

Characteristics of Warfarin Underprescription in Older Adults with Atrial Fibrillation

Sana Rashid DO¹, Maciej Tysarowski MD¹, Jorge Naranjo MD¹, Atharva Dhole BA¹, Luka Petrovic MD¹, Emad F. Aziz DO²

¹Department of Medicine, Rutgers New Jersey Medical School

²Division of Cardiology, Department of Medicine, Rutgers New Jersey Medical School

Introduction

- Atrial fibrillation (AF) is the most common sustained cardiac arrhythmia with prevalence increases with age
- It is an independent risk factor for all-cause mortality, cardiovascular mortality, hospitalization, stroke, dementia, and heart failure
- Age over 75 years is one of the strongest independent risk factors for thromboembolic (TE) events (ie. stroke)

Methods and Materials

- We analyzed prospective longitudinal registry of 2179 patients with AF and AFI between Sept 2006 and Apr 2014
- Prospective follow-up was obtained through telephone interview using questionnaire
- Patients discharged on a non-warfarin anticoagulation (i.e. direct-oral anticoagulants (DOACs)) (189 patients) were excluded from the analysis
- Remaining patients divided into two cohorts: ≥ 75 years or older and those < 75 years of age; older vs. younger cohorts
- The older group was subdivided into *Warfarin* group and *Non-warfarin* group (Figure 1)

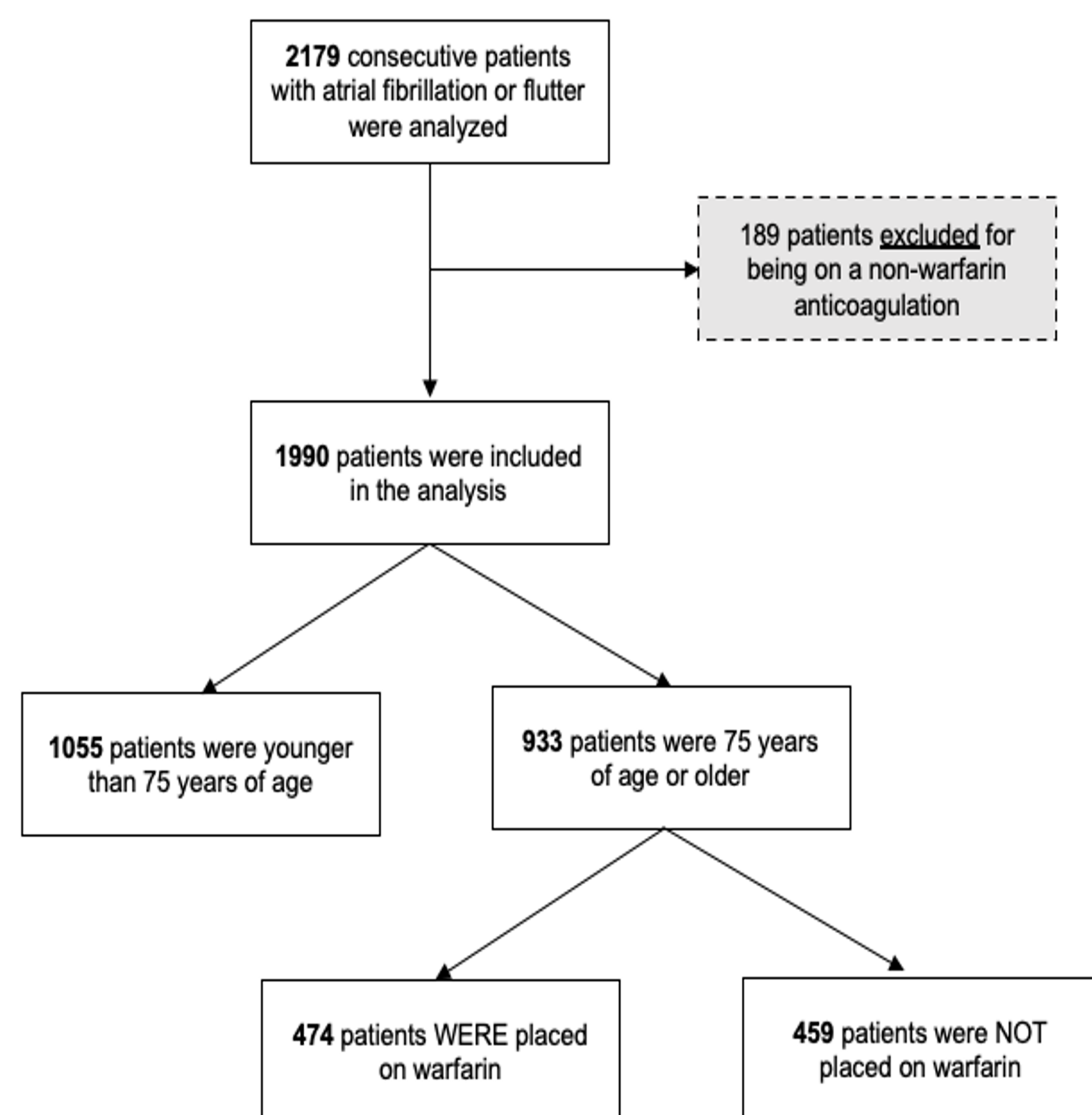


Figure 1. Flow diagram with patient selection and study criteria.

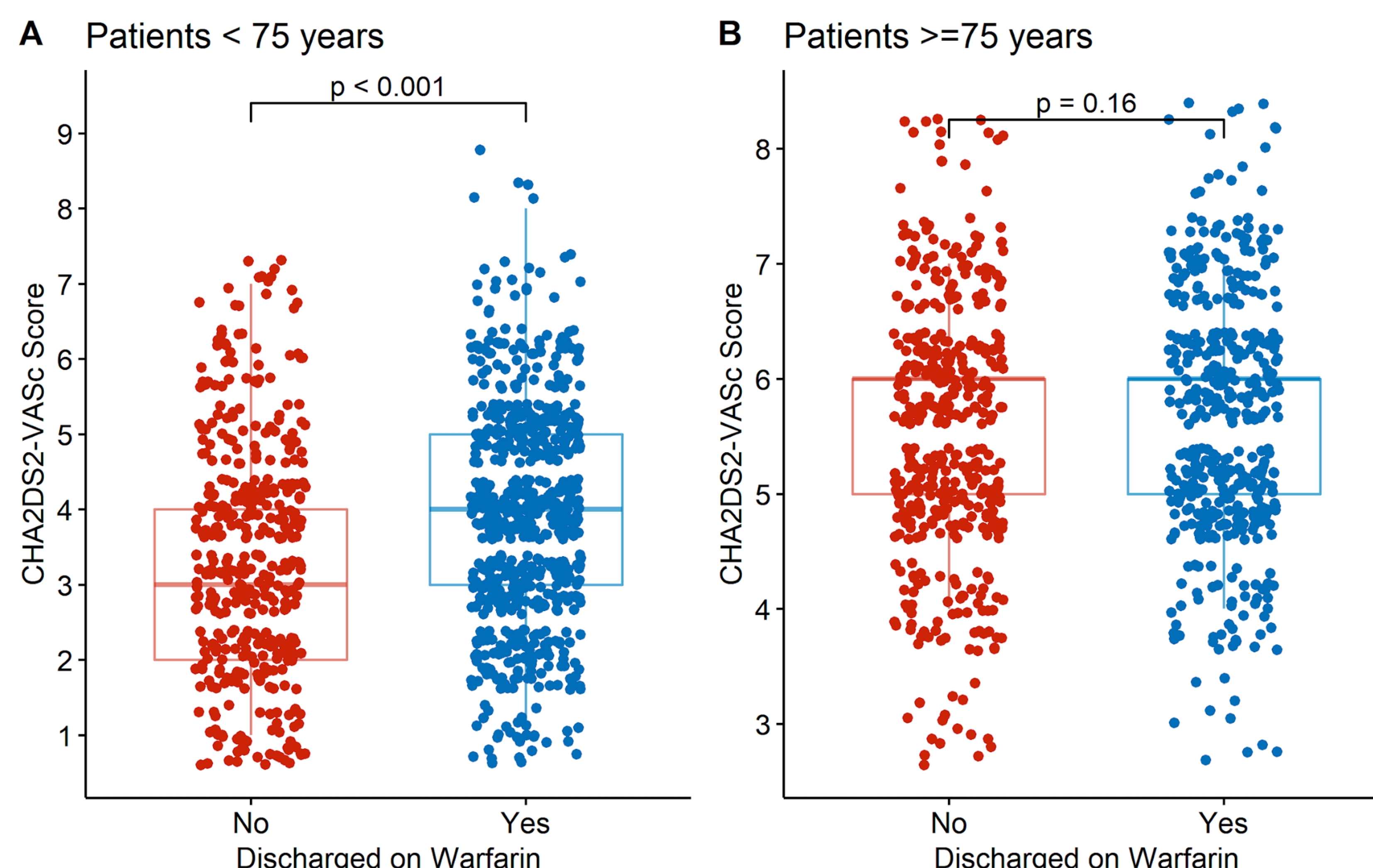


Figure 2. The relationship between CHA2DS2-VASc Score and warfarin discharge. In contrast to the younger cohort (A), there is no statistically significant difference between CHADS2-VASc Score and being discharged on warfarin in the older cohort (B, $p = 0.16$).

Multivariate Analysis: Odds of Discharge on Warfarin: OR (95% CI, p-value)

Age	0.93 (0.90-0.95, $p < 0.001$)
Male gender	0.76 (0.56-1.03, $p = 0.079$)
Black race	1.09 (0.81-1.47, $p = 0.581$)
GFR Cockcroft-Gault	1.00 (0.99-1.00, $p = 0.142$)
Discharged on aspirin	0.57 (0.43-0.75, $p < 0.001$)
CHADS-VASc score	1.06 (0.93-1.21, $p = 0.388$)
Body mass index	1.03 (1.01-1.06, $p = 0.018$)
Hemoglobin	1.11 (1.04-1.19, $p = 0.002$)

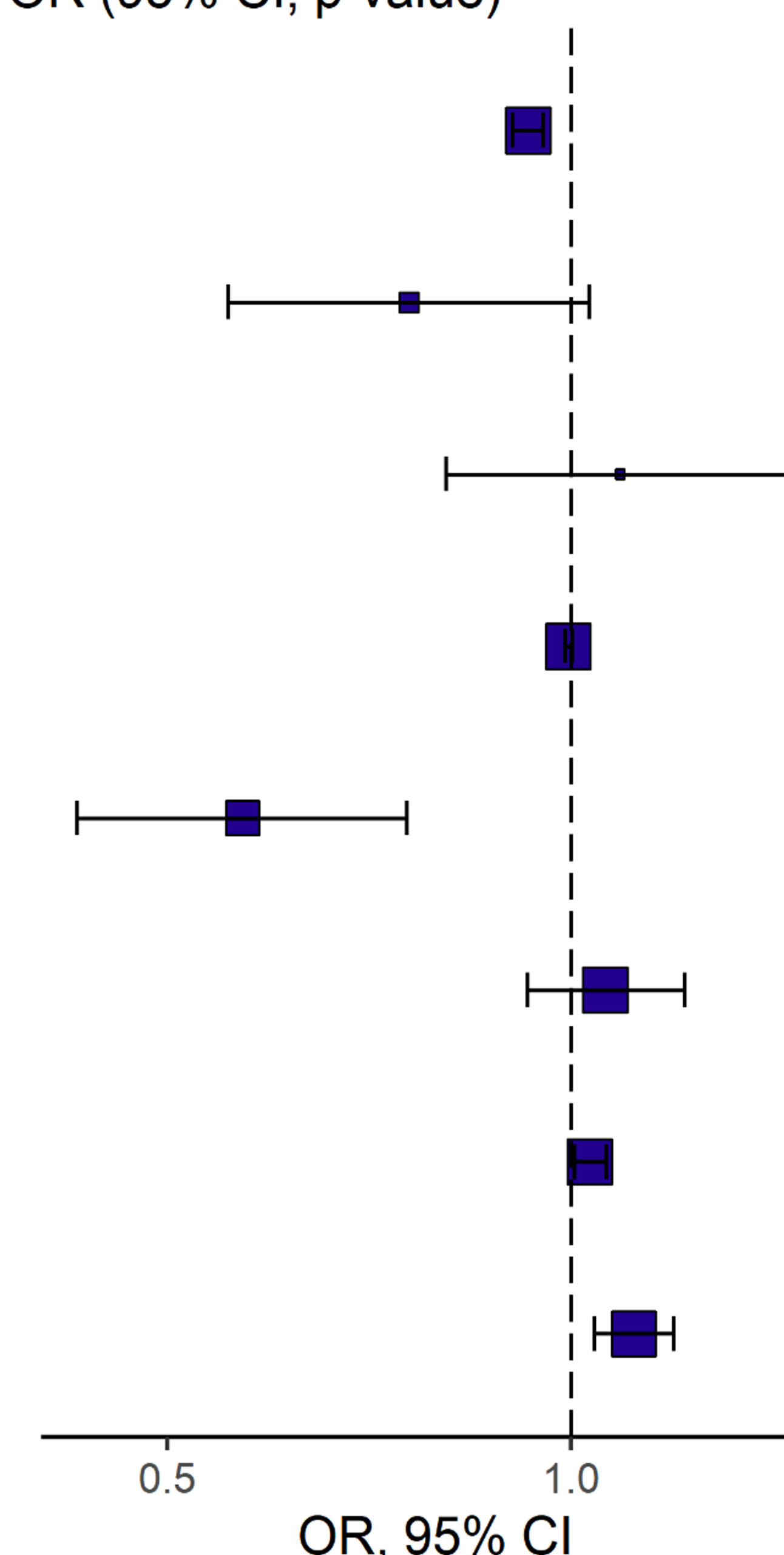


Figure 3. Multivariate analysis assessing predictors of being discharged on warfarin in patients ≥ 75 years old.

Results

- Older cohort included 933 patients (and the younger cohort included 1055 patients)
- Older cohort was less likely to be discharged on warfarin, despite a higher mean CHA₂DS₂-VASc score ($p < 0.001$)
- The younger cohort had higher rates of warfarin prescription as CHA₂DS₂-VASc score increased ($p < 0.001$)
- Higher rates of warfarin prescription in younger cohort as CHA₂DS₂-VASc score increased ($p < 0.001$)
- Older cohort, had no statistically significant difference between CHA₂DS₂-VASc score and warfarin prescription on discharge ($p = 0.16$) (Figure 2)
- Multivariate analysis demonstrated warfarin prescription in older adults was independently associated with lower rates of aspirin prescription, lower body mass index (BMI), and relative anemia
- Additionally, there was no difference between mean CHA₂DS₂-VASc score and warfarin prescription (OR = 1.06 (95% CI 0.93 - 1.21), $p = 0.388$) in the older cohort (Figure 3)

Conclusions

- Although there is enough evidence of anticoagulation benefits in older adults with AF and AFI, underprescription remains high regardless of their CHA₂DS₂-VASc score
- Our study suggests that certain patterns associated with underprescription include the presence of anemia, low weight, and aspirin prescription
- There may be hesitancy from clinicians to anticoagulate elderly patients when perceived risks outweighs benefits
- Patterns of anticoagulation underprescription can shed light on these patients who are already at the highest risk of TE events and have proven to benefit from therapeutic anticoagulation
- Careful assessment of benefits and risks, along with shared decision making, are necessary for optimal care of these older patients with AF or AFI



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