# The use of thromboelastography in percutaneous coronary intervention and acute coronary syndrome in East Asia: A systematic literature review

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## Supplementary material

**Table S1:** Search terms

| **Interventional cardiology terms** | **Drug treatment of cardiovascular disease terms** | **Countries when investigators are bases** | **TEG technology terms** | **Filters** |
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| percutaneous coronary intervention OR PCI OR transcatheter aortic valve replacement OR transcatheter aortic valve implant* OR transcatheter aortic valve intervent* OR TAVR OR TAVI OR electrophysiol* | [arrhythmia* OR acute coronary syndrome* OR coronary artery disease OR heart OR myocardial OR coronary OR cardiac OR cardiovascular] AND [platelet aggregation inhibitors OR antiplatelet OR anticoagulant OR antithrombo*] | China OR Japan OR Korea OR Thailand OR Singapore OR Hong Kong OR Malaysia OR Indonesia OR Philippines OR Myanmar OR Laos OR Cambodia OR Vietnam OR Taiwan | Thromboelasto* OR TEG OR Thrombelasto* OR PlateletMapping | Published in the last 10 years AND [English language OR Chinese language] |

**Table S2:** SIGN grading

| Article | Study Type | SIGN Rating* |
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| **PubMed: English language studies** | | |
| Yan, XQ, et al. Ann Palliat Med 2021. 10(3):2448-2457 | Non-randomized prospective study | 2+ or 2- |
| Gorog, DA, et al. Cardiovasc Res 2021. 117(2): 623-634 | RCT | 1- |
| Wu, HY et al. Acta Pharmacol Sin 2020. 41(2): 192-197 | Post hoc analysis of prospective observational study | 2+ or 2- |
| Wei, W et al. J Thorac Dis 2020. 12(10): 5811-5821 | Non-randomized observational study | 2+ |
| Park, Y et al. J Clin Med 2020. 9(6): 1678 | RCT | 1+ |
| Cheng, D et al. Biosci Rep 2020. 40(7) | Non-randomized prospective study | 2+ or 2- |
| Peng, W et al. Cardiovasc Ther 2019. | Non-randomized prospective study | 2- |
| Li, X et al. Front Pharmacol 2019. 10: 1158 | Non-randomized prospective study | 2- |
| Li, X et al. Basic Clin Pharmacol Toxicol 2019. 124(1): 84-93 | Non-randomized prospective study | 2- |
| Cao, B et al. Aging (Albany NY) 2019. 11(20): 8925-8936 | RCT | 2- |
| Zhuo, ZL et al. Anatol J Cardiol 2018. 19(2): 123-129 | Non-randomized prospective study | 2- |
| Yang, B et al. Iran J Public Health 2018. 47(7): 952-957 | RCT | 1+ |
| Tang, YD et al. Circulation 2018. 137(21): 2231-2245 | RCT | 1+ |
| Hou, X et al. J Clin Lab Anal 2018. 32(5): e22369 | Non-randomized prospective study | 2+ |
| Gong, W et al. J Am Heart Assoc 2018. 7(15): e008808 | Non-randomized prospective study | 2+ |
| Zhu, P et al. Chin Med J (Engl) 2017. 130: 2899-2905 | Non-randomized prospective study | 2+ |
| Nie, XY et al. J Zhejiang Univ Sci B 2017. 18(1): 37-47 | Non-randomized prospective study | 2- |
| Fu, DL et al. Chin Med J (Engl) 2017. 130(16): 1914-1918 | Non-randomized prospective study | 2- |
| Yao, Y et al. Chin Med J (Engl) 2016. 129(19): 2269-2274 | Non-randomized prospective study | 2- |
| Li, DD et al. J Geriatr Cardiol 2016. 13(4): 282-289 | Non-randomized prospective study | 2- |

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| Dong, P et al. Med Sci Monit 2016. 22: 4929-4936 | RCT | 2- |
| Wu, ZK et al. J Geriatr Cardiol 2015. 12(4): 378-382 | Non-randomized prospective study | 2+ |
| Tang, XF et al. Chin Med J (Engl) 2015. 128(6): 774-779 | Non-randomized prospective study | 2+ |
| Sun, B et al. Genet Mol Res 2015. 14(1): 1434-1442 | Non-randomized prospective study | 2- |
| Liu, J et al. Chin Med J (Engl) 2015. 128(16): 2183-2188 | Non-randomized prospective study | 2- |
| Zhu, P et al. Platelets 2021. 32(5):684-689 | Non-randomized prospective study | 2+ |
| Zhang, M et al. Eur Rev Med Pharmacol Sci 2020. 24(20): 10753-10768 | RCT | 1 |
| Zhu, P et al. Platelets 2019. 30(7): 901-907 | Non-randomized prospective study | 2- |
| Koh, JS et al. Thromb Haemost 2019. 119(2): 264-273 | RCT | 1 |
| Zhang, S et al. Cardiology 2018. 140(1): 21-29 | Non-randomized prospective study | 1 |
| Chen, Y et al. Cardiovasc J Afr 2018. 29(6): 357-361 | Non-randomized prospective cross-sectional study | 2+ |
| Song, Y et al. Biomed Environ Sci 2017. 30(12): 898-906 | Non-randomized prospective study | 2+ |
| Koh, JS et al. Platelets 2017. 28(2): 187-193 | RCT | 1+ |
| Yao, Y et al. Thromb Res 2016. 141: 28-34 | Non-randomized prospective study | 2- |
| Tang, N et al. Scand J Clin Lab Invest 2015. 75(3): 223-229 | Non-randomized prospective study | 2+ |
| Tian, KP et al. Nan Fang Yi Ke Da Xue Xue Bao 2016. 37(4): 533-536 | Non-randomized prospective study | 2- |
| Xia, JG et al. Beijing Da Xue Xue Bao Yi Xue Ban 2015. 47(3): 494-498 | RCT | 1 |
| Zhong, T et al. Zhongguo Shi Yan Xue Ye Xue Za Zhi 2018. 26(5): 1484-1491 | Cross sectional case control study | 2 |
| Luo, Y et al. Zhonghua Wei Zhong Bing Ji Jiu Yi Xue 2020. 32(8): 994-997 | RCT | 1 |
| Zhang, M et al. Perfusion 2020. | RCT | 2+ |

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| Xu, XR et al. Zhonghua Nei Ke Za Zhi 2016. 55(12): 932-936 | RCT | 1- |
| Xu, JJ et al. Zhonghua Xin Xue Guan Bing Za Zhi 2017. 45(2): 116-120 | Non-randomized prospective study | 2+ |
| **Chinese Databases: Chinese language studies** | | |
| Li, B. Clinical Medicine 2020. 0(1): 57-59 | RCT | 1+ |
| Li, D et al. Chinese Clinical Journal of Thoracic and Cardiovascular Surgery 2019. 26(2): 137-141 | Cohort study | 2- |
| Wu, H et al. Shanghai medical journal 2018. 41(1): 9-13 | Case control study | 2+ |
| Cui, Y et al. Chinese Cardiovascular Disease Research 2018. 16(1): 34-38 | Cohort study | 2- |
| Dana, W et al. Journal of Clinical Cardiovascular Diseases 2018. 34(7): 685-690 | Cohort study | 2- |
| Chen, Z. Northern Pharmacy 2017. 14(9): 23-23 | Non-randomized prospective study | 2- |
| Wang, J. Clinical Medicine and Research 2018. 0(66): 64-64 | Cohort study | 2- |
| Cui, Y et al. Journal of Integrated Cardiovascular and Cerebrovascular Diseases 2018. 16(4): 461-463 | Case control study | 2+ |
| Li, G et al. Journal of Clinical Blood Transfusion and Testing 2017. 19(1): 59-63 | Case control study | 2+ |
| Miao, L et al. Journal of Clinical Cardiovascular Diseases 2016. 32(4): 334-338 | RCT | 1+ or 1- |
| Ma, Y et al. Modern Applied Pharmacy in China 2017. 34(4): 587-590 | Non-randomized prospective study | 2- |
| Chen, ML et al. Journal of Diagnostic Theory and Practice 2016. 0(2):142-147 | Non-randomized prospective study | 2- |
| Wu, Y et al. Journal of Clinical Hematology (Blood Transfusion and Testing) 2016. 29(1): 120-122 | Retrospective study | 2- |

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| World Chinese Association of laboratory and pathologists; Laboratory physicians branch of Chinese Medical Association; Professional Committee of cardiovascular Laboratory Medicine. Journal of Clinical Medical Research and Practice 2018. 3(19): 201-201 | Consensus | 4 |
| Wei, H et al. Chinese Journal of Emergency Resuscitation and Disaster Medicine 2018. 13(10): 946-948 | RCT | 1- |
| Liang, D et al. Clinical Medicine and Research 2016. 0(58): 186-187 | Cohort study | 2- |
| Huang, L et al. Chinese Journal of Geriatric Multi-organ Diseases 2017. 16(11): 846-849 | RCT | 1- |
| Hodgs et al. Clinical Medicine and Research 2020. Volume(24): 34-35 | RCT | 1+ |
| Cui, H. New Word Journal of Diabetes 2019. 22(14): 22-23 | Case control study | 2- |
| Ren, D et al. Journal of Cardiovascular and Vascular Diseases 2019. 38(7): 725-730 | Case control study | 2+ |
| He, W. Modern Medicine and Health 2019. 35(S01): 27-28 | Case control study | 2- |
| Liu, W et al. Journal of Modern Integrative Medicine 2017. 26(22): 2487-2489 | Historical comparison | 2- |
| Zhao, Y et al. Journal of Laboratory Medicine and Clinical 2017. 28(3): 37-40 | Non-randomized prospective study | 2- |
| Chen, Q. Thrombosis and hemostasis 2016. 22(6): 611-613 | RCT | 1- |
| Zhang, Q et al. Chinese Journal of Pharmaceutical Science 2016. 6(11): 97-99 | RCT | 1- |
| Yanjun, Y et al. Chinese Journal of General Medicine 2016. 14(8): 1289-1292 | Non-randomized prospective study | 2+ |

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| Zhang, Y et al. Jilin Medicine 2020. 41(7): 1587-1589 | RCT | 1- |
| Zhang, Q et al. Clinical Research Journal 2019. 27(11): 19-21 | Non-randomized prospective study | 2+ |
| Liu, W et al. Lingnan Journal of Cardiovascular Diseases 2019. 25(1): 53-57 | Non-randomized prospective study | 2+ |
| Wu, D et al. Chinese Journal of Hospital Pharmacy 2018. 38(7): 759-762 | Non-randomized prospective study | 2- |
| Wu, F. Journal of Contemporary Medicine 2018. 16(24): 25-26 | RCT | 1- |
| Miao, L et al. Chinese Journal of Clinical Laboratory Science 2017. 35(6): 439-443 | Non-randomized prospective study | 2+ |
| Zhuang, J et al. Chinese Cardiovascular Disease Research 2017. 15(5): 445-450 | RCT | 1+ |
| Huang, M et al. Journal of Practical Clinical Medicine 2017. 21(12): 49-52 | RCT | 1- |
| Li, H. Chinese Practical Medical Journal 2016. 43(22): 40-42 | Non-randomized prospective | 2- |
| Wén, TQ et al. China Medical Guide 2016. 14(4): 165-166 | Retrospective case control study | 2- |
| Fu, X. Journal of Medical Dietary Therapy and Health 2018. 0(12): 45-45 | Retrospective case control study | 2- |
| Li, X et al. Medical Journal of Chinese People's Armed Police Forces 2018. 29(1): 14-16 | RCT | 1- |
| Jūn, HY et al. Journal of Integrated Cardiovascular and Cerebrovascular Diseases 2017. 15(3): 358-360 | Non-randomized prospective study | 2+ |
| Ma, J et al. Journal of Cardiovascular Diseases of Integrated Traditional Chinese and Western Medicine 2016. 4(24): 29-29 | Non-randomized prospective study | 2- |
| Cai, H. Knowledge of Cardiovascular Disease | Non-randomized prospective study | 2+ |

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| Prevention and Treatment 2020. 10(22): 32-34 | | |
| Lin, G et al. Thrombosis and Hemostasis 2019. 25(2): 199-201 | RCT | 1- |
| Zhan, X et al. Chinese Journal of Evidence-based Cardiovascular Medicine 2017. 9(9): 1108-1111 | RCT | 1- |
| Xu, Y et al. Modern Practical Medicine 2016. 28(10): 1323-1324 | Retrospective case control study | 2+ |
| Wei, H et al. Journal of Hunan University of Traditional Chinese Medicine 2016. 36(A02): 672-673 | RCT | 1- |
| Pan, B et al. Modern Medicine 2019. 47(9): 113-1138 | Non-randomized prospective study | 2- |
| Wu, D et al. Journal of Integrated Cardiovascular and Cerebrovascular Diseases 2019. 17(8): 1210-1212 | Retrospective case control study | 2- |
| Shen, W et al. Journal of Pla Medical College 2018. 39(2): 106-109 | RCT | 1+ |
| Lin, T et al. Chinese Journal of Gerontology 2018. 38(7): 1568-1569 | RCT | 1- |
| Ma, C et al. Journal of Nanjing Medical University 2018. 38(10): 1415-1420 | RCT | 1- |
| Hou, X et al. Chinese Cardiovascular Disease Research 2016. 14(12): 1081-1085 | RCT | 1- |
| Chen, Z et al. Journal of Clinical Research 2016. 33(11): 2207-2209 | Non-randomized prospective study | 2- |
| Hao, Z. Capital Medical Journal 2020. 27(19): 41-42 | Non-randomized prospective study | 2- |
| Brief News. Journal of Military Surgeon in Southwest China 2019. 21(6): 501-504 | Non-randomized prospective study | 2+ |

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| Du, Y et al. China Medical Herald Journal 2019. 16(11): 50-53 | Non-randomized prospective study | 2- |
| Huang, X et al. Anhui Medical Journal 2017. 38(12): 1580-1582 | Non-randomized prospective study | 2- |
| Zhang, D et al. Chinese Journal of Modern Medicine 2017. 19(7): 17-20 | Case control study | 2- |
| Yan, F et al. Journal of Practical Drugs and Clinics 2017. 20(4): 423-428 | Non-randomized prospective study | 2- |
| Hu, Z et al. Beijing Medical Journal 2018. 40(9): 818-820 | Non-randomized prospective study | 2+ |
| Li, A et al. Chinese Journal of Modern Medicine 2017. 27(1): 94-98 | Non-randomized prospective study | 2- |
| Bai, Y et al. Chinese Journal of Evidence-based Cardiovascular Medicine 2016. 8(12): 1491-1493 | RCT | 1- |
| Pei, Y et al. Journal of Clinical Psychosomatic Diseases 2020. 26(3): 45-47 | RCT | 1- |
| Liu, X et al. Journal of Clinical Hematology (Transfusion and Testing) 2020. 33(3): 425-427 | Non-randomized prospective study | 2- |
| Qiu, Y et al. Journal of Practical Medical Techniques 2020. 27(3): 284-286 | RCT | 1+ |
| Wang, G et al. Journal of Community Medicine 2020. 0(4): 264-268 | Case control study | 2+ |
| Zhu, J et al. Journal of Clinical Medicine Literature 2020. 7(96): 166-166 | RCT | 1- |
| Zhang, C et al. Medical Innovation in China 2018. 15(16): 27-30 | Case control study | 2- |
| Sun, A et al. Journal of Clinical Cardiovascular Diseases 2017. 33(5): 431-434 | RCT | 1+ |
| Chen, W et al. Medical New Knowledge 2016. 26(5): 338-341 | Cohort study | 2- |

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| Zhang, X et al. Shandong Medicine 2016. 56(5): 39-41 | RCT | 1- |
| Chen, Z et al. Shanxi Medical Journal 2020. 49(14): 1846-1848 | Retrospective case control study | 2- |

*In order of increasing bias, SIGN rating describes the levels of evidence ranked 1–4. Study type and quality of data are used to produce four grades of recommendation defined as follows; 1++: high quality meta-analyses, systematic reviews of RCTs, or RCTS with very low risk of bias; 1+: well-conducted meta-analyses, systematic reviews, or RCTs with a low risk of bias; 1-: meta-analyses, systematic reviews, or RCTs with a high risk of bias; 2++: high quality systematic reviews of case control or cohort or studies, high quality case control or cohort studies with a very low risk of confounding or bias and a high probability that the relationship is causal; 2+: well conducted case control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal; 2-: case control or cohort studies with a high risk of confounding or bias and a significant risk that the relationship is not causal; 3: non-analytic studies, e.g., case reports, case series; 4: expert opinion

SIGN, Scottish intercollegiate guidelines network; RCT, randomized controlled trial