

Results From The Minimizing Adverse Haemorrhagic Events By Transradial Access Site And Systemic Implementation of Angiox-MATRIX Access and Anti-thrombin Programs



NCT01433627

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*on behalf of the **MATRIX Group***

Background

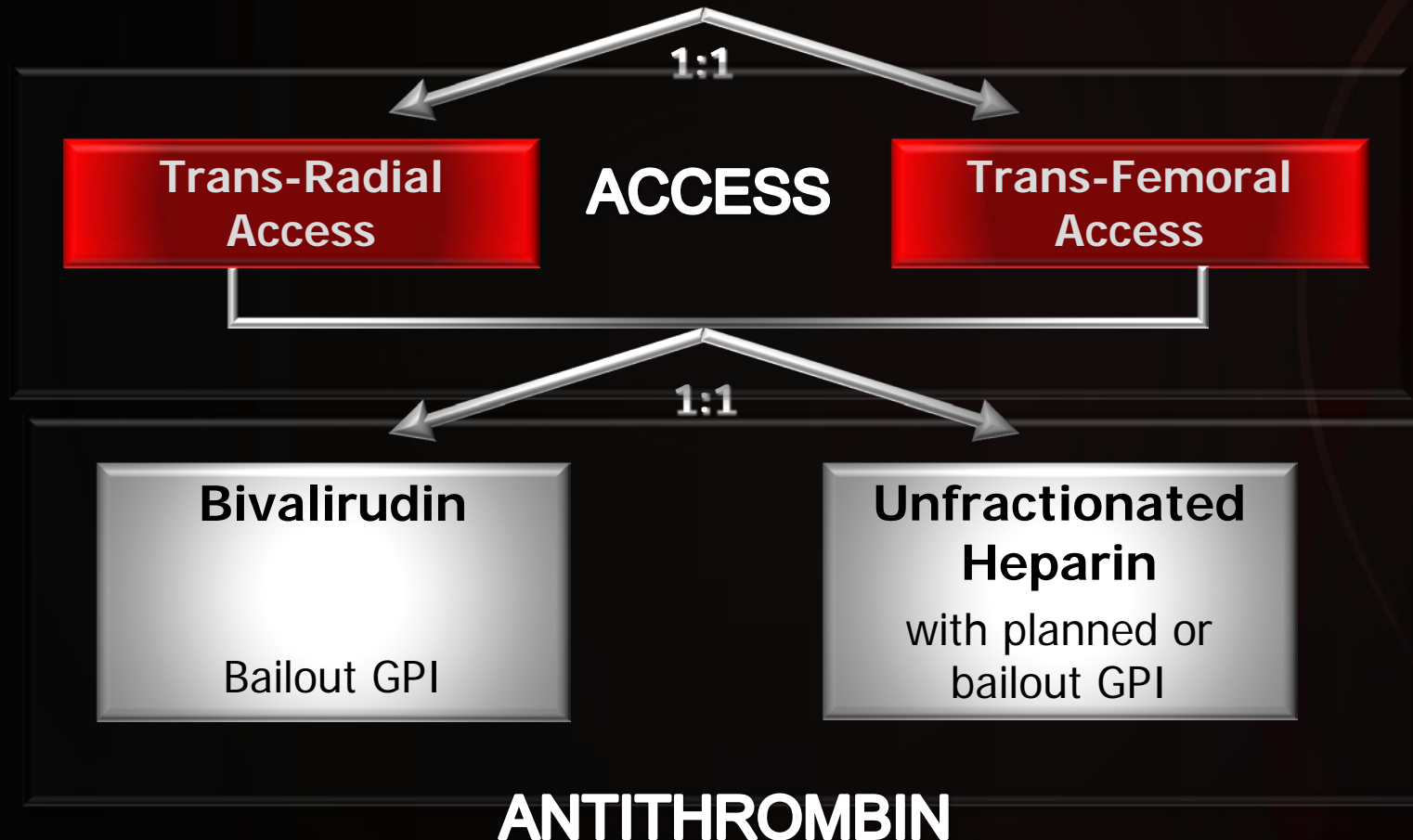
- Previous studies have come to differing conclusions with regards to the role of radial access and bivalirudin in reducing adverse outcomes in patients with ACS
- *It remains unclear whether avoiding access site bleeding and vascular complications through routine transradial intervention or routine use of bivalirudin **improves outcomes** in unselected patients with ACS undergoing invasive management*

MATRIX Program

NCT01433627

NSTEACS or STEMI with invasive management

Aspirin + P2Y12 blocker



MATRIX Access

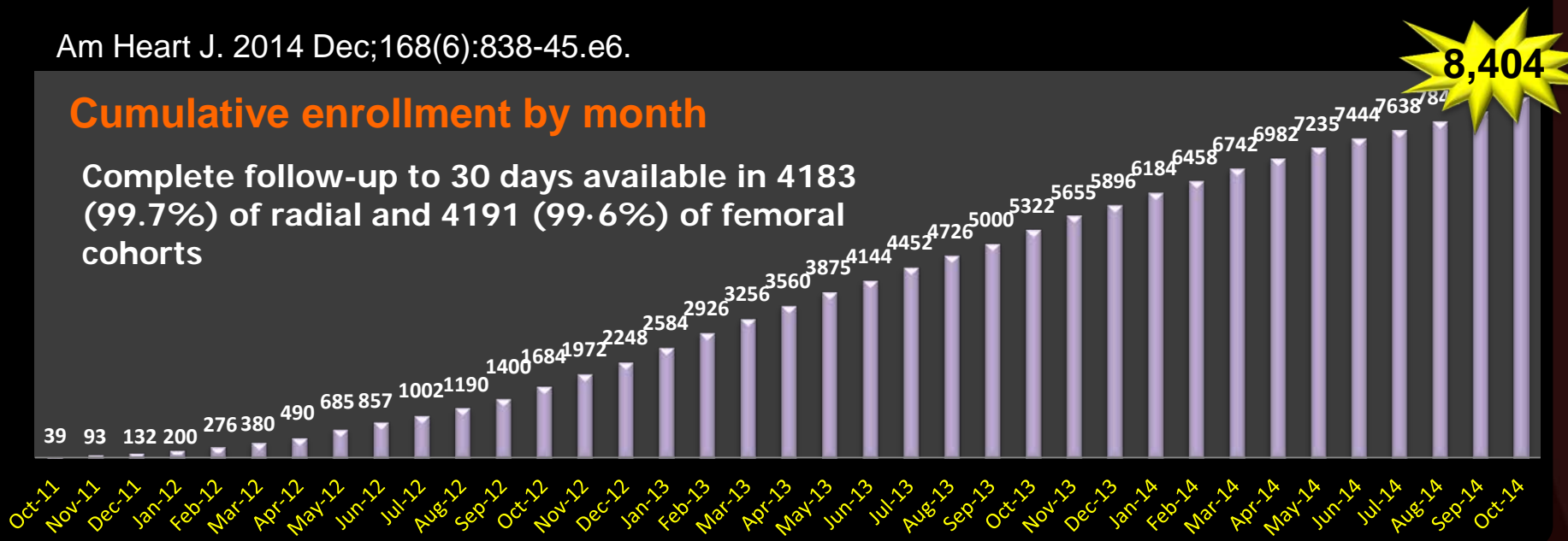


- 8,404 patients with ACS undergoing coronary angiography \pm PCI from 11th Oct 2011 to 7th Nov 2014
- **Operator Eligibility Criteria:** Interventional cardiologist expertise in TRI and TFI including at least 75 transradial coronary *interventions* and at least 50% of interventions performed via radial route in the year preceding site initiation

Am Heart J. 2014 Dec;168(6):838-45.e6.

Cumulative enrollment by month

Complete follow-up to 30 days available in 4183 (99.7%) of radial and 4191 (99.6%) of femoral cohorts



MATRIX Recruiting timelines:

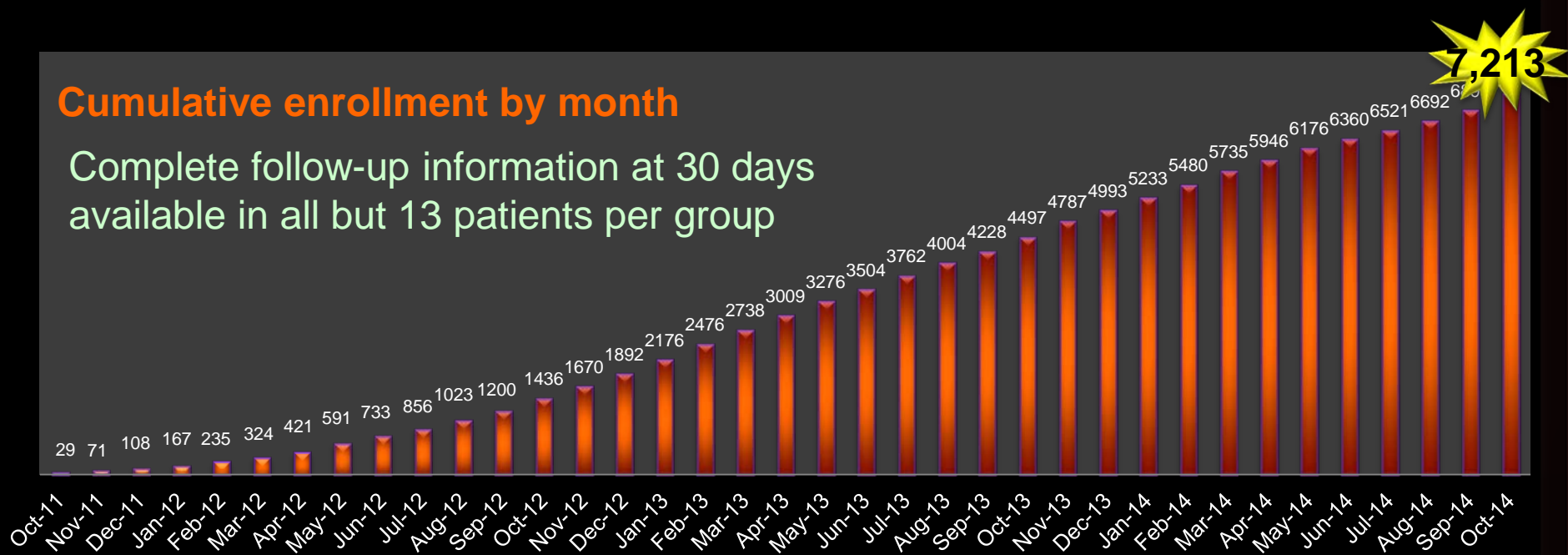
Anti-thrombin program

First Recruited patient: 11th Oct 2011

Last Recruited patient: 7th Nov 2014

Cumulative enrollment by month

Complete follow-up information at 30 days
available in all but 13 patients per group



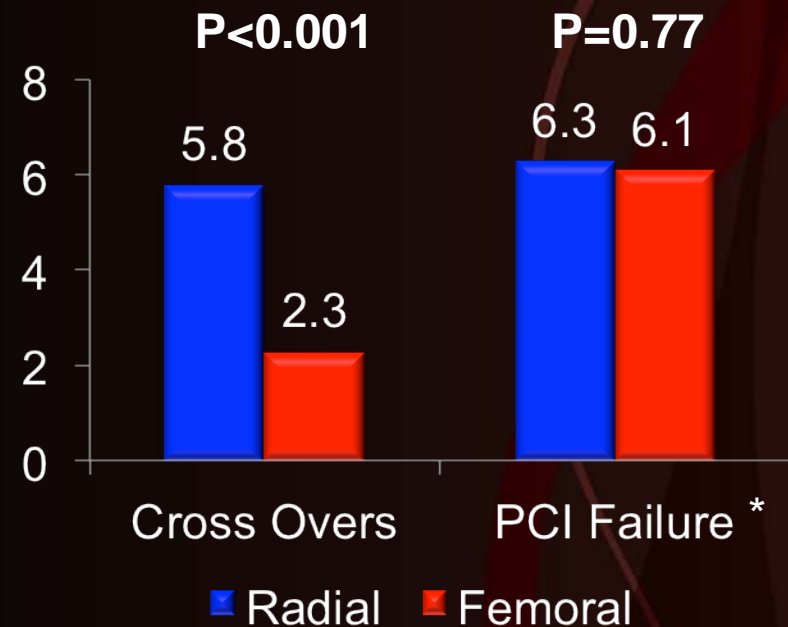
Cross Over and Procedural Success Rates



94.1% of radial and 97.4% of femoral cohorts received respective treatment as allocated

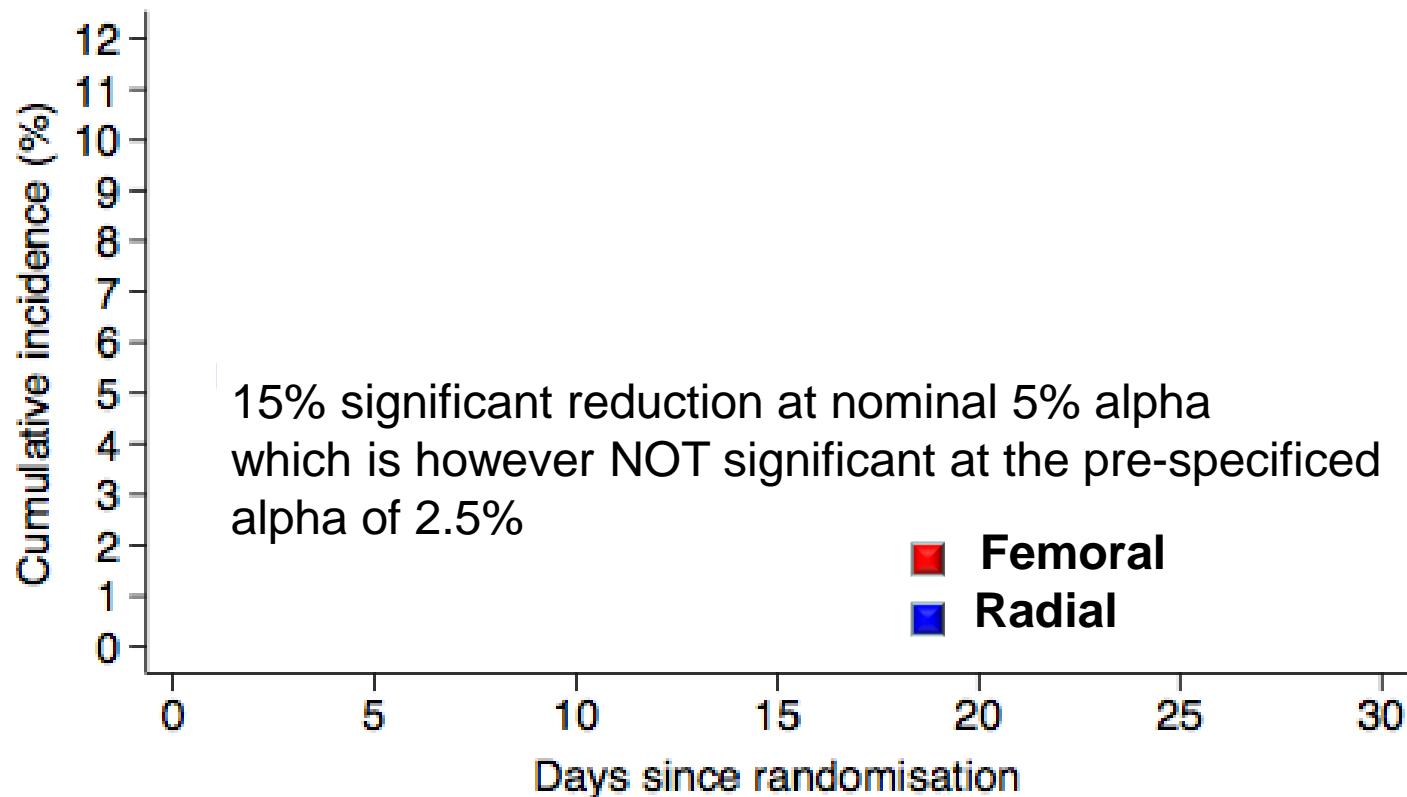
In 5.8% of radial and 2.3% of TF cohort the allocated access was attempted but failed.

In 3 (0.1%) in the radial and 13 (0.3%) patients in the femoral groups the allocated access was not attempted



*: TIMI <3 and/or % final stenosis >30%

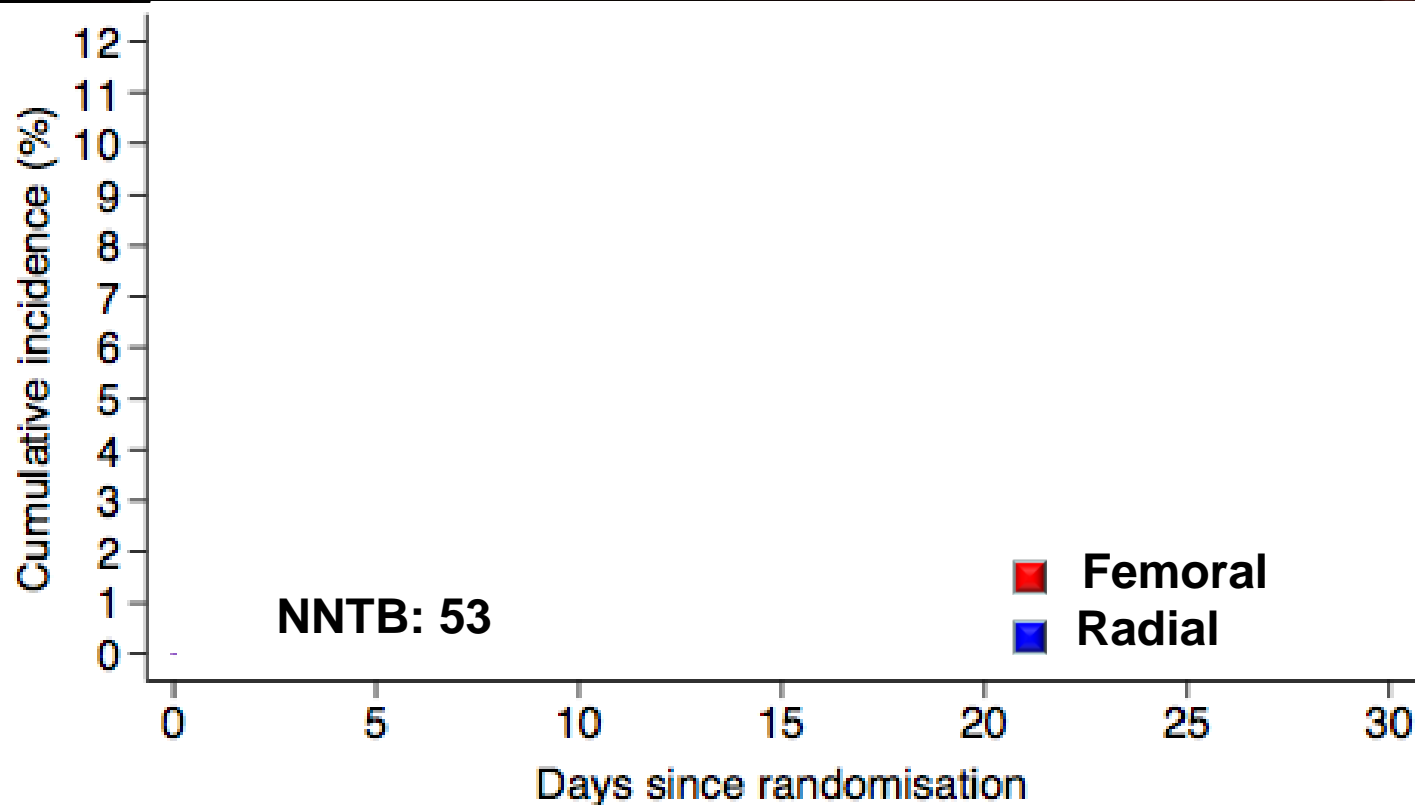
Primary EP: *MACE*



Number at risk

Femoral Access	4207	3846	3792	3776	3753	3713	3498
Radial Access	4197	3874	3834	3811	3785	3748	3545

Primary EP: NACE



Number at risk

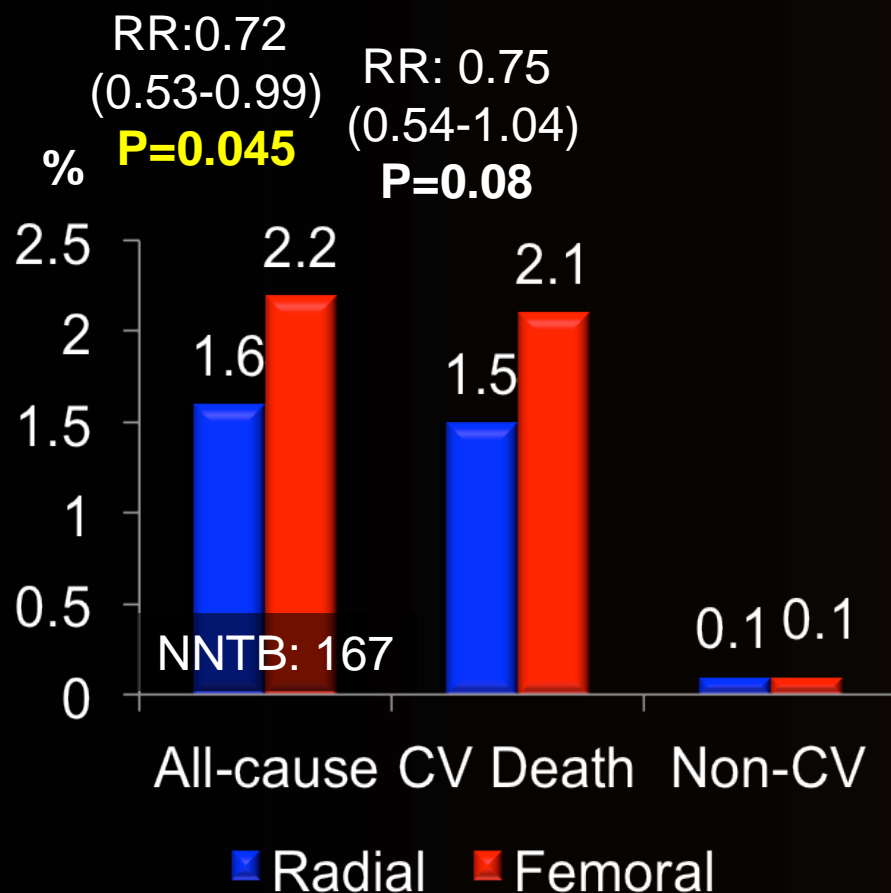
Femoral Access	4207	3801	3738	3725	3700	3659	3445
Radial Access	4197	3848	3798	3771	3744	3708	3505

Fatal and ST *EPs*:

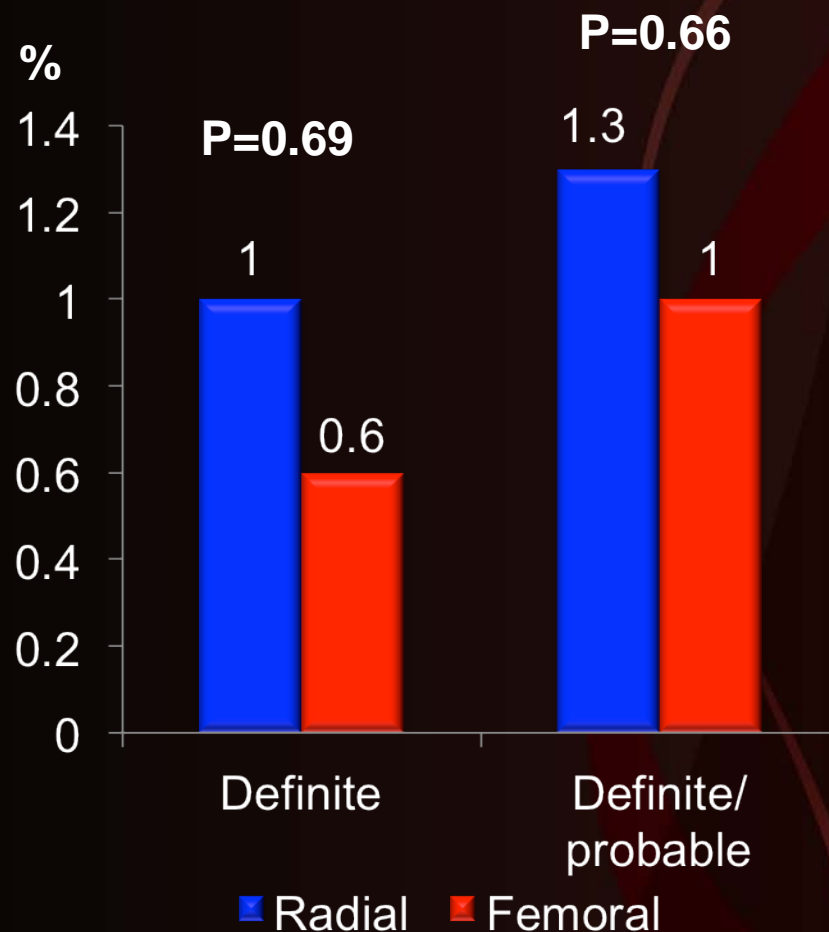


All-Cause, Cardiac, non-CV mortality, type of stent thrombosis

Mortality



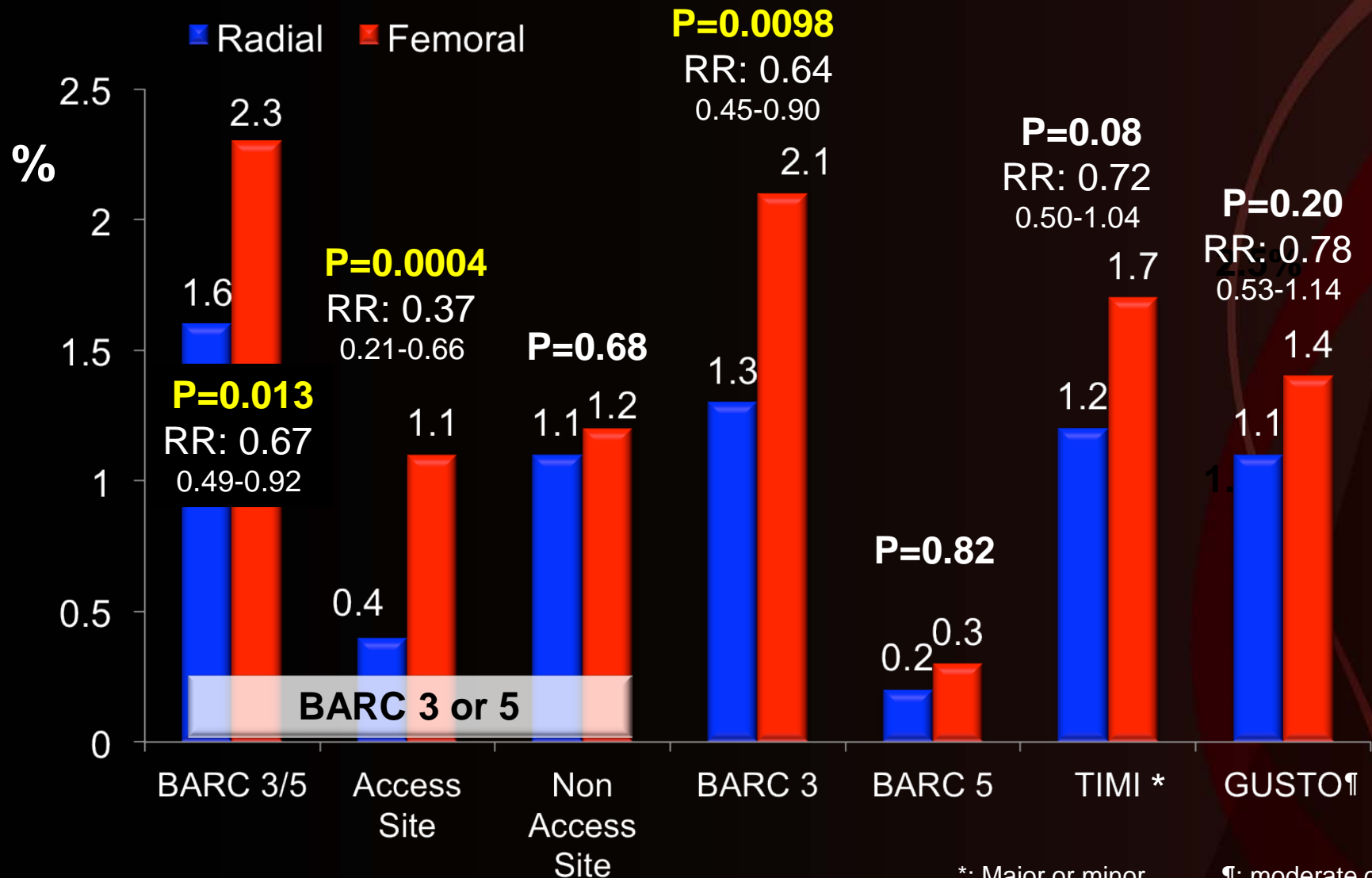
Stent Thrombosis



Bleeding endpoints:

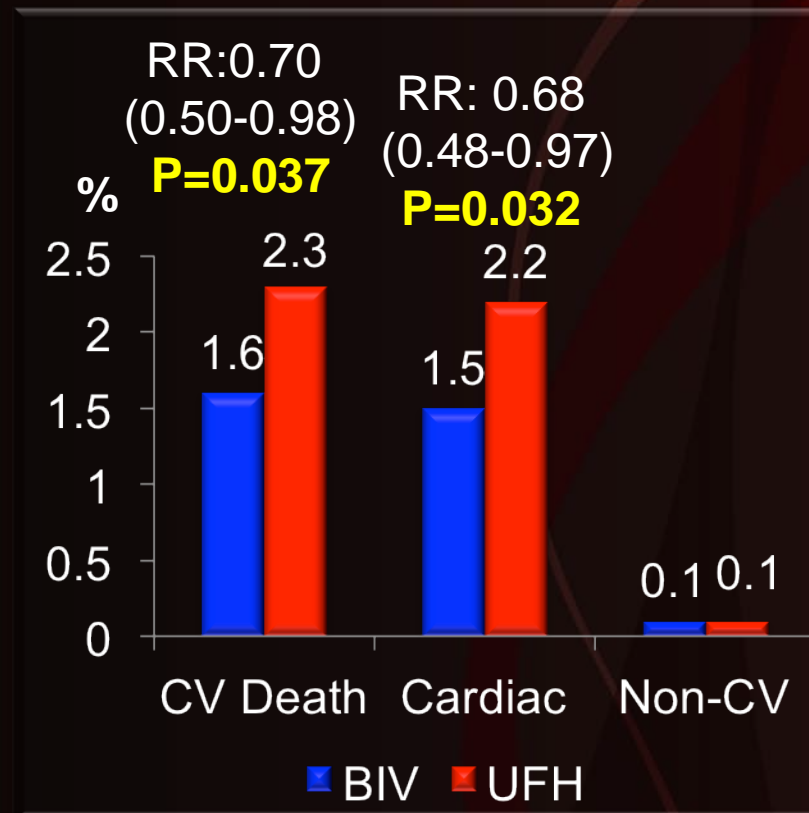
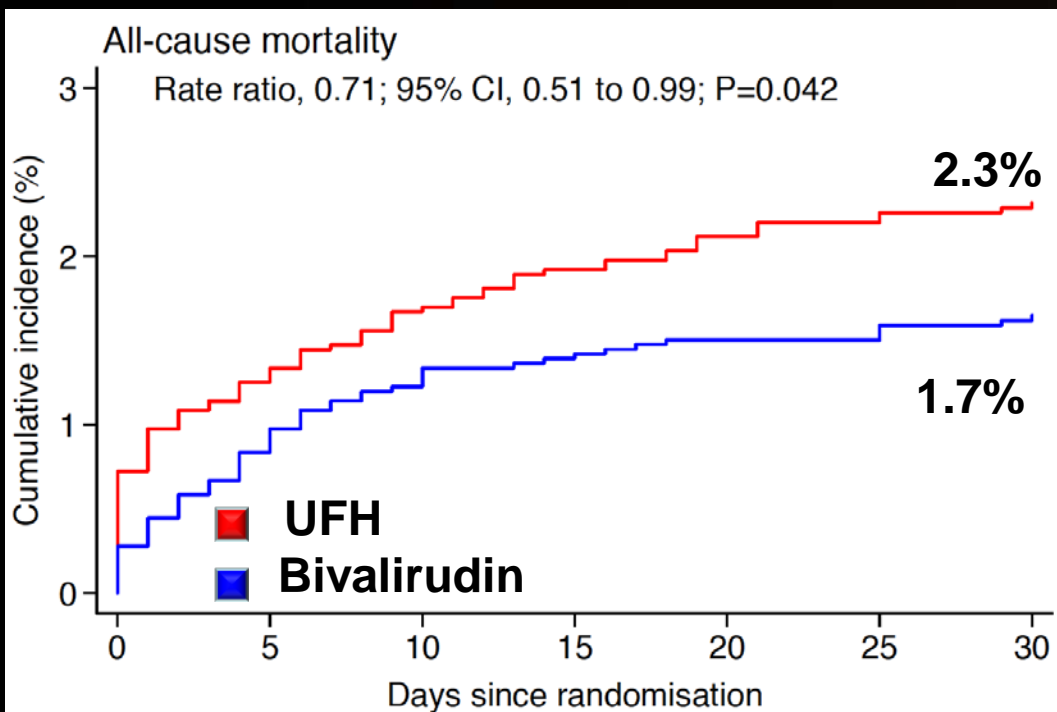


BARC, TIMI, GUSTO, access vs non-access related



Mortality:

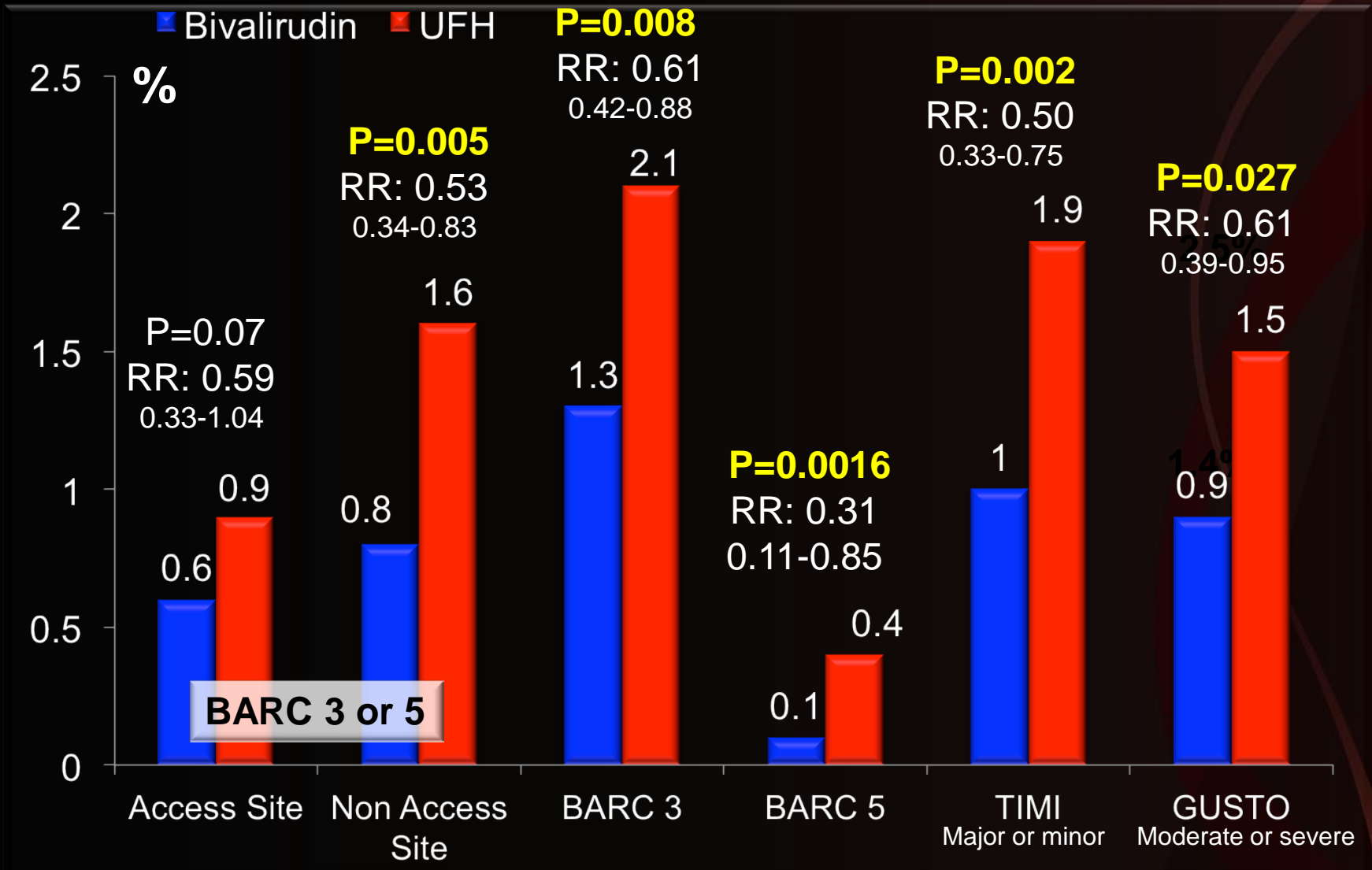
All-Cause, Cardiac, Vascular and non-CV mortality



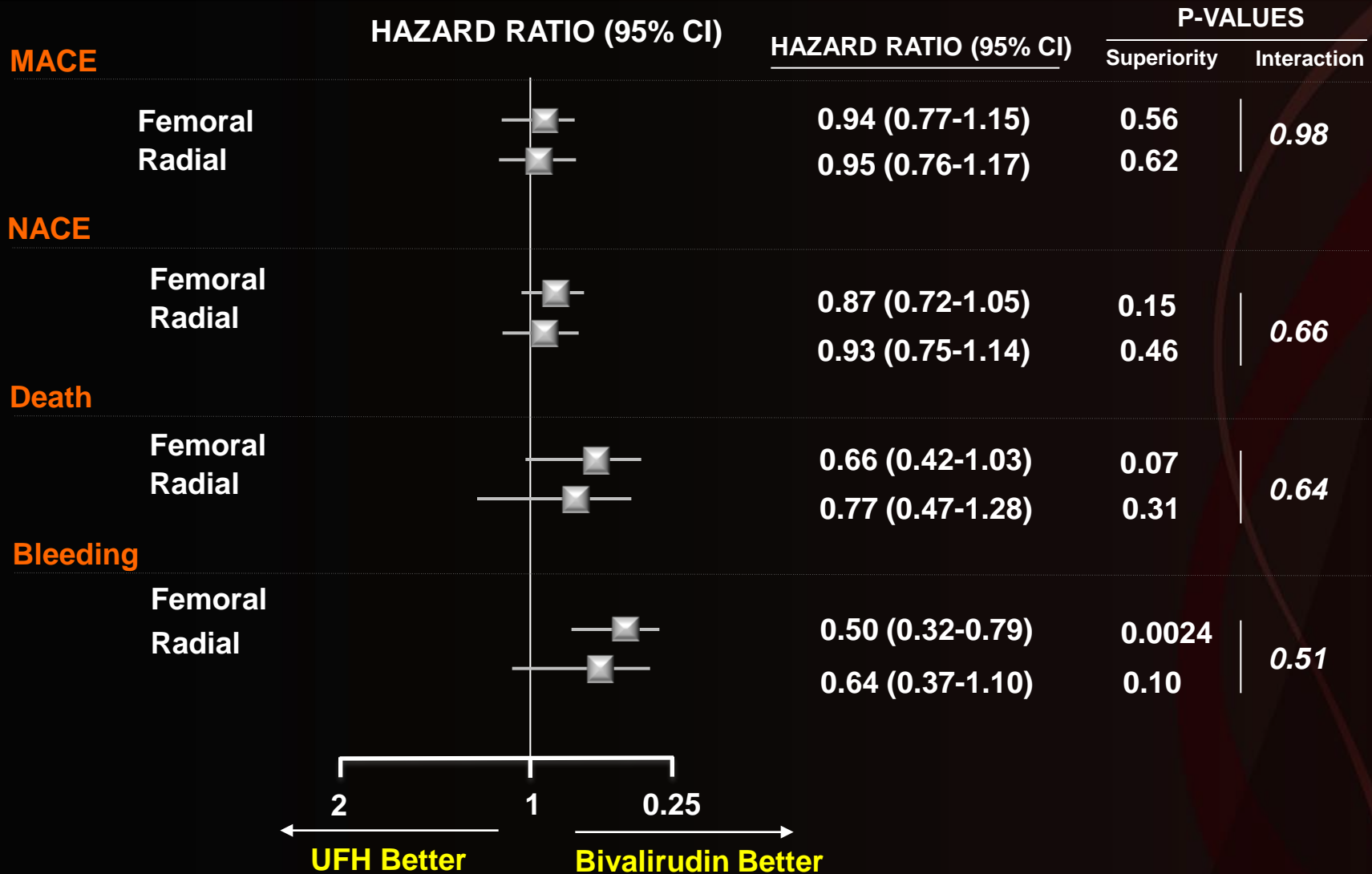
Bleeding endpoints:



BARC, TIMI, GUSTO, access vs non-access related



Subgroup Analysis



Summary

- Radial as compared to femoral access lowered the risk of NACE, driven by a significant reduction of mortality and bleeding with no difference for myocardial infarction or stent thrombosis. This effect was independent from the anticoagulant used during PCI but expertise in TRI was a treatment modifier.
- *Bivalirudin, when compared to UFH plus provisional GPI (used in 25% of patients) did not reduce the composite EP of MACE or NACE. however, the use of bivalirudin was associated to reduction of all-cause and CV death and bleeding including fatal ones. This effect was independent from the access site used during the procedure.*