**Appendix Table E85. Results from studies assessing the ability of TEG 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)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Gurbel, 2010  20691842  USA  PREPARE POST-STENTING | Clopidogrel 300-600 mg LD + 75 mg MD &  Aspirin 325 mg LD + 81-325 mg MD | TEG-ADP | MACE | Cardiac death, stent thrombosis, myocardial infarction, ischemic stroke, and unplanned revascularization | First event over f/u of 36 months | TEG MA-ADP >47mm | MACE | NR | Sensitivity: 0.76  Specificity: 0.85  AUC: 0.84 | 0.78-0.89 | P<0.001  from ROC | NO | NR | Primary endpoint;  14/59 (24%) of first events occurred after  clopidogrel stopped (mean duration of  Tx=of 6.4 ± 3 months) |
|  |  |  |  |  |  | TEG MA-ADP ≤47mm |  | NR |  |  |  |  |  |  |
|  | Clopidogrel 300-600 mg LD + 75 mg MD &  Aspirin 325 mg LD + 81-325 mg MD | TEG-Thrombin | MACE | Cardiac death, stent thrombosis, myocardial infarction, ischemic stroke, and unplanned revascularization | First event over f/u of 36 months | TEG MA-Thrombin >69mm | MACE | NR | Sensitivity: 0.76  Specificity: 0.60  AUC: 0.70 | 0.64-0.76 | P<0.001  from ROC | NO | NR | Primary endpoint;  14/59 (24%) of first events occurred after  clopidogrel stopped (mean duration of  Tx=of 6.4 ± 3 months) |
|  |  |  |  |  |  | TEG MA-Thrombin≤47mm |  | NR |  |  |  |  |  |  |
|  | Clopidogrel 300-600 mg LD + 75 mg MD &  Aspirin 325 mg LD + 81-325 mg MD | TEG-ADP | MACE | Cardiac death, stent thrombosis, myocardial infarction, ischemic  stroke, and unplanned revascularization | First event over f/u of 36 months | TEG MA-ADP >47mm | MACE | NR | HR=10.3 | 5.4-20 | P<0.001  cox proportional hazard model | NO | NR | Primary endpoint |
|  |  |  |  |  |  | TEG MA-ADP ≤47mm |  | NR |  |  |  |  |  |  |
|  | Clopidogrel 300-600 mg LD + 75 mg MD &  Aspirin 325 mg LD + 81-325 mg MD | TEG-Thrombin | MACE | Cardiac death, stent thrombosis, myocardial infarction, ischemic stroke, and unplanned revascularization | First event over f/u of 36 months | TEG MA-Thrombin >69mm | MACE | NR | HR=3.8 | 2.1-7.0 | P<0.001  cox proportional hazard model | NO | NR | Primary endpoint |
|  |  |  |  |  |  | TEG MA-Thrombin≤47mm |  | NR |  |  |  |  |  |  |
|  | Clopidogrel 300-600 mg LD + 75 mg MD &  Aspirin 325 mg LD + 81-325 mg MD | TEG-ADP | MACE | Cardiac death, stent thrombosis, myocardial infarction, ischemic stroke, and unplanned revascularization | First event over f/u of 36 months | TEG MA-ADP >47mm | MACE | NR | HR=10.9 | 5.6-21.3 | P<0.001  cox proportional hazard model | YES;  MA-THROMBIN >69 mm and calcium-channel blockers | NR | Primary endpoint |
|  |  |  |  |  |  | TEG MA-ADP ≤47mm |  | NR |  |  |  |  |  |  |
|  | Clopidogrel 300-600 mg LD + 75 mg MD &  Aspirin 325 mg LD + 81-325 mg MD | TEG-Thrombin | MACE | Cardiac death, stent thrombosis, myocardial infarction, ischemic  stroke, and unplanned revascularization1 | First event over f/u of 36 months | TEG MA-Thrombin >69mm | MACE | NR | HR=3.5 | 1.9-6.4 | P<0.001  cox proportional hazard model | YES;  MA-ADP>47 mm and calcium-channel blockers | NR | Primary endpoint |
|  |  |  |  |  |  | TEG MA-Thrombin≤47mm |  | NR |  |  |  |  |  |  |
|  | Clopidogrel 300-600 mg LD + 75 mg MD &  Aspirin 325 mg LD + 81-325 mg MD | TEG-ADP | MACE | Cardiac death, stent thrombosis, myocardial infarction, ischemic stroke, and unplanned revascularization | First event over f/u of 36 months | Quartile 1 <29 mm | MACE | 3 (6%) | NR | NR | NR | NR | NR | Primary endpoint |
|  |  |  |  |  |  | Quartile 2 29-39 mm |  | 4 (8%) |  |  |  |  |  |  |
|  |  |  |  |  |  | Quartile 3 >39-72 mm |  | 16 (29%) |  |  |  |  |  |  |
|  |  |  |  |  |  | Quartile 4 >72 mm |  | 36 (65%) |  |  |  |  |  |  |
|  | Clopidogrel 300-600 mg LD + 75 mg MD &  Aspirin 325 mg LD + 81-325 mg MD | TEG-THROMBIN | MACE | Cardiac death, stent thrombosis, myocardial infarction, ischemic stroke, and unplanned revascularization | First event over f/u of 36 months | Quartile 1 <65 mm | MACE | 5 (10%) | NR | NR | NR | NR | NR | Primary endpoint |
|  |  |  |  |  |  | Quartile 2 65-69 mm |  | 8 (15%) |  |  |  |  |  |  |
|  |  |  |  |  |  | Quartile 3 >69-72 mm |  | 21 (38%) |  |  |  |  |  |  |
|  |  |  |  |  |  | Quartile 4 >72 mm |  | 25 (43%) |  |  |  |  |  |  |
| Cotton,  2010  20406238  UK  NR | 300 mg or 600 mg LD Clopidogrel and maintaining 75 mg+ Aspirin | sTEG AUC 15 | Adverse event | MI+revascularization+cardiovascular admissions | 1 year | sTEG <800 mm/min | Adverse event | 0/NR | NR | NR | <0.02 sTEG <800 vs >800mm/min | NR | NR |  |
|  |  |  |  |  |  | sTEG AUC>800mm/min |  | 5/NR |  |  |  |  |  |  |
| Gurbel, 2005  16286165  USA  PREPARE POST-STENTING | Clopidogrel (300- 600 mg LD+75 mg daily MD) + aspirin (81- to 325-mg/d x 7 days LD + 325 md/f MD) | TEG-MA | Ischemic events | Cardiovascular death, MI, unstable angina and stroke requiring rehospitalization | 6 months | High TEG- MA- Quartile 4 (>72mm%) | Ischemic events | NR | OR=22.6 | 6.202-82.604 | P<0.0001  (Mulitple logistic regression) | YES;  Low TEG-R (reaction time<3.9 mins), High LTA(Max agg>67%) and combination of High TEG-MA and low R | NR | Tab 4; it’s not clear if all predictor were in the same model |
|  | Clopidogrel (300- 600 mg LD+75 mg daily MD) + aspirin (81- to 325-mg/d x 7 days LD + 325 md/f MD) | TEG-R | Ischemic events | Cardiovascular death, MI, unstable angina and stroke requiring rehospitalization | 6 months | Low-R Quartile 1 (<3.9 mins) | Ischemic events | NR | OR=4.4 | 1.002-19.051 | P=0.0498  (Mulitple logistic regression) | YES;  High TEG-MA (ma amplitude >72mm), High LTA(Max agg>67%) and combination of High TEG-MA and low R | NR | Tab 4; it’s not clear if all predictor were in the same model |
|  | Clopidogrel (300- 600 mg LD+75 mg daily MD) + aspirin (81- to 325-mg/d x 7 days LD + 325 md/f MD) | TEG-MA | Ischemic events | Cardiovascular death, MI, unstable angina and stroke requiring rehospitalization | 6 months | High TEG- MA- Quartile 4 (>72mm%) | Ischemic events | NR | Sens=0.74  Spec=0.89 | NR | NR | NO | No | Tab 4; it’s not clear if all predictor were in the same model |
|  | Clopidogrel (300- 600 mg LD+75 mg daily MD) + aspirin (81- to 325-mg/d x 7 days LD + 325 md/f MD) | TEG-R | Ischemic events | Cardiovascular death, MI, unstable angina and stroke requiring rehospitalization | 6 months | Low-R Quartile 1 (>3.9 mins) | Ischemic events | NR | Sens=0.42  Spec=0.79 | NR | NR | NO | No | Tab 4; it’s not clear if all predictor were in the same model |
|  | Clopidogrel (300- 600 mg LD+75 mg daily MD) + aspirin (81- to 325-mg/d x 7 days LD + 325 md/f MD) | TEG-MA | Ischemic events | Cardiovascular death, MI, unstable angina and stroke requiring rehospitalization | 6 months | Quartile 1 (<65 mm) | Ischemic events | 2% | NR | NR | P<0.001 (Q1 vs Q4)  P<0.001 (Q2 vs Q4)  P<0.001 (Q3 vs Q4)  Logistic regression with appropriate contrasts | NO | NR | Fig 7 |
|  |  |  |  |  |  | Quartile 2 (65-68 mm) |  | 8% |  |  |  |  |  |  |
|  |  |  |  |  |  | Quartile 3 (69-72 mm) |  | 9% |  |  |  |  |  |  |
|  |  |  |  |  |  | High TEG-MA - Quartile 4 (>72 mm) |  | 58% |  |  |  |  |  |  |
|  | Clopidogrel (300- 600 mg LD+75 mg daily MD) + aspirin (81- to 325-mg/d x 7 days LD + 325 md/f MD) | TEG-R | Ischemic events | Cardiovascular death, MI, unstable angina and stroke requiring rehospitalization | 6 months | Quartile 1 (<3.9 mins) | Ischemic events | 33% | NR | NR | P=0.41 (Q1 vs Q2)  P=0.006 (Q1 vs Q3)  P=0.004 (Q1 vs Q4)  Logistic regression with appropriate contrasts | NO | NR | Fig 8 |
|  |  |  |  |  |  | Quartile 2 (3.9-5.1 min) |  | 26% |  |  |  |  |  |  |
|  |  |  |  |  |  | Quartile 3 (5.2-6.1 min) |  | 9% |  |  |  |  |  |  |
|  |  |  |  |  |  | Quartile 4 (6.1-14 min) |  | 7% |  |  |  |  |  |  |
| Bliden, 2006  17291930  USA  NR | clopidogrel  75 mg qd | TEG | Ischemic events | Ischemic events | 1 year | HPR | Ischemic event | NR | OR=26.8 | 6.7-107.5 | <0.001  cox regression | Yes, age, presentation, diabetes, hypertension, current smoking, BMS(bare-metal stents) | NR |  |