

# Safety and efficacy of apixaban and rivaroxaban in obese patients with atrial fibrillation: A multicenter retrospective analysis

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*The authors have no conflict of interest.*

## Background:

Per the Centers of Disease Control (CDC) and Prevention, 42.4% of the United States adult population is obese.<sup>1</sup> In patients with atrial fibrillation, current guidelines recommend use of direct oral anticoagulants (DOACs) over warfarin based on novel studies showing a reduction in thrombosis with reduced occurrences of life threatening bleeds.<sup>2</sup> Despite such strong recommendations, uncertainty remains regarding the safety and efficacy of DOAC use in extremes of weight.

### Objective:

- To determine the safety and efficacy of apixaban and rivaroxaban in obese patients with atrial fibrillation.

## Methods:

This is a multicenter, retrospective cohort study conducted with data from January 1, 2012 through December 31, 2019 in patients followed over 12 months.

### Inclusion:

- BMI greater than 40 kg/m<sup>2</sup> and/or weight greater than 120 kg
- Diagnosis of non-valvular atrial fibrillation
- On apixaban, rivaroxaban, or warfarin
- Follow-up visit within 12 months

### Exclusion:

- Pregnancy
- Severe liver disease
- Contraindicated concomitant medications

### Efficacy Outcome:

Time to composite rate of thrombosis, including:

- Stroke
- Systemic embolism
- Myocardial infarction

### Safety Outcome:

- Time to major bleed

### Statistical Analysis:

Study groups will be analyzed in a 2:1 warfarin to apixaban and warfarin to rivaroxaban ratio. With an alpha level of 0.05, a total of 3524 patients will be needed to meet an 80 percent power, with 1762 patients in the warfarin group, 881 patients in the apixaban group, and 881 patients in the rivaroxaban group. A Kaplan-Meier curve or log rank test will be used to assess time to thrombosis or major bleeding event.

## Results:

Results are pending.

## Conclusion:

Pending study completion, we anticipate the results to provide insight into whether or not DOACs are a safe and effective therapeutic option for patients who are obese with atrial fibrillation.

## References:

1. Hales CM, et al. Prevalence of obesity among adults and youth: United States, 2015–2016. *NCHS Data Brief*. 2017;(288):1-8. PMID: 29155689.
2. January CT, et al. 2019 AHA/ACC/HRS focused update of the 2014 AHA/ACC/HRS guideline for the management of patients with atrial fibrillation: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *Circulation*. 2019;140:e125-e151.