0.701
CHA ₂ DS ₂ -VAsC variables + race/ethnicity + race/ethnicity*individual	0.692	0.684, 0.701
CHA ₂ DS ₂ -VAsC variables		

CHA₂DS₂-VAsC variables: congestive heart failure, hypertension, age, diabetes mellitus, stroke or TIA, complicated vascular disease (myocardial infarction or peripheral arterial disease)

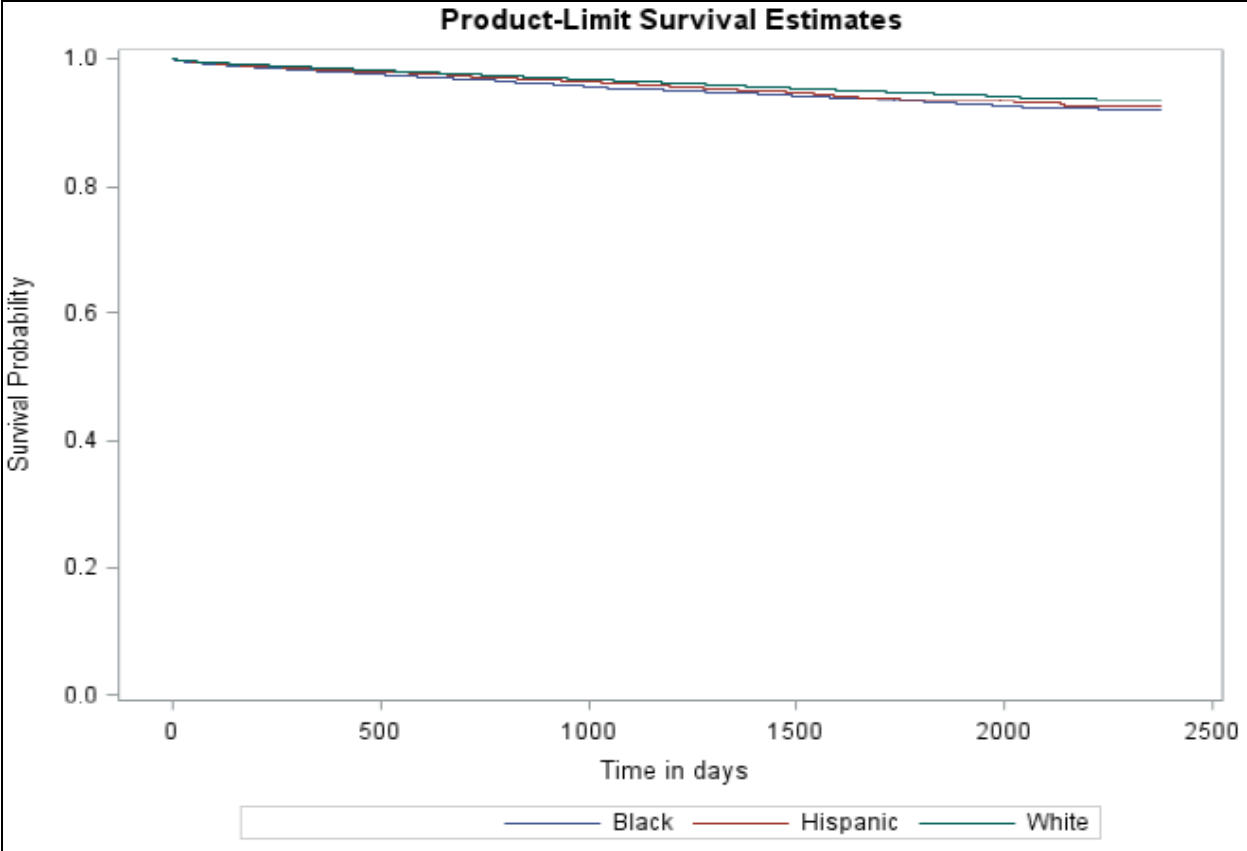


Figure I. Kaplan-Meier curve for ischemic stroke and TIA by race/ethnicity

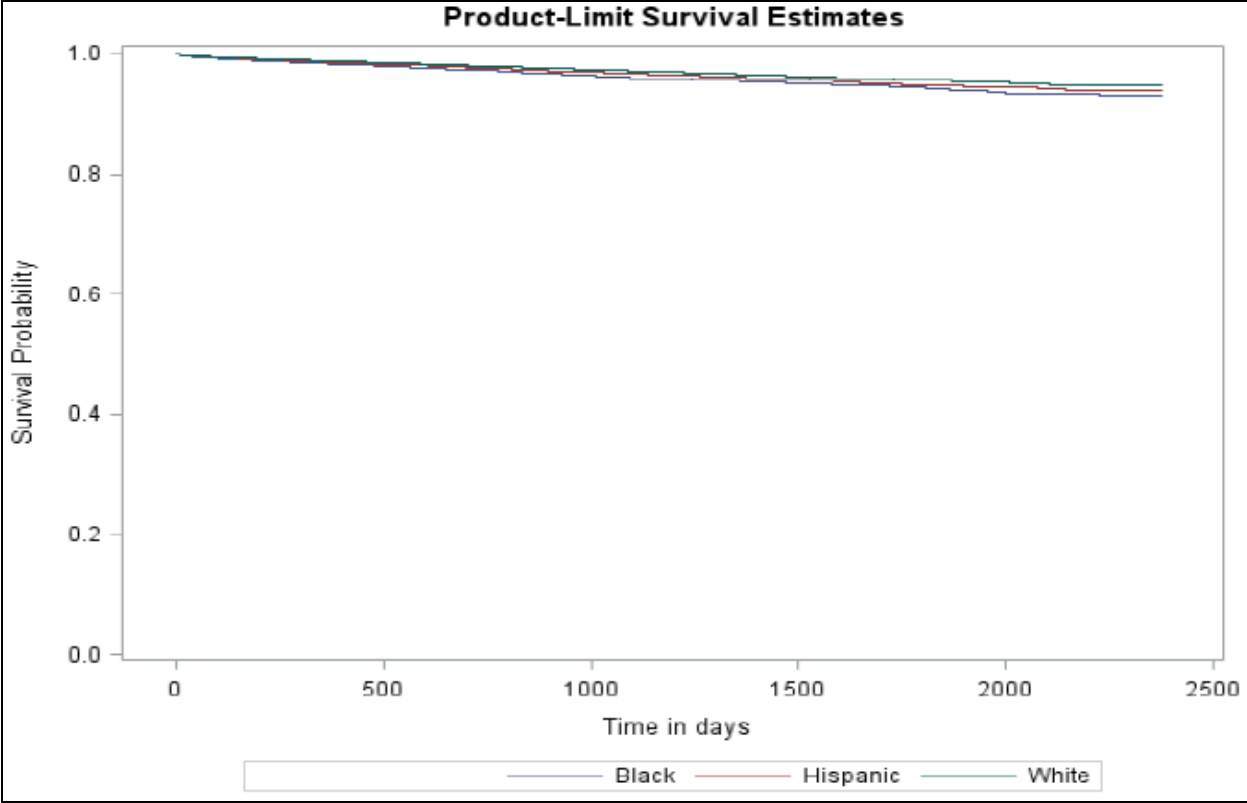


Figure II. Kaplan-Meier curves for ischemic stroke by race/ethnicity

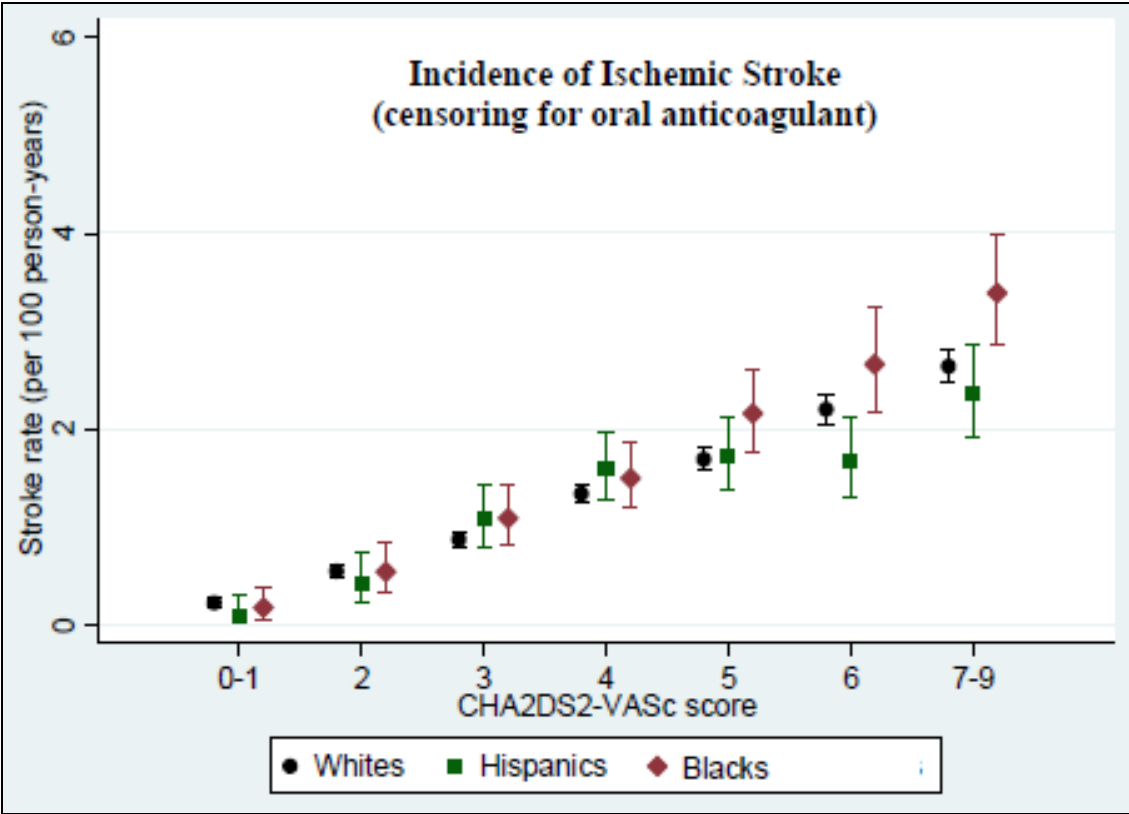


Figure III. Incidence of ischemic stroke or TIA, censoring for oral anticoagulant

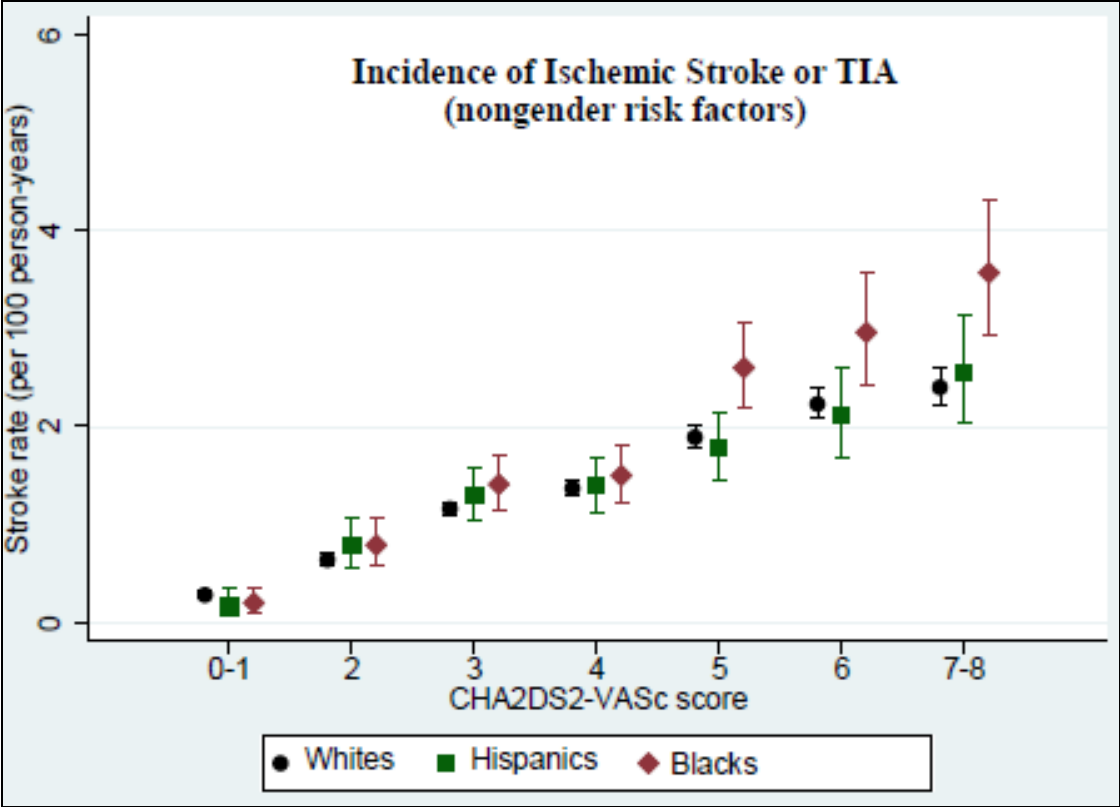


Figure IV. Incidence of ischemic stroke or TIA, nongender risk factors