**Appendix Table E43. Quality assessment of studies assessing the predictive ability of VerifyNow in patients with ischemic heart disease**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Author, year [ref]**  **UID**  **Country**  **Study Name** | **Patients selection** |  |  |  |  | **Index test** |  |  |  | **Reference standard** |  |  |  | **Flow and timing** |  |  |  |  |
|  | **1** | **2** | **3** | **ROB**  **(selection)** | **Applicability**  **(selection)** | **4** | **5** | **ROB**  **(index)** | **Applicability**  **(index)** | **6** | **7** | **ROB**  **(reference)** | **Applicability**  **(reference)** | **8** | **9** | **10** | **11** | **ROB**  **(flow & timing)** |
| Cotton, 2010{Cotton, 2010 75 /id}  20406238  UK  NR | no | yes | yes | low | low | NR | No | high | low | yes | NR | yes | low | yes | yes | yes | yes | low |
| Angiolillo, 2007{Angiolillo, 2008 180 /id}  18312754  USA  OPTIMUS | NO | yes | yes | low | low | NR | NR | unclear | unclear | No | NR | unclear | high | no [1 month] | yes | yes | yes | low |
| Breet, 2010{Breet, 2010 86 /id}  20179285  Netherlands  POPULAR | yes | yes | yes | low | low | NR | no | high | low | yes | yes | low | low | yes | yes | yes | yes | low |
| Kim, 2010{Kim, 2010 241 /id}  20449634  Korea  NR | yes | yes | yes | low | low | NR | yes | unclear | Low | Yes | NR | unclean | Low | no [6 months] | yes | yes | yes | low |
| Ko, 2011{Ko, 2011 26 /id}  21315223  Korea  NR | YES | YES | YES | LOW | LOW | YES | NO | HIGH | LOW | YES | NR | UNCLEAR | LOW | NO [30 days] | YES | YES | YES | LOW |
| Campo, 2010{Campo, 2010 58 /id}  20951320  10 sites in Italy, Belgium, France, Sprain  3T/2R trial | No | YES | YES | LOW | LOW | NR | yes | unclear | Low | YES | NR | UNCLEAR | LOW | yes [1 year] | yes | yes | yes | low |
| Campo, 2011{Campo, 2011 13 /id}  21679849  Italy  NR | Yes | YES | YES | LOW | LOW | NR | yes | Low | Low | YES | NR | UNCLEAR | LOW | yes [12 months] | yes | yes | yes | low |
| Cuisset, 2008{Cuisset, 2008 168 /id}  18549843  Belgium  NR | Yes | YES | YES | LOW | LOW | NR | No | High | Low | YES | Yes | Low | LOW | NO  [followup NR] | yes | yes | yes | low |
| de\_Miguel\_Castro, 2009{de Miguel, 2009 136 /id}  19232185  Spain  NR | No | YES | YES | LOW | LOW | Yes | No | High | Low | YES | Yes | Low | LOW | yes [1 year] | yes | yes | yes | low |
| Gladding, 2008{Gladding, 2008 149 /id}  19463375  New Zealand  Secondary (but not subgroup) analysis of PRINC (Plavix Response in Coronary Intervention) Trial | Yes | YES | YES | LOW | LOW | NR  [double-blind trial but details related to genotyping unclear] | yes | Unclear | Low | No | NR  [double-blind trial but details related to genotyping unclear] | High | Low | No [7 days] | yes | yes | yes | low |
| Huczek, 2011{Huczek, 2011 239 /id}  21443410  Poland  NR | NR | YES | No | Unclear | LOW | NR | No | High | Low | YES | NR | UNCLEAR | LOW | NO [30 days] | YES | YES | YES | LOW |
| Kim, 2011{Kim, 2011 5 /id}  21786434  South Korea  CiLostazol administration before pErcutaneous coronAry intervention for Reduction of periprocedural myonecrosis trial (CLEAR trial) | Ye (RCT)s | YES | YES | LOW | LOW | NR | yes | Unclear | Low | YES | NR | UNCLEAR | LOW | NO [6 months] | YES | YES | YES | LOW |
| Lee, 2009{Lee, 2009 230 /id}  20049136  South Korea  NR | Yes | YES | YES | LOW | LOW | NR | yes | Unclear | Low | YES | NR | UNCLEAR | LOW | NO [6 months] | YES | YES | YES | LOW |
| Mangiacapra, 2010{Mangiacapra, 2010 83 /id}  20298992  Italy  NR | No | YES | YES | LOW | LOW | NR | yes | Unclear | Low | YES | NR | UNCLEAR | LOW | NO  [followup NR] | yes | yes | yes | low |
| Mangiacapra, 2010{Mangiacapra, 2010 94 /id}  20129566  Belgium  NR | No | YES | YES | LOW | LOW | NR | No | High | Low | YES | NR | UNCLEAR | LOW | NO  [followup NR] | yes | yes | yes | low |
| Mangiacapra, 2010{Mangiacapra, 2010 65 /id}  20723634  Italy  NR | Yes | YES | YES | LOW | LOW | NR | yes | Unclear | Low | YES | NR | UNCLEAR | LOW | NO  [followup NR] | yes | yes | yes | low |
| Marcucci, 2009{Marcucci, 2009 144 /id}  19118249  Italy  NR | No | YES | YES | LOW | LOW | Yes | No | Unclear | Low | YES | NR | UNCLEAR | LOW | yes [12 months] | yes | yes | yes | low |
| Patti, 2008{Patti, 2011 22 /id}  18804738  Italy  ARMYDA-PRO (Antiplatelet  therapy for Reduction of MYocardial Damage during  Angioplasty-Platelet Reactivity Predicts Outcome) | NR | YES | YES | LOW | LOW | NR | No | High | Low | YES | NR | UNCLEAR | LOW | NO;  1 MONTH & 6 MONTH | yes | yes | yes | low |
| Patti, 2011{Patti, 2011 22 /id}  21256470  Italy  Antiplatelet Therapy for Reduction of Myocardial Damage During Angioplasty (ARMYDA)–Bleeding Study (ARMYDA-BLEEDS) | Yes | YES | YES | LOW | LOW | NR | yes | Unclear | Low | YES | NR | UNCLEAR | LOW | NO (1 month) | yes | yes | yes | low |
| Price, 2011{Price, 2011 23 /id}  21406646  USA  Gauging Responsiveness with A VerifyNow assay—Impact on Thrombosis And Safety (GRAVITAS) | Yes | YES | YES | LOW | LOW | Yes | yes | Low | Low | Yes | yes | Low | Low | NO (6 months) | yes | yes | yes | low |
| Price, 2008{Price, 2008 174 /id}  18263931  USA  NR | No | YES | YES | LOW | LOW | NR | NR | Unclear | Low | YES | NR | UNCLEAR | LOW | NO (6 months) | yes | yes | yes | low |
| Saw, 2008{Saw, 2008 242 /id}  19463380  Canada  BRIEF-PCI | No | YES | YES | LOW | LOW | Yes | No | Unclear | Low | YES | NR | UNCLEAR | LOW | NO (6 months) | yes | yes | yes | low |
| Valgimigli, 2009{Valgimigli, 2009 244 /id}  19528337  10 sites in Europe (Italy, Belgium, France, Spain)  Tailoring Treatment With Tirofiban in Patients Showing Resistance to Aspirin and/or Resistance to Clopidogrel (3T/2R) study | No | YES | YES | LOW | LOW | NR | No | High | Low | YES | NR | UNCLEAR | LOW | NO (2-30 days) | yes | yes | yes | low |
| Vavuranakis, 2011{Vavuranakis, 2011 245 /id}  21712606  Greece  NR | No | YES | No | HIgh | LOW | NR | No | High | Low | Yes | yes | Low | Low | NO (Mean 203 days) | yes | yes | yes | low |
| Breet, 2011{Breet, 2011 15 /id}  21478385  The Netherlands  POPular | Yes | yes | yes | low | low | NR | Yes | Unclear | Unclear | Yes | Yes | Low | low | Yes [1 year] | yes | yes | yes | low |
| Suh, 2011{Suh, 2011 33 /id}  21232664  Korea  CILON-T | NR | YES | YES | LOW | LOW | Yes | No | High | Low | Yes | NR | Unclear | low | NO (6 months) | yes | yes | yes | low |
| Park, 2011 {Park, 2011 1 /id} 22152948  Korea  NR | yes | yes | yes | low | low | yes | yes | low | low | yes | yes | low | low | yes (median 2.2 years) | Yes | yes | yes | low |
| Price, 2011{Price, 2011 18182 /id}  21875913  USA  Gauging Responsiveness with A VerifyNow assay—Impact on Thrombosis And Safety (GRAVITAS) | Yes | YES | YES | LOW | LOW | Yes | yes | Low | Low | Yes | yes | Low | Low | NO (6 months) | yes | yes | yes | low |
| Park, 2011{Park, 2011 18181 /id}  21880289  Korea  CROSS-VERIFY | NR | yes | yes | low | low | yes | yes | Low | Low | Yes | yes | Low | Low | Yes (12 months) | yes | yes | yes | low |
| Mangiacapra, 2012{Mangiacapra, 2012 18179 /id}  22440493  Italy & Belgium  ARMYDA-PROVE | Yes | yes | yes | low | low | yes | No | High | Low | Yes | yes | Low | Low | No (30 days) | yes | yes | yes | low |
| Yu, 2012 {Yu, 2012 18231 /id}  Korea  NR | yes | yes | yes | low | low | NR | yes | unclear | low | yes | NR | unclear | yes | yes | yes | yes | yes | low |
| Jin, 2012 {Jin, 2012 18230 /id} Korea  NR | NR | yes | no | unclear | low | NR | no | High | low | yes | NR | unclear | low | yes | yes | yes | no | low |
| Saraf, 2010{Saraf, 2010 18234 /id}  20447533  UK  NR | NR | Yes | Yes | Low | Low | Yes | Yes | Low | Low | Yes | NR | Unclear | Low | Yes [1 year] | Yes | Yes | Yes | Low |
| Codner, 2012{Codner, 2012 18241 /id}  22534051  Israel  NR | NR | Yes | yes | Low | Low | NR | Yes | unclear | Low | No | Yes | High | High | No [6 months] | Yes | yes | Yes | Low |
| Gaglia, 2012{Gaglia, 2011 18244 /id}  21919956  USA  NR | Yes | Yes | Yes | Low | Low | Yes | Yes | Low | low | Yes | Yes | Low | Low | No [in-hospital] | yes | yes | yes | Low |

1. Consecutive or random sample of patients enrolled.
2. Case-control design avoided
3. Study avoided inappropriate exclusions

Risk of bias: could the selection of patients have introduced bias ( If ≥2 of the above 3 questions are YES, give LOW here; if ≥2 are NO give HIGH; otherwise, give UNCLEAR)

Concerns that the included patients do not match the review question?

1. Index test results interpreted without knowledge of results of reference standard?
2. If a threshold used, was it prespecified?

Risk of bias: Could the conduct or interpretation of the index test have introduced bias?

(If both of the above questions are YES, give LOW here; if one or both are NO, give HIGH; otherwise, give UNCLEAR)

Concerns that the index test, its conduct, or its interpretation differ from the review question?

1. Reference standard likely to correctly classify the target condition?
2. Reference standard results interpreted without knowledge of index test results?

Could the reference standard, its conduct, or its interpretation have introduced bias?

(If both of the above questions are YES, give LOW here; if one or both are NO, give HIGH; otherwise, give UNCLEAR)

Are there concerns that the target condition as defined by the reference standard does not match the review question?

1. Appropriate interval between index test and reference standard?
2. All patients received a reference standard?
3. All patients received the same reference standard?
4. Were all patients included in the analysis?

Could the patient flow have introduced bias? (If ≥3 of the above 4 questions are YES, give LOW here; if ≥2 are NO give HIGH; otherwise, give UNCLEAR)