

# Long term use of blood thinners shows promise in reducing complications for patients following a heart attack

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A new study examining the criteria proposed by the European Society of Cardiology (ESC) to prescribe long-term treatment with more than one

blood thinner after percutaneous coronary intervention was presented today as late-breaking clinical research at the Society for Cardiovascular Angiography & Interventions (SCAI) 2023 Scientific Sessions.

The study confirmed that patients presenting the characteristics proposed in the ESC guidelines are more likely to experience complications due to [blood](#) clotting in the coronary arteries. These patients may therefore benefit from a long-term treatment with more than one blood thinner.

Risk assessment before [percutaneous coronary intervention](#) (PCI) provides valuable information for patient management and post-intervention treatment.

The latest ESC guidelines for the management of patients with Non-ST-segment elevation [acute coronary syndrome](#), recommend patients with specific high-risk characteristics like a history of myocardial infarction, diabetes, [chronic kidney disease](#) or an advanced form of coronary artery disease, might benefit from longer-term treatment with blood thinners after PCI following a heart attack. The use of blood thinners after PCI can help prevent complications like blood clots from forming inside a patient's stent.

Patients with acute or chronic coronary syndrome undergoing PCI at a large tertiary-care center from 2012 to 2019 were included in the analysis. Patients were grouped into low, medium, and high thrombotic risk based on the ESC criteria. The primary endpoint was major adverse cardiovascular events (MACE) at one year, a composite of all-cause death, myocardial infarction (MI) and stroke. Secondary endpoints included the individual components of the primary endpoint and major bleeding.

Among 11,787, patients included in the study, 2,641 (22.4%) were at low-risk, 5,286 (44.8%) at moderate risk, and 3,860 (32.7%) at high-

risk. The one-year risk of MACE was increased in patients at moderate (HR 2.53, 95% CI 1.78-3.58) and high-risk (HR 3.39, 95% CI 2.39-4.80) as compared to those at low-risk, because of higher rates of all-cause death and MI in the two former groups. Major bleeding was significantly higher in high-risk patients (HR 1.59, 95% CI 1.25—2.02), but similar between the moderate and low-risk group.

"We see an inherent need to provide individualized cardiology care using precision medicine principles adjusted on patient unique risk factors," said George Dangas, M.D., Ph.D., MACC, MSCAI, Professor of Cardiology and Vascular Surgery at the Icahn School of Medicine at Mount Sinai, New York, lead author of the study and SCAI President-Elect.

"With this study, we are working to find the best way to provide the right blood thinner therapy to the right patient. Evaluating these criteria offers an important step toward the creation of a more personalized tool to identify high-risk [patients](#) who would benefit from a long-term treatment with more than one blood thinner."

**More information:** Conference: [scai.org/scai-2023-scientific-sessions](https://scai.org/scai-2023-scientific-sessions)

Provided by Society for Cardiovascular Angiography and Interventions

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