Introduction: Data of non-vitamin K antagonist oral anticoagulants (NOACs) in current management of AF atrial fibrillation (AF) and stroke are predominantly derived from North American and European regions. However, the effects of NOACs with warfarin for AF stroke prevention in Latin America remain unclear. Therefore, we aimed to compare the efficacy and safety of NOACs with warfarin in Latin American patients with AF.

Methods: The PubMed and Embase databases were systematically searched until July 11, 2019 for applicable phase III clinical trials. The risk ratios (RRs [95% confidence intervals]) were pooled by a random-effects model.

Result: Four trials involving 8,943 Latin American patients were included in this meta-analysis. In anticoagulated patients with AF, Latin Americans had increased rates of stroke or systemic embolism (1.15[1.01-1.30]) and all cause death (1.46[1.30-1.63]) compared with non-Latin Americans. For the treatment effects, compared with warfarin, NOACs significantly reduced the risks of stroke or systemic embolism (0.78[0.64-0.96]), all cause death (0.85[0.75-0.98]), major bleeding (0.66[0.54-0.80]), intracranial bleeding (0.25[0.12-0.52]) and any bleeding (0.70[0.62-0.78]) in Latin American patients. Interactions between Latin American and non-Latin American patients about efficacy and safety outcomes of NOACs compared with warfarin were non-significant (all Pinteraction>0.05). In the sensitivity analysis, the results by including data of 3 direct Xa inhibitors were consistent with the primary analyses.

Conclusion: Latin American patients had higher risks of stroke or systemic embolism and death than non-Latin American individuals. The use of NOACs is non-inferior to warfarin use in Latin American patients with AF.