The efficacy of NOACs was evaluated and compared to constant HRs from previous clinical trials of AF patients, comparing any two of the following agents: placebo, aspirin, aspirin and clopidogrel combination therapy (A+C), adjusted-dose warfarin (target INR 2.0-3.0), dabigatran (110 mg and 150 mg), rivaroxaban, apixaban, and edoxaban (low-dose). For each outcome, agents were ranked to generate relative effectiveness estimates for the outcomes of interest (all stroke, ischemic stroke, and fatal bleeding). For each outcome, agents were ranked according to their likelihood of being the best option. Results: We identified 12 studies, comprising 81,771 patients. Compared to warfarin, dabigatran 150 mg (RR 0.65, 95% CI 0.53-0.82) and apixaban (RR 0.80, 95% 0.66-0.96) reduced the risk of all strokes. Dabigatran 150 mg was also more effective than warfarin at reducing ischemic stroke risk (RR 0.77, 95% CI 0.59-0.98). All anticoagulants were more effective than A+C, aspirin and placebo at reducing the risk of ischemic and all strokes. All trials were complicated with a lower risk of major bleeding, except for dabigatran 150 mg, rivaroxaban, A+C, and aspirin. Dabigatran 150 mg was most likely to be ranked best at reducing ischemic stroke risk, and low-dose edoxaban was as best at reducing major bleeding risk. Conclusions: Anticoagulants effectively reduce the risk of ischemic and all strokes in AF patients, and are more effective than A+C, aspirin and placebo at reducing the risk of ischemic and all strokes. Dabigatran 150 mg was also more effective than warfarin at reducing ischemic and all strokes. DOXO was most likely to be ranked best at reducing major bleeding risk.

Overall, NOACs had lower risk of stroke and/or major bleeding risk than warfarin. In addition to a drug’s safety and effectiveness, individual treatment should consider the patient’s underlying stroke and bleeding risk profile.