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**EP729 / #577, TOPIC: ASA04 - CLINICAL VASCULAR DISEASE / ASA04-12 PREVENTION AND TREATMENT OF CARDIOVASCULAR DISEASE; MISCELLANEOUS, POSTER VIEWING SESSION. PATIENT-CENTERED CARDIAC REHABILITATION BY AI-POWERED LIFESTYLE INTERVENTION – THE TIMELY APPROACH**

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**Background and Aims:** eHealth innovations allow the integration of artificial intelligence (AI) and IoT-devices to optimize personalized care and provide self-care assistance during cardiac rehabilitation (CR). TIMELY is the first AI-driven eHealth approach promoting targeted personalized lifestyle interventions. TIMELY includes continuous risk prediction, decision support tools and assists lifestyle changes based on psychosocial assessment and behavioral change models.

**Methods:** TIMELY uses a Living Lab approach for iterative and participatory design. Routes for patient information and communication will be based on an app complemented by adaptive chat bots for the assessment of psychosocial CR-relevant components. Self-applicable ECG devices, activity trackers and hemodynamic monitors will inform about therapy progress and risks. The TIMELY AI will allow continuous risk prediction and AI behavioral change agents will help to optimized program adherence and support long-term lifestyle changes.

**Results:** Living Lab interviews revealed patients' requirements and good acceptance of the proposed solution. Patients reported high acceptance of the eHealth solution in general and of components informing on current diagnosis, clinical/ laboratory parameters, future risks and support for physical activity (motivational messages, progress documentation, training updates). Assistance with smoking cessation and stress management was considered important, dietary support was not prioritized. Communication by adaptive chat bots was generally accepted, even if personal feedback was highly appreciated.

**Conclusions:** TIMELY will be the first AI-powered multimodal intervention system supporting CAD patients to achieve long-lasting lifestyle changes. TIMELY may be applied in different European health care settings to coordinate a multidisciplinary care team and improved quality of life and health outcomes.



**EP730 / #962, TOPIC: ASA04 - CLINICAL VASCULAR DISEASE / ASA04-12 PREVENTION AND TREATMENT OF CARDIOVASCULAR DISEASE; MISCELLANEOUS, POSTER VIEWING SESSION. A CLINICAL SCORE INCLUDING PERIPHERAL ATHEROSCLEROSIS FOR PREDICTING UPPER GASTROINTESTINAL BLEEDING IN PATIENTS WITH STABLE CAD**

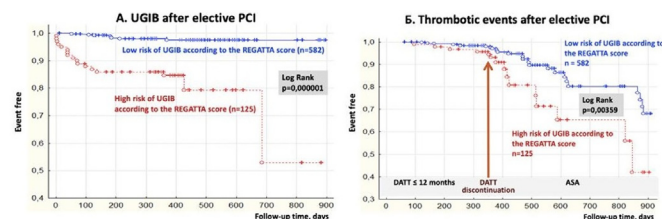
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**Background and Aims :** Identifying CAD patients at high risk of upper gastrointestinal bleeding (UGIB) carries important therapeutic implications. Existing approaches (like algorithm proposed by the European Society of Cardiology (ESC) in 2015) mostly assess local risk factors and ignore comorbidity.

**Methods:** The UGIB risk scale was developed based on the prospective REGISTRY of long-term

AnTithrombotic TherApy-1 REGATTA-1 (ClinicalTrials.gov Identifier: NCT04347200). The median follow-up was 2,5 [1,1-14,7] years.

**Results:** Of the 934 patients (median age 61 [53–68] years, 78.6% men) included, 51 patients developed overt UGIB (1.9 per 100 patients per year). Age ( $\geq 80$ ), abdominal aortic aneurysm and/or peripheral atherosclerosis, heart failure, prior gastric/duodenal erosion, prior gastric/duodenal ulcer, prior gastrointestinal bleeding, NSAIDs/corticosteroids and anticoagulants are independent risk factors of UGIB according to multivariate logistic regression. A risk scoring system REGATTA was constructed using these clinical variables that successfully stratifies patients into 2 risk groups, with good model discrimination (AUC=0.88). Predictive value of REGATTA score was higher than of ESC 2015 score (AUC=0.79),  $p=0.04$ . In patients after elective PCI ( $n=640$ ), the REGATTA score predicts UGIB better than the PRESICE-DAPT score, respective AUCs are 0.87 and 0.70 ( $p=0.04$ ). Finally, patients with a high UGIB risk according to REGATTA score are also characterized by a high risk of thrombotic events (figure 1) possibly because new scale considers atherosclerosis burden. Picture 1. Survival without upper gastrointestinal bleeding (A) and thrombotic events (B) according to the REGATTA score (Kaplan-Meier curves).



**Conclusions:** REGATTA score represents simple, non-invasive and highly accurate tool for detecting high risk of UGIB in patients with stable CAD.