

CARDIOVASCULAR INNOVATIONS DIGITAL 2020

Updates in Post PCI Pharmacology

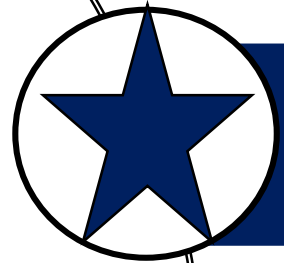
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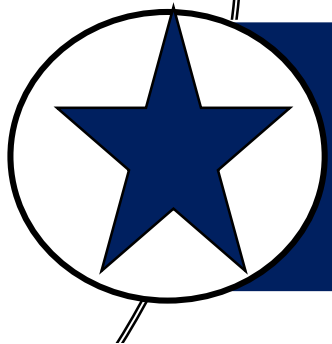
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Latest in Post-PCI Pharmacology



Latest in Genotype-Guided Antiplatelet Therapy

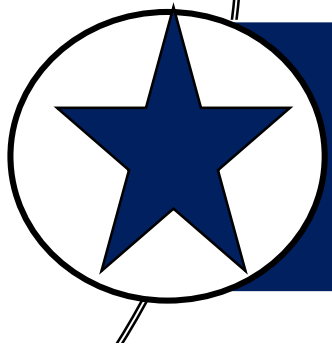


Latest in P2Y₁₂ Inhibitors Monotherapy

Latest in Post-PCI Pharmacology



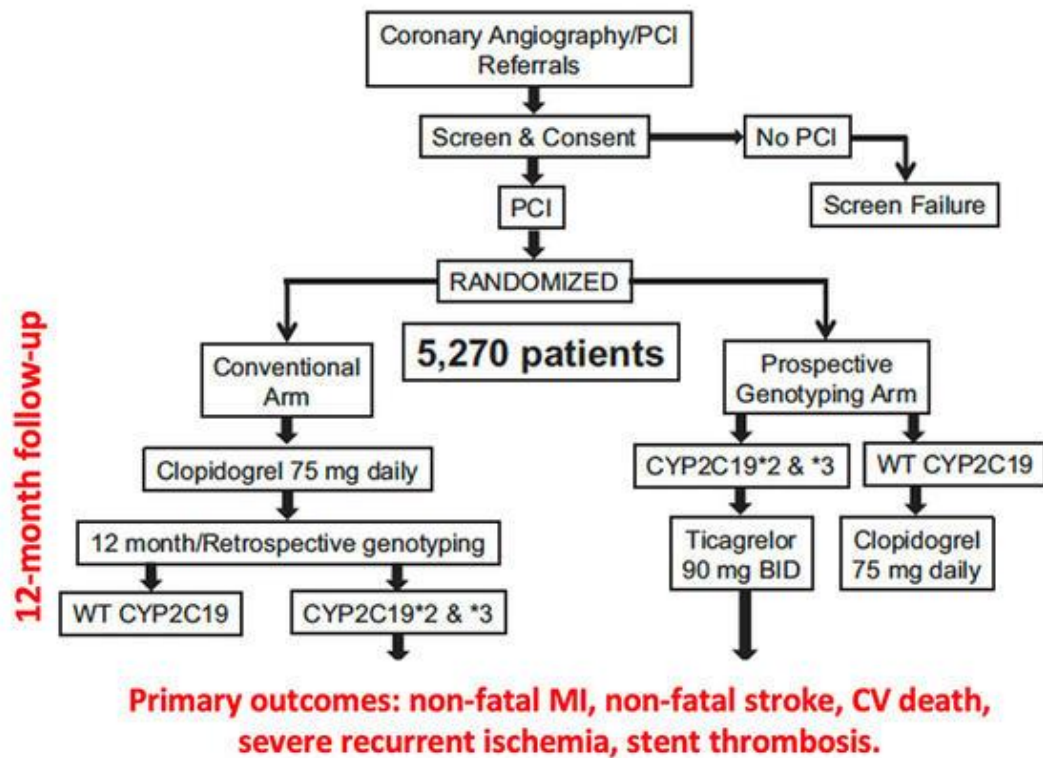
Latest in Genotype-Guided Antiplatelet Therapy



Latest in P2Y₁₂ Inhibitors Monotherapy

TAILOR-PCI: Genotype-guided Antiplatelet Therapy Post PCI

TAILOR PCI TRIAL DESIGN



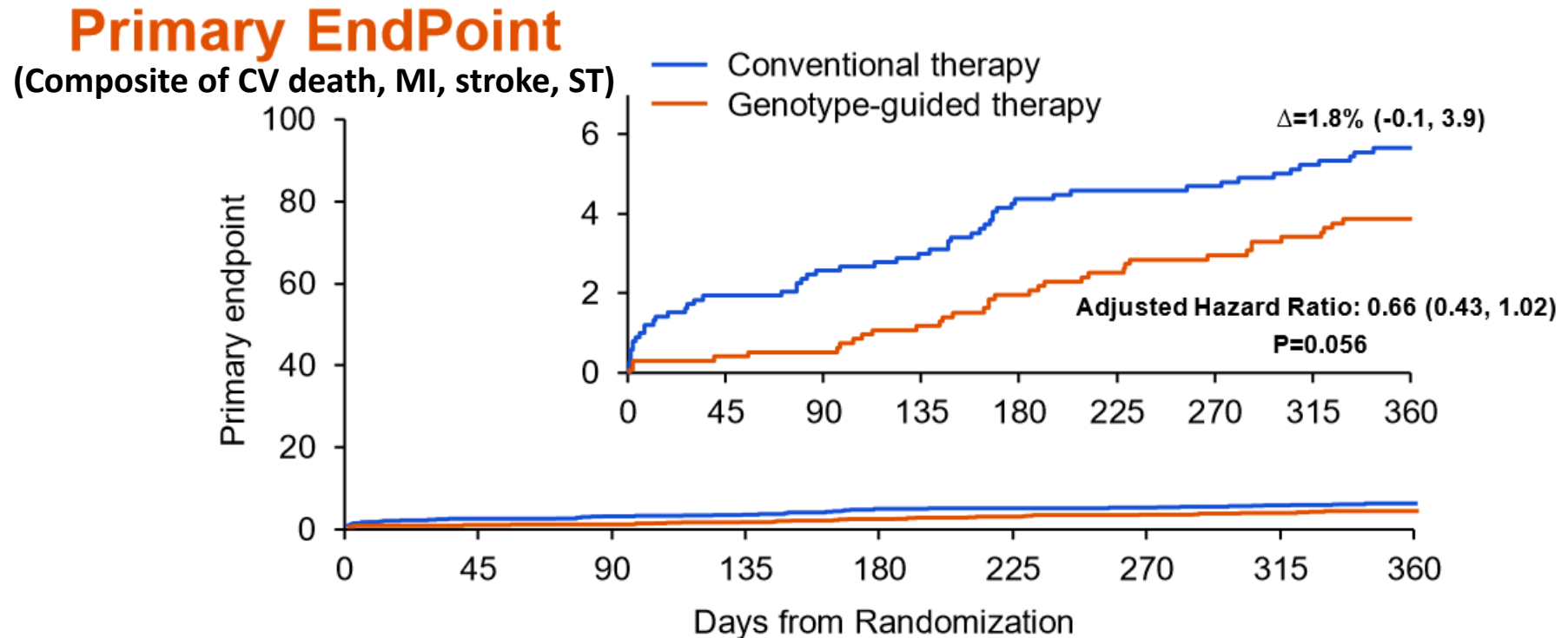
▪ Background:

Current clinical guidelines do not recommend testing patients for the CYP2C19 genetic abnormality before prescribing clopidogrel.

▪ Hypothesis:

Guiding the choice of post-PCI DAPT according to CYP2C19 loss-of-function (LOF) status will improve outcomes in CYP2C19 LOF carriers versus prescribing clopidogrel for all.

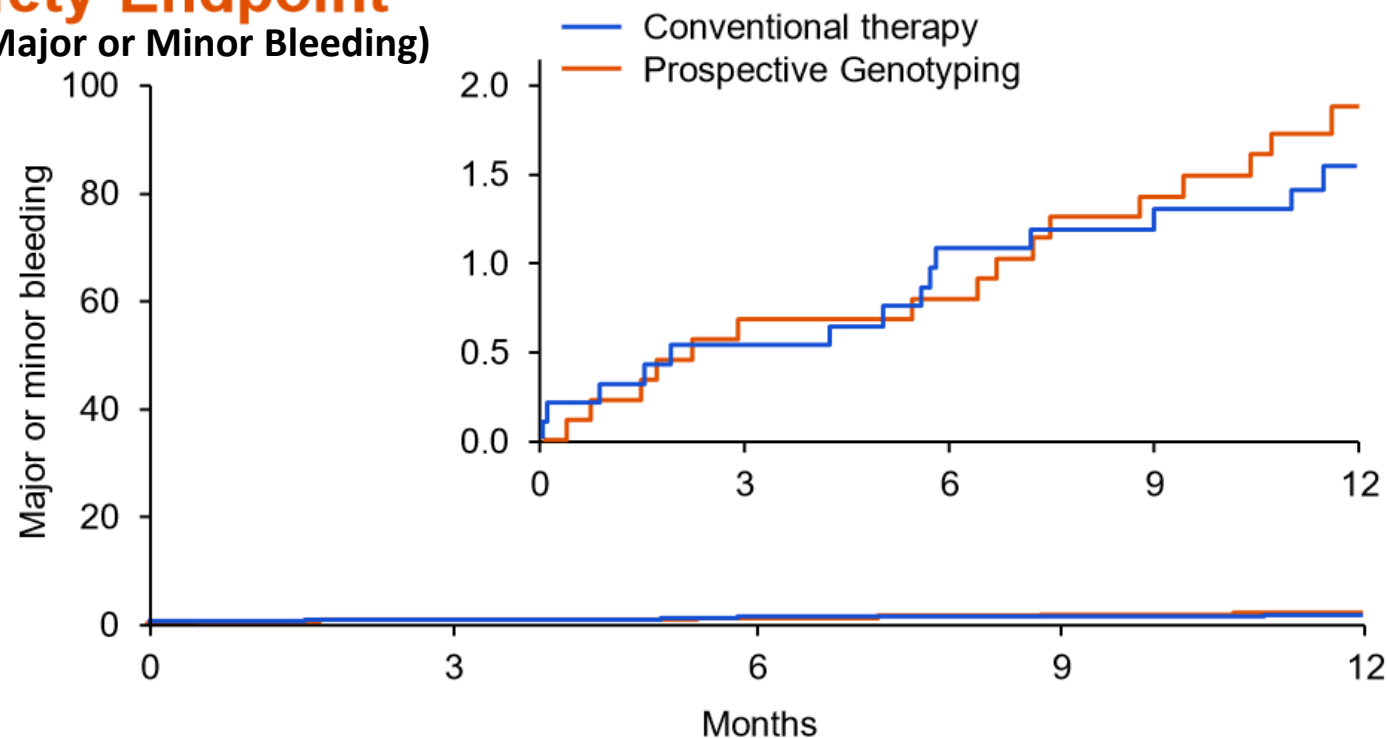
TAILOR-PCI: Genotype-guided Antiplatelet Therapy Post PCI



Conventional therapy	946	906	898	894	876	867	864	859	604
Genotype-guided therapy	903	875	870	863	854	838	833	824	556

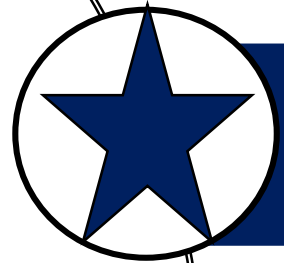
TAILOR-PCI: Genotype-guided Antiplatelet Therapy Post PCI

Safety Endpoint (TIMI Major or Minor Bleeding)

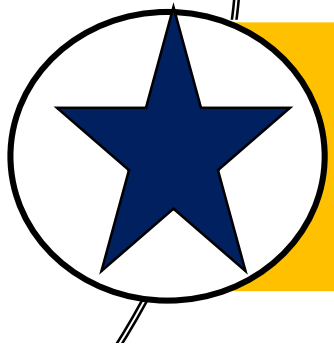


Bleeding rates were similar between the two strategies

Latest in Post-PCI Pharmacology



Latest in Genotype-Guided Antiplatelet Therapy

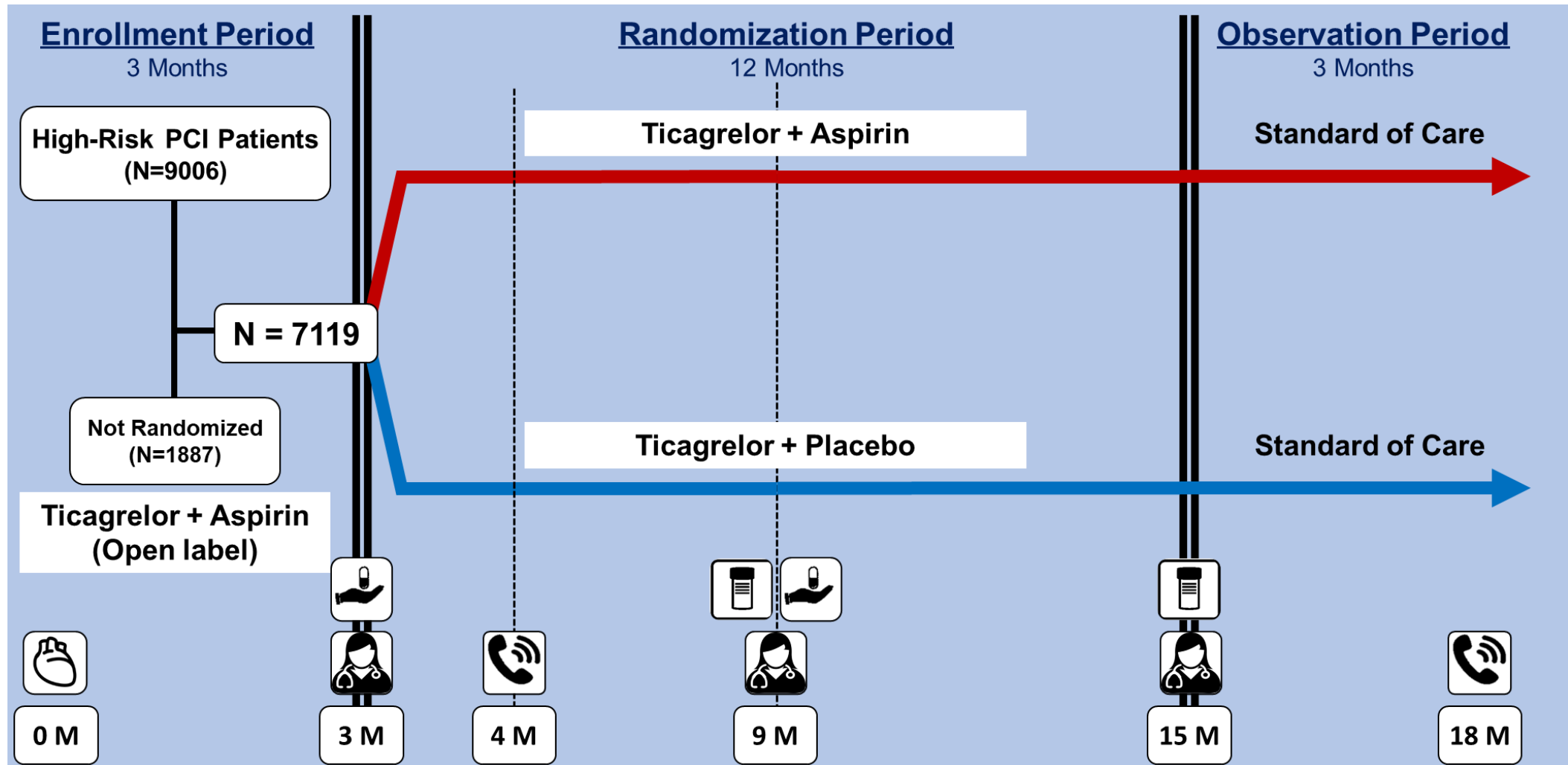


Latest in P2Y₁₂ Inhibitors Monotherapy

P2Y12 Monotherapy: A New Paradigm

- Many issues with Aspirin (Aspirin resistance, bleeding risk, gastrototoxicity, etc.).
- Aspirin might abolish or decrease the proposed anti-thrombotic effect of P2Y12 receptor blockers in vivo that is mediated by the amplification of anti-platelet effect of inhibitory prostaglandins such as PGI₂.
- In the presence of strong P2Y12 receptor blockade, aspirin provides little additional inhibition of platelet aggregation.

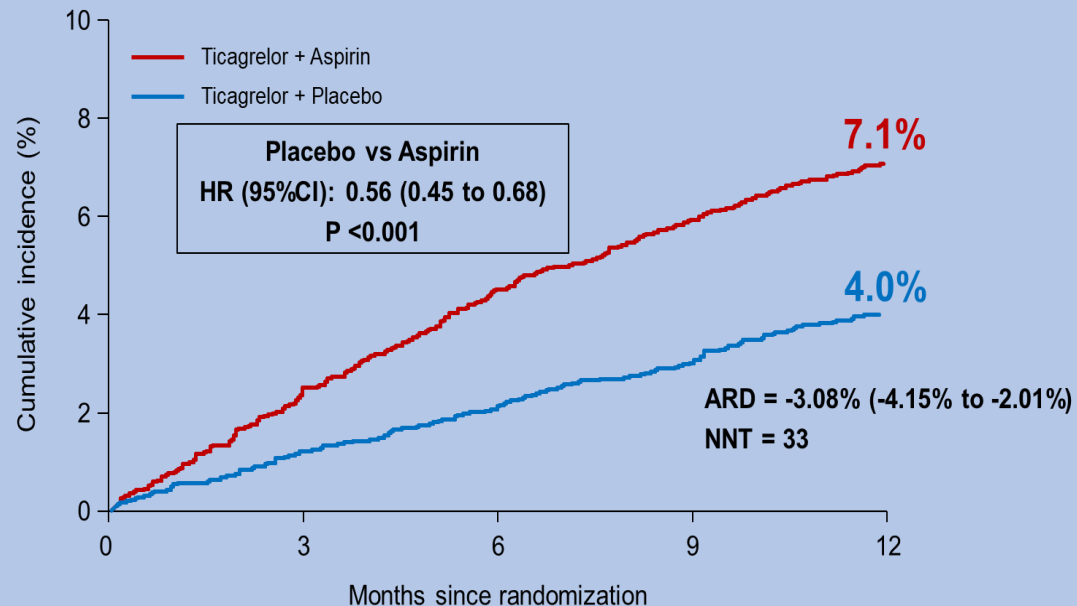
TWILIGHT Trial: Study Design



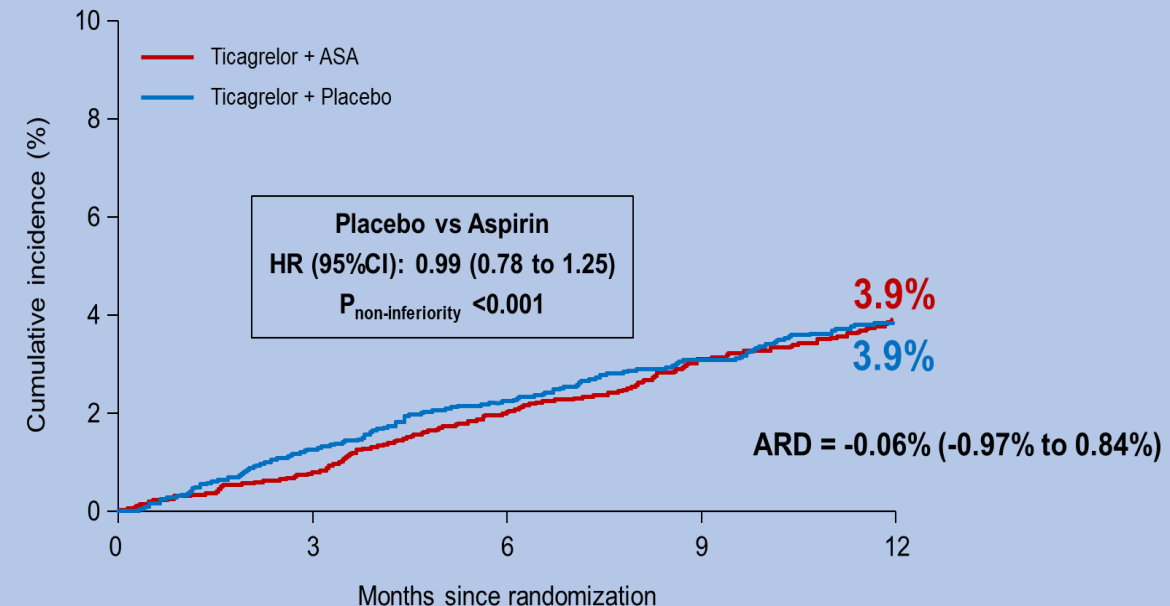
TWILIGHT Trial: Results

Primary Endpoint BARC 2, 3 or 5 bleeding (ITT)

Key Secondary Endpoint Death, MI or Stroke (PP)

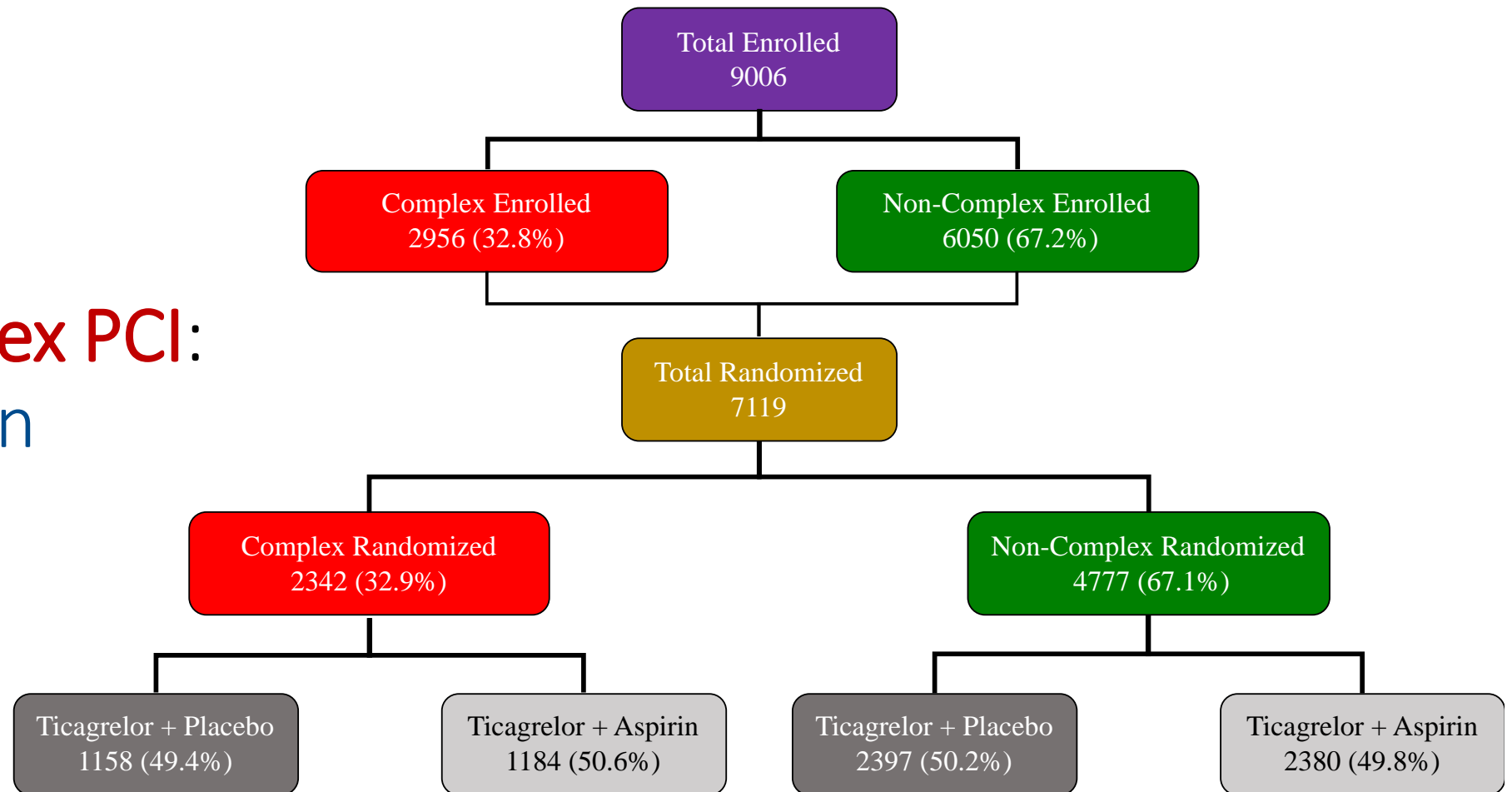


No. at risk					
Ticagrelor + Aspirin	3564	3454	3357	3277	3213
Ticagrelor + Placebo	3555	3474	3424	3366	3321



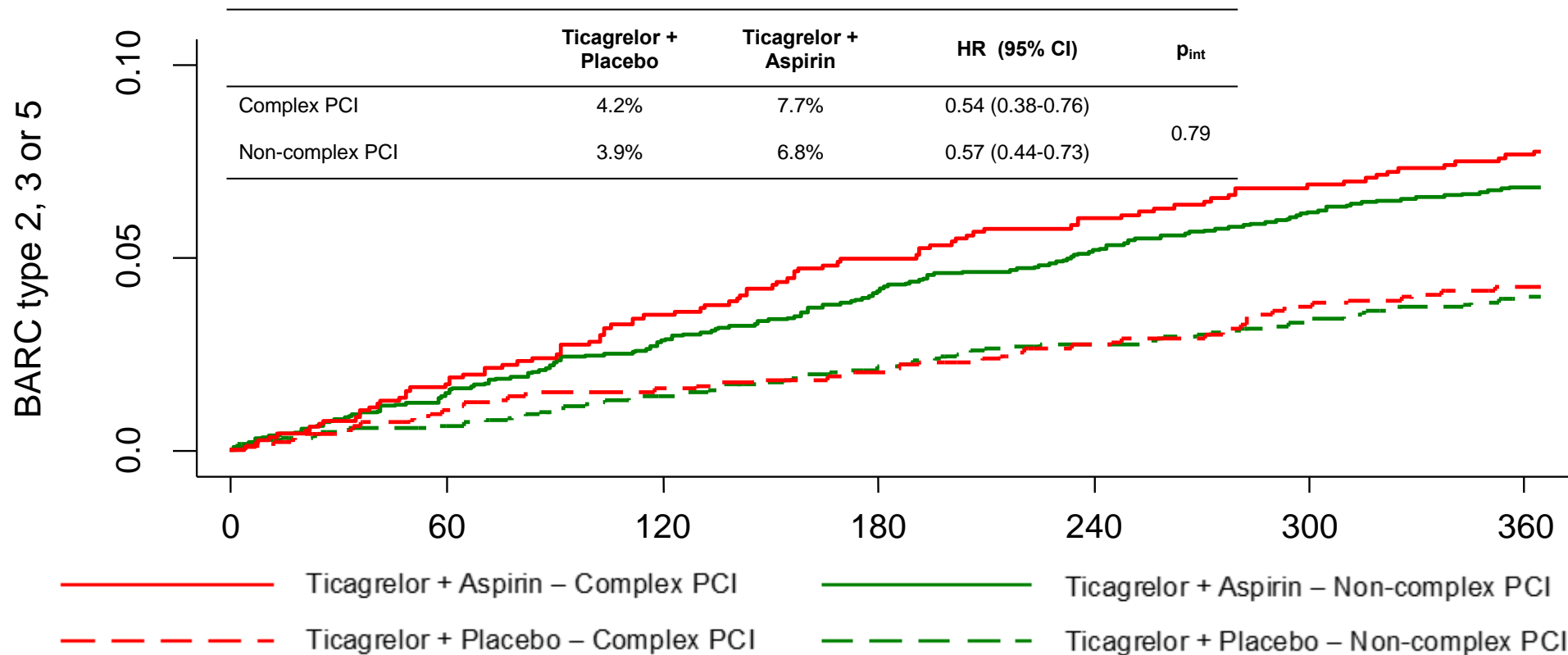
No. at risk					
Ticagrelor + Aspirin	3515	3466	3415	3361	3320
Ticagrelor + Placebo	3524	3457	3412	3365	3330

TWILIGHT-Complex PCI: Study Design



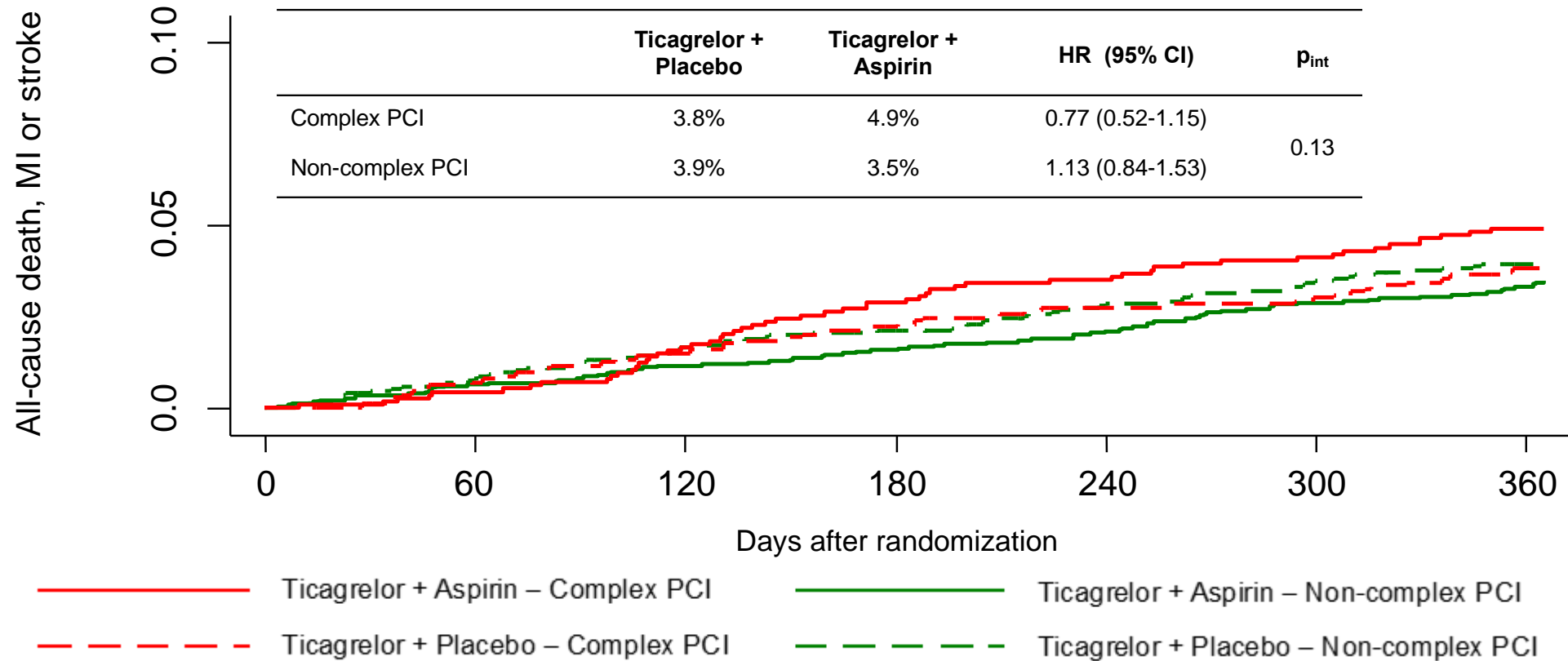
TWILIGHT-Complex PCI: BARC 2, 3, or 5 Bleeding

Intention-To-Treat Cohort

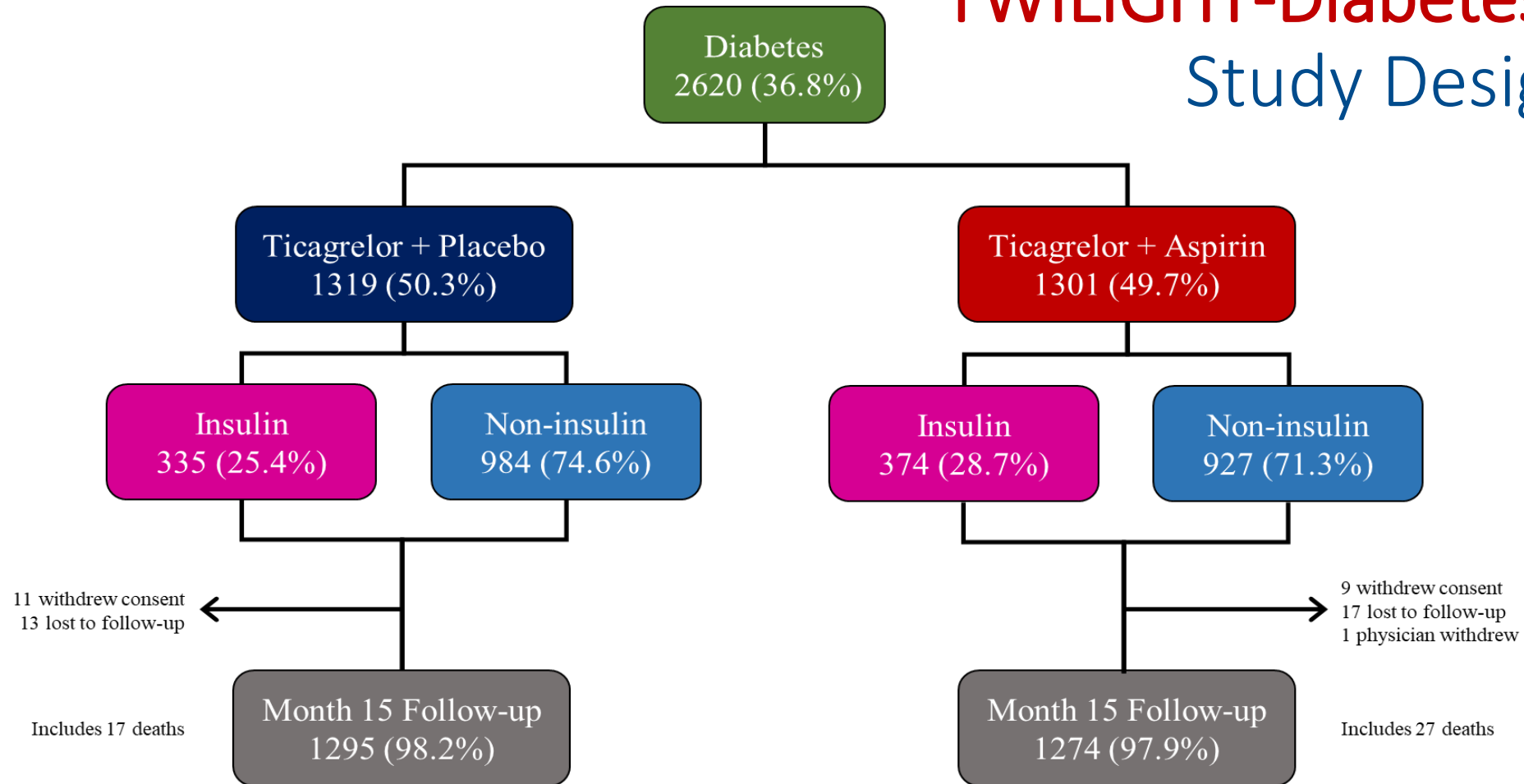


TWILIGHT-Complex PCI: Death, MI, or Stroke

Per-Protocol Cohort



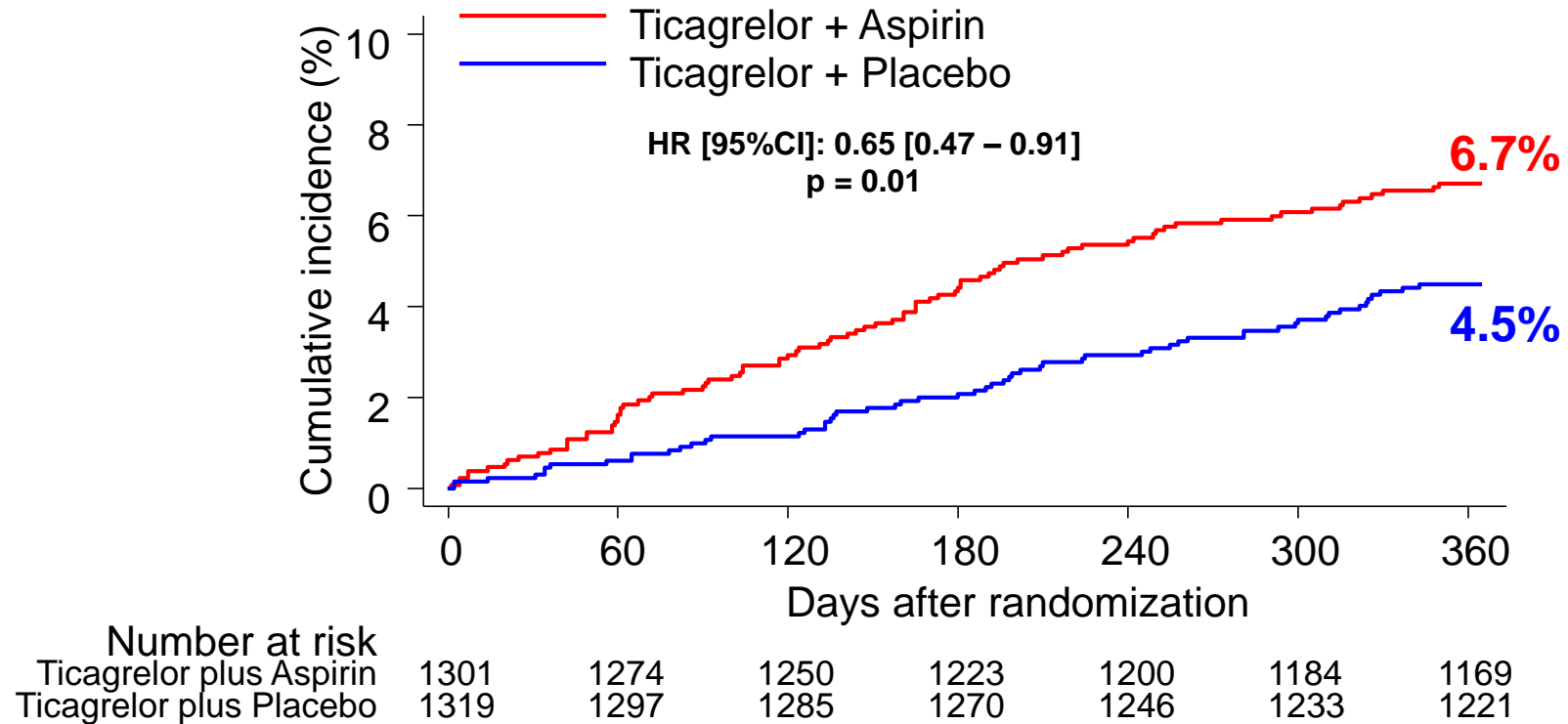
TWILIGHT-Diabetes Mellitus: Study Design



DM patients were more likely to be from North America and 84.7% nonwhite race, have more risk factors (CKD, HTN, obesity), prior revascularization and multivessel CAD compared to non-DM patients.

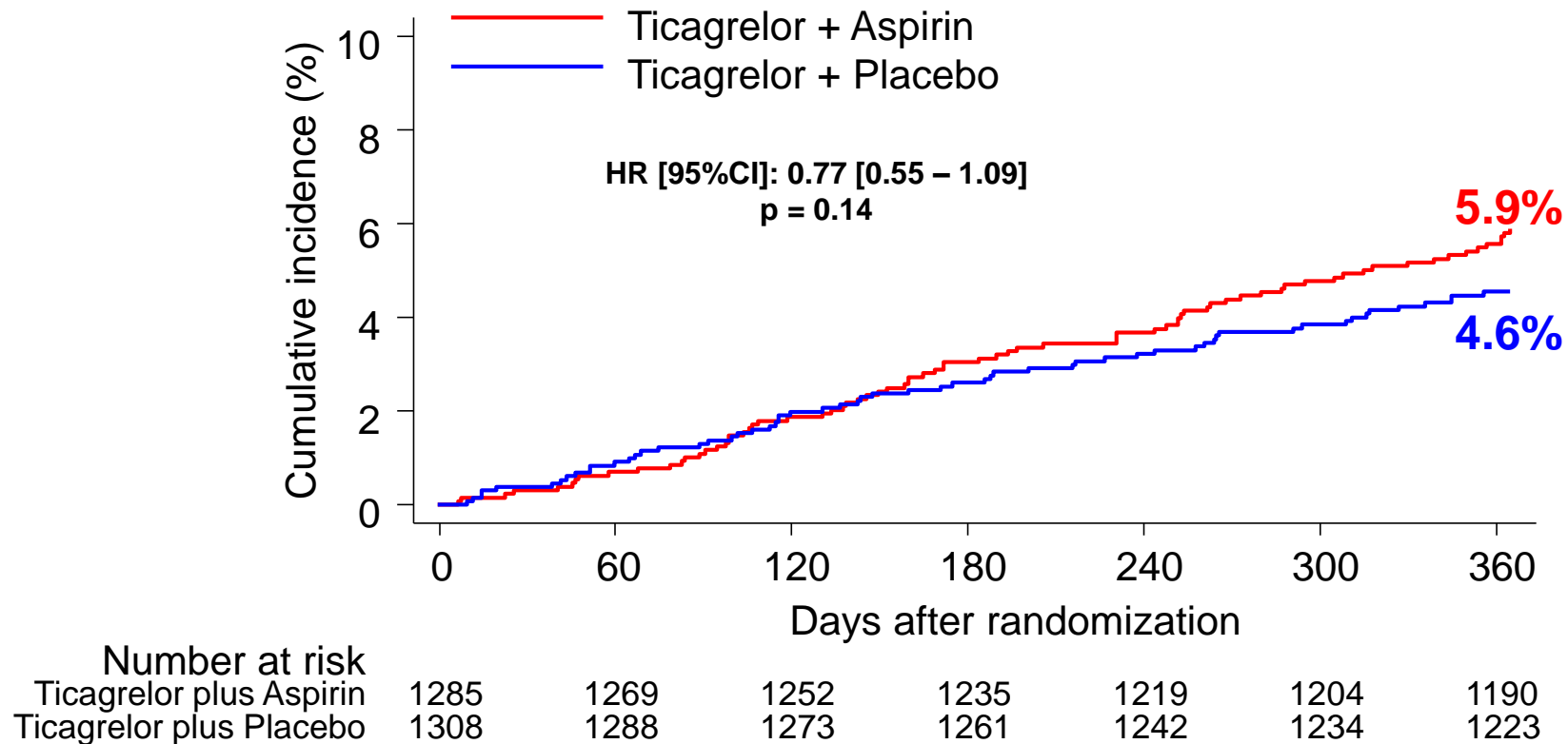
TWILIGHT-DM: BARC 2, 3, or 5 Bleeding

Intention-To-Treat Cohort



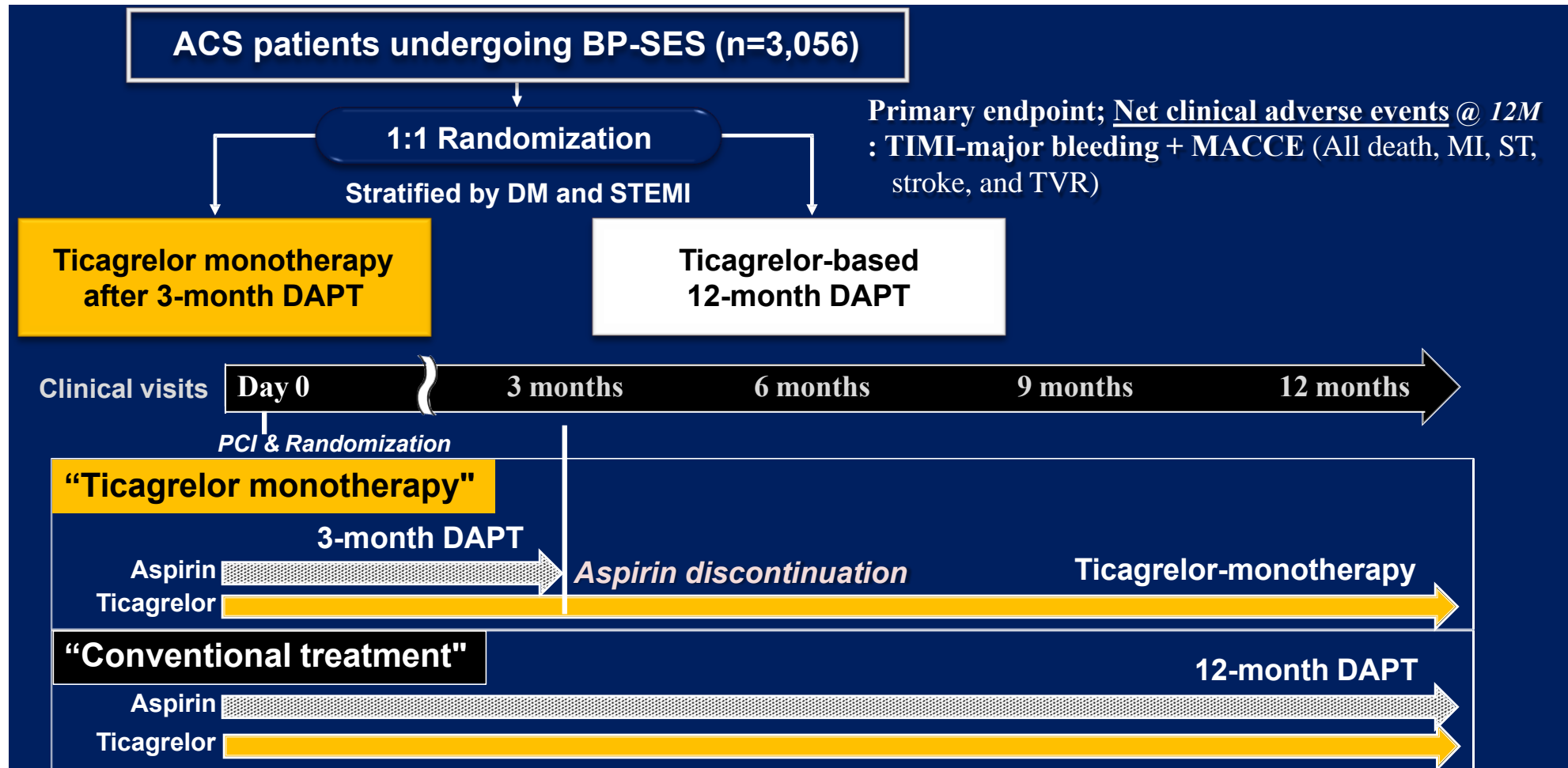
TWILIGHT-DM: Death, MI, or Stroke

Per-Protocol Cohort

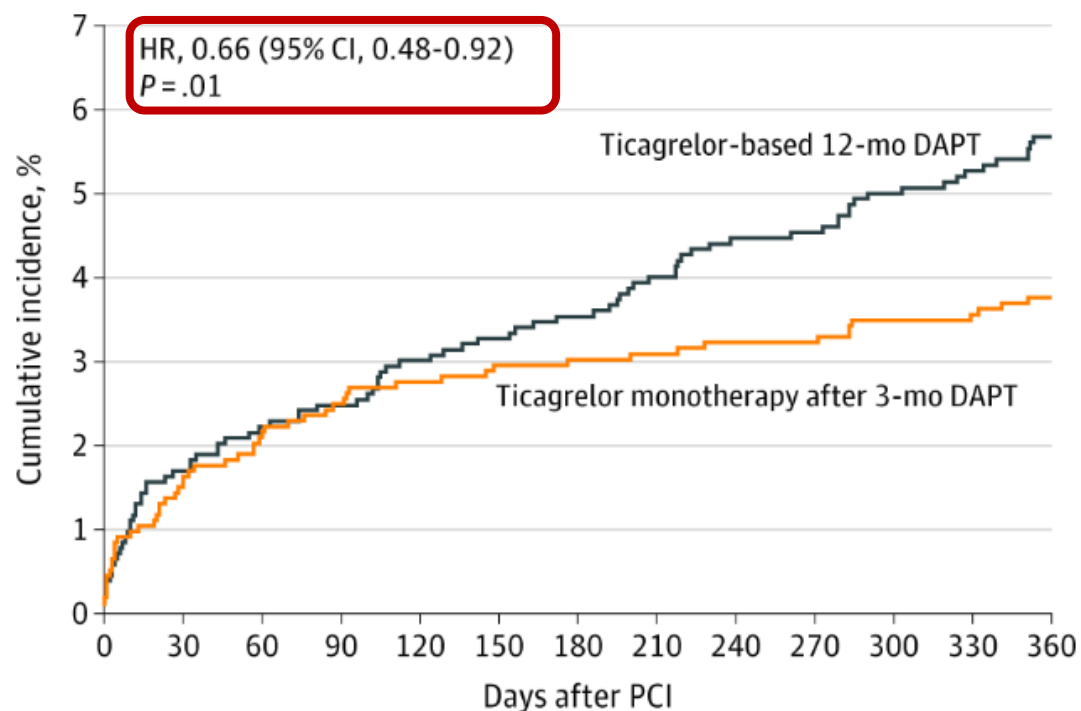


Ticagrelor Monotherapy Vs DAPT in Patients with ACS:

TICO Randomized Trial



A Primary outcome of the net adverse clinical event



TICO Trial: Results

Outcomes	No. of patients with event (% cumulative incidence) ^a		Absolute difference, % (95% CI)	Hazard ratio (95% CI)	P value ^b
	Ticagrelor monotherapy after 3-mo DAPT (n = 1527)	Ticagrelor-based 12-mo DAPT (n = 1529)			
Major adverse cardiac and cerebrovascular event ^d	35 (2.3)	51 (3.4)	-1.05 (-2.23 to 0.13)	0.69 (0.45 to 1.06)	.09
TIMI					
Major bleeding	25 (1.7)	45 (3.0)	-1.33 (-2.40 to -0.27)	0.56 (0.34 to 0.91)	.02
Major or minor bleeding	53 (3.6)	83 (5.5)	-2.06 (-3.52 to -0.60)	0.64 (0.45 to 0.90)	.01

*Mainly driven by a
reduction in bleeding!*

Among patients with ACS treated with DES, ticagrelor monotherapy after 3 months of DAPT, compared with ticagrelor-based 12-month DAPT, resulted in a modest but statistically significant reduction in a composite outcome of major bleeding and CV events at 1 year.

Take-Home Messages

- A genotype-guided strategy was NOT superior at reducing adverse cardiovascular events compared with standard therapy after PCI.
- P2Y12 Inhibitor Monotherapy after a short course of DAPT reduces risk of bleeding without compromising ischemic protection in different subsets of high-risk patients who have undergone PCI.

Thank You!