**Appendix Table E113. Results from studies assessing the ability of miscellaneous platelet function tests to predict major adverse cardiovascular events in patients with ischemic heart disease**

| **Author, year**  **UID**  **Country**  **Study name** | **Treatment** | **Phenotypic Test Used [index test]** | **Clinical Outcome** | **Outcome Definition** | **Timing of measurement** | **Index test result: category (e.g., HPR+) – ONE ROW PER PHENOTYPE GROUP** | **Outcome status (e.g., bleeding or no bleeding)** | **No. with outcome status within phenotype group** | **Comparative metric (OR, RR, HR)** | **95% CI** | **P (between which groups?)**  **[statistical test]** | **Adjusted?**  **[YES/NO/NR]**  **If YES, for what factors?** | **Procedures for multiple comparisons [YES, NO, NR]** | **Comments (e.g., additional data in figures)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Smit,  2010  20889993  Netherlands  ON-TIME-2 | Clopidogrel 300 mg LD + 75 mg MD | FIPA | MACE | mortality, urgent target vessel revascularisation or recurrent myocardial infarction | 30 days | Quartile 1 | MACE | NR | NR | NR | 0.281; between all quartiles  [Chi-square] | NO | NR | Data in figures only shows percentages; needs to be digitized to obtain accurate values |
|  |  |  |  |  |  | Quartile 2 |  | NR |  |  |  |  |  |  |
|  |  |  |  |  |  | Quartile 3 |  | NR |  |  |  |  |  |  |
|  |  |  |  |  |  | Quartile 4 |  | NR |  |  |  |  |  |  |
|  | Clopidogrel 300 mg LD + 75 mg MD | Plateletworks | MACE | mortality, urgent target vessel revascularisation or recurrent myocardial infarction | 30 days | Quartile 1 | MACE | NR | NR | NR | 0.358; between all quartiles  [Chi-square] | NO | NR | Data in figures only shows percentages; needs to be digitized to obtain accurate values |
|  |  |  |  |  |  | Quartile 2 |  | NR |  |  |  |  |  |  |
|  |  |  |  |  |  | Quartile 3 |  | NR |  |  |  |  |  |  |
|  |  |  |  |  |  | Quartile 4 |  | NR |  |  |  |  |  |  |
| Breet,  2010  20179285  Netherlands  POPULAR | maintaining Clopidogrel 75 mg daily +aspirin 80-100mg daily | IMPACT-R ADP | Death combined | All-cause death, nonfatal MI, stent thrombosis and stroke | 1-year | High OTPR | Death combined | 32/296  (10.8) | OR=1.6 | 0.99-2.58 | 0.05  high OTPR vs normal | No | NR |  |
|  |  |  |  |  |  | Normal  OTPR |  | 43/609  (7.1) |  |  |  |  |  |  |
|  |  | IMPACT-R ADP | Death combined | All-cause death, nonfatal MI, stent thrombosis and stroke | 1 year | High OTPR  ≥93% surface coverage | Death combined | 33/262  (12.6) | AUC: 0.53  Sens: 0.44  Spec: 0.669 | 0.47-0.59  0.333-0.553  0.636-0.7 |  | No | NR |  |
|  |  | Plateletworks ADP | Death combined | All-cause death, nonfatal MI, stent thrombosis and stroke | 1-year | High OTPR  ≥80.5% | Death combined | 33/262  (12.6) | AUC: 0.61  Sens: 0.63  Spec: 0.585 | 0.53-0.69  0.496-0.746  0.544-0.626 | 0.001  regression model | No | NR |  |
|  |  | Plateletworks ADP | Death combined | All-cause death, nonfatal MI, stent thrombosis and stroke | 1-year | High OTPR | Death combined | 33/262  (12.6) | OR=2.22 | 1.25-3.93 | 0.005  high OTPR vs normal  logistic regression analysis | No | NR |  |
|  |  |  |  |  |  | Normal  OTPR |  | 21/344  (6.1) |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Kim, 2010  20449634  Korea  NR | 300-600mg LD and 75 mg maintain dose clopidogrel | 5umol ADP-induced PRmax≥50% | ischemic events | ischemic events | 6 months | 5umol ADP-induced PRmax≥50% | PRmax≥50% | 2.2% | OR=1.33 | 0.16-11.33 | 0.299  PR≥50 vs <50% | NR | NR | NR |
|  |  | 5umol ADP-induced LTA and VerifyNowP2Y12 |  |  |  | 5umol ADP-induced LTA and VerifyNowP2Y12 | PRmax<50% and PRmax<240 | 1.6% |  |  |  |  |  |  |
|  | 300-600mg LD and 75 mg maintain dose clopidogrel | 5umol ADP-induced PRmax≥50% | ischemic events | ischemic events | 6 months | 5umol ADP-induced PRmax≥50% | PRmax≥50% | 2.2% | OR=1.33 | 0.16-11.33 | 0.299  HPPR vs no-HPPR | NR | NR | NR |
|  |  | 5umol ADP-induced LTA and VerifyNowP2Y12 |  |  |  | 5umol ADP-induced LTA and VerifyNowP2Y12 | no-HPPR  (PRmax<50% and PRU<240) | 1.6% |  |  |  |  |  |  |
|  | 300-600mg LD and 75 mg maintain dose clopidogrel | 5umol ADP-induced LTA and VerifyNowP2Y12 | ischemic events | ischemic events | 6 months | 5umol ADP-induced PRmax≥50% and PRU≥240 | 5umol ADP-induced PRmax≥50% and PRU≥240 | 6.0% | OR=3.86 | 1.55-9.63 | 0.002  HPPR vs no-HPPR | NR | NR | NR |
|  |  | 5umol ADP-induced LTA and VerifyNowP2Y12 |  |  |  | 5umol ADP-induced LTA and VerifyNowP2Y12 | no-HPPR  (PRmax<50% and PRU<240) | 1.6% |  |  |  |  |  |  |
| Mobley, 2004  14969622  USA  NONE | 300mg LD Clopidogrel and 75mg MD | Combination of LTA, TEG & Ichor PlateletWorks | Major adverse coronary events | death due to cardiovascular or unknown causes, rehospitalization for angina pectoris, rehospitalization for myocardial infarction, or need for target vessel revascularization | 1 month | Nonresponder | Yes | 0/15 | OR=0.74  (calculated) | NR | p=0.85  nonresponder vs. responder  Fisher’s exact test | NR | NR |  |
|  |  |  |  |  |  | Responder | Yes | 1/35 |  |  |  |  |  |  |
|  |  |  | Major adverse coronary events | death due to cardiovascular or unknown causes, rehospitalization for angina pectoris, rehospitalization for myocardial infarction, or need for target vessel revascularization | 6 months | Nonresponder | Yes | 1/15 | OR=0.76 (calculate) | NR | p=0.82 nonresponder vs. responder  Fisher’s exact test | NR | NR |  |
|  |  |  |  |  |  | Responder | Yes | 3/35 |  |  |  |  |  |  |
| Saad, 2012  22146578  Egypt  NR | clopidogrel LD: 600 mg; MD: 75 mg/d; aspirin 162 mg/d | P-selectin by flow cytometry | MACE | CV death, recurrent acute coronary syndrome (ACS), and acute,  subacute, and late stent thromboses | 6 months | ≥18.5%  N=NR | MACE | NR | AUC=0.831 | 0.736-0.926 | P<0.001 | No | NR |  |
|  |  |  |  |  |  | <18.5%  N=NR |  | NR |  |  |  |  |  |  |
| Lakkis, 2001  11458412  USA  NR | clopidogrel 300 mg and aspirin 325 mg  and tirofiban | ICHOR platelet works | MACE | death, Q-wave myocardial  infarction, or rehospitalization for ischemia | 30 days | High reactivity <80% IPA  N=1 | MACE | 0 | NR | NR | NR | NR | NR |  |
|  |  |  |  |  |  | Normal reactivity <80% IPA  N=19 |  | 0 |  |  |  |  |  |  |
|  | clopidogrel 300 mg and aspirin 325 mg  and Abciximab | ICHOR platelet works | MACE | death, Q-wave myocardial  infarction, or rehospitalization for ischemia | 30 days | High reactivity <80% IPA  N=2 | MACE | 0 | NR | NR | NR | NR | NR |  |
|  |  |  |  |  |  | Normal reactivity <80% IPA  N=8 |  | 0 |  |  |  |  |  |  |