



Effects of evolocumab in patients with prior percutaneous coronary intervention: An analysis from the FOURIER trial

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on behalf of FOURIER Steering Committee and Investigators

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2- Academic Research Organization, Hospital Israelita Albert Einstein, São Paulo, Brazil;



An Academic Research Organization of
Brigham and Women's Hospital and Harvard Medical School



American Heart Association
Scientific Sessions



Declaration of Interest



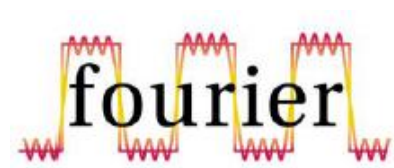
The FOURIER trial was sponsored by Amgen.

R.H.M.F. reports grants and personal fees from AstraZeneca and Bayer; personal fees from Servier; and research grants from Pfizer, EMS, Aché, Brazilian Ministry of Health, University Health Network, and Lemann Foundation Research Fellowship. A.F. reports a grant from The Lemann Foundation as Research Fellowships. K.O. reports a grant from JSPS Overseas Research Fellowships. T.A.Z. reports honoraria from AstraZeneca and Boehringer Ingelheim, and research grants from the German Research Foundation, and Austrian Science Funds. M.T. is a member of the TIMI Study Group, which has received institutional grant support through the Brigham and Women's Hospital from: Abbott, Amgen, Aralez, AstraZeneca, Bayer HealthCare Pharmaceuticals, Inc., Daiichi-Sankyo, Eisai, GlaxoSmithKline, Intarcia, Janssen, MedImmune, Merck, Novartis, Pfizer, Poxel, Quark Pharmaceuticals, Roche, Takeda, The Medicines Company, Zora Biosciences. J.K. is a member of the TIMI Study Group, which has received institutional grant support through the Brigham and Women's Hospital from: Abbott, Amgen, Aralez, AstraZeneca, Bayer HealthCare Pharmaceuticals, Inc., Daiichi-Sankyo, Eisai, GlaxoSmithKline, Intarcia, Janssen, MedImmune, Merck, Novartis, Pfizer, Poxel, Quark Pharmaceuticals, Roche, Takeda, The Medicines Company, Zora Biosciences.

S.A.M. is a member of the TIMI Study Group, which has received institutional grant support through the Brigham and Women's Hospital from: Abbott, Amgen, Aralez, AstraZeneca, Bayer HealthCare Pharmaceuticals, Inc., Daiichi-Sankyo, Eisai, GlaxoSmithKline, Intarcia, Janssen, MedImmune, Merck, Novartis, Pfizer, Poxel, Quark Pharmaceuticals, Roche, Takeda, The Medicines Company, Zora Biosciences. A.H. is an employee of Amgen. H.W. is an employee of Amgen.

A.C.K. reports grants and personal fees from Abbott, personal fees from Amgen, personal fees from AstraZeneca, grants and personal fees from Mylan, personal fees from Pfizer, grants from Sanofi, grants from Novartis, and personal fees from Bayer, outside the submitted work. T.P. Dr Pedersen reported grants and personal fees from Amgen during the conduct of the study and personal fees from Merck outside the submitted work. R.P.G. reports grants from Amgen, honoraria from Amgen, Daiichi Sankyo, and Merck, and consultant fees from Amgen, Akcea, Amarin, Boehringer-Ingelheim, Bristol-Myers-Squibb, CVS Caremark, Daiichi Sankyo, GlaxoSmithKline, Lexicon, Merck, Portola, and Pfizer. M.S.S. reports Research grant support through Brigham and Women's Hospital from: Amgen; AstraZeneca; Bayer; Daiichi-Sankyo; Eisai; Intarcia; Janssen Research and Development; Medicines Company; MedImmune; Merck; Novartis; Pfizer; Quark Pharmaceuticals; Takeda. Consulting for: Althera; Amgen; Anthos Therapeutics; AstraZeneca; Bristol-Myers Squibb; CVS Caremark; DalCor; Dr. Reddy's Laboratories; Dyrnamix; Esperion; IFM Therapeutics; Intarcia; Janssen Research and Development; Medicines Company; MedImmune; Merck; Novartis. Research grant support through Brigham and Women's Hospital from: Amgen; AstraZeneca; Bayer; Daiichi-Sankyo; Eisai; Intarcia; Janssen Research and Development; Medicines Company; MedImmune; Merck; Novartis; Pfizer; Quark Pharmaceuticals; Takeda. Consulting for: Althera; Amgen; Anthos Therapeutics; AstraZeneca; Bristol-Myers Squibb; CVS Caremark; DalCor; Dr. Reddy's Laboratories; Dyrnamix; Esperion; IFM Therapeutics; Intarcia; Janssen Research and Development; Medicines Company; MedImmune; Merck; Novartis. B.A.B. reports grant support: Pfizer, AstraZeneca, Abbott Vascular; Consulting fees: Philips, Abbott Vascular, Servier, Daiichi-Sankyo, Janssen, Quark. BAB is a member of the TIMI Study Group, which has received institutional grant support through the Brigham and Women's Hospital from: Abbott, Amgen, Aralez, AstraZeneca, Bayer HealthCare Pharmaceuticals, Inc., Daiichi-Sankyo, Eisai, GlaxoSmithKline, Intarcia, Janssen, MedImmune, Merck, Novartis, Pfizer, Poxel, Quark Pharmaceuticals, Roche, Takeda, The Medicines Company, Zora Biosciences.





Background

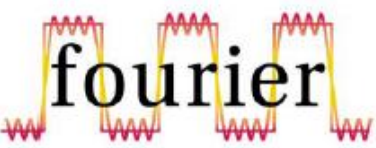


- **Patients with prior percutaneous coronary intervention (PCI) comprise an important subgroup for secondary prevention.**
- **Despite the widespread use of later-generation drug eluting stents (DES), these patients remain at heightened risk of coronary events, including repeat coronary revascularization and recurrent myocardial infarction.**

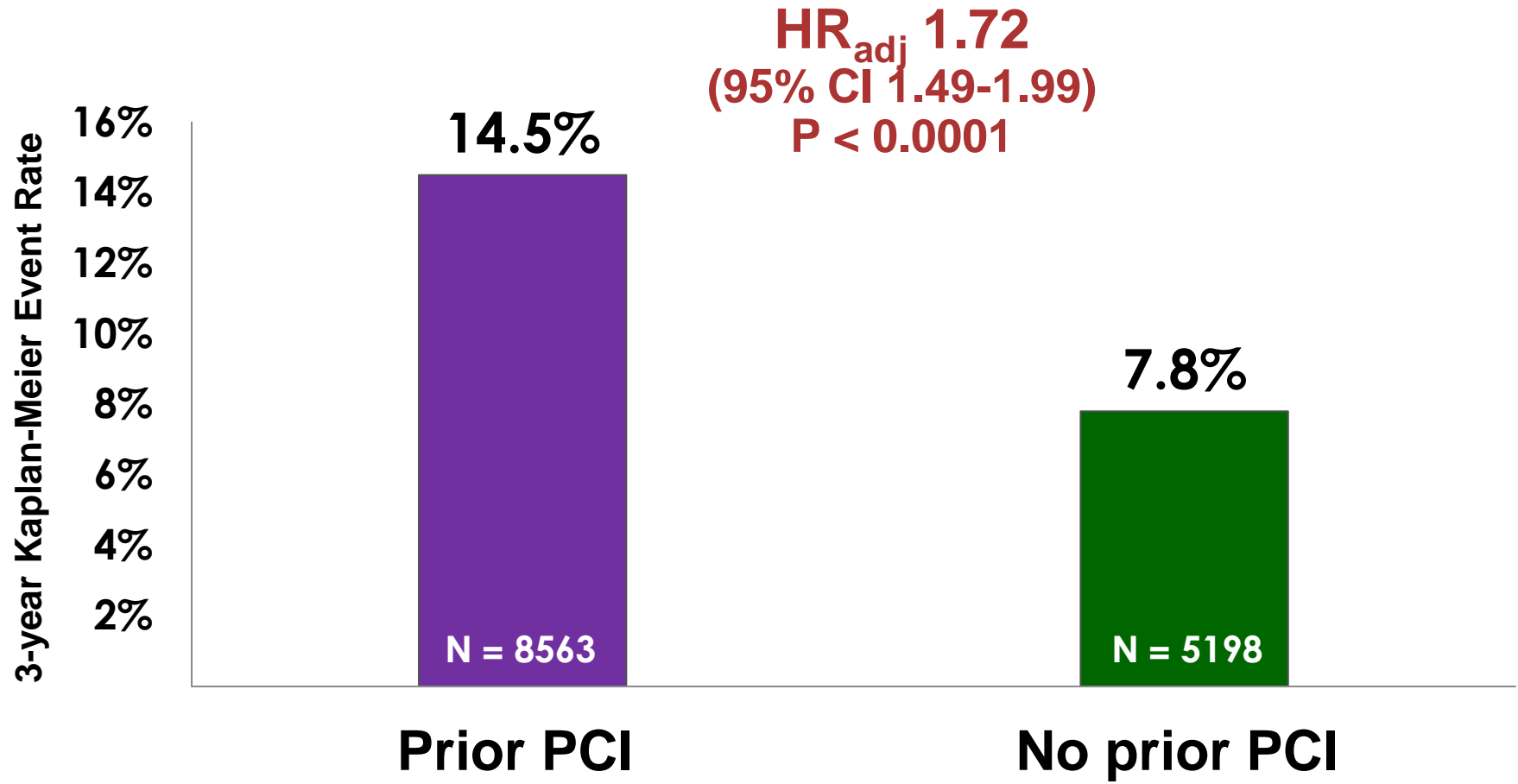
- **27,564 pts with established atherosclerotic CV disease on statin therapy randomized to evolocumab vs placebo**
- **Patients with prior PCI were pre-specified subgroup**
- **Endpoint: Coronary death, MI or coronary revascularization**
- **Detailed review of coronary revasc reports performed blinded to treatment arm**
- **Comparison of outcomes in PBO group with versus without prior PCI using Cox model, adjusted for baseline differences**
- **Comparison of EVO vs PBO, stratified by prior PCI, assessed by Cox model and analysis of treatment-by-subgroup interaction**

Characteristics*	Prior PCI (N=17,073)	No prior PCI (N=10,455)
Age (yrs), median	62	64
Female sex, (%)	21	31
White Race, (%)	87	83
Hypertension, (%)	78	83
Diabetes, (%)	34	41
Smoker, (%)	28	28
Prior MI, (%)	96	56
Prior stroke, (%)	8	38
PAD, (%)	9	20
eGFR (ml/min/1.73 m ²), median	76	74
LDL-C (mg/dL), median	92	92

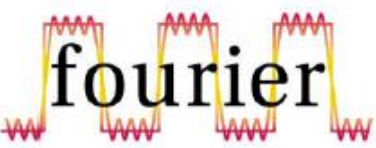
*All p-values < 0.001 for between group differences, except smoker (p=0.53) and LDL-C (p=0.039)



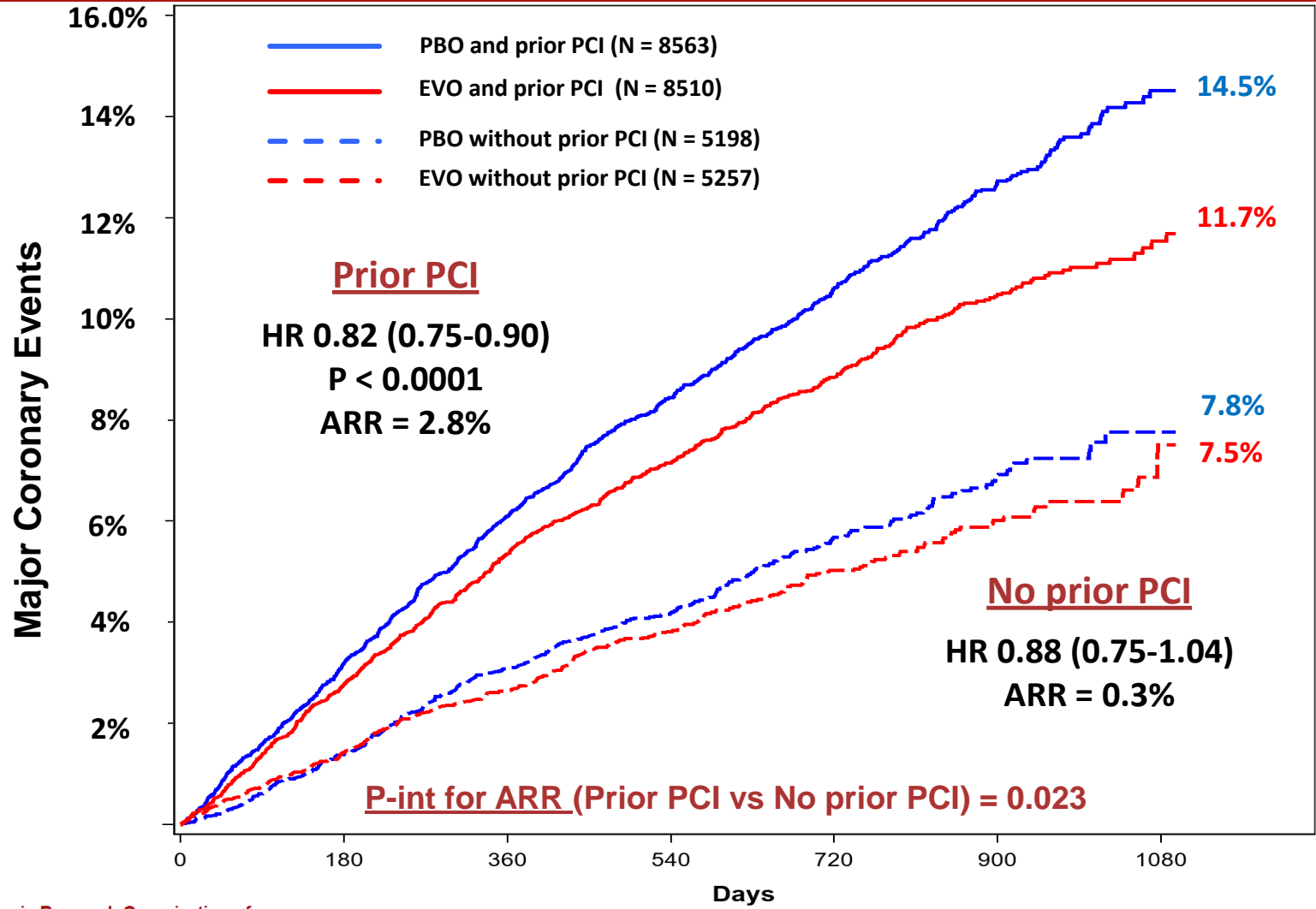
Major Coronary Events in the placebo arm

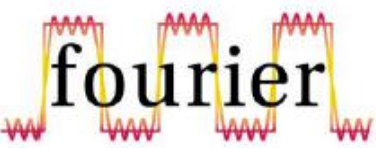


Adjusted for age, weight, eGFR, baseline LDL-C, sex, race, region, history of residual CAD > 2 vessels, history of MI, history of stroke, PAD, hypertension, diabetes and prior CABG.



Effect of Evolocumab on Major Coronary Events

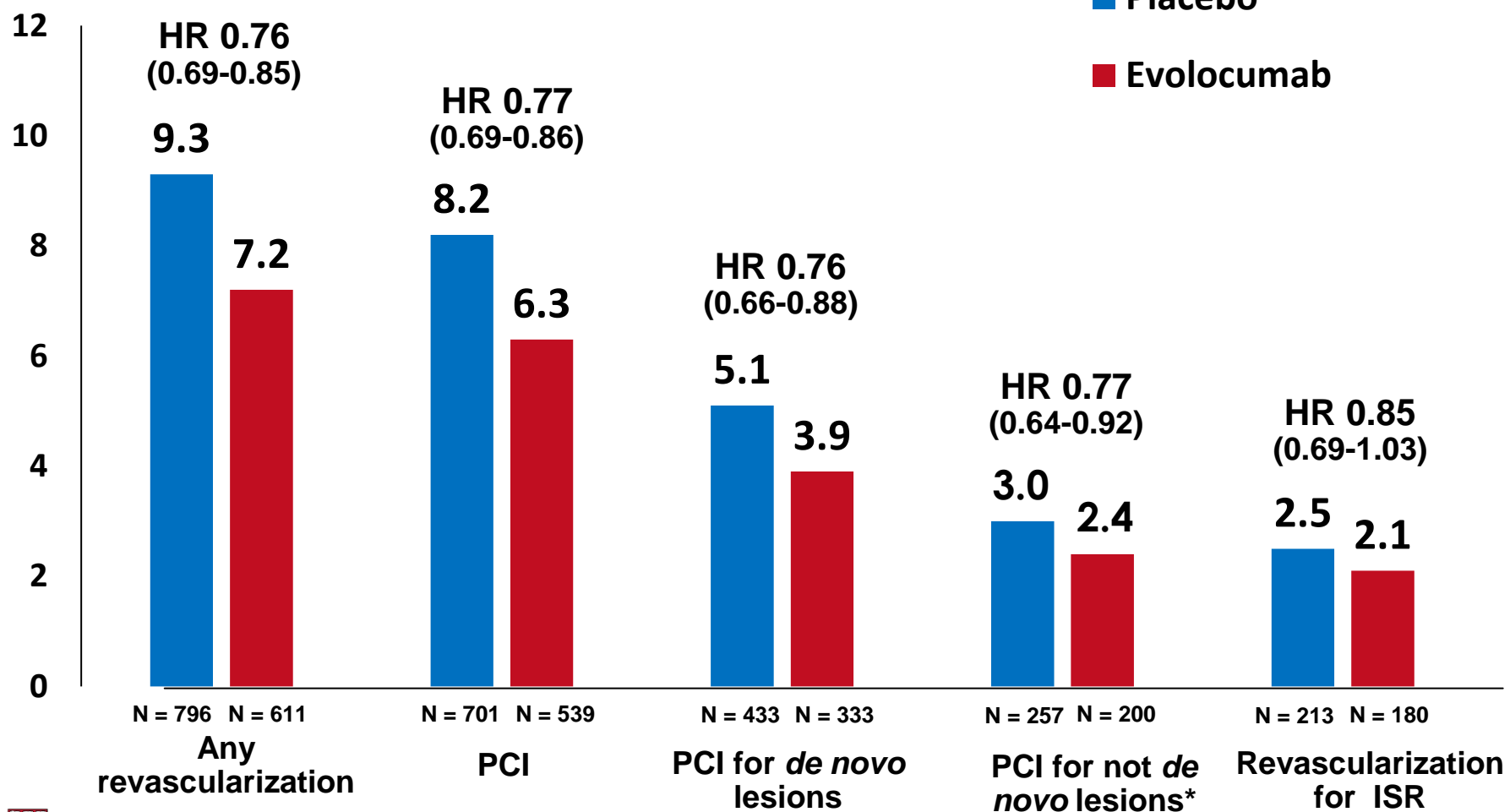




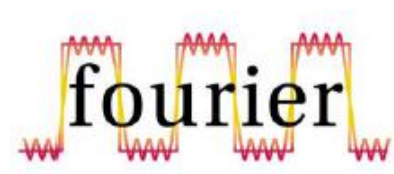
Coronary revascularizations in patients with prior PCI



% of pts



*ISR or bypass graft PCI



Limitations



- **Detailed coronary anatomical information was not available at baseline**
- **Coronary angiograms films not available for review; event types determined by review of written reports**



Conclusions



- **Patients with prior PCI are at heightened risk for recurrent coronary events**
- **Evolocumab reduces the risk of major coronary events when added to statin therapy in patients with ASCVD, with a higher absolute risk reduction in patients with a prior history of PCI**
- **Evolocumab consistently reduces the risk for revasc for *de novo* lesions, not *de novo* lesions, and ISR**