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LETTER TO THE EDITOR
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Antithrombotic management in the elderly post-percutaneous coronary intervention: a critical analysis of the PERSEO registry in the context of frailty and evidence-based practice

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The *post-hoc* analysis of the PERSEO registry by Minardi, *et al*.[1] offers critical insights into antithrombotic management for elderly patients (≥ 80 years) on oral anticoagulation undergoing percutaneous coronary intervention. While the authors effectively demonstrate the vulnerability of this population, characterized by substantial comorbidity burden and markedly elevated rates of mortality, ischemic events, and bleeding at one year compared with younger cohorts, their findings raise important questions about contemporary practice patterns and their alignment with evidence-based guidelines.

The registry reveals a concerning disconnect between current practice and established evidence. Despite robust data from AUGUSTUS (An Open-Label, 2 x 2 Factorial, Randomized Controlled, Clinical Trial to Evaluate the Safety of Apixaban vs. Vitamin K Antagonist and Aspirin vs. Aspirin Placebo in Patients With Atrial Fibrillation and Acute Coronary Syndrome or Percutaneous Coronary Intervention)[2] and RE-DUAL PCI (Randomized Evaluation of Dual Antithrombotic Therapy with Dabigatran versus Triple Therapy with Warfarin in Patients with Nonvalvular Atrial Fibrillation Undergoing Percutaneous Coronary Intervention)[3] demonstrating superior safety with dual antithrombotic therapy (direct oral anticoagulant plus $P2Y_{12}$ inhibitor) over triple antithrombotic therapy (TAT), 75% of elderly patients in PERSEO received TAT for a mean duration of 113 days.[1] This substantially exceeds guideline recommendations limiting TAT to approximately one week.[4] The authors' characterization of this approach as "less aggressive" therapy warrants reconsideration. From a bleeding perspective, prolonged TAT constitutes a decidedly more aggressive strategy, rendering the observed 21% incidence of BARC (Bleeding Academic Research Consortium) type 2–5 bleeding events predictable rather than paradoxical.[1] The threefold elevation in all-cause mortality among elderly patients (21% *vs.* 7%) points to critical unmeasured variables influencing outcomes. We propose that frailty, a multidimensional syndrome of reduced physiological reserve distinct from chronological age or multimorbidity, serves as the primary explanatory factor.[5] The PERSEO findings exemplify the well-documented "treatment-risk paradox": clinicians, attempting to navigate competing ischemic and bleeding risks in frail patients, employ inconsistent therapeutic strategies that ultimately fail to mitigate the poor outcomes driven by underlying physiological vulnerability.[6]

Registry data inherently suffer from confounding by indication, particularly when treatment selection occurs at operator discretion. This methodological limitation precludes definitive conclusions about the comparative effectiveness of dual antithrombotic therapy versus TAT in this specific population. Nevertheless, the data generate important hypotheses requiring prospective validation. The PERSEO registry underscores an imperative to transcend age-based therapeutic algorithms.[1] Integration of standardized frailty assessment instruments into cardiovascular care would enable more nuanced, patient-specific risk stratification and treatment selection. These findings provide compelling justification for randomized controlled trials specifically enrolling very elderly and frail patients, employing patient-centered outcomes including functional capacity, quality of life, and freedom from disability alongside traditional cardiovascular endpoints.

As the demographic burden of cardiovascular disease shifts toward older, more complex patients, establishing evi-

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dence-based antithrombotic strategies for this vulnerable population becomes increasingly urgent. The PERSEO registry,[1] while highlighting current practice gaps, catalyzes essential discourse on optimizing care delivery for elderly patients navigating the complex intersection of atrial fibrillation, coronary disease, and frailty.

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