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TCT-113

Predicting the Risk of In-Hospital Major Adverse Cardiovascular Events in Chronic Total Occlusion Percutaneous Coronary Intervention: The PROGRESS-CTO MACE Score



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BACKGROUND Estimating the risk of complications in chronic total occlusion (CTO) percutaneous coronary intervention (PCI) facilitates risk-benefit assessment and procedural planning.

METHODS We analyzed the Prospective Global Registry for the Study of Chronic Total Occlusion Intervention (PROGRESS-CTO; NCT02061436) and created a risk score for in-hospital major adverse cardiovascular events (MACE). Logistic regression prediction modeling was used to identify independently associated variables and the model was internally validated with bootstrapping.

RESULTS Of the 10,480 CTO PCI cases performed between 2012-2022 at 40 US and non-US centers, in-hospital MACE occurred in 215 (2.05%). The final prediction model identified 5 independent predictors of MACE: age ≥65 years, odds ratio (OR) 1.57, 95% confidence interval (CI) 1.10-2.26, 1 point; female sex, OR 2.46, 95% CI 1.72-3.53, 2 points; moderate to severe calcification, OR 1.71, 95% CI 1.20-2.44, 1 point; Blunt stump, OR 1.63, 95% CI 1.14-2.33, 1 point; and Antegrade dissection re-entry, OR 2.21, 95% CI 1.32-3.72, 1 point; and retrograde strategy, OR 2.86, 95% CI 1.94-4.22, 2 points; with a bootstrap corrected c-statistic of 0.72, 95% CI 0.68-0.76. The calculated risk percentages for MACE based on the PROGRESS-CTO MACE score ranged from 0.4% to 9.4% for MACE; 42% of patients had PROGRESS-CTO MACE score of 2-3, corresponding to a MACE risk of 1.1%-2.0% (Figure).

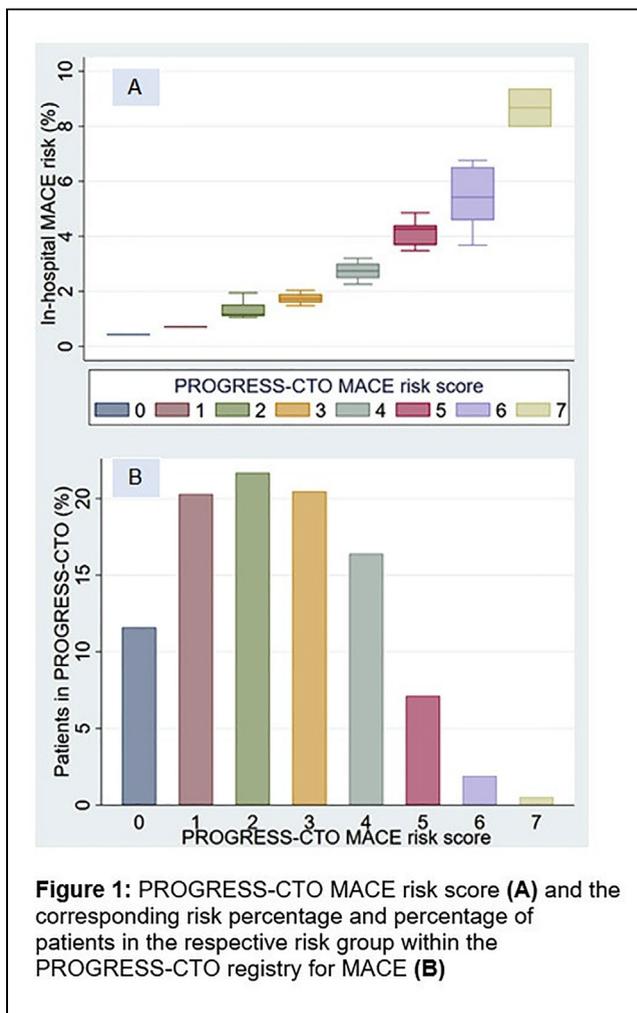


Figure 1: PROGRESS-CTO MACE risk score (A) and the corresponding risk percentage and percentage of patients in the respective risk group within the PROGRESS-CTO registry for MACE (B)

CONCLUSION The PROGRESS-CTO in-hospital MACE risk score can facilitate risk-benefit assessment and procedural planning in patients undergoing CTO PCI.

CATEGORIES CORONARY: Complex and Higher Risk Procedures for Indicated Patients (CHIP)

CTO STUDIES II

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TCT-114

Abstract Withdrawn

TCT-115

The Presence of a Chronic Total Coronary Occlusion Is Associated With Appropriate ICD Shocks and Mortality in the Nationwide Prospective Dutch Outcome in ICD Therapy (DO-IT) Registry



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