# IMPATTO PROGNOSTICO DELL'ARTERIOPATIA PERIFERICA NEI PAZIENTI CON SINDROME CORONARICA ACUTA

# Background

- Peripheral arterial disease (PAD) is associated with a 2-3-fold increased risk of myocardial infarction, stroke and vascular death.
- Despite its high prevalence PAD remains often unrecognized and its prognostic impact frequently underestimated.
- The prevalence of PAD among patients with acute coronary syndromes (ACS) ranges from 6 to 13%.
- PAD greatly magnifies the risk of ischemic events of stable patients with a previous MI and the risk of a new cardiovascular event in patients with an ACS.
- However, most of the information on the worsening impact of PAD on cardiovascular prognosis in ACS patients comes from randomized clinical trials in many cases performed before the current drug-eluting stent and aggressive anti-platelet therapy era.

# eripheral arterial disease has a strong impact on cardiovascular outcome n patients with acute coronary syndromes: from the START ntiplatelet registry

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# Aim of the study

Aim of the study was to assess the impact of concomitant PAD on cardiovascular outcome and treatment decisions in patients with ACS in a real-life setting in the current era of DES and more powerful dual antiplatelet therapy (DAPT) in Italy

# Methods

START-ANTIPLATELET is a multicenter registry enrolling ACS patient.

Baseline clinical characteristics and treatment at discharge were recorded and follow-up was repeated at 6-months and 1-year.

PAD was defined as intermittent claudication and/or previous revascularization.

# Baseline characteristics of the study population

| | NO PAD | PAD | *p* |
|---|---|---|---|
| *n* (%) | 1339 (92.9) | 103 (7.1) | |
| Age, yrs. (mean, sd) | 66.2 (12.6) | 71.8 (10.6) | **<0.0001** |
| Females, *n* (%) | 370 (27.6) | 32 (31.1) | 0.494 |
| Hypertension, *n* (%) | 918 (68.6) | 93 (90.3) | **<0.0001** |
| Hypercholesterolemia, *n* (%) | 702 (52.4) | 68 (66.0) | **0.008** |
| Diabetes, *n* (%) | 330 (24.6) | 53 (51.5) | **<0.0001** |
| Obesity (BMI ≥ 30%), *n* (%) | 258 (19.3) | 29 (28.2) | **0.040** |
| Smoke, *n*(%) | 665 (49.7) | 52 (50.5) | 0.919 |
| CVD Familiarity, *n* (%) | 382 (28.5) | 26 (25.2) | 0.570 |
| Previous MI, *n* (%) | 238 (17.9) | 25 (24.3) | 0.111 |
| Previous PCI, *n* (%) | 257 (19.2) | 24 (23.3) | 0.303 |
| Previous TIA, *n* (%) | 37 (2.8) | 8 (7.8) | **0.012** |
| Previous IS, *n* (%) | 42 (3.1) | 12 (11.7) | **<0.0001** |
| Previous MB, *n* (%) | 30 (2.2) | 2 (1.9) | 1 |

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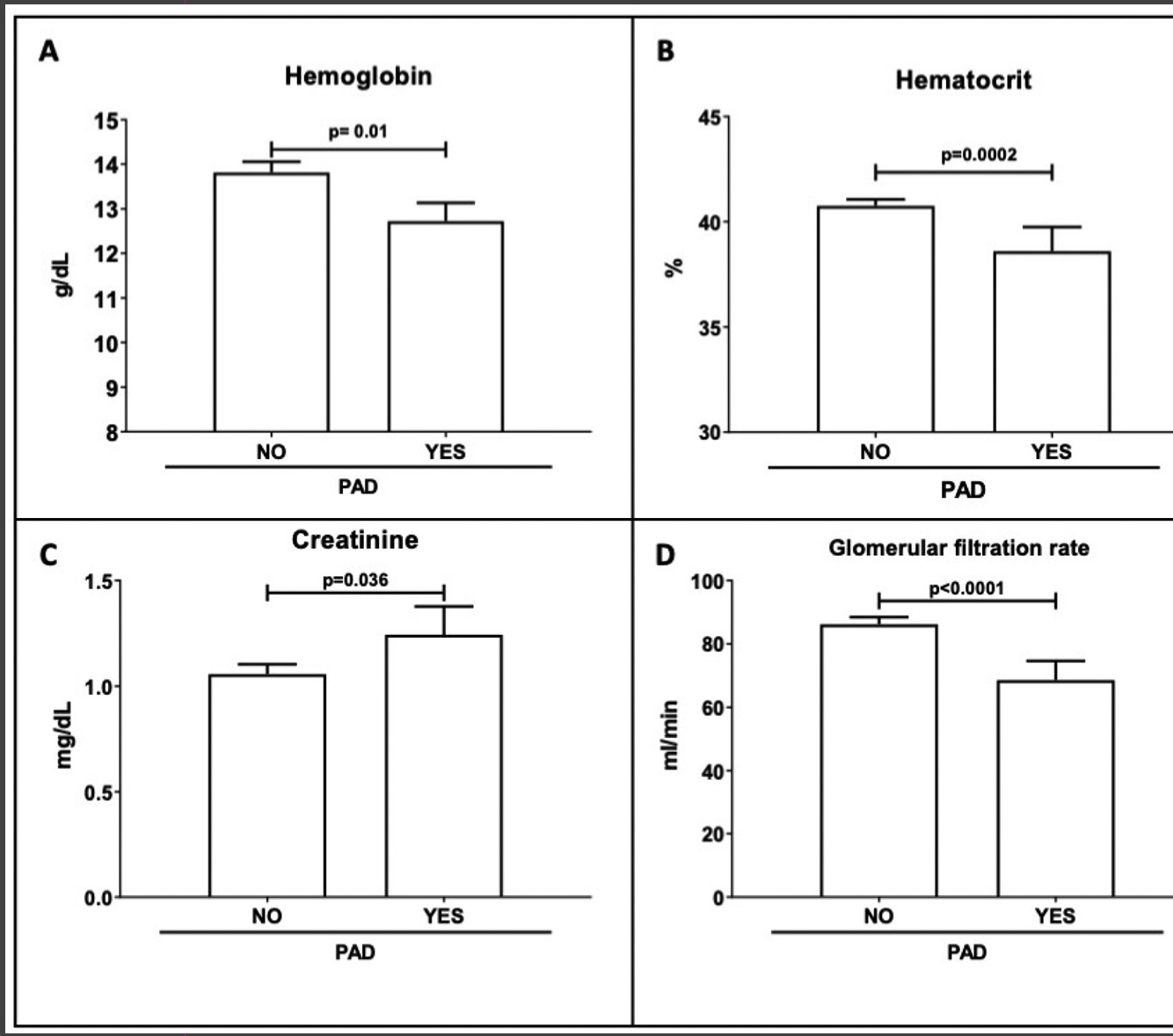
# BIOCHEMICAL PARAMETERS ON ADMISSION IN NON-PAD AND PAD ACS PATIENTS



# Clinical Presentation and interventions adopted

| | | NO PAD | PAD | *p* |
|---|---|---|---|---|
| Clinical presentation | NSTEMI, *n* (%) | 472 (35.5) | 45 (43.7) | 0.262 |
| | STEMI, *n* (%) | 682 (50.9) | 34 (33) | **0.040** |
| | UA, *n* (%) | 185 (13.8) | 24 (23.3) | 0.219 |
| Intervention adopted | CABG, *n* (%) | 46 (3.4) | 6 (5.8) | 0.690 |
| | Multivessel, *n* (%) | 11 (23.9) | 4 (66.0) | 0.140 |
| | PCI, *n* (%) | 1116 (83.3) | 79 (76.7) | 0.102 |
| | PCI + STENT, *n* (%) | 1055 (78.8) | 75 (72.8) | 0.172 |
| | BMS, *n* (%) | 36 (3.4) | 3 (4.0) | 0.957 |
| | DES, *n* (%) | 1019 (96.6) | 72 (96.0) | 0.787 |
| | Medical Therapy, *n* (%) | 195 (14.6) | 21 (20.4) | 0.115 |
| | DAPT, *n* (%) | 91 (46.7) | 16 (76.2) | **0.030** |
| | SAPT, *n* (%) | 32 (16.4) | 2 (9.5) | 0.690 |
| | Other, *n* (%) | 72 (36.9) | 3 (14.3) | 0.560 |

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# Medical therapy at discharge

| | NO PAD | PAD | *p* |
|---|---|---|---|
| DAPT, *n* (%) | 1138 (85.0) | 71 (68.9) | **0.005** |
| ASA-CLOP. *n* (%) | 350 (30.8) | 22 (30.1) | 0.961 |
| ASA-PRAS, *n* (%) | 162 (14.3) | 4 (5.5) | 0.634 |
| ASA-TICA, *n* (%) | 624 (54.9) | 47 (64.4) | 0.227 |
| SAPT, *n* (%) | 84 (5.4) | 12 (9.7) | 0.557 |
| OAC (Overall) *n* (%) | 114 (8.5) | 19 (18.4) | 0.183 |
| OAC, *n* (%) | 4 (0.3) | 1 (1.0) | 0.932 |
| OAC + SAPT, *n*(%) | 25 (1.9) | 1 (1.0) | 0.949 |
| OAC + DAPT *n* (%) | 85 (6.3) | 17 (16.5) | 0.159 |
| STATINS, *n* (%) | 1291 (96.4) | 96 (93.2) | 0.115 |
| ACE-I/ARB, *n* (%) | 872 (65.1) | 63 (61.2) | 0.531 |
| BETA BLOCK, *n* (%) | 953 (71.2) | 77 (74.8) | 0.501 |
| NITRATES, *n* (%) | 135 (10.1) | 18 (17.5) | **0.029** |
| DIURETICS, *n* (%) | 383 (28.6) | 43 (41.7) | **0.007** |
| PPI, *n* (%) | 1286 (92.9) | 99 (96.1) | 0.961 |
| CA, *n* (%) | 10 (0.7) | 0 (0.0) | 1 |

# Clinical outcomes

Median follow-up time of 11.1 months

| | Non PAD | PAD | *p* |
|---|---|---|---|
| MACCE, *n* (%) | 77 (8.6) | 12 (15.1) | **0.044** |
| CVD | 16 (20.8) | 5 (41.6) | |
| *Re*-MI | 19 (24.7) | 3 (27.3) | |
| Stroke | 6 (7.8) | 0 (0.0) | |
| TIA | 2 (2.6) | 0 (0.0) | |
| TVR | 24 (31.2) | 2 (18.2) | |
| Ischemic Compl | 10 (13.0) | 2 (18.2) | |
| NACE, *n* (%) | 94 (10.5) | 14 (19.1) | **0.049** |
| ICH | 9 (9.6) | 0 (0.0) | |
| GIB | 7 (7.4) | 2 (15.4) | |
| RPH | 1 (1.1) | 0 (0.0) | |

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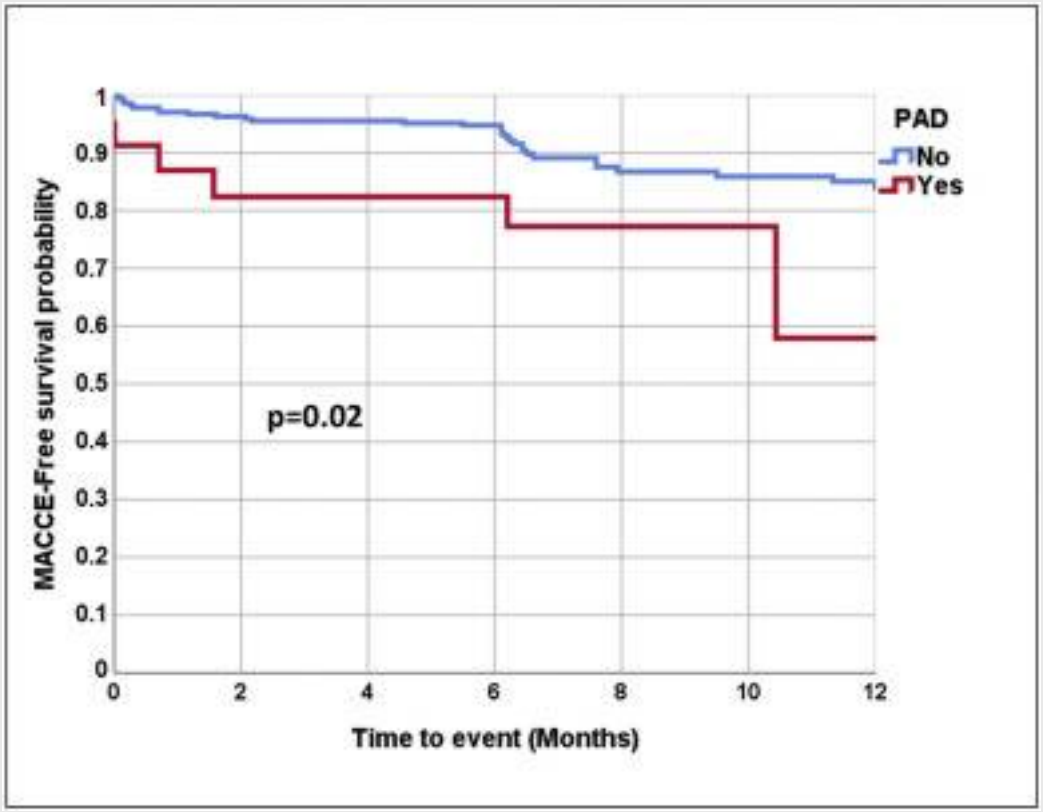
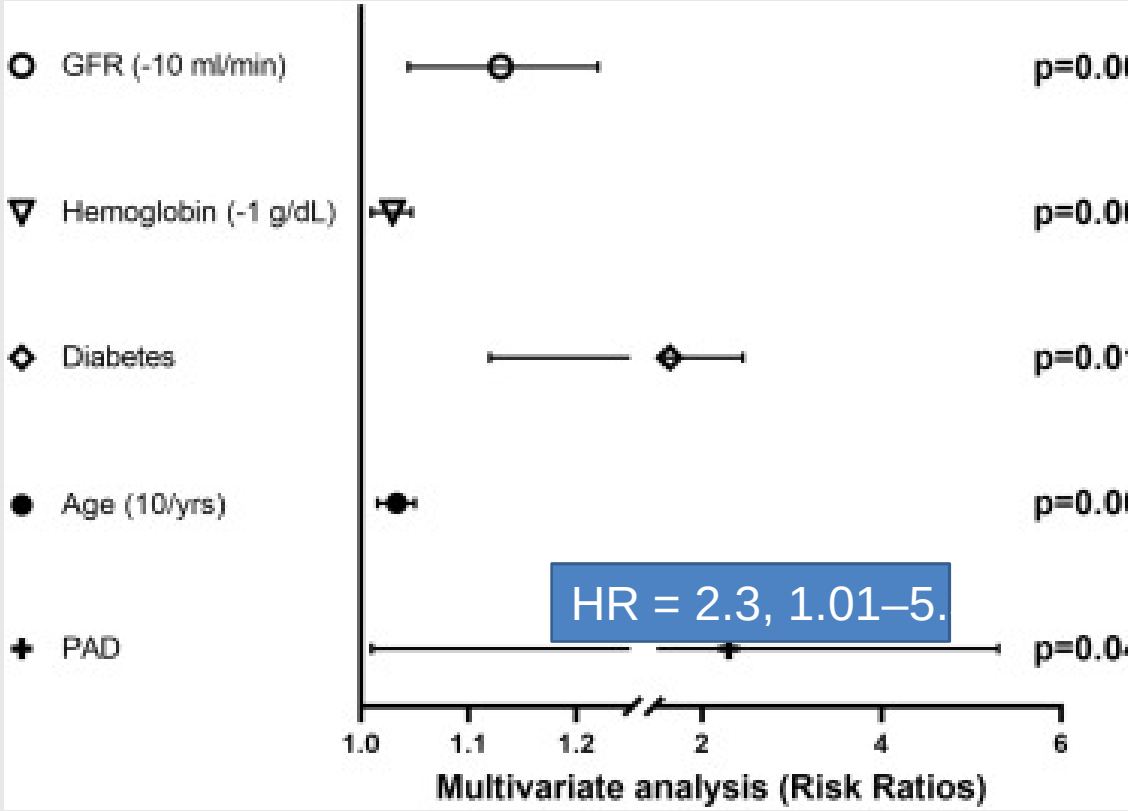
# MACCE-free survival probability in non-PAD and PAD patients




Multivariate COX regression analysis (Hazard Rati

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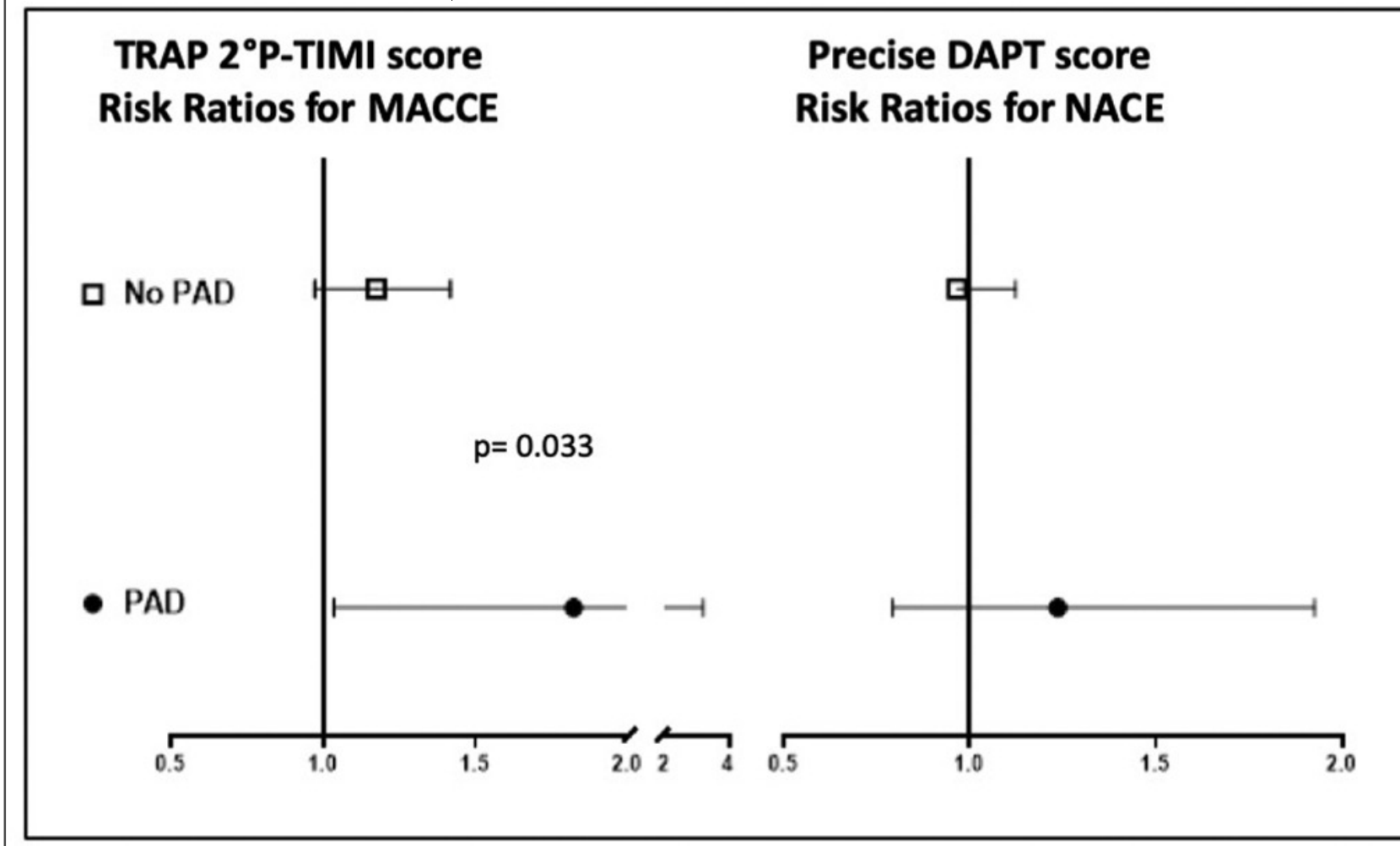
## RA 2°P score risk atios for MACCE and PRECISE DAPT HR for NACE in non-PAD and PAD patients

- TRA 2°P score independently associated with MACCE in PAD patients (HR: 1.22 per 1 score point increase1.008–1.478, p = 0.033)
- PRECISE-DAPT not related with major hemorrhages or NACE

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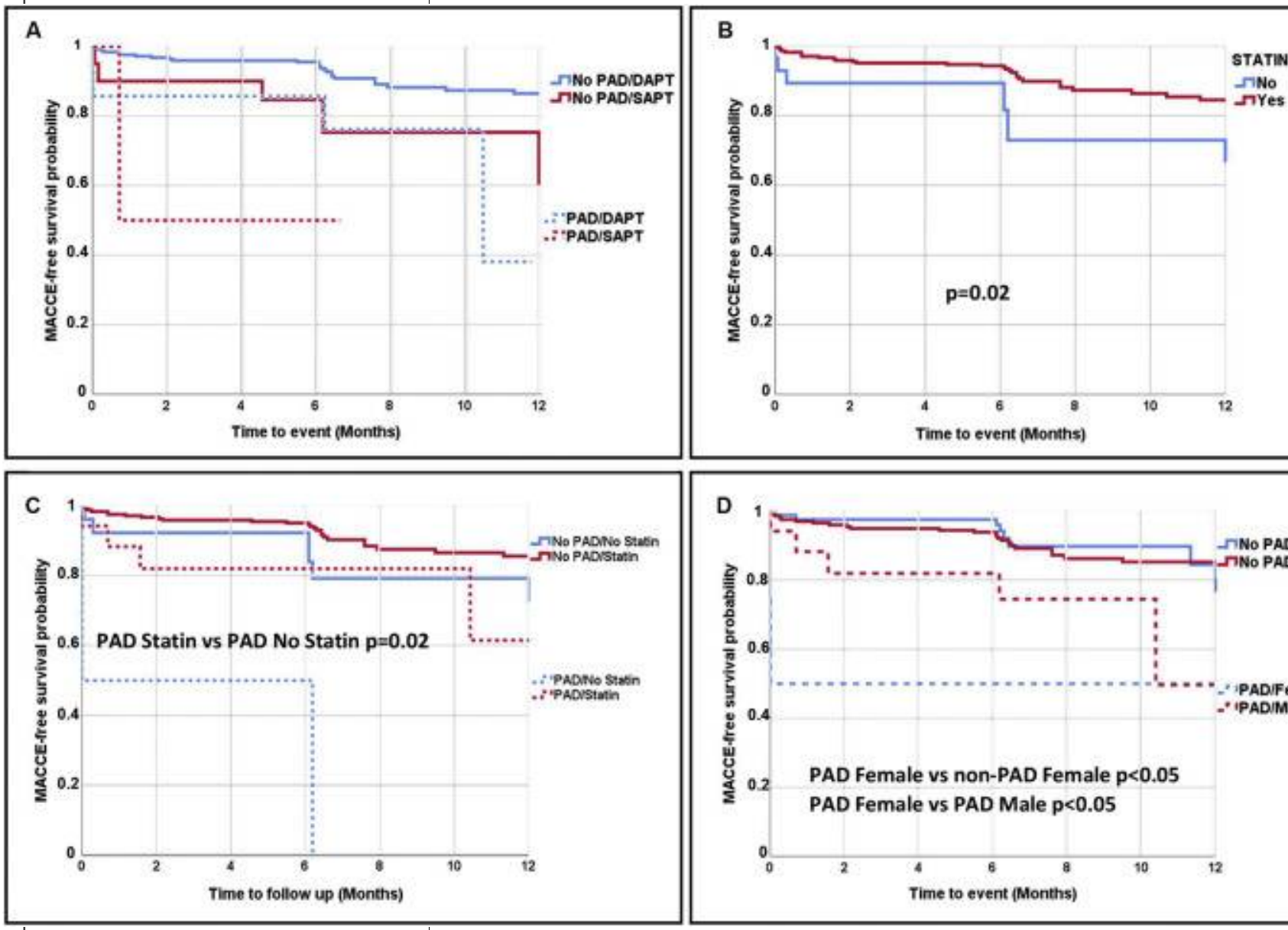
# MACCE-free survival probability

A) non-PAD and PAD patients discharged on SAPT or DAPT

B) Patients with or without statins at discharge (overall population)

C) Non-PAD and PAD patients discharged with or without statins

D) Non-PAD and PAD patients by sex

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# Limitations

Observational, non-randomized design which may have produced selection bias

Lack of systematic data collection on the instrumental assessment of lower limb arterial circulation and the definition of PAD based only on clinically ascertained intermittent claudication which may have underestimated the real prevalence of PAD.

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# Conclusions

PAD identifies a subgroup of ACS patients at significantly increased cardiovascular risk, but these patients tend to be undertreated.

Patients admitted for ACS should be screened for PAD and optimal medical therapy at discharge should be implemented.

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