Net Thromboembolic vs. Bleeding Risk Stratification: A Step Forward for Personalized and Tailored Treatment of Atrial Fibrillation.

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Hijazi and colleagues' ABC score yields promise as a new standard for assessming bleeding risk in patients with atrial fibrillation (AF) and supports the role of biomarkers in the field [1]. Unfortunately, it also highlights the overlap of some variables (GDF-15, Troponin T, and age) which not only associate with bleeding, but are also known risk factors for stroke and systemic embolism [2, 3]. New thromboembolic risk stratification schemes like ATRIA [4], R_2CHADS_2 [5] and ABC-stroke [6] have been proposed, but it is clear the time has come for a new paradigm of integrated risk stratification for AF patients. Using two separate risk classifications to assess the two ends of a continuous spectrum (thrombosis vs. bleeding) seems artificial and provides unclear guidance in the frequent setting of increased bleeding and thrombotic risk. We propose that a combined risk score assessing thromboembolic risk and simultaneously adjusting/balancing for bleeding risk, providing us with a net risk/benefit estimation may be the way to achieve a personalized treatment in this population. This could potentially allow tailoring of anticoagulation according to each patient's net risk, possibly allowing higher intensity anticoagulation regimens for patients with high thromboembolic risk but low bleeding risk, and lower intensity anticoagulation in those with low to moderate thromboembolic risk and higher bleeding tendency. Integrating and merging the different risk assessment tools (bleeding and thromboembolic risk scores), including variables

signalling only higher thromboembolic risk or adjusting for thrombotic risk factors to the bleeding tendency may be the way forward. In the future strucutural information when they are validated (eg. Left atrial appendage morphology/velocities), as well as biomarkers could also be incorporated to refine the scoring system.

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