

TICO

Randomized Evaluation of Ticagrelor Monotherapy After 3-month Dual-antiplatelet Therapy (DAPT) in patients with Acute Coronary Syndrome (ACS)

Conclusions

- In the TICO trial, among ACS patients treated with Orsiro[®], ticagrelor monotherapy after 3-m DAPT showed significantly lower rates of Net Adverse Clinical Events (NACE) compared to 12-m conventional DAPT therapy (3.9% vs. 5.9%, HR 0.66 [95% CI 0.48-0.92], $p = 0.01$).
- The difference in the primary endpoint was mainly driven by significantly lower rates of major bleeding (1.7% vs. 3.0%, $p = 0.02$) favoring the ticagrelor monotherapy arm.
- These findings suggest that ticagrelor monotherapy after 3-m DAPT could be an optimal strategy, balancing ischemic and bleeding risks for ACS patients treated with the ultrathin strut Orsiro DES.

Study design

Prospective, multicentre, randomized (1:1), Korean trial

Endpoints

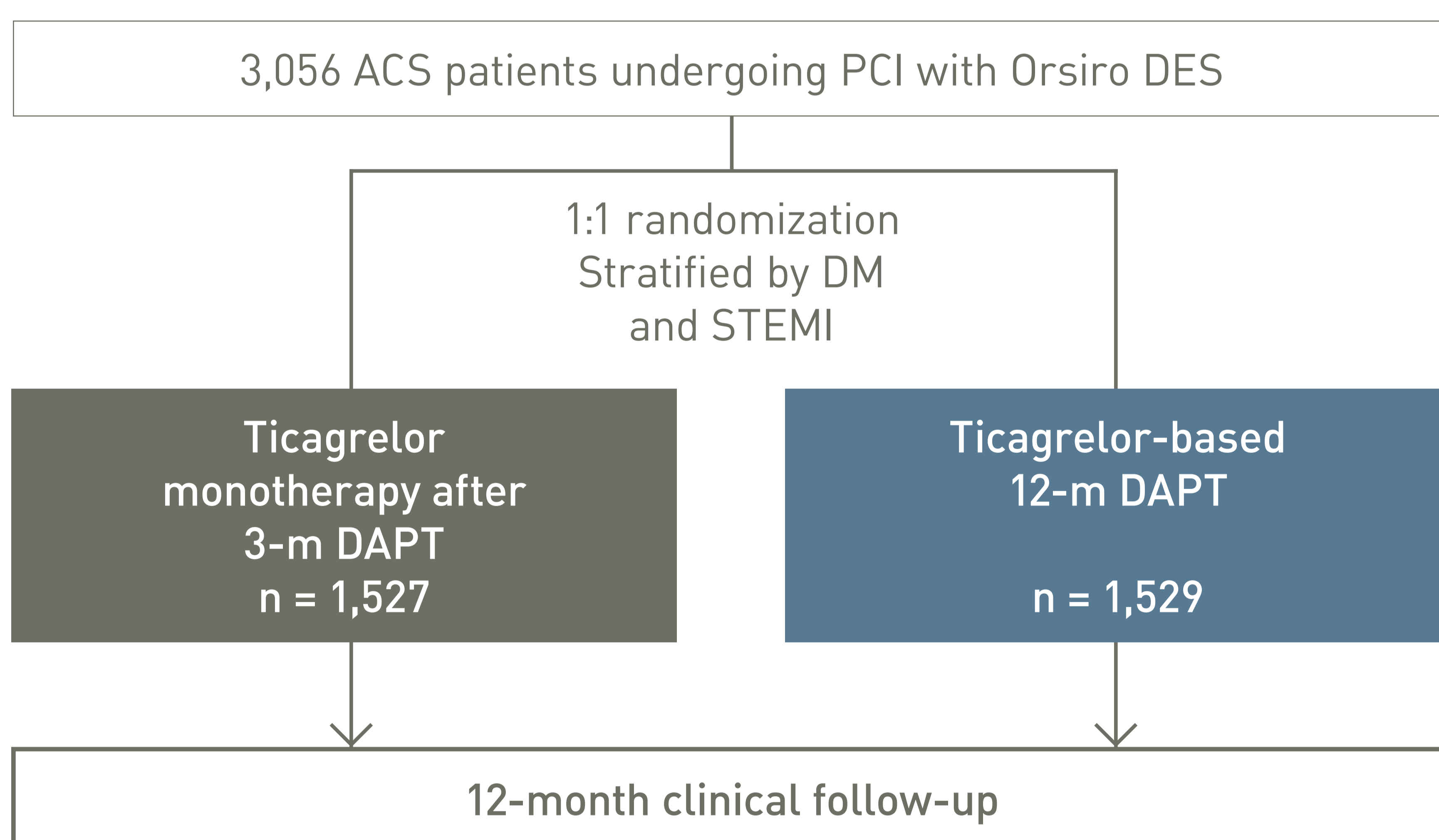
Primary Endpoints

Net Adverse Clinical Events (NACE) at 12 months follow-up defined as the composite of:

- Major Bleeding
- Major Adverse Cardiac and Cerebrovascular Events (MACCE)

Secondary Endpoints

- TIMI Major Bleeding
- MACCE – composite of all-cause death, Myocardial Infarction, Stent Thrombosis, Stroke or Target Vessel Revascularization
- Individual components of MACCE



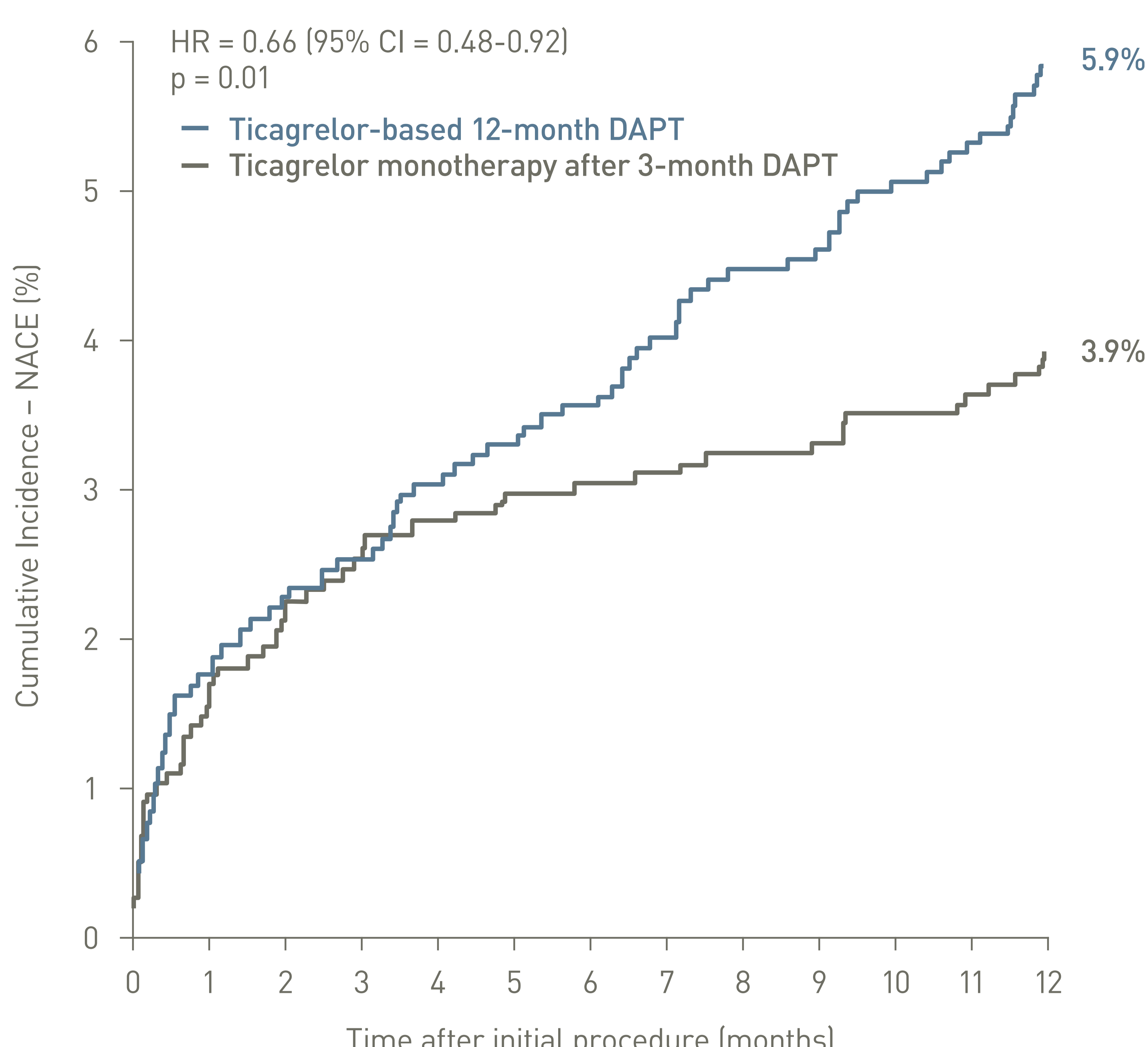
Baseline Characteristics ^{2,3}	Ticagrelor monotherapy after 3-m DAPT n = 1,527	Ticagrelor based 12-m DAPT n = 1,529
Age (years)	61 ± 11	61 ± 11
Male gender	79%	80%
Diabetes mellitus	27%	27%
Hypertension	50%	51%
Previous MI	4%	3%
Previous PCI	9%	8%
Clinical Presentation		
Unstable angina	29%	32%
NSTEMI	35%	32%
STEMI	36%	36%
2 or 3 vessel disease	55%	56%

Baseline characteristics were similar between the two groups.

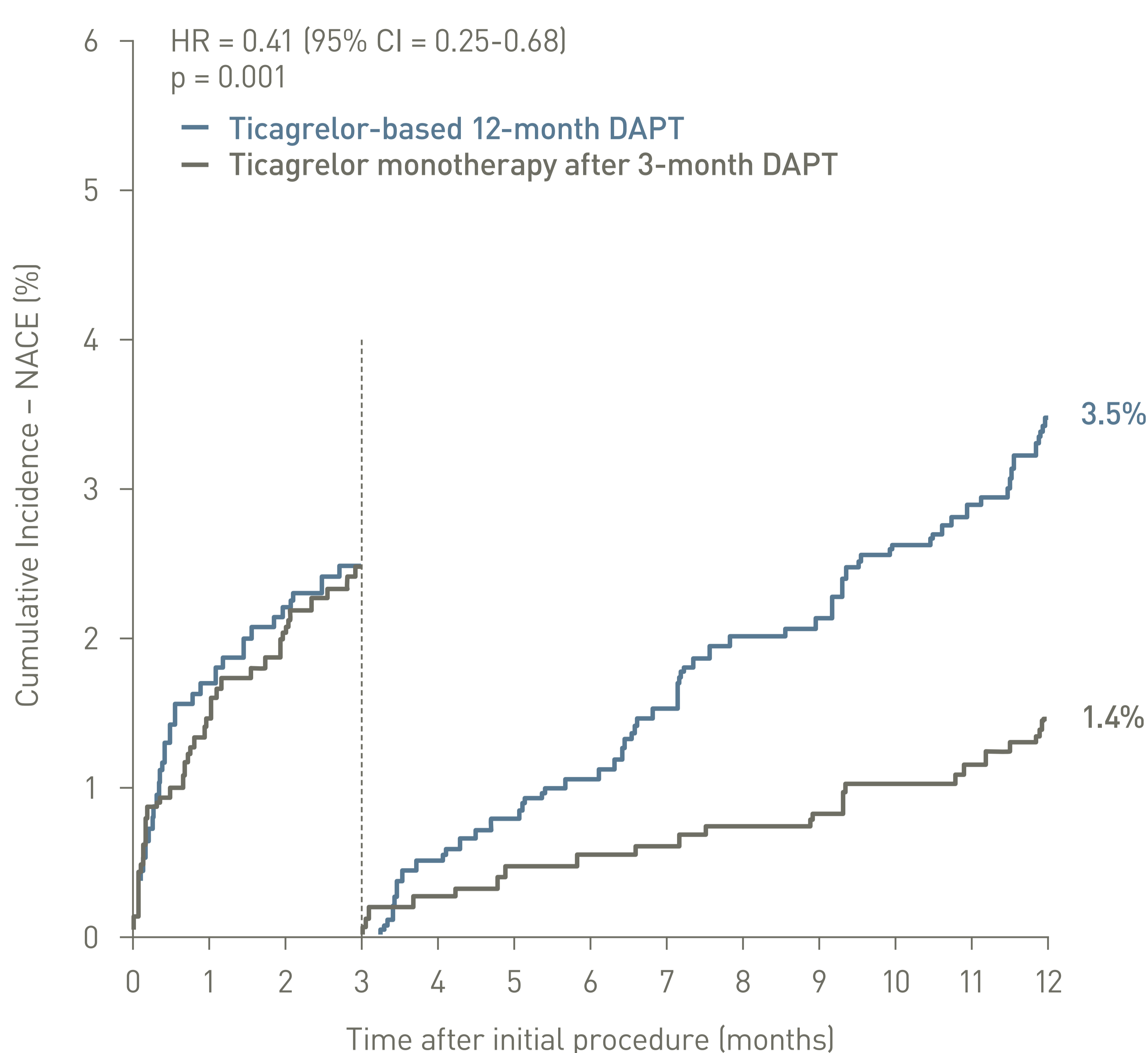
Diabetes Mellitus (DM)

ST-elevation myocardial infarction (STEMI)

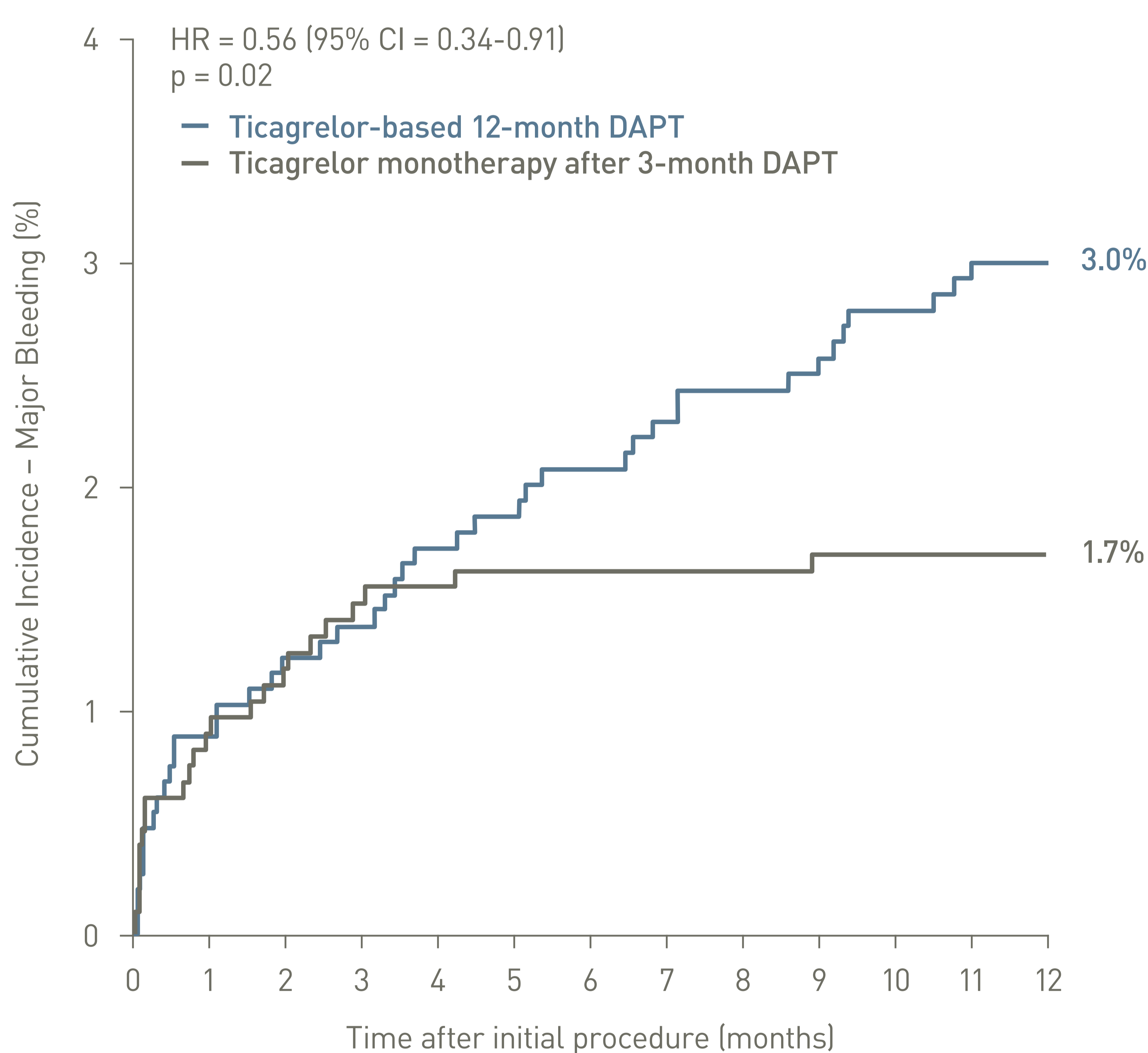
Primary Endpoint - NACE at 12 Months¹



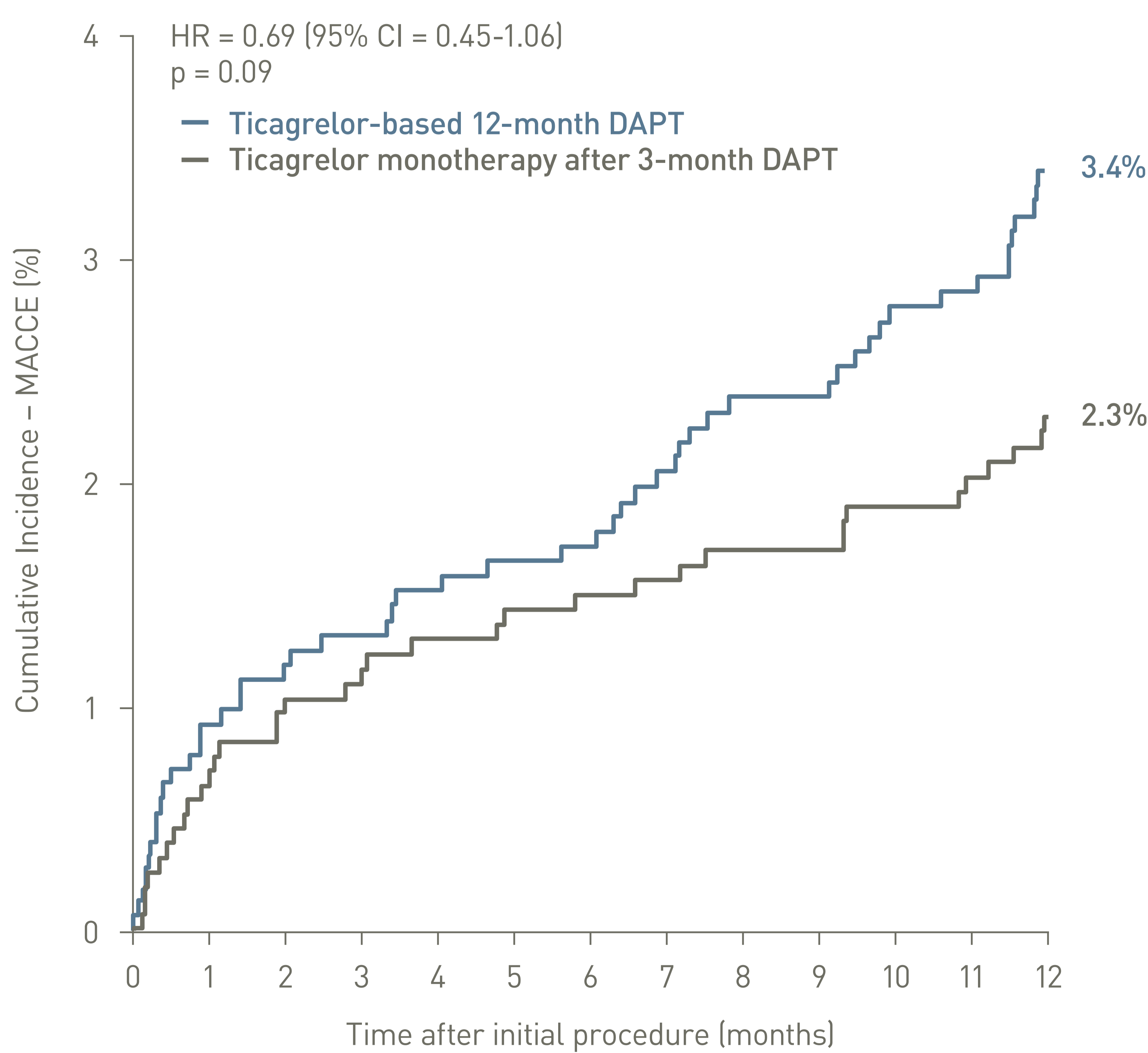
3-Month NACE Landmark Analysis¹



Major Bleeding at 12 Months¹



MACCE at 12 Months¹



Principal investigator

Dr. Yang Soo Jang, Yonsei University College of Medicine, Seoul, South Korea

1. Kim Byeong-Keuk et al. Effect of Ticagrelor Monotherapy vs. Ticagrelor with Aspirin on Major Bleeding and Cardiovascular Events in Patients with Acute Coronary Syndrome. The TICO Randomized Clinical Trial. JAMA.2020;323(23):2407-2416.doi:10.1001/jama.2020.7580.

Clinical data conducted with Orsiro, Orsiro Mission's predecessor device can be used to illustrate Orsiro Mission clinical outcomes. Orsiro and Orsiro Mission are trademarks or registered trademarks of the BIOTRONIK Group of Companies.

TICO

A Randomized trial of Ticagrelor Monotherapy vs. Ticagrelor with Aspirin in ST-Elevation Myocardial Infarction (STEMI)

Conclusions

- In the TICO trial, among STEMI patients treated with Orsiro DES, ticagrelor monotherapy after 3-month DAPT showed significantly lower rates of major bleeding compared to 12-month conventional DAPT therapy (0.9% vs. 2.9%, $p = 0.02$).
- Among patients with STEMI, there were no significant differences observed between treatment arms with respect to primary endpoint of Net Adverse Clinical Events (NACE) and secondary endpoint of Major Adverse Cardiac and Cerebrovascular Events (MACCE) at 12 months follow-up.

Study design

Subgroup analysis of a prospective, randomized, multi-center, Korean trial.

Endpoints

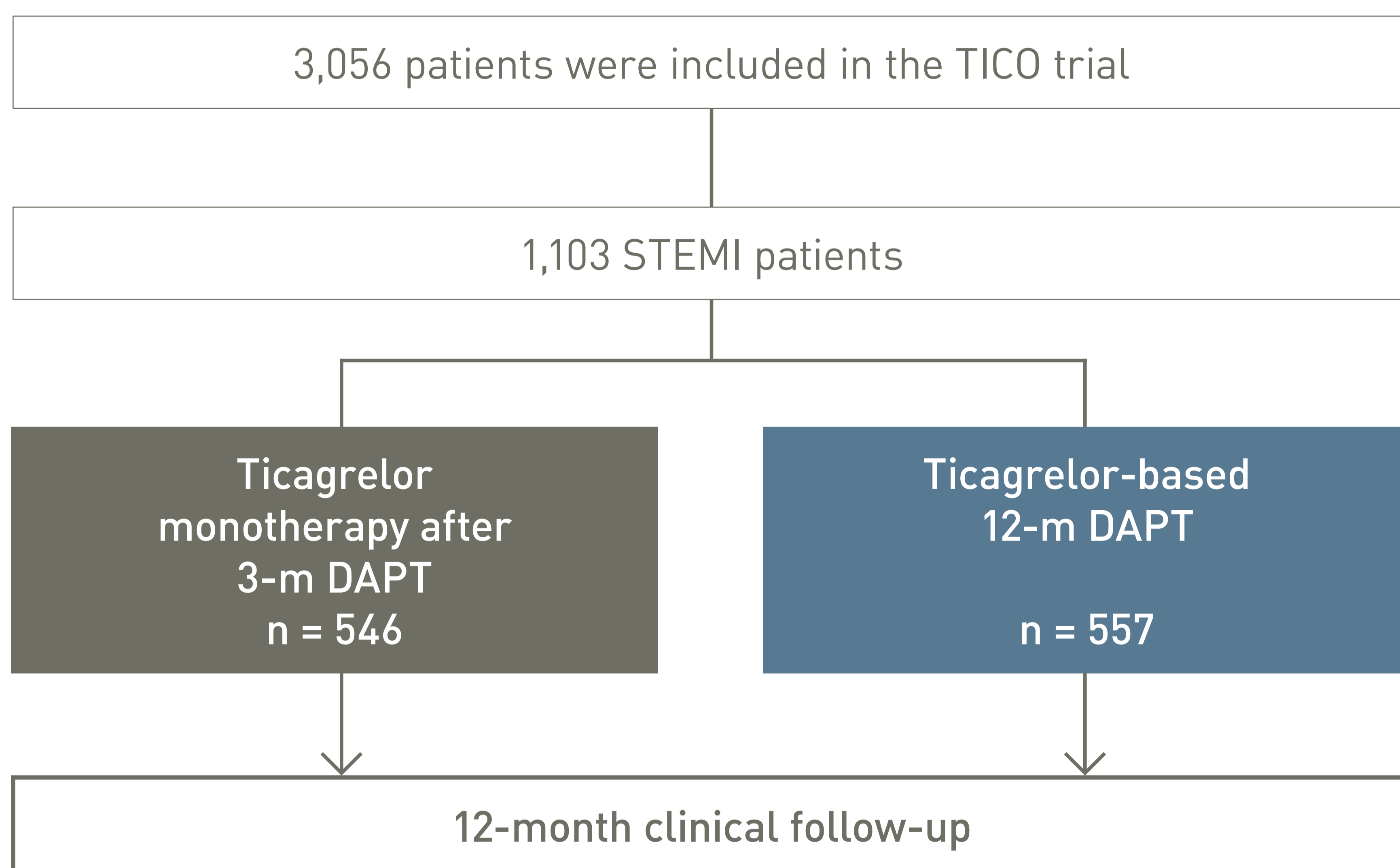
Primary Endpoints

Net Adverse Clinical Events (NACE) at 12 months follow-up defined as the composite of:

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- Individual components of MACCE

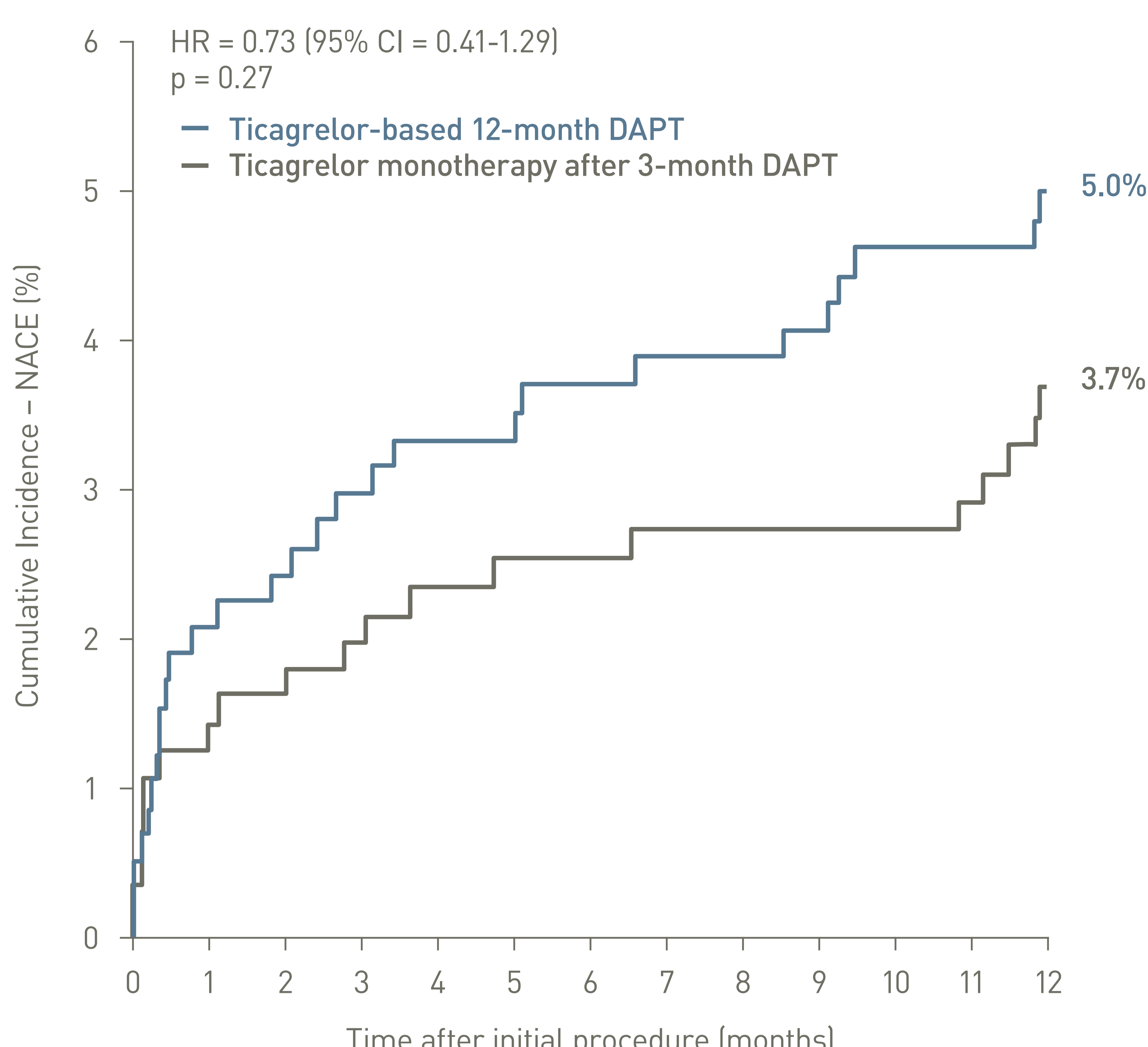


Baseline Characteristics ^{2,3}	Ticagrelor monotherapy after 3-m DAPT n = 546	Ticagrelor based 12-m DAPT n = 557
Age (years)	59 ± 11	59 ± 11
Female	16%	15%
Diabetes mellitus	21%	21%
Chronic Kidney Disease	22%	23%
Hypertension	46%	43%
Previous MI	4%	3%
Previous PCI	6%	4%
2 or 3 vessel disease	52%	52%
Total number of stents per patient*	1.3 ± 0.6	1.3 ± 0.5
Total stent length per patient, mm*	33 ± 18	32 ± 17

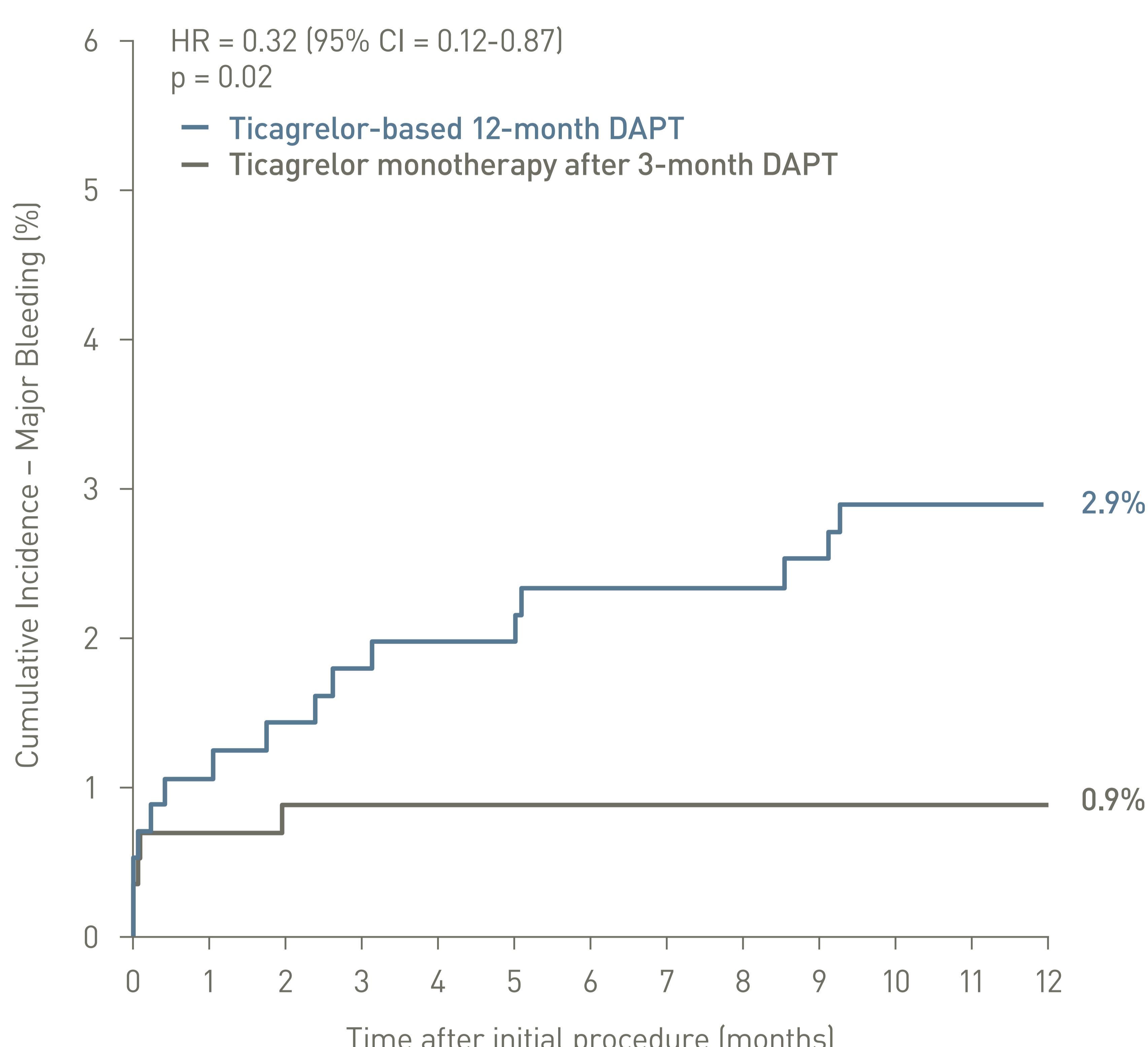
Baseline characteristics were similar between the two groups.

*Data shown as mean ± SD

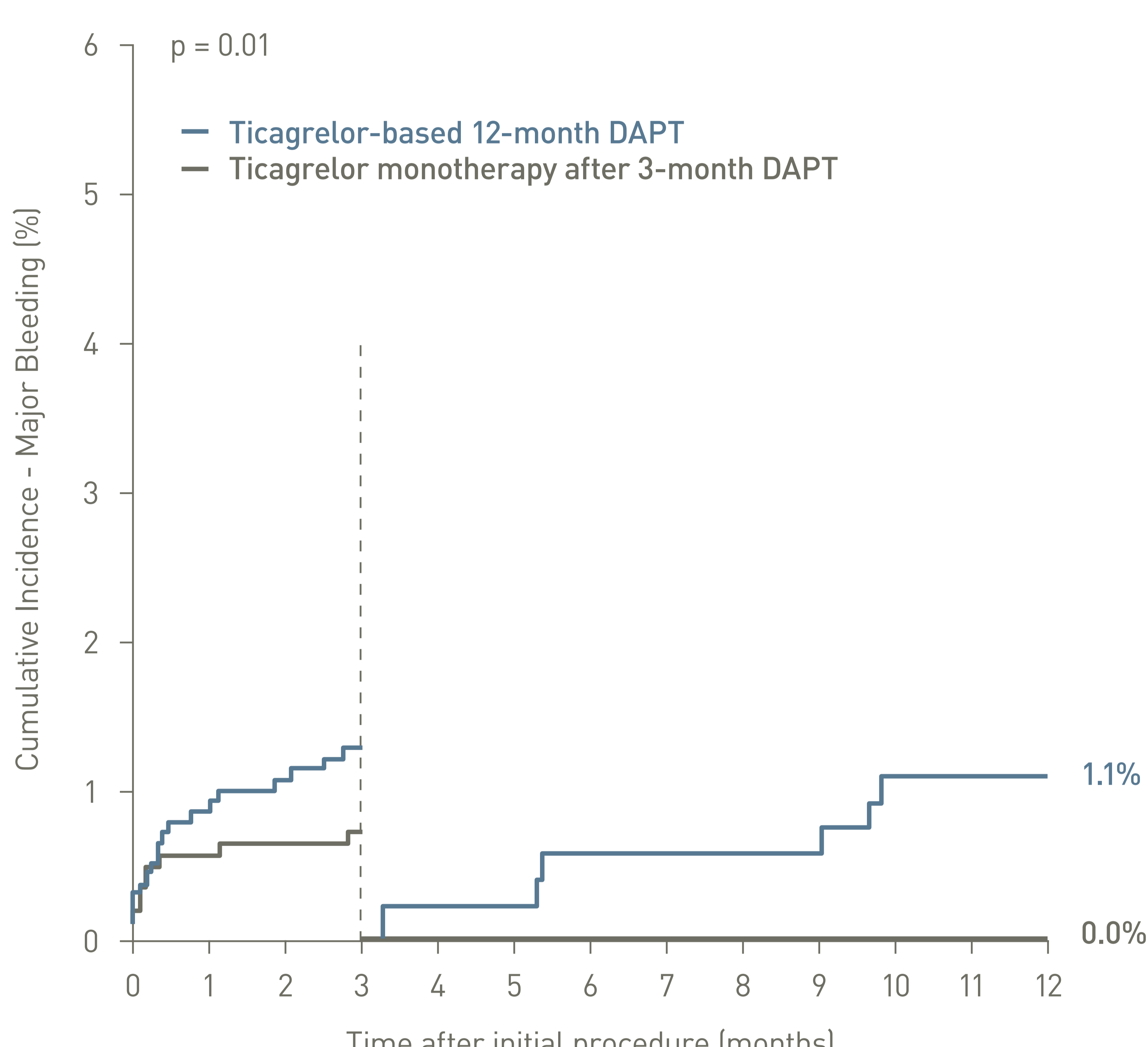
NACE at 12 months¹



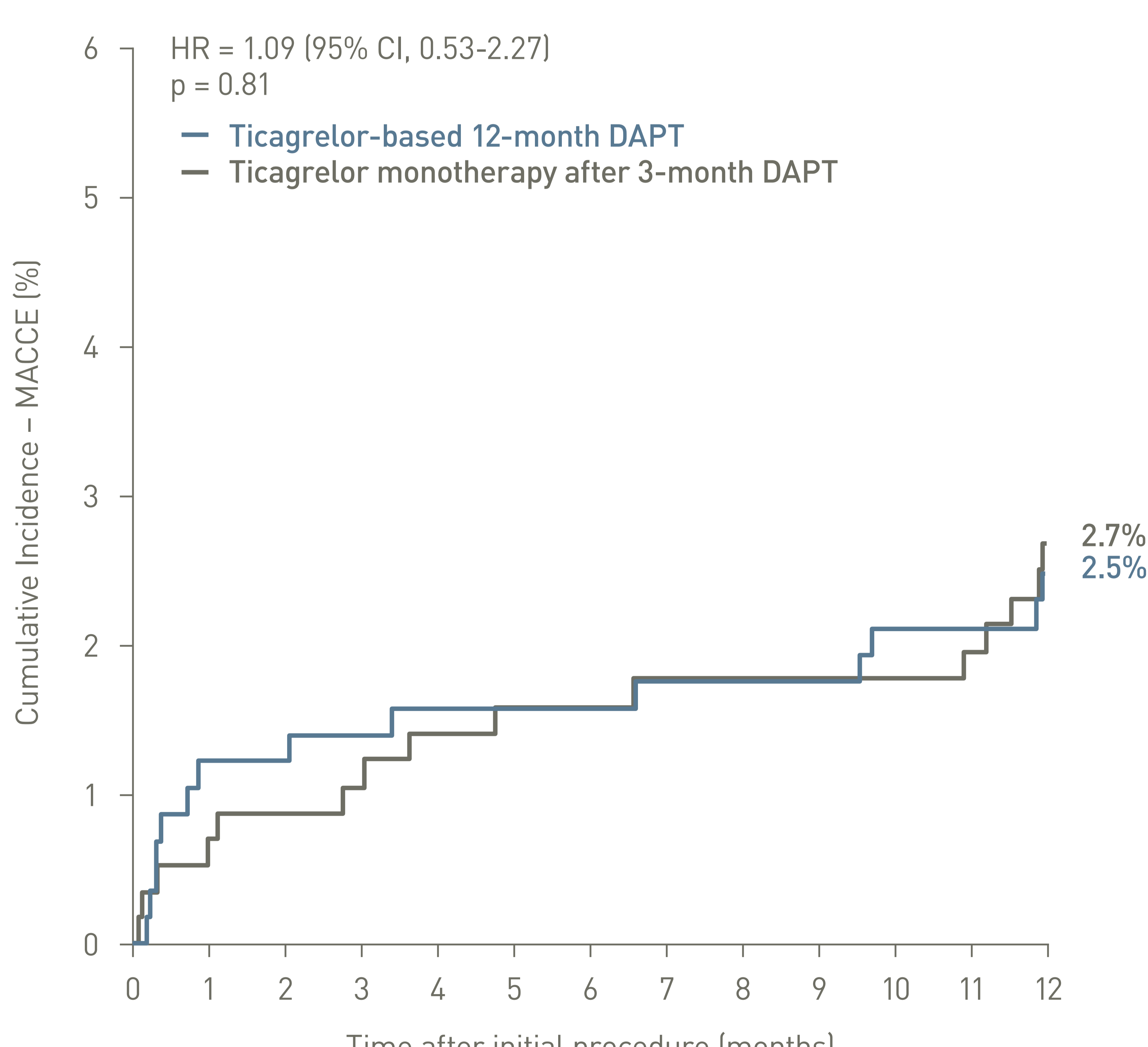
Major Bleeding at 12 months¹



3-month Landmark Analysis - Major Bleeding¹



MACCE at 12 Months¹



Principal investigator

Dr. Yang Soo Jang, Yonsei University College of Medicine, Seoul, South Korea

1. Kim Byeong-Keuk et al. TICO-STEMI: A Randomized Trial of Ticagrelor Monotherapy vs. Ticagrelor with Aspirin in STEMI. Presented at TCT connect 2020

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