Response to Letter Regarding Article, “Renal Dysfunction as a Predictor of Stroke and Systemic Embolism in Patients With Nonvalvular Atrial Fibrillation: Validation of the R\_CHADS\_2 Score in the ROCKET AF (Rivaroxaban Once-Daily, Oral, Direct Factor Xa Inhibition Compared With Vitamin K Antagonism for Prevention of Stroke and Embolism Trial in Atrial Fibrillation) and ATRIA (Anticoagulation and Risk Factors in Atrial Fibrillation) Study Cohorts”

We appreciate the comments and suggestions made by Apostolakis et al. As they point out, there are several important limitations of our analysis, including the high-risk nature of the ROCKET AF (Rivaroxaban Once-Daily, Oral, Direct Factor Xa Inhibition Compared With Vitamin K Antagonism for Prevention of Stroke and Embolism Trial in Atrial Fibrillation) trial cohort. Factors associated with stroke or systemic embolism in a selected high-risk population may not be generalizable to other patient populations, including patients not currently being treated with oral anticoagulation. It was for precisely these reasons that we validated our model in the independent and unselected ATRIA (Anticoagulation and Risk Factors in Atrial Fibrillation) cohort.

In our external validation analyses, we found that use of the R\_CHADS\_2 score improved risk stratification in the ATRIA cohort. When compared with the CHADS\_2 index, use of the R\_CHADS\_2 resulted in 12\% (95\% confidence interval, 6\% to 19.5\%) net reclassification improvement in patients on warfarin. Net reclassification improvement was even more robust in those not receiving oral anticoagulation (net reclassification improvement in patients on warfarin: 22.6\%; 95\% confidence interval, 14.5\% to 30.7\%). Additional analyses from ATRIA have also supported the importance of renal function in risk stratification for stroke.

Although we certainly agree that additional validation is warranted, the data from ROCKET AF and ATRIA indicate that stroke risk stratification in patients with atrial fibrillation should include renal function.

Disclosures

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