APPENDIX A. SEARCH STRATEGIES

MEDLINE

1	((((("Chest Pain"[Mesh] OR "Myocardial Ischemia"[Mesh] OR "Acute Coronary Syndrome"[Mesh] OR "Myocardial Infarction"[Mesh] OR (acute coronary syndrome*[tiab]) OR (preinfarc*[tiab] AND Angina*[tiab]) OR (pre-infarc*[tiab] AND Angina*[tiab]) OR "Unstable angina*"[tiab] OR ((heart*[tiab] OR myocardi*[tiab] OR cardiac[tiab] OR coronary[tiab]) AND (preinfarc*[tiab] OR infarc*[tiab] OR attack*[tiab] OR arrest*[tiab] OR occlusion*[tiab] OR ischemia*[tiab] OR ischaemia[tiab]) OR occlusi*[tiab]) OR MI[tiab] OR ACS[tiab] OR STEMI[tiab] OR NSTE-ACS[tiab] OR NSTEACS[tiab] OR nonSTEMI[tiab] OR NSTEMI[tiab] OR AMI[tiab] OR UAP[tiab] OR OMI[tiab] OR ((acute[tiab] OR ischem*[tiab] OR ischaem*[tiab]) AND (coronar*[tiab] OR cardiac*[tiab] OR heart[tiab])) OR ((heart[tiab] OR myocard*[tiab]) AND infarct*[tiab]))))
2	(("troponin T"[Mesh] OR "troponin I"[Mesh] OR troponin[Mesh] OR "trop I"[tiab] OR "trop t"[tiab] OR "troponin I"[tiab] OR "troponin T"[tiab] OR accu-tni[tiab] OR accutni[tiab] OR ctni-hs[tiab] OR ctni-ultra[tiab] OR ctni[tiab] OR ctnihs[tiab] OR ctnt-hs[tiab] OR ctnt[tiab] OR cTnT[tiab] OR ctnths[tiab] OR hs-ctni[tiab] OR hs-cTnT[tiab] OR hs-tni[tiab] OR hs-TnT[tiab] OR hsctni[tiab] OR hscTnT[tiab] OR Hstni[tiab] OR hsTnT[tiab] OR tni[tiab] OR tnt-hs[tiab] OR tnt[tiab] OR tnths[tiab] OR tropI[tiab] OR troponin*[tiab] OR tropT[tiab] OR "Accelerated diagnostic protocol*" OR "HEART Pathway" OR "EDACS-ADP" OR "EDACS" OR ADP)))
3	(("Emergency Service, Hospital"[Mesh] OR emergency room* OR emergency department* OR ED OR ER OR "Triage"[Mesh] OR "Emergencies"[Mesh] OR "Emergency Responders"[Mesh] OR "Emergency Treatment"[Mesh] OR "Emergency Medicine"[Mesh] OR "Emergency Medical Technicians"[Mesh] OR "Emergency Medical Services"[Mesh] OR "Ambulances"[Mesh] OR "Hospital Rapid Response Team"[Mesh] OR triage OR emergenc* OR ambulance* OR EMT OR EMS OR "Cardiology Service, Hospital"[Mesh]))))
5	#1 AND #2 AND #3
6	((((("2008/01/01"[Date - Entry] : "3000"[Date - Entry])) OR (("2008/01/01"[Date - Publication] : "3000"[Date - Publication]))) OR (("2008/01/01"[Date - Create] : "3000"[Date - Create]))))
7	AND/5-6

EMBASE

1	Heart muscle ischemia/exp OR heart muscle ischemia
2	Myocardial ischemia
3	Acute coronary syndrome
4	Heart infarction
5	Myocardial infarction
6	Unstable angina pectoris
7	Unstable angina
8	(heart* OR myocardi* OR cardiac OR coronary) AND ((preinfarc* OR infarc* OR attachk* OR arrest*or) AND occlusion* OR ischemia* OR ischaemia* OR occlusi*)
9	mi OR acs OR stemi OR ‘nste acs’ OR nsteacs. OR nonstemi OR nstemi OR ami OR uap OR omi
10	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9
11	troponin i
12	troponin t
13	trop i OR trop t OR troponin i OR troponin t OR accu tni OR accutni OR ctni hs OR ctni ultra OR ctni OR ctnihs OR ctnt hs OR ctnt OR ctnths OR hs ctni OR hs tni OR hs tnt OR hsctni OR hsctnt

	OR hstni OR hstnt OR tni OR tnt hs OR tnt OR tnths OR tropi OR troponin* OR tropt OR accelerated diagnostic protocol* OR heart pathway OR edacs-adp OR edacs OR adp
14	#11 OR #12 OR #13
15	emergency ward
16	(Emergency AND room* OR emergency) AND department* OR ed OR er OR triage OR emergenc* OR emt OR ems
17	#15 OR #16
18	#10 AND #14 AND #17
19	#10 AND #14 AND #17 AND ([article/lim OR [article in press]/lim) AND [humans]/lim AND [2008-2022-04-15]/py

COCHRANE

1	MeSh descriptor: [Chest Pain] explode all trees
2	MeSh descriptor: [Myocardial Ischemia] explode all trees
3	MeSh descriptor: [Acute Coronary Syndrome] explode all trees
4	MeSh descriptor: [Myocardial Infarction] explode all trees
5	((hear* OR myocardi* OR cardiac OR coronary) AND (preinfarc* OR infarc* OR attack* OR arrest* OR ischemia* OR ischaemia* OR occlusi*))
6	#1 OR #2 OR #3 OR #4 OR #5
7	MeSh descriptor: [Troponin I] explode all trees
8	MeSh descriptor: [Troponin T] explode all trees
9	*trop I OR trop T OR troponin I OR troponin T OR accu-tni OR accutni OR ctni-hs OR ctni-ultra OR ctnihs OR ctnt-hs OR ctnt OR cTnT OR ctnths OR hs-ctni OR hs-cTnT OR hs-tni OR hs-TnT OR hsctni OR hscTnT OR Hstni OR hsTnT OR tni OR tnt-hs OR tnt OR tnths OR tropl OR troponin* OR tropT OR Accelerated diagnostic protocol* OR HEART Pathway OR EDACS-ADP OR EDACS OR ADP
10	#7 OR #8 OR #9
11	MeSh descriptor: [Emergency Medicall Services] explode all trees
12	Triage OR emergenc* OR ambulance* OR EMT OR EMS
13	#11 OR #12
14	#6 AND #10 AND #13

APPENDIX B. EXCLUDED STUDIES

1. Agrawal AVS, Rupesh; Singh, Manbir. Validation of 0 -2 hour algorithm for rule in and rule out myocardial infarction based on highly sensitive troponin I assay. Indian Heart Journal. 2018;70:S27-S44. *Abstract, no PDF.*
2. Aloe R, Lippi G, Di Pietro M, et al. Improved efficiency and cost reduction in the emergency department by replacing contemporary sensitive with high-sensitivity cardiac troponin immunoassay. *Acta Biomed*. Dec 23 2019;90(4):614-620. doi:10.23750/abm.v90i4.8769. *No defined ADP.*
3. Aldous SJ, Richards AM, Cullen L, Than MP. Early dynamic change in high-sensitivity cardiac troponin T in the investigation of acute myocardial infarction. *Clin Chem*. Aug 2011;57(8):1154-60. doi:10.1373/clinchem.2010.161166. *No defined ADP.*
4. Aldous S, Pemberton C, Richards AM, Troughton R, Than M. High-sensitivity troponin T for early rule-out of myocardial infarction in recent onset chest pain. *Emerg Med J*. Oct 2012;29(10):805-10. doi:10.1136/emermed-2011-200222. *No defined ADP.*
5. Allen BR, Christenson RH, Cohen SA, et al. Diagnostic Performance of High-Sensitivity Cardiac Troponin T Strategies and Clinical Variables in a Multisite US Cohort. *Circulation*. Apr 27 2021;143(17):1659-1672. doi:10.1161/circulationaha.120.049298. *Not prospective.*
6. Allen BR, Simpson GG, Zeinali I, et al. Incorporation of the HEART Score Into a Low-risk Chest Pain Pathway to Safely Decrease Admissions. Crit Pathw Cardiol. Dec 2018;17(4):184-190. doi:10.1097/hpc.0000000000000155. *Not high-sensitivity Tn.*
7. Ambavane A, Lindahl B, Giannitsis E, et al. Economic evaluation of the one-hour rule-out and rule-in algorithm for acute myocardial infarction using the high-sensitivity cardiac troponin T assay in the emergency department. *PLoS One*. 2017;12(11):e0187662. doi:10.1371/journal.pone.0187662. *Not prospective.*
8. Ambavane A, Lindahl B, Giannitsis E, et al. Correction: Economic evaluation of the one-hour rule-out and rule-in algorithm for acute myocardial infarction using the high-sensitivity cardiac troponin T assay in the emergency department. PLoS One. 2018;13(1):e0191348. doi:10.1371/journal.pone.0191348. *Not published/peer reviewed.*
9. Amsterdam EA, Wenger NK, Brindis RG, et al. 2014 AHA/ACC guideline for the management of patients with non-ST-elevation acute coronary syndromes: executive summary: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. Circulation. Dec 23 2014;130(25):2354-94. doi:10.1161/cir.0000000000000133. *No defined ADP.*
10. Anand A, Shah ASV, Strachan FE, et al. P3593Improving the performance of high-sensitivity cardiac troponin for the diagnosis of myocardial infarction. European Heart Journal. 2019;40(Supplement_1)doi:10.1093/eurheartj/ehz745.0453. *No defined ADP.*
11. Andersen CF, Bang C, Lauridsen KG, et al. Single troponin measurement to rule-out acute myocardial infarction in early presenters. *Int J Cardiol*. Oct 15 2021;341:15-21. doi:10.1016/j.ijcard.2021.08.005. *Not prospective.*
12. Andruchow JE, Boyne T, Innes G, et al. Low High-Sensitivity Troponin Thresholds Identify Low-Risk Patients With Chest Pain Unlikely to Benefit From Further Risk Stratification. *CJC Open*. Nov 2019;1(6):289-296. doi:10.1016/j.cjco.2019.08.002. *Not prospective.*
13. Andruchow JE, Boyne T, Seiden-Long I, et al. Prospective comparative evaluation of the European Society of Cardiology (ESC) 1-hour and a 2-hour rapid diagnostic algorithm

for myocardial infarction using high-sensitivity troponin-T. *Cjem*. Sep 2020;22(5):712-720. doi:10.1017/cem.2020.349. *Not prospective.*

14. Arslan M, Dedic A, Boersma E, Dubois EA. Serial high-sensitivity cardiac troponin T measurements to rule out acute myocardial infarction and a single high baseline measurement for swift rule-in: A systematic review and meta-analysis. *Eur Heart J Acute Cardiovasc Care*. Feb 2020;9(1):14-22. doi:10.1177/2048872618819421. *No defined ADP.*
15. Arslan M, Schaap J, Rood PPM, et al. HEART score improves efficiency of coronary computed tomography angiography in patients suspected of acute coronary syndrome in the emergency department. *European Heart Journal Acute Cardiovascular Care*. 2020;9(1):23-29. doi:10.1177/2048872619882424. *Secondary analysis study.*
16. Astley CM, Beltrame JF, Zeitz C, et al. Study design of embracing high-sensitivity troponin effectively: the value of more information: a randomized comparison. *Contemp Clin Trials*. Nov 2014;39(2):183-90. doi:10.1016/j.cct.2014.08.012. *This is a study design with no results.*
17. Aurora L, McCord J, Nowak R, et al. Prognostic Utility of a Modified HEART Score When Different Troponin Cut Points Are Used. *Crit Pathw Cardiol*. Sep 1 2021;20(3):134-139. doi:10.1097/hpc.0000000000000262. *Not prospective.*
18. Avigni N, Ippoliti M, Muccinelli M, et al. Chest pain in the emergency department: benefits of a management model modified from the ANMCO-SIMEU recommendations. *Giornale Italiano di Cardiologia (2006)*. 2011;12(5):365-373. *No PDF found.*
19. Badertscher P, Boeddinghaus J, Nestelberger T, et al. Effect of Acute Coronary Syndrome Probability on Diagnostic and Prognostic Performance of High-Sensitivity Cardiac Troponin. *Clin Chem*. Mar 2018;64(3):515-525. doi:10.1373/clinchem.2017.279513. *No defined ADP.*
20. Badertscher P, Boeddinghaus J, Twerenbold R, et al. Direct Comparison of the 0/1h and 0/3h Algorithms for Early Rule-Out of Acute Myocardial Infarction. *Circulation*. Jun 5 2018;137(23):2536-2538. doi:10.1161/circulationaha.118.034260. *Not prospective.*
21. Bahrmann P, Christ M, Bahrmann A, et al. A 3-hour diagnostic algorithm for non-ST-elevation myocardial infarction using high-sensitivity cardiac troponin T in unselected older patients presenting to the emergency department. *J Am Med Dir Assoc*. Jun 2013;14(6):409-16. doi:10.1016/j.jamda.2012.12.005. *No defined ADP.*
22. Bandstein N, Ljung R, Johansson M, Holzmann MJ. Undetectable high-sensitivity cardiac troponin T level in the emergency department and risk of myocardial infarction. *J Am Coll Cardiol*. Jun 17 2014;63(23):2569-2578. doi:10.1016/j.jacc.2014.03.017. *No defined ADP.*
23. Bang C, Andersen CF, Lauridsen KG, et al. Rapid Rule-Out of Myocardial Infarction After 30 Minutes as an Alternative to 1 Hour: The RACING-MI Cohort Study. *Ann Emerg Med*. Feb 2022;79(2):102-112. doi:10.1016/j.annemergmed.2021.08.024. *Not prospective.*
24. Bang C, Hansen C, Lauridsen KG, et al. Rapid use of high-sensitive cardiac troponin I for ruling-in and ruling-out of acute myocardial infarction (RACING-MI): study protocol. *Open Heart*. 2019;6(1):e000995. doi:10.1136/openhrt-2018-000995. *Protocol itself has no results, and the results were published in a different study (Bang-2022-34969529).*
25. Bank IE, Dekker MS, Hoes AW, et al. Suspected acute coronary syndrome in the emergency room: Limited added value of heart type fatty acid binding protein point of care or ELISA tests: The FAME-ER (Fatty Acid binding protein in Myocardial infarction

Evaluation in the Emergency Room) study. *Eur Heart J Acute Cardiovasc Care*. Aug 2016;5(4):364-74. doi:10.1177/2048872615584077. *Not prospective.*

26. Baugh CW, Scirica BM, Januzzi JL, et al. Implementation of an Emergency Department High-Sensitivity Troponin Chest Pain Pathway in the United States. *Crit Pathw Cardiol*. Mar 2019;18(1):1-4. doi:10.1097/hpc.0000000000000164. *Neither primary study nor SR.*
27. Beaune G, Yayehd K, Rocher T, et al. [Evaluation of rule out strategy for patients with non-ST-elevation acute coronary syndrome with single measurement of high-sensitivity cardiac troponin I from one sample tested beetween 3 and 6 hours after chest pain onset]. *Ann Cardiol Angeiol (Paris)*. Nov 2021;70(5):270-274. Évaluation d'une stratégie d'exclusion d'un syndrome coronarien aigu non ST+ basé sur une unique mesure de troponine de haute sensibilité à partir d'un prélèvement effectué entre 3 et 6 heures après le début de la douleur. doi:10.1016/j.ancard.2021.07.006. *Only r/out MI (others excluded).*
28. Bellini C, Cinci F, Bova G, et al. Methodology to Evaluate Clinical Impact of 0/3 Hour High-Sensitivity Cardiac Troponin T Protocol on Managing Acute Coronary Syndrome in Daily Emergency Department Practice. *Lab Med*. Sep 1 2021;52(5):452-459. doi:10.1093/labmed/lmaa118. *No defined ADP.*
29. Bevins NJ, Chae H, Hubbard JA, et al. Emergency Department Management of Chest Pain With a High-Sensitivity Troponin-Enabled 0/1-Hour Rule-Out Algorithm. *Am J Clin Pathol*. May 4 2022;157(5):774-780. doi:10.1093/ajcp/aqab192. *No defined ADP.*
30. Bhatti Y, Stevenson A, Weerasuriya S, Khan S. Reducing avoidable chest pain admissions and implementing high-sensitivity troponin testing. *BMJ Open Qual*. 2019;8(4):e000629. doi:10.1136/bmjoq-2019-000629. *ADP cannot be replicated.*
31. Biener M, Mueller M, Vafaie M, et al. Comparison of a 3-hour versus a 6-hour sampling-protocol using high-sensitivity cardiac troponin T for rule-out and rule-in of non-STEMI in an unselected emergency department population. *Int J Cardiol*. Aug 20 2013;167(4):1134-40. doi:10.1016/j.ijcard.2012.09.122. *Not prospective.*
32. Björkelund A, Ohlsson M, Lundager Forberg J, et al. Machine learning compared with rule-in/rule-out algorithms and logistic regression to predict acute myocardial infarction based on troponin T concentrations. *J Am Coll Emerg Physicians Open*. Apr 2021;2(2):e12363. doi:10.1002/emp2.12363. *Retrospective cross-sectional with no follow-up and ML.*
33. Bjurman C, Zywczyk M, Zangana S, et al. Patients discharged with elevated baseline high-sensitive cardiac troponin T from the emergency department. *Biomarkers*. Jul 2021;26(5):410-416. doi:10.1080/1354750x.2021.1917662. *No outcomes within 6 weeks reported.*
34. Body R, Burrows G, Carley S, Lewis PS. The Manchester Acute Coronary Syndromes (MACS) decision rule: validation with a new automated assay for heart-type fatty acid binding protein. *Emerg Med J*. Oct 2015;32(10):769-74. doi:10.1136/emermed-2014-204235. *Not high-sensitivity Tn.*
35. Body R, Carley S, McDowell G, et al. The Manchester Acute Coronary Syndromes (MACS) decision rule for suspected cardiac chest pain: derivation and external validation. *Heart*. Sep 15 2014;100(18):1462-8. doi:10.1136/heartjnl-2014-305564. *Not prospective.*
36. Body R, Carlton E, Sperrin M, et al. Troponin-only Manchester Acute Coronary Syndromes (T-MACS) decision aid: single biomarker re-derivation and external validation in three cohorts. *Emerg Med J*. Jun 2017;34(6):349-356. doi:10.1136/emermed-2016-205983. *Not prospective.*

37. Body R, Morris N, Collinson P. Single test rule-out of acute myocardial infarction using the limit of detection of a new high-sensitivity troponin I assay. *Clin Biochem*. Apr 2020;78:4-9. doi:10.1016/j.clinbiochem.2020.02.014. *Not prospective.*
38. Body R, Morris N, Reynard C, Collinson PO. Comparison of four decision aids for the early diagnosis of acute coronary syndromes in the emergency department. *Emerg Med J*. Jan 2020;37(1):8-13. doi:10.1136/emermed-2019-208898. *No defined ADP.*
39. Body R, Mueller C, Giannitsis E, et al. The Use of Very Low Concentrations of High-sensitivity Troponin T to Rule Out Acute Myocardial Infarction Using a Single Blood Test. *Acad Emerg Med*. Sep 2016;23(9):1004-13. doi:10.1111/acem.13012. *No defined ADP.*
40. Body R, Twerenbold R, Austin C, et al. Diagnostic Accuracy of a High-Sensitivity Cardiac Troponin Assay with a Single Serum Test in the Emergency Department. *Clin Chem*. Aug 2019;65(8):1006-1014. doi:10.1373/clinchem.2018.294272. *Not prospective.*
41. Boeddinghaus J, Lopez-Ayala P, Nestelberger T, et al. Prospective Validation of the ESC 0/1h-Algorithm Using High-Sensitivity Cardiac Troponin I. *Am J Cardiol*. Nov 1 2021;158:152-153. doi:10.1016/j.amjcard.2021.08.007. *Not prospective.*
42. Boeddinghaus J, Nestelberger T, Badertscher P, et al. Predicting Acute Myocardial Infarction with a Single Blood Draw. *Clin Chem*. Mar 2019;65(3):437-450. doi:10.1373/clinchem.2018.294124. *No defined ADP.*
43. Boeddinghaus J, Nestelberger T, Koechlin L, et al. Early Diagnosis of Myocardial Infarction With Point-of-Care High-Sensitivity Cardiac Troponin I. *J Am Coll Cardiol*. Mar 17 2020;75(10):1111-1124. doi:10.1016/j.jacc.2019.12.065. *Not prospective.*
44. Boeddinghaus J, Nestelberger T, Twerenbold R, et al. High-Sensitivity Cardiac Troponin I Assay for Early Diagnosis of Acute Myocardial Infarction. *Clin Chem*. Jul 2019;65(7):893-904. doi:10.1373/clinchem.2018.300061. *Not prospective.*
45. Boeddinghaus J, Nestelberger T, Twerenbold R, et al. Impact of age on the performance of the ESC 0/1h-algorithms for early diagnosis of myocardial infarction. *Eur Heart J*. Nov 7 2018;39(42):3780-3794. doi:10.1093/eurheartj/ehy514. *Not prospective.*
46. Boeddinghaus J, Nestelberger T, Twerenbold R, et al. Direct Comparison of 4 Very Early Rule-Out Strategies for Acute Myocardial Infarction Using High-Sensitivity Cardiac Troponin I. *Circulation*. Apr 25 2017;135(17):1597-1611. doi:10.1161/circulationaha.116.025661. *Retrospective applied cutofffs to compare 4 strategies.*
47. Boeddinghaus J, Reichlin T, Cullen L, et al. Two-Hour Algorithm for Triage toward Rule-Out and Rule-In of Acute Myocardial Infarction by Use of High-Sensitivity Cardiac Troponin I. *Clin Chem*. Mar 2016;62(3):494-504. doi:10.1373/clinchem.2015.249508. *Not prospective.*
48. Boeddinghaus J, Twerenbold R, Nestelberger T, et al. Clinical Validation of a Novel High-Sensitivity Cardiac Troponin I Assay for Early Diagnosis of Acute Myocardial Infarction. *Clin Chem*. Sep 2018;64(9):1347-1360. doi:10.1373/clinchem.2018.286906. *Not prospective.*
49. Boeddinghaus J, Twerenbold R, Nestelberger T, et al. Clinical Use of a New High-Sensitivity Cardiac Troponin I Assay in Patients with Suspected Myocardial Infarction. *Clin Chem*. Nov 2019;65(11):1426-1436. doi:10.1373/clinchem.2019.304725. *Validiating hs-cTnI-VITROS.*
50. Bohyn E, Dubie E, Lebrun C, et al. Expeditious exclusion of acute coronary syndrome diagnosis by combined measurements of copeptin, high-sensitivity troponin, and GRACE

score. *Am J Emerg Med*. Apr 2014;32(4):293-6. doi:10.1016/j.ajem.2013.11.043. *Not prospective.*

51. Borna C, Frostred KL, Ekelund U. Predictive role of high sensitivity troponin T within four hours from presentation of acute coronary syndrome in elderly patients. *BMC Emerg Med*. Jan 4 2016;16:1. doi:10.1186/s12873-015-0064-z. *Retrospective applied cutofffs to compare 4 strategies.*
52. Borna C, Kollberg K, Larsson D, Mokhtari A, Ekelund U. The objective CORE score allows early rule out in acute chest pain patients. *Scand Cardiovasc J*. Dec 2018;52(6):308-314. doi:10.1080/14017431.2018.1546891. *Retrospective applied cutofffs to compare 4 strategies.*
53. Boyle RSJ, Body R. The Diagnostic Accuracy of the Emergency Department Assessment of Chest Pain (EDACS) Score: A Systematic Review and Meta-analysis. *Ann Emerg Med*. Apr 2021;77(4):433-441. doi:10.1016/j.annemergmed.2020.10.020. *SR, not primary study.*
54. Bozdereli Berikol G, Aydın H, Doğan H. Early discharging patients with chest pain using EDACS-ADP and COMPASS-MI risk predictors. *Heart Vessels*. Feb 8 2022:1-10. doi:10.1007/s00380-022-02036-9. *Not prospective.*
55. Braga F, Dolci A, Cavallero A, Ghezzi A, Infusino I, Milano M, Rubino M, Marenzi G, Panteghini M. Evaluation of the sensitivity of two highly sensitive troponin assays for early detection of non ST-elevation myocardial infarction (NSTEMI). Biochimica Clinica. 35(3):186-189. *Not English.*
56. Brophy J. In adults with chest pain, a troponin limit of detection strategy did not increase early discharge rate. *Ann Intern Med*. Oct 20 2020;173(8):Jc45. doi:10.7326/acpj202010200-045. *Neither primary study nor SR.*
57. Buccelletti F, Galiuto L, Marsiliani D, et al. Comparison of diagnostic accuracy between three different rules of interpreting high sensitivity troponin T results. *Intern Emerg Med*. Aug 2012;7(4):365-70. doi:10.1007/s11739-012-0787-8. *Not prospective.*
58. Bularga A, Lee KK, Stewart S, et al. High-Sensitivity Troponin and the Application of Risk Stratification Thresholds in Patients With Suspected Acute Coronary Syndrome. *Circulation*. Nov 5 2019;140(19):1557-1568. doi:10.1161/circulationaha.119.042866. *Not prospective.*
59. Burgio MA, Marino G, Di Maria D. Troponin cTnT-hs: a matter of gender and age? Evaluation of differentiated cut-offs by gender and age in an Emergency Department population. *La Rivista Italiana della Medicina di Laboratorio - Italian Journal of Laboratory Medicine*. 2018/03/01 2018;14(1):41-49. doi:10.1007/s13631-018-0184-z. *Not Prospective.*
60. Burgos LM, Trivi M, Costabel JP. Performance of the European Society of Cardiology 0/1-hour algorithm in the diagnosis of myocardial infarction with high-sensitivity cardiac troponin: Systematic review and meta-analysis. *Eur Heart J Acute Cardiovasc Care*. Jun 29 2020;doi:10.1177/2048872620935399. *Systematic Review.*
61. Burgstaller JM, Held U, Gravestock I, et al. Impact of the Introduction of High-Sensitive Troponin Assay in the Emergency Department: A Retrospective Study. *Am J Med*. Aug 2020;133(8):976-985. doi:10.1016/j.amjmed.2019.12.029. *No defined ADP.*
62. CADTH Optimal Use Reports. *High-Sensitivity Cardiac Troponin for the Rapid Diagnosis of Acute Coronary Syndrome in the Emergency Department: A Clinical and Cost-Effectiveness Evaluation*. Canadian Agency for Drugs and Technologies in Health. Copyright © 2013 Canadian Agency for Drugs and Technologies in Health.; 2013. *Systematic Review.*

63. Cappellini F, Falbo R, Saltafossi D, et al. Development of an algorithm for ruling-out non-ST elevation myocardial infarction in the emergency department using high sensitivity troponin T assay. *Clin Chim Acta*. Aug 2019;495:1-7. doi:10.1016/j.cca.2019.03.1625. *Not prospective.*
64. Carlton E, Body R, Greaves K. External Validation of the Manchester Acute Coronary Syndromes Decision Rule. *Acad Emerg Med*. Feb 2016;23(2):136-43. doi:10.1111/acem.12860. *Not prospective.*
65. Carlton E, Campbell S, Ingram J, et al. Randomised controlled trial of the Limit of Detection of Troponin and ECG Discharge (LoDED) strategy versus usual care in adult patients with chest pain attending the emergency department: study protocol. *BMJ Open*. Oct 2 2018;8(10):e025339. doi:10.1136/bmjopen-2018-025339. *No data were included in the main paper.*
66. Carlton EW, Cullen L, Than M, Gamble J, Khattab A, Greaves K. A novel diagnostic protocol to identify patients suitable for discharge after a single high-sensitivity troponin. *Heart*. Jul 2015;101(13):1041-6. doi:10.1136/heartjnl-2014-307288. *Not prospective.*
67. Carlton EW, Ingram J, Taylor H, et al. Limit of detection of troponin discharge strategy versus usual care: randomised controlled trial. *Heart*. Oct 2020;106(20):1586-1594. doi:10.1136/heartjnl-2020-316692. *No defined ADP.*
68. Carlton EW, Khattab A, Greaves K. Identifying Patients Suitable for Discharge After a Single-Presentation High-Sensitivity Troponin Result: A Comparison of Five Established Risk Scores and Two High-Sensitivity Assays. *Ann Emerg Med*. Dec 2015;66(6):635-645.e1. doi:10.1016/j.annemergmed.2015.07.006. *Not prospective.*
69. Carlton EW, Khattab A, Greaves K. Beyond triage: the diagnostic accuracy of emergency department nursing staff risk assessment in patients with suspected acute coronary syndromes. *Emerg Med J*. Feb 2016;33(2):99-104. doi:10.1136/emermed-2015-204780. *Not prospective.*
70. Carlton EW, Pickering JW, Greenslade J, et al. Assessment of the 2016 National Institute for Health and Care Excellence high-sensitivity troponin rule-out strategy. *Heart*. Apr 2018;104(8):665-672. doi:10.1136/heartjnl-2017-311983. *Not prospective.*
71. Chacón-Diaz M, Salinas J, Doig R. Stratification of thoracic pain with modified HEART score and its relationship to short term cardiovascular events. *Archivos de cardiología de México*. 2018;88(5):333-338. *Unclear how modified HEART used by physician in ED to stratify patients. Not English language.*
72. Chapman AR, Adamson PD, Shah ASV, et al. High-Sensitivity Cardiac Troponin and the Universal Definition of Myocardial Infarction. *Circulation*. Jan 21 2020;141(3):161-171. doi:10.1161/circulationaha.119.042960. *No defined ADP.*
73. Chapman AR, Anand A, Boeddinghaus J, et al. Comparison of the Efficacy and Safety of Early Rule-Out Pathways for Acute Myocardial Infarction. *Circulation*. Apr 25 2017;135(17):1586-1596. doi:10.1161/circulationaha.116.025021. *Not prospective.*
74. Chapman AR, Fujisawa T, Lee KK, et al. Novel high-sensitivity cardiac troponin I assay in patients with suspected acute coronary syndrome. *Heart*. Apr 2019;105(8):616-622. doi:10.1136/heartjnl-2018-314093. *Not prospective.*
75. Chapman AR, Hesse K, Andrews J, et al. High-Sensitivity Cardiac Troponin I and Clinical Risk Scores in Patients With Suspected Acute Coronary Syndrome. *Circulation*. Oct 16 2018;138(16):1654-1665. doi:10.1161/circulationaha.118.036426. *Not prospective.*
76. Chapman AR, Lee KK, McAllister DA, et al. Association of High-Sensitivity Cardiac Troponin I Concentration With Cardiac Outcomes in Patients With Suspected Acute

Coronary Syndrome. *Jama*. Nov 21 2017;318(19):1913-1924. doi:10.1001/jama.2017.17488. *Systematic Review.*

77. Charpentier S, Chenevier-Gobeaux C. [2015 ESC guidelines: 1-hour rule-out and rule-in of acute myocardial infarction with high-sensitive troponin T]. *Presse Med*. Oct 2016;45(10):859-864. Recommandations ESC 2015 : exclure ou confirmer le diagnostic d’infarctus du myocarde en 1 heure avec la troponine T hypersensible. doi:10.1016/j.lpm.2016.05.023. *Neither primary study nor SR.*
78. Chenevier-Gobeaux C, Meune C, Lefevre G, et al. A single value of high-sensitive troponin T below the limit of detection is not enough for ruling out non ST elevation myocardial infarction in the emergency department. *Clin Biochem*. Oct 2016;49(15):1113-1117. doi:10.1016/j.clinbiochem.2016.05.021. *No defined ADP.*
79. Chew DP, Zeitz C, Worthley M, et al. Randomized Comparison of High-Sensitivity Troponin Reporting in Undifferentiated Chest Pain Assessment. *Circ Cardiovasc Qual Outcomes*. Sep 2016;9(5):542-53. doi:10.1161/circoutcomes.115.002488. *No defined ADP.*
80. Chew PG, Frost F, Mullen L, et al. A direct comparison of decision rules for early discharge of suspected acute coronary syndromes in the era of high sensitivity troponin. *Eur Heart J Acute Cardiovasc Care*. Aug 2019;8(5):421-431. doi:10.1177/2048872618755369. *Not prospective.*
81. Chiang CH, Chiang CH, Lee GH, et al. Safety and efficacy of the European Society of Cardiology 0/1-hour algorithm for diagnosis of myocardial infarction: systematic review and meta-analysis. *Heart*. Jul 2020;106(13):985-991. doi:10.1136/heartjnl-2019-316343. *Systematic Review.*
82. Chiang CH, Chiang CH, Pickering JW, et al. Performance of the European Society of Cardiology 0/1-Hour, 0/2-Hour, and 0/3-Hour Algorithms for Rapid Triage of Acute Myocardial Infarction : An International Collaborative Meta-analysis. *Ann Intern Med*. Jan 2022;175(1):101-113. doi:10.7326/m21-1499. *Systematic Review.*
83. Chiang CH, Chiang CH, Ruangsomboon O. Utilizing the European Society of Cardiology 0/3-h algorithm to triage the 0/1-h algorithm observe-zone. *Eur Heart J Acute Cardiovasc Care*. Mar 29 2022;doi:10.1093/ehjacc/zuac025. *Not prospective.*
84. Christ M, Popp S, Pohlmann H, et al. Implementation of high sensitivity cardiac troponin T measurement in the emergency department. *Am J Med*. Dec 2010;123(12):1134-42. doi:10.1016/j.amjmed.2010.07.015. *No defined ADP.*
85. Chuang A, Gnanamanickam E, Lambrakis K, et al. Cost Effectiveness of a 1-Hour High-Sensitivity Troponin-t Protocol in Suspected Acute Coronary Syndrome: A Trial-Based Analysis of the Rapid-tnt Randomised Trial. *Circulation*. 2021;144(Suppl_1):A6984-A6984. *Abstract of Chuang-2022-Cost effectiveness of a 1-hour hig.*
86. Chuang MA, Gnanamanickam ES, Karnon J, et al. Cost effectiveness of a 1-hour high-sensitivity troponin-T protocol: An analysis of the RAPID-TnT trial. *Int J Cardiol Heart Vasc*. Feb 2022;38:100933. doi:10.1016/j.ijcha.2021.100933. *No outcomes within 6 weeks reported.*
87. Clerico A, Ripoli A, Masotti S, et al. Evaluation of 99th percentile and reference change values of a high-sensitivity cTnI method: A multicenter study. *Clin Chim Acta*. Jun 2019;493:156-161. doi:10.1016/j.cca.2019.02.029. *Not non-STEMI ACS.*
88. Collinson P, Gaze D, Goodacre S. Evaluation of the European Society of Cardiology recommended rapid diagnostic algorithms in a challenging low risk cohort. *European Heart Journal*. 2017;38(Suppl 1):998-998. *Not published/peer reviewed.*

89. Collinson PO GD, Goodacre S. Decision limits, delta troponin or both for the confirmation and exclusion of myocardial infarction using contemporary and high sensitive assays. Clinical Chemistry. 2018;64:S32. *Abstract, no PDF.*
90. Consuegra-Sánchez L, Martínez-Díaz JJ, de Guadiana-Romualdo LG, et al. No additional value of conventional and high-sensitivity cardiac troponin over clinical scoring systems in the differential diagnosis of type 1 vs. type 2 myocardial infarction. *Clin Chem Lab Med*. Apr 25 2018;56(5):857-864. doi:10.1515/cclm-2017-0609. *No defined ADP.*
91. Cooper JG, Ferguson J, Donaldson LA, et al. Could High-Sensitivity Cardiac Troponin Testing Rule Out Acute Myocardial Infarction in the Prehospital Setting? *J Am Coll Cardiol*. Dec 7 2021;78(23):2392-2394. doi:10.1016/j.jacc.2021.10.004. *Neither primary study nor SR.*
92. Corsini A, Vagnarelli F, Bugani G, et al. Impact of high-sensitivity Troponin T on hospital admission, resources utilization, and outcomes. *Eur Heart J Acute Cardiovasc Care*. Apr 2015;4(2):148-57. doi:10.1177/2048872614547687. *No defined ADP.*
93. Cortés M, Haseeb S, Lambardi F, et al. The HEART score in the era of the European Society of Cardiology 0/1-hour algorithm. *Eur Heart J Acute Cardiovasc Care*. Feb 2020;9(1):30-38. doi:10.1177/2048872619883619. *Not prospective.*
94. Cortés MM, Lambardi F, Ariznavarreta P, et al. Usefulness of the HEART score with high-sensitivity troponin T for the evaluation of patients with chest pain. *Revista Argentina de Cardiologia*. 2018;86(5):317-321. *Not prospective.*
95. Costabel JP, Campos R, Ariznavarreta P, et al. Results of the first patients with suspected acute coronary syndrome evaluated with the 1-hour algorithm proposed by the European Society of Cardiology. *Revista Argentina de Cardiología*. 2019;87(3):197-202. *Only hs-cTN.*
96. Croce A, Brunati P, Colzani C, et al. A Rational Adoption of the High Sensitive Assay for Cardiac Troponin I in Diagnostic Routine. *Dis Markers*. 2017;2017:4523096. doi:10.1155/2017/4523096. *Not prospective.*
97. Cuda G, Lentini M, Gallo L, et al. High sensitive troponin T in individuals with chest pain of presumed ischemic origin. *Front Biosci (Elite Ed)*. Jun 1 2012;4(7):2322-7. doi:10.2741/e544. *No defined ADP.*
98. Cullen L, Aldous S, Than M, et al. Comparison of high sensitivity troponin T and I assays in the diagnosis of non-ST elevation acute myocardial infarction in emergency patients with chest pain. *Clin Biochem*. Apr 2014;47(6):321-6. doi:10.1016/j.clinbiochem.2013.11.019. *This is a secondary analysis, not clear if hs-TnT was combine with other components in a pre-defined protocol.*
99. Cullen L, Greenslade J, Than M, et al. Performance of risk stratification for acute coronary syndrome with two-hour sensitive troponin assay results. *Heart Lung Circ*. May 2014;23(5):428-34. doi:10.1016/j.hlc.2013.11.003. *Not high-sensitivity Tn.*
100. Cullen L, Greenslade JH, Carlton EW, et al. Sex-specific versus overall cut points for a high sensitivity troponin I assay in predicting 1-year outcomes in emergency patients presenting with chest pain. *Heart*. Jan 2016;102(2):120-6. doi:10.1136/heartjnl-2015-308506. *No outcomes within 6 weeks reported.*
101. Cullen L, Greenslade JH, Than M, et al. The new Vancouver Chest Pain Rule using troponin as the only biomarker: an external validation study. *Am J Emerg Med*. Feb 2014;32(2):129-34. doi:10.1016/j.ajem.2013.10.021. *Not prospective.*
102. Cullen L, Mueller C, Parsonage WA, et al. Validation of high-sensitivity troponin I in a 2-hour diagnostic strategy to assess 30-day outcomes in emergency department patients

with possible acute coronary syndrome. *J Am Coll Cardiol*. Oct 1 2013;62(14):1242-1249. doi:10.1016/j.jacc.2013.02.078. *Not prospective.*

103. Dadkhah S, Almuwaqqat Z, Sulaiman S, et al. Sensitive Troponin I and Stress Testing in the Emergency Department for the Early Management of Chest Pain Using 2-Hour Protocol. *Crit Pathw Cardiol*. Sep 2017;16(3):89-92. doi:10.1097/hpc.0000000000000115. *Not high-sensitivity Tn.*
104. Dawson C, Benger JR, Bayly G. Serial high-sensitivity troponin measurements for the rapid exclusion of acute myocardial infarction in low-risk patients. *Emerg Med J*. Jul 2013;30(7):593-4. doi:10.1136/emermed-2012-201574. *Not prospective.*
105. Dedic A, Lubbers MM, Schaap J, et al. Coronary CT Angiography for Suspected ACS in the Era of High-Sensitivity Troponins: Randomized Multicenter Study. *J Am Coll Cardiol*. Jan 5 2016;67(1):16-26. doi:10.1016/j.jacc.2015.10.045. *No defined ADP.*
106. Dongxu C, Yannan Z, Yilin Y, et al. Evaluation of the 0 h/1 h high-sensitivity cardiac troponin T algorithm in diagnosis of non-ST-segment elevation myocardial infarction (NSTEMI) in Han population. *Clin Chem Lab Med*. Mar 26 2021;59(4):757-764. doi:10.1515/cclm-2020-0367. *No defined ADP.*
107. Doudesis D, Lee KK, Yang J, et al. Validation of the myocardial-ischaemic-injury-index machine learning algorithm to guide the diagnosis of myocardial infarction in a heterogenous population: a prespecified exploratory analysis. *Lancet Digit Health*. May 2022;4(5):e300-e308. doi:10.1016/s2589-7500(22)00025-5. *Not prospective.*
108. Druey S, Wildi K, Twerenbold R, et al. Early rule-out and rule-in of myocardial infarction using sensitive cardiac Troponin I. *Int J Cardiol*. Sep 15 2015;195:163-70. doi:10.1016/j.ijcard.2015.05.079. Not high-sensitivity Tn.
109. Dupuy AM, Pasquier G, Thiebaut L, Roubille F, Sebbane M, Cristol JP. Additive value of bioclinical risk scores to high sensitivity troponins-only strategy in acute coronary syndrome. *Clin Chim Acta*. Dec 2021;523:273-284. doi:10.1016/j.cca.2021.10.008. *Not prospective.*
110. Eggers KM, Aldous S, Greenslade JH, et al. Two-hour diagnostic algorithms for early assessment of patients with acute chest pain--Implications of lowering the cardiac troponin I cut-off to the 97.5th percentile. *Clin Chim Acta*. May 20 2015;445:19-24. doi:10.1016/j.cca.2015.03.002. *Not prospective.*
111. Etaher A, Chew DP, Frost S, et al. Prognostic Implications of High-Sensitivity Troponin T Levels Among Patients Attending Emergency Departments and Evaluated for an Acute Coronary Syndrome. *Am J Med*. Aug 2021;134(8):1019-1028.e1. doi:10.1016/j.amjmed.2021.03.005. *No defined ADP.*
112. Ezekowitz JA, Welsh RC, Weiss D, et al. Providing Rapid Out of Hospital Acute Cardiovascular Treatment 4 (PROACT-4). *J Am Heart Assoc*. Dec 1 2015;4(12)doi:10.1161/jaha.115.002859. *Not high-sensitivity Tn.*
113. Farook N, Cochon L, Bode AD, Langer BP, Baez AA. HEART Score and Stress Test Emergency Department Bayesian Decision Scheme: Results from the Acute Care Diagnostic Collaboration. *J Emerg Med*. Feb 2018;54(2):147-155. doi:10.1016/j.jemermed.2017.10.021. *Not high-sensitivity Tn.*
114. Ferencik M, Liu T, Mayrhofer T, et al. hs-Troponin I Followed by CT Angiography Improves Acute Coronary Syndrome Risk Stratification Accuracy and Work-Up in Acute Chest Pain Patients: Results From ROMICAT II Trial. *JACC Cardiovasc Imaging*. Nov 2015;8(11):1272-1281. doi:10.1016/j.jcmg.2015.06.016. *hs-cTn portion of the trial not prospective.*

115. Ferencik M, Mayrhofer T, Lu MT, et al. High-Sensitivity Cardiac Troponin I as a Gatekeeper for Coronary Computed Tomography Angiography and Stress Testing in Patients with Acute Chest Pain. *Clin Chem*. Nov 2017;63(11):1724-1733. doi:10.1373/clinchem.2017.275552. *Not prospective.*
116. Ferry AV, Anand A, Strachan FE, et al. Presenting Symptoms in Men and Women Diagnosed With Myocardial Infarction Using Sex-Specific Criteria. *J Am Heart Assoc*. Sep 3 2019;8(17):e012307. doi:10.1161/jaha.119.012307. *No defined ADP.*
117. Ferry AV, Strachan FE, Stewart SD, et al. Exploring Patient Experience of Chest Pain Before and After Implementation of an Early Rule-Out Pathway for Myocardial Infarction: A Qualitative Study. *Ann Emerg Med*. Apr 2020;75(4):502-513. doi:10.1016/j.annemergmed.2019.11.012. *Qualitative study.*
118. Freund Y, Chenevier-Gobeaux C, Bonnet P, et al. High-sensitivity versus conventional troponin in the emergency department for the diagnosis of acute myocardial infarction. *Crit Care*. Jun 10 2011;15(3):R147. doi:10.1186/cc10270. *No defined ADP.*
119. Gallacher PJ, Miller-Hodges E, Shah ASV, et al. High-sensitivity cardiac troponin and the diagnosis of myocardial infarction in patients with kidney impairment. *Kidney Int*. Jul 2022;102(1):149-159. doi:10.1016/j.kint.2022.02.019. *No defined ADP.*
120. Gelber A, Drescher M, Shiber S. Sex Differences in Identifying Chest Pain as Being of Cardiac Origin Using the HEART Pathway in the Emergency Department. *J Womens Health (Larchmt)*. May 2 2022;doi:10.1089/jwh.2021.0453. *No outcomes within 6 weeks reported.*
121. Giannitsis E, Clifford P, Slagman A, et al. Multicentre cross-sectional observational registry to monitor the safety of early discharge after rule-out of acute myocardial infarction by copeptin and troponin: the Pro-Core registry. *BMJ Open*. Jul 23 2019;9(7):e028311. doi:10.1136/bmjopen-2018-028311. *Combination with other lab (only).*
122. Giannitsis E, Kehayova T, Vafaie M, Katus HA. Combined testing of high-sensitivity troponin T and copeptin on presentation at prespecified cutoffs improves rapid rule-out of non-ST-segment elevation myocardial infarction. *Clin Chem*. Oct 2011;57(10):1452-5. doi:10.1373/clinchem.2010.161265. The algorithm combined copeptin, conventional and hs-TnT, and GRACE score. *No separate analysis or subgroup was done.*
123. Gibbs J, deFilippi C, Peacock F, et al. The utility of risk scores when evaluating for acute myocardial infarction using high-sensitivity cardiac troponin I. *Am Heart J*. Sep 2020;227:1-8. doi:10.1016/j.ahj.2020.05.014. *Not prospective.*
124. Graven T, Klykken B, Kleinau O, Skjetne K, Andersen G, Dalen H. Measurement of high-sensitivity troponin-I in suspected coronary-related chest pain in Emergency Departments. *Tidsskr Nor Laegeforen*. Sep 7 2021;141(2021-12)Høysensitiv troponin I-måling ved koronarsuspekte brystsmerter i akuttmottak. doi:10.4045/tidsskr.21.0037. *No defined ADP.*
125. Gray A. 011 High-sensitivity cardiac troponin on presentation to rule out myocardial infarction (HiSTORIC): a stepped-wedge cluster randomised controlled trial. BMJ Publishing Group Ltd and the British Association for Accident …; 2019. *Not published/peer reviewed.*
126. Gray AJ, Roobottom C, Smith JE, et al. The RAPID-CTCA trial (Rapid Assessment of Potential Ischaemic Heart Disease with CTCA) - a multicentre parallel-group randomised trial to compare early computerised tomography coronary angiography versus standard care in patients presenting with suspected or confirmed acute coronary syndrome: study

protocol for a randomised controlled trial. *Trials*. Dec 7 2016;17(1):579. doi:10.1186/s13063-016-1717-2. *Not non-STEMI ACS.*

127. Greenslade JH, Carlton EW, Van Hise C, et al. Diagnostic Accuracy of a New High-Sensitivity Troponin I Assay and Five Accelerated Diagnostic Pathways for Ruling Out Acute Myocardial Infarction and Acute Coronary Syndrome. *Ann Emerg Med*. Apr 2018;71(4):439-451.e3. doi:10.1016/j.annemergmed.2017.10.030. *Not prospective.*
128. Greenslade JH, Chung K, Parsonage WA, et al. Modification of the Thrombolysis in Myocardial Infarction risk score for patients presenting with chest pain to the emergency department. *Emerg Med Australas*. Feb 2018;30(1):47-54. doi:10.1111/1742-6723.12913. *Not prospective.*
129. Greenslade JH, Cullen L, Than M, et al. Validation of the Vancouver Chest Pain Rule using troponin as the only biomarker: a prospective cohort study. *Am J Emerg Med*. Jul 2013;31(7):1103-7. doi:10.1016/j.ajem.2013.04.016. *Not prospective.*
130. Greenslade JH, Nayer R, Parsonage W, et al. Validating the Manchester Acute Coronary Syndromes (MACS) and Troponin-only Manchester Acute Coronary Syndromes (T-MACS) rules for the prediction of acute myocardial infarction in patients presenting to the emergency department with chest pain. *Emerg Med J*. Aug 2017;34(8):517-523. doi:10.1136/emermed-2016-206366. *Not prospective.*
131. Greenslade JH, Parsonage W, Foran L, et al. Widespread Introduction of a High-Sensitivity Troponin Assay: Assessing the Impact on Patients and Health Services. *J Clin Med*. Jun 16 2020;9(6)doi:10.3390/jcm9061883. *No defined ADP.*
132. Gulati M, Levy PD, Mukherjee D, et al. 2021 AHA/ACC/ASE/CHEST/SAEM/SCCT/SCMR Guideline for the Evaluation and Diagnosis of Chest Pain: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation*. Nov 30 2021;144(22):e368-e454. doi:10.1161/cir.0000000000001029. *This is a report on multiple guidelines for the evaluation and diagnosis of chest pain.*
133. Gunsolus I, Smith S, Herzog C, Sexter A, Apple F. 24 Influence of Renal Dysfunction on High-Sensitivity Cardiac Troponin I for Diagnostic Accuracy of Myocardial Infarction and Outcomes Assessment. *American Journal of Clinical Pathology*. 2018;149:S176. *Not published/peer reviewed.*
134. Hillinger P, Twerenbold R, Jaeger C, et al. Optimizing Early Rule-Out Strategies for Acute Myocardial Infarction: Utility of 1-Hour Copeptin. *Clin Chem*. Dec 2015;61(12):1466-74. doi:10.1373/clinchem.2015.242743. *Patients were followed for 3, 12, and 24 months. Combination of copeptin and hs-TnT.*
135. Hochholzer W, Reichlin T, Twerenbold R, et al. Incremental value of high-sensitivity cardiac troponin T for risk prediction in patients with suspected acute myocardial infarction. *Clinical chemistry*. 2011;57(9):1318-1326. *No defined ADP.*
136. Hrecko J, Dokoupil J, Pudil R. The use of T-MACS algorithm in elderly patients in acute cardiac care. *Health & Environmental Research Online*. 2020;19(3):149-154. doi:10.36290/kar.2020.038. *No defined ADP.*
137. Hrecko J, Dokoupil J, Pudil R. Comparison of six decision aid rules for diagnosis of acute myocardial infarction in elderly patients presenting to the emergency department with acute chest pain. *Bratisl Lek Listy*. 2022;123(4):282-290. doi:10.4149//bll_2022_045. *Not prospective.*
138. Inoue K, Shiozaki M, Suwa S, Sumiyoshi M, Daida H. A 0/1-Hour Algorithm Using High-Sensitivity Cardiac Troponin. *J Acute Med*. Jun 1 2018;8(2):47-52. doi:10.6705/j.jacme.201806_8(2).0002. *Review article, not primary study.*

139. Ishak M, Ali D, Fokkert MJ, et al. Fast assessment and management of chest pain without ST-elevation in the pre-hospital gateway: rationale and design. *Eur Heart J Acute Cardiovasc Care*. Apr 2015;4(2):129-36. doi:10.1177/2048872614549738. *Not prospective.*
140. Ishak M, Ali D, Fokkert MJ, et al. Fast assessment and management of chest pain patients without ST-elevation in the pre-hospital gateway (FamouS Triage): ruling out a myocardial infarction at home with the modified HEART score. *Eur Heart J Acute Cardiovasc Care*. Mar 2018;7(2):102-110. doi:10.1177/2048872616687116. *Not prospective.*
141. Jaeger C, Wildi K, Twerenbold R, et al. One-hour rule-in and rule-out of acute myocardial infarction using high-sensitivity cardiac troponin I. *Am Heart J*. Jan 2016;171(1):92-102.e1-5. doi:10.1016/j.ahj.2015.07.022. *Not prospective.*
142. Januzzi JL, Jr., Bamberg F, Lee H, et al. High-sensitivity troponin T concentrations in acute chest pain patients evaluated with cardiac computed tomography. *Circulation*. Mar 16 2010;121(10):1227-34. doi:10.1161/circulationaha.109.893826. *No outcomes within 6 weeks reported.*
143. Johannessen TR, Atar D, Vallersnes OM, Larstorp ACK, Mdala I, Halvorsen S. Comparison of a single high-sensitivity cardiac troponin T measurement with the HEART score for rapid rule-out of acute myocardial infarction in a primary care emergency setting: a cohort study. *BMJ Open*. Feb 24 2021;11(2):e046024. doi:10.1136/bmjopen-2020-046024. *Not prospective.*
144. Johannessen TR, Halvorsen S, Atar D, Vallersnes OM. Performance of the Novel Observation Group Criteria of the European Society of Cardiology (ESC) 0/1-Hour Algorithm in a Low-Risk Population. *J Am Heart Assoc*. Apr 5 2022;11(7):e024927. doi:10.1161/jaha.121.024927. *Not prospective.*
145. Johannessen TR, Vallersnes OM, Halvorsen S, Larstorp ACK, Mdala I, Atar D. Pre-hospital One-Hour Troponin in a Low-Prevalence Population of Acute Coronary Syndrome: OUT-ACS study. *Open Heart*. Jul 2020;7(2)doi:10.1136/openhrt-2020-001296. *hs-cTn result given to MD but not in the context of the algo.*
146. Jülicher P, Greenslade JH, Parsonage WA, Cullen L. The organisational value of diagnostic strategies using high-sensitivity troponin for patients with possible acute coronary syndromes: a trial-based cost-effectiveness analysis. *BMJ Open*. Jun 9 2017;7(6):e013653. doi:10.1136/bmjopen-2016-013653. *Neither primary study nor SR.*
147. Kaambwa B, Ratcliffe J, Horsfall M, et al. Cost effectiveness of high-sensitivity troponin compared to conventional troponin among patients presenting with undifferentiated chest pain: A trial based analysis. *Int J Cardiol*. Jul 1 2017;238:144-150. doi:10.1016/j.ijcard.2017.02.141. *No outcomes within 6 weeks reported.*
148. Kaier TE, Twerenbold R, Lopez-Ayala P, et al. A 0/1h-algorithm using cardiac myosin-binding protein C for early diagnosis of myocardial infarction. *Eur Heart J Acute Cardiovasc Care*. Jun 7 2022;11(4):325-335. doi:10.1093/ehjacc/zuac007. *Not high-sensitivity Tn.*
149. Kang T, Kim GS, Byun YS, et al. An Algorithmic Approach Is Superior to the 99th Percentile Upper Reference Limits of High Sensitivity Troponin as a Threshold for Safe Discharge from the Emergency Department. *Medicina (Kaunas)*. Oct 12 2021;57(10)doi:10.3390/medicina57101083. *No outcomes within 6 weeks reported.*
150. Kankra M, Mehta A, Sawhney J, et al. Improving the ACS Triage—Using High Sensitivity TroponinI and Copeptin for Early ‘Rule-Out’of AMI. *Indian Journal of Clinical Biochemistry*. 2022:1-9. *Combination with other lab (only).*

151. Karakas M, Januzzi JL, Jr., Meyer J, et al. Copeptin does not add diagnostic information to high-sensitivity troponin T in low- to intermediate-risk patients with acute chest pain: results from the rule out myocardial infarction by computed tomography (ROMICAT) study. *Clin Chem*. Aug 2011;57(8):1137-45. doi:10.1373/clinchem.2010.160192. *Combination with other lab (only).*
152. Kavsak PA, Cerasuolo JO, Mondoux SE, et al. Risk Stratification for Patients with Chest Pain Discharged Home from the Emergency Department. *J Clin Med*. Sep 12 2020;9(9)doi:10.3390/jcm9092948. *No defined ADP.*
153. Kavsak PA, Hewitt MK, Mondoux SE, et al. Diagnostic Performance of Serial High-Sensitivity Cardiac Troponin Measurements in the Emergency Setting. *J Cardiovasc Dev Dis*. Aug 13 2021;8(8)doi:10.3390/jcdd8080097. *Not prospective.*
154. Kavsak PA, Mondoux SE, Ma J, et al. Comparison of two biomarker only algorithms for early risk stratification in patients with suspected acute coronary syndrome. *Int J Cardiol*. Nov 15 2020;319:140-143. doi:10.1016/j.ijcard.2020.06.066. *Neither primary study nor SR.*
155. Kavsak PA, Mondoux SE, Sherbino J, et al. Clinical evaluation of Ortho Clinical Diagnostics high-sensitivity cardiac Troponin I assay in patients with symptoms suggestive of acute coronary syndrome. *Clin Biochem*. Jun 2020;80:48-51. doi:10.1016/j.clinbiochem.2020.04.003. *Neither primary study nor SR.*
156. Kelly A-M. What is the incidence of major adverse cardiac events in emergency department chest pain patients with a normal ECG, Thrombolysis in Myocardial Infarction score of zero and initial troponin≤ 99th centile: an observational study? *Emergency Medicine Journal*. 2013;30(1):15-18. *Not high-sensitivity Tn.*
157. Kelly AM. Performance of a sensitive troponin assay in the early diagnosis of acute myocardial infarction in the emergency department. *Emerg Med Australas*. Apr 2011;23(2):181-5. doi:10.1111/j.1742-6723.2011.01388.x. *Not high-sensitivity Tn.*
158. Khan A, Engineer R, Wang S, Jaber WA, Menon V, Cremer PC. Initial experience regarding the safety and yield of rest-stress myocardial perfusion imaging in emergency department patients with mildly abnormal high-sensitivity cardiac troponins. *J Nucl Cardiol*. Dec 2021;28(6):2941-2948. doi:10.1007/s12350-020-02145-w. *This study about MPI safety and not ADP performance/efficacy, not population of interest or outcomes (assessed adverse events attributable to stress testing).*
159. Khan DA, Sharif MS, Khan FA. Diagnostic performance of high-sensitivity troponin T, myeloperoxidase, and pregnancy-associated plasma protein A assays for triage of patients with acute myocardial infarction. *Korean J Lab Med*. Jul 2011;31(3):172-8. doi:10.3343/kjlm.2011.31.3.172. *No defined ADP.*
160. Khan E, Lambrakis K, Blyth A, et al. Classification performance of clinical risk scoring in suspected acute coronary syndrome beyond a rule-out troponin profile. *Eur Heart J Acute Cardiovasc Care*. Dec 6 2021;10(9):1038-1047. doi:10.1093/ehjacc/zuab040. *Not prospective.*
161. Khand A, Frost F, Grainger R, et al. Identification of high-risk non-ST elevation myocardial infarction at presentation to emergency department. A prospective observational cohort study in North West England. *BMJ Open*. Jun 8 2020;10(6):e030128. doi:10.1136/bmjopen-2019-030128. *Not prospective.*
162. Khoshnood A, Erlandsson M, Isma N, Yndigegn T, Mokhtari A. Diagnostic accuracy of troponin T measured ≥6h after symptom onset for ruling out myocardial infarction. *Scand Cardiovasc J*. Jun 2020;54(3):153-161. doi:10.1080/14017431.2019.1699248. *Not prospective.*

163. Kienbacher CL, Fuhrmann V, van Tulder R, et al. Impact of more conservative European Society of Cardiology guidelines on the management of patients with acute chest pain. *Int J Clin Pract*. Jun 2021;75(6):e14133. doi:10.1111/ijcp.14133. *No outcomes within 6 weeks reported.*
164. Kim JW, Kim H, Yun YM, Lee KR, Kim HJ. Absolute Change in High-Sensitivity Cardiac Troponin I at Three Hours After Presentation is Useful for Diagnosing Acute Myocardial Infarction in the Emergency Department. *Ann Lab Med*. Nov 2020;40(6):474-480. doi:10.3343/alm.2020.40.6.474. *No outcomes within 6 weeks reported.*
165. Kim KS, Suh GJ, Song SH, et al. Copeptin with high-sensitivity troponin at presentation is not inferior to serial troponin measurements for ruling out acute myocardial infarction. *Clin Exp Emerg Med*. Mar 2020;7(1):35-42. doi:10.15441/ceem.19.013. *No outcomes within 6 weeks reported.*
166. King G, Nicholls GM, Jones P. Impact of a decision rule on duration of continuous cardiac monitoring of patients with suspected acute coronary syndrome in an emergency department. *Intern Med J*. Oct 2013;43(10):1088-95. doi:10.1111/imj.12250. *No defined ADP.*
167. Koechlin L, Boeddinghaus J, Nestelberger T, et al. Lower diagnostic accuracy of hs-cTnI in patients with prior coronary artery bypass grafting. *Int J Cardiol*. May 1 2022;354:1-6. doi:10.1016/j.ijcard.2022.02.025. *Not prospective.*
168. Koechlin L, Boeddinghaus J, Nestelberger T, et al. Performance of the ESC 0/2h-algorithm using high-sensitivity cardiac troponin I in the early diagnosis of myocardial infarction. *Am Heart J*. Dec 2021;242:132-137. doi:10.1016/j.ahj.2021.08.008. *Not prospective.*
169. Koper LH, Frenk LDS, Meeder JG, et al. URGENT 1.5: diagnostic accuracy of the modified HEART score, with fingerstick point-of-care troponin testing, in ruling out acute coronary syndrome. *Neth Heart J*. Nov 24 2021;doi:10.1007/s12471-021-01646-8. *Not high-sensitivity Tn.*
170. Lau G, Koh M, Kavsak PA, et al. Clinical outcomes for chest pain patients discharged home from emergency departments using high-sensitivity versus conventional cardiac troponin assays. *Am Heart J*. Mar 2020;221:84-94. doi:10.1016/j.ahj.2019.12.007. *No defined ADP.*
171. Laureano-Phillips J, Robinson RD, Aryal S, et al. HEART Score Risk Stratification of Low-Risk Chest Pain Patients in the Emergency Department: A Systematic Review and Meta-Analysis. *Ann Emerg Med*. Aug 2019;74(2):187-203. doi:10.1016/j.annemergmed.2018.12.010. *Not prospective.*
172. Lee CC, Huang SS, Yeo YH, et al. High-sensitivity-cardiac troponin for accelerated diagnosis of acute myocardial infarction: A systematic review and meta-analysis. *Am J Emerg Med*. Jul 2020;38(7):1402-1407. doi:10.1016/j.ajem.2019.11.035. *Not prospective.*
173. Lee KK, Ferry AV, Anand A, et al. Sex-Specific Thresholds of High-Sensitivity Troponin in Patients With Suspected Acute Coronary Syndrome. J Am Coll Cardiol. Oct 22 2019;74(16):2032-2043. doi:10.1016/j.jacc.2019.07.082. *No defined ADP.*
174. Leung YK, Cheng NM, Chan CP, et al. Early Exclusion of Major Adverse Cardiac Events in Emergency Department Chest Pain Patients: A Prospective Observational Study. *J Emerg Med*. Sep 2017;53(3):287-294. doi:10.1016/j.jemermed.2017.05.006. *Not prospective.*

175. Lin Z, Lim SH, Chua SJT, Tai ES, Chan YH, Richards AM. High-sensitivity troponin T and long-term adverse cardiac events among patients presenting with suspected acute coronary syndrome in Singapore. *Singapore Med J*. Aug 2019;60(8):418-426. doi:10.11622/smedj.2019013. *No defined ADP.*
176. Lindahl B, Jernberg T, Badertscher P, et al. An algorithm for rule-in and rule-out of acute myocardial infarction using a novel troponin I assay. *Heart*. Jan 15 2017;103(2):125-131. doi:10.1136/heartjnl-2016-309951. *Not prospective.*
177. Liu T, Wang G, Li P, Dai X. Risk classification of highly sensitive troponin I predict presence of vulnerable plaque assessed by dual source coronary computed tomography angiography. *Int J Cardiovasc Imaging*. Nov 2017;33(11):1831-1839. doi:10.1007/s10554-017-1174-3. *No defined ADP.*
178. Liu TY, Tsai MT, Chen FC, et al. Impact of coronary risk scores on disposition decision in emergency patients with chest pain. *Am J Emerg Med*. Oct 2021;48:165-169. doi:10.1016/j.ajem.2021.04.029. *Heart score provided but no defined rules on how to rule in /out.*
179. Ljung L, Reichard C, Hagerman P, et al. Sensitivity of undetectable level of high-sensitivity troponin T at presentation in a large non-ST-segment elevation myocardial infarction cohort of early presenters. *Int J Cardiol*. Jun 1 2019;284:6-11. doi:10.1016/j.ijcard.2018.10.088. *Not prospective.*
180. Lopez-Ayala P, Boeddinghaus J, Koechlin L, Nestelberger T, Mueller C. Early Rule-Out Strategies in the Emergency Department Utilizing High-Sensitivity Cardiac Troponin Assays. *Clin Chem*. Jan 8 2021;67(1):114-123. doi:10.1093/clinchem/hvaa226. *Neither primary study nor SR.*
181. Lopez-Ayala P, Nestelberger T, Boeddinghaus J, et al. Novel Criteria for the Observe-Zone of the ESC 0/1h-hs-cTnT Algorithm. *Circulation*. Sep 7 2021;144(10):773-787. doi:10.1161/circulationaha.120.052982. *No outcomes within 6 weeks reported.*
182. Lordet V, Lesbordes M, Garcia R, et al. Prevalence and outcome of patients referred for chest pain with high-sensitivity troponin elevation and no diagnosis at discharge. *Clin Cardiol*. Jul 2018;41(7):953-958. doi:10.1002/clc.22984. *No defined ADP.*
183. Ma CP, Wang X, Wang QS, Liu XL, He XN, Nie SP. A modified HEART risk score in chest pain patients with suspected non-ST-segment elevation acute coronary syndrome. *J Geriatr Cardiol*. Jan 2016;13(1):64-9. doi:10.11909/j.issn.1671-5411.2016.01.013. *Not prospective.*
184. Mahler SA, Riley RF, Russell GB, et al. Adherence to an Accelerated Diagnostic Protocol for Chest Pain: Secondary Analysis of the HEART Pathway Randomized Trial. *Acad Emerg Med*. Jan 2016;23(1):70-7. doi:10.1111/acem.12835. *Not high-sensitivity Tn.*
185. Mahler SA, Stopyra JP, Apple FS, et al. Use of the HEART Pathway with high sensitivity cardiac troponins: A secondary analysis. *Clin Biochem*. May 2017;50(7-8):401-407. doi:10.1016/j.clinbiochem.2017.01.003. *Combination with other lab (only).*
186. Mahmoud O, Mahmaljy H, Elias H, et al. A comparative 30-day outcome analysis of inpatient evaluation vs outpatient testing in patients presenting with chest pain in the high-sensitivity troponin era. A propensity score matched case-control retrospective study. *Clin Cardiol*. Nov 2020;43(11):1248-1254. doi:10.1002/clc.23435. *No defined ADP.*
187. Málek J, Živný P, Vojtíšek P, Matějka J. Application of 0/1-h high sensitivity cardiac troponin algorithm in the cardiology outpatient department. *Cor et Vasa*. 2019;61(6):584-587. *Not ED or pre-ED presentation.*

188. Marcusohn E, Epstein D, Roguin A, Zukermann R. Rapid rule out for suspected myocardial infarction: is the algorithm appropriate for all? *Eur Heart J Qual Care Clin Outcomes*. Jul 1 2020;6(3):193-198. doi:10.1093/ehjqcco/qcaa005. *Specific population.*
189. Marjot J, Kaier TE, Henderson K, Hunter L, Marber MS, Perera D. A single centre prospective cohort study addressing the effect of a rule-in/rule-out troponin algorithm on routine clinical practice. *Eur Heart J Acute Cardiovasc Care*. Aug 2019;8(5):404-411. doi:10.1177/2048872617746850. *No defined ADP.*
190. McCord J, Aurora L, Lindahl B, et al. Symptoms Predictive of Acute Myocardial Infarction in the Troponin Era: Analysis From the TRAPID-AMI Study. *Crit Pathw Cardiol*. Mar 2019;18(1):10-15. doi:10.1097/hpc.0000000000000163. *Substudy analysis of the TRAPID-AMI, no outcome of interest.*
191. McCord J, Cabrera R, Lindahl B, et al. Prognostic Utility of a Modified HEART Score in Chest Pain Patients in the Emergency Department. *Circ Cardiovasc Qual Outcomes*. Feb 2017;10(2)doi:10.1161/circoutcomes.116.003101. *Not ED or pre-ED presentation.*
192. McCord J, Hana A, Cook B, et al. The role of cardiac testing with the 0/1-hour high-sensitivity cardiac troponin algorithm evaluating for acute myocardial infarction. *Am Heart J*. Mar 2021;233:68-77. doi:10.1016/j.ahj.2020.12.015. *Not prospective.*
193. McCord JK, Cook B, Gandolfo C, et al. Race-it-rapid myocardial infarction exclusion using an accelerated high-sensitivity cardiac troponin I protocol: a prospective trail. *Journal of the American College of Cardiology*. 2022;79(9_Supplement):951-951. *Abstract, no PDF.*
194. McRae A, Graham M, Abedin T, et al. Sex-specific, high-sensitivity cardiac troponin T cut-off concentrations for ruling out acute myocardial infarction with a single measurement. *Cjem*. Jan 2019;21(1):26-33. doi:10.1017/cem.2018.435. *Not prospective.*
195. McRae AD, Andruchow JE. Highly-sensitive troponin T algorithm facilitates early discharge of low-risk chest pain patients within 1 h of emergency department arrival. *Evid Based Med*. Aug 2015;20(4):144. doi:10.1136/ebmed-2015-110224. *Abstract, no PDF.*
196. McRae AD, Innes G, Graham M, et al. Undetectable Concentrations of a Food and Drug Administration-approved High-sensitivity Cardiac Troponin T Assay to Rule Out Acute Myocardial Infarction at Emergency Department Arrival. *Acad Emerg Med*. Oct 2017;24(10):1267-1277. doi:10.1111/acem.13229. *No defined ADP.*
197. McRae AD, Innes G, Graham M, et al. Comparative Evaluation of 2-Hour Rapid Diagnostic Algorithms for Acute Myocardial Infarction Using High-Sensitivity Cardiac Troponin T. *Can J Cardiol*. Aug 2017;33(8):1006-1012. doi:10.1016/j.cjca.2017.04.010. *Not prospective.*
198. Meller B, Cullen L, Parsonage WA, et al. Accelerated diagnostic protocol using high-sensitivity cardiac troponin T in acute chest pain patients. *Int J Cardiol*. Apr 1 2015;184:208-215. doi:10.1016/j.ijcard.2015.02.006. *Not prospective.*
199. Meune C, Reichlin T, Irfan A, et al. How safe is the outpatient management of patients with acute chest pain and mildly increased cardiac troponin concentrations? *Clin Chem*. May 2012;58(5):916-24. doi:10.1373/clinchem.2011.178053. *No defined ADP.*
200. Miller J, Cook B, Singh-Kucukarslan G, et al. RACE-IT - Rapid Acute Coronary Syndrome Exclusion using the Beckman Coulter Access high-sensitivity cardiac troponin I: A stepped-wedge cluster randomized trial. *Contemp Clin Trials Commun*. Jun 2021;22:100773. doi:10.1016/j.conctc.2021.100773. *Protocol and no trial outcome paper found.*

201. Miller-Hodges E, Anand A, Shah ASV, et al. High-Sensitivity Cardiac Troponin and the Risk Stratification of Patients With Renal Impairment Presenting With Suspected Acute Coronary Syndrome. *Circulation*. Jan 30 2018;137(5):425-435. doi:10.1161/circulationaha.117.030320. *No defined ADP.*
202. Möckel M, Searle J, Hamm C, et al. Early discharge using single cardiac troponin and copeptin testing in patients with suspected acute coronary syndrome (ACS): a randomized, controlled clinical process study. *Eur Heart J*. Feb 7 2015;36(6):369-76. doi:10.1093/eurheartj/ehu178. *Not prospective.*
203. Mohsen M, Shawky A. The diagnostic utility of High-Sensitivity Cardiac Troponin T in acute coronary syndrome. *The Egyptian Heart Journal*. 2016;68(1):1-9. *No defined ADP.*
204. Mokhtari A, Borna C, Gilje P, et al. A 1-h Combination Algorithm Allows Fast Rule-Out and Rule-In of Major Adverse Cardiac Events. *J Am Coll Cardiol*. Apr 5 2016;67(13):1531-1540. doi:10.1016/j.jacc.2016.01.059. *ADP not prospective.*
205. Mokhtari A, Khoshnood A, Lundager Forberg J, et al. Effectiveness and Safety of the European Society of Cardiology 0-/1-h Troponin Rule-Out Protocol: The Design of the ESC-TROP Multicenter Implementation Study. *Cardiology*. 2020;145(11):685-692. doi:10.1159/000509390. *Study design, no outcomes.*
206. Mokhtari A, Lindahl B, Schiopu A, et al. A 0-Hour/1-Hour Protocol for Safe, Early Discharge of Chest Pain Patients. *Acad Emerg Med*. Aug 2017;24(8):983-992. doi:10.1111/acem.13224. *ADP not prospective.*
207. Mokhtari A, Lindahl B, Smith JG, Holzmann MJ, Khoshnood A, Ekelund U. Diagnostic Accuracy of High-Sensitivity Cardiac Troponin T at Presentation Combined With History and ECG for Ruling Out Major Adverse Cardiac Events. *Ann Emerg Med*. Dec 2016;68(6):649-658.e3. doi:10.1016/j.annemergmed.2016.06.008. *ADP not prospective.*
208. Morawiec B, Przywara-Chowaniec B, Muzyk P, et al. Combined Use of High-Sensitive Cardiac Troponin, Copeptin, and the Modified HEART Score for Rapid Evaluation of Chest Pain Patients. *Dis Markers*. 2018;2018:9136971. doi:10.1155/2018/9136971. *Standard care is based on esc but paper does not report those results and instead reports non prospective ADP.*
209. Mueller C, Giannitsis E, Christ M, et al. Multicenter Evaluation of a 0-Hour/1-Hour Algorithm in the Diagnosis of Myocardial Infarction With High-Sensitivity Cardiac Troponin T. *Ann Emerg Med*. Jul 2016;68(1):76-87.e4. doi:10.1016/j.annemergmed.2015.11.013. *Not prospective.*
210. Mueller M, Biener M, Vafaie M, et al. Absolute and relative kinetic changes of high-sensitivity cardiac troponin T in acute coronary syndrome and in patients with increased troponin in the absence of acute coronary syndrome. *Clin Chem*. Jan 2012;58(1):209-18. doi:10.1373/clinchem.2011.171827. *No defined ADP.*
211. Mueller T, Egger M, Peer E, Jani E, Dieplinger B. Evaluation of sex-specific cut-off values of high-sensitivity cardiac troponin I and T assays in an emergency department setting–results from the Linz Troponin (LITROP) study. *Clinica Chimica Acta*. 2018;487:66-74. *No defined ADP.*
212. Mueller-Hennessen M, Lindahl B, Giannitsis E, et al. Diagnostic and prognostic implications using age- and gender-specific cut-offs for high-sensitivity cardiac troponin T - Sub-analysis from the TRAPID-AMI study. *Int J Cardiol*. Apr 15 2016;209:26-33. doi:10.1016/j.ijcard.2016.01.213. *No defined ADP.*
213. Mueller-Hennessen M, Lindahl B, Giannitsis E, et al. Combined testing of copeptin and high-sensitivity cardiac troponin T at baseline in comparison to other algorithms for rule-

out of acute myocardial infarction. *European Heart Journal*. 2017;38(suppl_1). *Abstract, no PDF.*

214. Mueller-Hennessen M, Lindahl B, Giannitsis E, et al. Combined testing of copeptin and high-sensitivity cardiac troponin T at presentation in comparison to other algorithms for rapid rule-out of acute myocardial infarction. *Int J Cardiol*. Feb 1 2019;276:261-267. doi:10.1016/j.ijcard.2018.10.084. *Not Prospective.*
215. Mueller-Hennessen M, Mueller C, Giannitsis E, et al. Serial Sampling of High-Sensitivity Cardiac Troponin T May Not Be Required for Prediction of Acute Myocardial Infarction Diagnosis in Chest Pain Patients with Highly Abnormal Concentrations at Presentation. *Clin Chem*. Feb 2017;63(2):542-551. doi:10.1373/clinchem.2016.258392. *Not prospective.*
216. Mumma BE, Casey SD, Dang RK, et al. Diagnostic Reclassification by a High-Sensitivity Cardiac Troponin Assay. *Ann Emerg Med*. Nov 2020;76(5):566-579. doi:10.1016/j.annemergmed.2020.06.047. *No defined ADP.*
217. Mungai E, Hamilton BK, Burns D. Comparison of High-Sensitivity Troponin T Assay to Conventional Troponin T Assay for Rule Out of Acute Coronary Syndrome in the Emergency Department. *Adv Emerg Nurs J*. Oct/Dec 2020;42(4):304-314. doi:10.1097/tme.0000000000000324. *No defined ADP.*
218. Musey PI, Jr., Bellolio F, Upadhye S, et al. Guidelines for reasonable and appropriate care in the emergency department (GRACE): Recurrent, low-risk chest pain in the emergency department. *Acad Emerg Med*. Jul 2021;28(7):718-744. doi:10.1111/acem.14296. *Not primary study.*
219. Nejatian A, Omstedt Å, Höijer J, et al. Outcomes in Patients With Chest Pain Discharged After Evaluation Using a High-Sensitivity Troponin T Assay. *J Am Coll Cardiol*. May 30 2017;69(21):2622-2630. doi:10.1016/j.jacc.2017.03.586. *No defined ADP.*
220. Nestelberger T, Boeddinghaus J, Greenslade J, et al. Two-Hour Algorithm for Rapid Triage of Suspected Acute Myocardial Infarction Using a High-Sensitivity Cardiac Troponin I Assay. *Clin Chem*. Nov 2019;65(11):1437-1447. doi:10.1373/clinchem.2019.305193. *Not prospective.*
221. Nestelberger T, Boeddinghaus J, Wussler D, et al. Predicting Major Adverse Events in Patients With Acute Myocardial Infarction. *J Am Coll Cardiol*. Aug 20 2019;74(7):842-854. doi:10.1016/j.jacc.2019.06.025. *Not prospective.*
222. Nestelberger T, Cullen L, Lindahl B, et al. Diagnosis of acute myocardial infarction in the presence of left bundle branch block. *Heart*. Oct 2019;105(20):1559-1567. doi:10.1136/heartjnl-2018-314673. *Not prospective.*
223. Nestelberger T, Lopez-Ayala P, Boeddinghaus J, et al. External Validation and Extension of a Clinical Score for the Discrimination of Type 2 Myocardial Infarction. *J Clin Med*. Mar 18 2021;10(6)doi:10.3390/jcm10061264. *Not prospective.*
224. Nestelberger T, Wildi K, Boeddinghaus J, et al. Characterization of the observe zone of the ESC 2015 high-sensitivity cardiac troponin 0h/1h-algorithm for the early diagnosis of acute myocardial infarction. *Int J Cardiol*. Mar 15 2016;207:238-45. doi:10.1016/j.ijcard.2016.01.112. *Not prospective.*
225. Neumann JT, Sörensen NA, Ojeda F, et al. Early diagnosis of acute myocardial infarction using high-sensitivity troponin I. *PLoS One*. 2017;12(3):e0174288. doi:10.1371/journal.pone.0174288. *Standard of care is esc but research team applied rules of esc and manipulated to determine a better ADP.*
226. Neumann JT, Sörensen NA, Ojeda F, et al. Immediate Rule-Out of Acute Myocardial Infarction Using Electrocardiogram and Baseline High-Sensitivity Troponin I. *Clin*

Chem. Jan 2017;63(1):394-402. doi:10.1373/clinchem.2016.262659. *Standard of care is esc but research team applied rules of esc and manipulated to determine a better ADP.*

227. Neumann JT, Sörensen NA, Schwemer T, et al. Diagnosis of Myocardial Infarction Using a High-Sensitivity Troponin I 1-Hour Algorithm. *JAMA Cardiol*. Jul 1 2016;1(4):397-404. doi:10.1001/jamacardio.2016.0695. *Not prospective.*
228. Neumann JT, Twerenbold R, Ojeda F, et al. Application of High-Sensitivity Troponin in Suspected Myocardial Infarction. *N Engl J Med*. Jun 27 2019;380(26):2529-2540. doi:10.1056/NEJMoa1803377. *No defined ADP.*
229. Ng M, Tan HJG, Gao F, et al. Comparative prospective study of the performance of chest pain scores and clinical assessment in an emergency department cohort in Singapore. *J Am Coll Emerg Physicians Open*. Oct 2020;1(5):723-729. doi:10.1002/emp2.12242. *Not prospective.*
230. Nilsson T, Johannesson E, Lundager Forberg J, Mokhtari A, Ekelund U. Diagnostic accuracy of the HEART Pathway and EDACS-ADP when combined with a 0-hour/1-hour hs-cTnT protocol for assessment of acute chest pain patients. *Emerg Med J*. Nov 2021;38(11):808-813. doi:10.1136/emermed-2020-210833. *Not prospective.*
231. Nowak R, Mueller C, Giannitsis E, et al. High sensitivity cardiac troponin T in patients not having an acute coronary syndrome: results from the TRAPID-AMI study. *Biomarkers*. Dec 2017;22(8):709-714. doi:10.1080/1354750x.2017.1334154. *Describes final non-ACS diagnoses of patients without ACS.*
232. Nowak RM, Christenson RH, Jacobsen G, et al. Performance of Novel High-Sensitivity Cardiac Troponin I Assays for 0/1-Hour and 0/2- to 3-Hour Evaluations for Acute Myocardial Infarction: Results From the HIGH-US Study. *Ann Emerg Med*. Jul 2020;76(1):1-13. doi:10.1016/j.annemergmed.2019.12.008. *Not prospective.*
233. Nowak RM, Jacobsen G, Limkakeng A, Jr., et al. Outpatient versus observation/inpatient management of emergency department patients rapidly ruled-out for acute myocardial infarction: Findings from the HIGH-US study. *Am Heart J*. Jan 2021;231:6-17. doi:10.1016/j.ahj.2020.10.067. *Not prospective.*
234. Ola O, Akula A, De Michieli L, et al. Clinical Impact of High-Sensitivity Cardiac Troponin T Implementation in the Community. *J Am Coll Cardiol*. Jun 29 2021;77(25):3160-3170. doi:10.1016/j.jacc.2021.04.050. *Abstract, no PDF.*
235. Olsson P, Khoshnood A, Mokhtari A, Ekelund U. Glucose and high-sensitivity troponin T predict a low risk of major adverse cardiac events in emergency department chest pain patients. *Scand Cardiovasc J*. Dec 2021;55(6):354-361. doi:10.1080/14017431.2021.1987512. *Not prospective.*
236. Pang PS, Fermann GJ, Hunter BR, et al. TACIT (High Sensitivity Troponin T Rules Out Acute Cardiac Insufficiency Trial) An Observational Study to Identify Acute Heart Failure Patients at Low Risk for Rehospitalization or Mortality. *Circulation: Heart Failure*. 2019;12(7):e005931. *Not non-STEMI ACS.*
237. Paoloni R, Kumar P, Janu M. Pilot study of high-sensitivity troponin T testing to facilitate safe early disposition decisions in patients presenting to the emergency department with chest pain. *Intern Med J*. Mar 2010;40(3):188-92. doi:10.1111/j.1445-5994.2009.01962.x. *Not non-STEMI ACS.*
238. Papendick C, Blyth A, Seshadri A, et al. A randomized trial of a 1-hour troponin T protocol in suspected acute coronary syndromes: Design of the Rapid Assessment of Possible ACS In the emergency Department with high sensitivity Troponin T (RAPID-TnT) study. *Am Heart J*. Aug 2017;190:25-33. doi:10.1016/j.ahj.2017.05.004. *Not published/peer reviewed.*

239. Parsonage WA, Greenslade JH, Hammett CJ, et al. Validation of an accelerated high-sensitivity troponin T assay protocol in an Australian cohort with chest pain. *Med J Aust*. Feb 17 2014;200(3):161-5. doi:10.5694/mja13.10466. *Not non-STEMI ACS.*
240. Parsonage WA, Mueller C, Greenslade JH, et al. Validation of NICE diagnostic guidance for rule out of myocardial infarction using high-sensitivity troponin tests. *Heart*. Aug 15 2016;102(16):1279-86. doi:10.1136/heartjnl-2016-309270. *Not non-STEMI ACS.*
241. Pavlovsky T, Obadia M, Ragot S, Douay B, Casalino E, Ghazali DA. Predictors of Risk Stratification and Value of Point-of-Care of High-Sensitivity Cardiac Troponin-I in EMS Management of Non-ST-Segment Elevation Myocardial Infarction: A Retrospective Study. *Prehosp Disaster Med*. Jun 2022;37(3):365-372. doi:10.1017/s1049023x22000681. *Not prospective.*
242. Peacock WF, Baumann BM, Bruton D, et al. Efficacy of High-Sensitivity Troponin T in Identifying Very-Low-Risk Patients With Possible Acute Coronary Syndrome. *JAMA Cardiol*. Feb 1 2018;3(2):104-111. doi:10.1001/jamacardio.2017.4625. *Not prospective.*
243. Peacock WF, Christenson R, Diercks DB, et al. Myocardial Infarction Can Be Safely Excluded by High-sensitivity Troponin I Testing 3 Hours After Emergency Department Presentation. *Acad Emerg Med*. Aug 2020;27(8):671-680. doi:10.1111/acem.13922. *No defined ADP.*
244. Peck D, Knott J, Lefkovits J. Clinical impact of a high-sensitivity troponin assay introduction on patients presenting to the emergency department. *Emerg Med Australas*. Jun 2016;28(3):273-8. doi:10.1111/1742-6723.12566. *No defined ADP.*
245. Pedersen CK, Stengard C, Boetker MT, Soendergaard HM, Dodt KK, Terkelsen CJ. Copeptin and troponin for rule-out of AMI reduces length of stay (the AROMI study) 2018; https://academic.oup.com/ehjacc/article/7/1_suppl/4/5922359 by New York University user on 21 July 2022. *Abstract of AROMI study.*
246. Pettersson A, Ljung L, Johansson C, et al. Experiences of a One-hour Algorithm in Chest Pain Patients With a Nonelevated Troponin T at Presentation. *Crit Pathw Cardiol*. Mar 2018;17(1):6-12. doi:10.1097/hpc.0000000000000138. *Not prospective.*
247. Pickering JW, Flaws D, Smith SW, et al. A Risk Assessment Score and Initial High-sensitivity Troponin Combine to Identify Low Risk of Acute Myocardial Infarction in the Emergency Department. *Acad Emerg Med*. Apr 2018;25(4):434-443. doi:10.1111/acem.13343. *Not prospective.*
248. Pickering JW, Greenslade JH, Cullen L, et al. Assessment of the European Society of Cardiology 0-Hour/1-Hour Algorithm to Rule-Out and Rule-In Acute Myocardial Infarction. *Circulation*. Nov 15 2016;134(20):1532-1541. doi:10.1161/circulationaha.116.022677. *Not prospective.*
249. Pickering JW, Greenslade JH, Cullen L, et al. Validation of presentation and 3 h high-sensitivity troponin to rule-in and rule-out acute myocardial infarction. *Heart*. Aug 15 2016;102(16):1270-8. doi:10.1136/heartjnl-2015-308505. *Not prospective.*
250. Pickering JW, Than MP, Cullen L, et al. Rapid Rule-out of Acute Myocardial Infarction With a Single High-Sensitivity Cardiac Troponin T Measurement Below the Limit of Detection: A Collaborative Meta-analysis. *Ann Intern Med*. May 16 2017;166(10):715-724. doi:10.7326/m16-2562. *Systematic Review.*
251. Pickering JW, Young JM, George P, et al. The utility of presentation and 4-hour high sensitivity troponin I to rule-out acute myocardial infarction in the emergency department. *Clin Biochem*. Dec 2015;48(18):1219-24. doi:10.1016/j.clinbiochem.2015.07.033. *Not prospective.*

252. Poldervaart JM, Reitsma JB, Backus BE, et al. Effect of Using the HEART Score in Patients With Chest Pain in the Emergency Department: A Stepped-Wedge, Cluster Randomized Trial. *Ann Intern Med*. May 16 2017;166(10):689-697. doi:10.7326/m16-1600. *Not high-sensitivity Tn.*
253. Pongas D, Dupouy P, Daoud B, et al. Acute chest pain and cardiac computed tomography. *Sang Thrombose Vaisseaux*. 2016;28(3):119-131. *Neither primary study nor SR.*
254. Potocki M, Reichlin T, Thalmann S, et al. Diagnostic and prognostic impact of copeptin and high-sensitivity cardiac troponin T in patients with pre-existing coronary artery disease and suspected acute myocardial infarction. *Heart*. 2012;98(7):558-565. *Not prospective.*
255. Puelacher C, Gugala M, Adamson PD, et al. Incidence and outcomes of unstable angina compared with non-ST-elevation myocardial infarction. *Heart*. Sep 2019;105(18):1423-1431. doi:10.1136/heartjnl-2018-314305. *No defined ADP.*
256. Rainer TH, Ahuja AT, Graham CA, Yan BP, Wong JK, Chan CP. Improving early risk stratification in patients presenting to emergency department with suspected acute coronary syndrome. *Hong Kong Med J*. Feb 2018;24 Suppl 2(1):24-29. *Not prospective.*
257. Rainer TH, Leung YK, Lee A, et al. Add-on tests for improving risk-stratification in emergency department patients with chest pain who are at low to moderate risk of 30-day major adverse cardiac events. *Int J Cardiol*. Oct 1 2016;220:299-306. doi:10.1016/j.ijcard.2016.05.057. *Not prospective.*
258. Ramezani F, Ahmadi S, Faridaalee G, Baratloo A, Yousefifard M. Value of Manchester Acute Coronary Syndromes Decision Rule in the Detection of Acute Coronary Syndrome; a Systematic Review and Meta-Analysis. *Emerg (Tehran)*. 2018;6(1):e61. *Systematic Review.*
259. Ras M, Reitsma JB, Hoes AW, Six AJ, Poldervaart JM. Value of Repeated Troponin Measurements to Improve the Safety of the HEART Score for Chest Pain Patients at the Emergency Department. *Crit Pathw Cardiol*. Jun 2020;19(2):62-68. doi:10.1097/hpc.0000000000000213. *Not high-sensitivity Tn.*
260. Rasmussen MB, Stengaard C, Sørensen JT, et al. Predictive value of routine point-of-care cardiac troponin T measurement for prehospital diagnosis and risk-stratification in patients with suspected acute myocardial infarction. *Eur Heart J Acute Cardiovasc Care*. Jun 2019;8(4):299-308. doi:10.1177/2048872617745893. *Not high-sensitivity Tn.*
261. Ratmann PD, Boeddinghaus J, Nestelberger T, et al. External Validation of the No Objective Testing Rules in Acute Chest Pain. *J Am Heart Assoc*. May 18 2021;10(10):e020031. doi:10.1161/jaha.120.020031. *Not prospective.*
262. Reichlin T, Cullen L, Parsonage WA, et al. Two-hour algorithm for triage toward rule-out and rule-in of acute myocardial infarction using high-sensitivity cardiac troponin T. *Am J Med*. Apr 2015;128(4):369-79.e4. doi:10.1016/j.amjmed.2014.10.032. *Not prospective.*
263. Reichlin T, Schindler C, Drexler B, et al. One-hour rule-out and rule-in of acute myocardial infarction using high-sensitivity cardiac troponin T. *Arch Intern Med*. Sep 10 2012;172(16):1211-8. doi:10.1001/archinternmed.2012.3698. *Not prospective.*
264. Reichlin T, Twerenbold R, Maushart C, et al. Risk stratification in patients with unstable angina using absolute serial changes of 3 high-sensitive troponin assays. *Am Heart J*. Mar 2013;165(3):371-8.e3. doi:10.1016/j.ahj.2012.11.010. *No defined ADP.*
265. Reichlin T, Twerenbold R, Wildi K, et al. Prospective validation of a 1-hour algorithm to rule-out and rule-in acute myocardial infarction using a high-sensitivity cardiac troponin

T assay. *Cmaj*. May 19 2015;187(8):E243-e252. doi:10.1503/cmaj.141349. *Not prospective.*

266. Restan IZ, Sanchez AY, Steiro OT, et al. Adding stress biomarkers to high-sensitivity cardiac troponin for rapid non-ST-elevation myocardial infarction rule-out protocols. *Eur Heart J Acute Cardiovasc Care*. Mar 16 2022;11(3):201-212. doi:10.1093/ehjacc/zuab124. *Not prospective.*
267. Reynard C, Ismail H, Hadden N. BET 1: Can the Manchester Acute Coronary Syndromes and Troponin-only Manchester Acute Coronary Syndromes decision aids rule out acute coronary syndromes in the emergency department? *Emerg Med J*. Dec 2017;34(12):852-854. doi:10.1136/emermed-2017-207286.1. *Systematic Review.*
268. Richards G, Sen G, Halliday A, et al. Reducing chest pain admissions using a 1 hour high-sensitivity troponin-t pathway. *Heart*. 2017;103(Suppl 5):A50-A51. *Not published/peer reviewed.*
269. Riedlinger D, Möckel M, Müller C, et al. High-sensitivity cardiac troponin T for diagnosis of NSTEMI in the elderly emergency department patient: a clinical cohort study. *Biomarkers*. Sep 2018;23(6):551-557. doi:10.1080/1354750x.2018.1460763. *No defined ADP.*
270. Roongsritong C, Taha ME, Pisipati S, et al. SVEAT Score, a Potential New and Improved Tool for Acute Chest Pain Risk Stratification. *Am J Cardiol*. Jul 15 2020;127:36-40. doi:10.1016/j.amjcard.2020.04.009. *No defined ADP.*
271. Roos A, Holzmann MJ. Use of historical high-sensitivity cardiac troponin T levels to rule out myocardial infarction. *Open Heart*. May 2021;8(1)doi:10.1136/openhrt-2021-001682. *Not prospective.*
272. Röttger E, de Vries-Spithoven S, Reitsma JB, et al. Safety of a 1-hour Rule-out High-sensitive Troponin T Protocol in Patients With Chest Pain at the Emergency Department. *Crit Pathw Cardiol*. Dec 2017;16(4):129-134. doi:10.1097/hpc.0000000000000135. *No defined ADP.*
273. Ruangsomboon O, Mekavuthikul P, Chakorn T, et al. The feasibility of the 1-h high-sensitivity cardiac troponin T algorithm to rule-in and rule-out acute myocardial infarction in Thai emergency patients: an observational study. *Int J Emerg Med*. Oct 22 2018;11(1):43. doi:10.1186/s12245-018-0204-9. *No defined ADP.*
274. Ruangsomboon O, Thirawattanasoot N, Chakorn T, et al. The utility of the 1-hour high-sensitivity cardiac troponin T algorithm compared with and combined with five early rule-out scores in high-acuity chest pain emergency patients. *Int J Cardiol*. Jan 1 2021;322:23-28. doi:10.1016/j.ijcard.2020.08.099. *Not prospective.*
275. Rubini Gimenez M, Badertscher P, Twerenbold R, et al. Impact of the US Food and Drug Administration-Approved Sex-Specific Cutoff Values for High-Sensitivity Cardiac Troponin T to Diagnose Myocardial Infarction. *Circulation*. Apr 24 2018;137(17):1867-1869. doi:10.1161/circulationaha.117.031940. *No defined ADP.*
276. Rubini Giménez M, Hoeller R, Reichlin T, et al. Rapid rule out of acute myocardial infarction using undetectable levels of high-sensitivity cardiac troponin. *Int J Cardiol*. Oct 9 2013;168(4):3896-901. doi:10.1016/j.ijcard.2013.06.049. *No defined ADP.*
277. Rubini Giménez M, Twerenbold R, Boeddinghaus J, et al. Clinical Effect of Sex-Specific Cutoff Values of High-Sensitivity Cardiac Troponin T in Suspected Myocardial Infarction. *JAMA Cardiol*. Nov 1 2016;1(8):912-920. doi:10.1001/jamacardio.2016.2882. *No defined ADP.*

278. Rubini Gimenez M, Twerenbold R, Reichlin T, et al. Direct comparison of high-sensitivity-cardiac troponin I vs. T for the early diagnosis of acute myocardial infarction. *Eur Heart J*. Sep 7 2014;35(34):2303-11. doi:10.1093/eurheartj/ehu188. *No defined ADP.*
279. Rubini Giménez M, Wildi K, Wussler D, et al. Early kinetics of cardiac troponin in suspected acute myocardial infarction. *Rev Esp Cardiol (Engl Ed)*. Jun 2021;74(6):502-509. doi:10.1016/j.rec.2020.04.008. *No defined ADP.*
280. Sajeed SM, De Dios MP, Ong DWJ, Punyadasa AC. Performance of the modified HEART score in an Asian population. *Int J Emerg Med*. Aug 19 2020;13(1):43. doi:10.1186/s12245-020-00300-1. *Not prospective.*
281. Sajeev JK, New G, Roberts L, et al. High sensitivity troponin: Does the 50% delta change alter clinical outcomes in chest pain presentations to the emergency room? *Int J Cardiol*. Apr 1 2015;184:170-174. doi:10.1016/j.ijcard.2015.01.074. *No defined ADP.*
282. Sanchis J, Abellán L, García-Blas S, et al. Usefulness of delta troponin for diagnosis and prognosis assessment of non-ST-segment elevation acute chest pain. *Eur Heart J Acute Cardiovasc Care*. Sep 2016;5(5):399-406. doi:10.1177/2048872615593534. *No defined ADP.*
283. Sanchis J, García-Blas S, Carratalá A, et al. Clinical Evaluation Versus Undetectable High-Sensitivity Troponin for Assessment of Patients With Acute Chest Pain. *Am J Cardiol*. Dec 1 2016;118(11):1631-1635. doi:10.1016/j.amjcard.2016.08.040. *No defined ADP.*
284. Sanchis J, García-Blas S, Mainar L, et al. High-sensitivity versus conventional troponin for management and prognosis assessment of patients with acute chest pain. *Heart*. Oct 2014;100(20):1591-6. doi:10.1136/heartjnl-2013-305440. *No defined ADP.*
285. Sanchis J, Valero E, García Blas S, et al. Undetectable high-sensitivity troponin in combination with clinical assessment for risk stratification of patients with chest pain and normal troponin at hospital arrival. *Eur Heart J Acute Cardiovasc Care*. Sep 2020;9(6):567-575. doi:10.1177/2048872620907539. *No outcomes within 6 weeks reported.*
286. Sandoval Y, Lewis BR, Mehta RA, et al. Rapid Exclusion of Acute Myocardial Injury and Infarction With a Single High-Sensitivity Cardiac Troponin T in the Emergency Department: A Multicenter United States Evaluation. *Circulation*. Jun 7 2022;145(23):1708-1719. doi:10.1161/circulationaha.122.059235. *No defined ADP.*
287. Sandoval Y, Smith SW, Love SA, Sexter A, Schulz K, Apple FS. Single High-Sensitivity Cardiac Troponin I to Rule Out Acute Myocardial Infarction. *Am J Med*. Sep 2017;130(9):1076-1083.e1. doi:10.1016/j.amjmed.2017.02.032. *No defined ADP.*
288. Sandoval Y, Smith SW, Schulz K, Sexter A, Apple FS. Comparison of 0/3-Hour Rapid Rule-Out Strategies Using High-Sensitivity Cardiac Troponin I in a US Emergency Department. *Circ Cardiovasc Qual Outcomes*. Jul 2020;13(7):e006565. doi:10.1161/circoutcomes.120.006565. *No defined ADP.*
289. Sandoval Y, Smith SW, Shah AS, et al. Rapid Rule-Out of Acute Myocardial Injury Using a Single High-Sensitivity Cardiac Troponin I Measurement. *Clin Chem*. Jan 2017;63(1):369-376. doi:10.1373/clinchem.2016.264523. *No defined ADP.*
290. Sandoval Y, Smith SW, Thordsen SE, et al. Diagnostic Performance of High Sensitivity Compared with Contemporary Cardiac Troponin I for the Diagnosis of Acute Myocardial Infarction. *Clin Chem*. Oct 2017;63(10):1594-1604. doi:10.1373/clinchem.2017.272930. *No defined ADP.*

291. Santaló M, Martin A, Velilla J, et al. Using high-sensitivity troponin T: the importance of the proper gold standard. *Am J Med*. Aug 2013;126(8):709-17. doi:10.1016/j.amjmed.2013.03.003. *No defined ADP.*
292. Santi L, Farina G, Gramenzi A, et al. The HEART score with high-sensitive troponin T at presentation: ruling out patients with chest pain in the emergency room. *Intern Emerg Med*. Apr 2017;12(3):357-364. doi:10.1007/s11739-016-1461-3. *Not prospective.*
293. Scharnhorst V, Krasznai K, van't Veer M, Michels R. Rapid detection of myocardial infarction with a sensitive troponin test. *Am J Clin Pathol*. Mar 2011;135(3):424-8. doi:10.1309/ajcpa4g8aqoyekld. *No defined ADP.*
294. Schønemann-Lund M, Schoos MM, Iversen K, et al. Retrospective Evaluation of Two Fast-track Strategies to Rule Out Acute Coronary Syndrome in a Real-life Chest Pain Population. *J Emerg Med*. Dec 2015;49(6):833-42. doi:10.1016/j.jemermed.2015.06.026. *Not ED or pre-ED presentation.*
295. Sedighi SM, Nguyen M, Khalil A, Fülöp T. The impact of cardiac troponin in elderly patients in the absence of acute coronary syndrome: A systematic review. *Int J Cardiol Heart Vasc*. Dec 2020;31:100629. doi:10.1016/j.ijcha.2020.100629. *No defined ADP.*
296. Sepehrvand N, Zheng Y, Armstrong PW, Welsh RC, Ezekowitz JA. Identifying Low-risk Patients for Early Discharge From Emergency Department Without Using Subjective Descriptions of Chest Pain: Insights From Providing Rapid Out of Hospital Acute Cardiovascular Treatment (PROACT) 3 and 4 Trials. *Acad Emerg Med*. Jun 2017;24(6):691-700. doi:10.1111/acem.13183. *Not high-sensitivity Tn.*
297. Sethi A, Bajaj A, Malhotra G, Arora RR, Khosla S. Diagnostic accuracy of sensitive or high-sensitive troponin on presentation for myocardial infarction: a meta-analysis and systematic review. *Vasc Health Risk Manag*. 2014;10:435-50. doi:10.2147/vhrm.S63416. *No defined ADP.*
298. Shah AS, Anand A, Sandoval Y, et al. High-sensitivity cardiac troponin I at presentation in patients with suspected acute coronary syndrome: a cohort study. *Lancet*. Dec 19 2015;386(10012):2481-8. doi:10.1016/s0140-6736(15)00391-8. *No defined ADP.*
299. Shah AS, Griffiths M, Lee KK, et al. High sensitivity cardiac troponin and the under-diagnosis of myocardial infarction in women: prospective cohort study. *Bmj*. Jan 21 2015;350:g7873. doi:10.1136/bmj.g7873. *No defined ADP.*
300. Shah ASV, Anand A, Strachan FE, et al. High-sensitivity troponin in the evaluation of patients with suspected acute coronary syndrome: a stepped-wedge, cluster-randomised controlled trial. *Lancet*. Sep 15 2018;392(10151):919-928. doi:10.1016/s0140-6736(18)31923-8. *No defined ADP.*
301. Shiozaki M, Inoue K, Suwa S, et al. Clinical Evaluation of a New High-Sensitivity Cardiac Troponin I Assay for Diagnosis and Risk Assessment of Patients with Suspected Acute Myocardial Infarction. *Cardiology*. 2021;146(2):172-178. doi:10.1159/000512185. *No defined ADP.*
302. Shiozaki M, Inoue K, Suwa S, et al. Implementing the European Society of Cardiology 0-h/1-h algorithm in patients presenting very early after chest pain. *Int J Cardiol*. Dec 1 2020;320:1-6. doi:10.1016/j.ijcard.2020.07.037. *Not prospective.*
303. Shiozaki M, Inoue K, Suwa S, et al. Utility of the 0-hour/1-hour high-sensitivity cardiac troponin T algorithm in Asian patients with suspected non-ST elevation myocardial infarction. *Int J Cardiol*. Dec 15 2017;249:32-35. doi:10.1016/j.ijcard.2017.09.009. *Not prospective.*
304. Shortt C, Ma J, Clayton N, et al. Rule-In and Rule-Out of Myocardial Infarction Using Cardiac Troponin and Glycemic Biomarkers in Patients with Symptoms Suggestive of

Acute Coronary Syndrome. *Clin Chem*. Jan 2017;63(1):403-414. doi:10.1373/clinchem.2016.261545. *Combination with other lab (only).*

305. Shortt C, Xie F, Whitlock R, et al. Economic Considerations of Early Rule-In/Rule-Out Algorithms for The Diagnosis of Myocardial Infarction in The Emergency Department Using Cardiac Troponin and Glycemic Biomarkers. *Clin Chem*. Feb 2017;63(2):593-602. doi:10.1373/clinchem.2016.261776. *Combination with other lab (only).*
306. Simpson P, Tirimacco R, Cowley P, et al. A comparison of cardiac troponin T delta change methods and the importance of the clinical context in the assessment of acute coronary syndrome. *Annals of Clinical Biochemistry*. 2019;56(6):701-707. *No defined ADP.*
307. Smulders MW, Bekkers S, van Cauteren YJM, et al. Risk stratification and role for additional diagnostic testing in patients with acute chest pain and normal high-sensitivity cardiac troponin levels. *PLoS One*. 2018;13(9):e0203506. doi:10.1371/journal.pone.0203506. *No defined ADP.*
308. Snavely AC, Hendley N, Stopyra JP, et al. Sex and race differences in safety and effectiveness of the HEART pathway accelerated diagnostic protocol for acute chest pain. *Am Heart J*. Feb 2021;232:125-136. doi:10.1016/j.ahj.2020.11.005. *Not high-sensitivity Tn.*
309. Sörensen NA, Goßling A, Neumann JT, et al. Diagnostic Validation of a High-Sensitivity Cardiac Troponin I Assay. *Clin Chem*. Sep 1 2021;67(9):1230-1239. doi:10.1093/clinchem/hvab070. *Not prospective.*
310. Sörensen NA, Ludwig S, Makarova N, et al. Prognostic Value of a Novel and Established High-Sensitivity Troponin I Assay in Patients Presenting with Suspected Myocardial Infarction. *Biomolecules*. Sep 9 2019;9(9)doi:10.3390/biom9090469. *No defined ADP.*
311. Sörensen NA, Neumann JT, Ojeda F, et al. Diagnostic Evaluation of a High-Sensitivity Troponin I Point-of-Care Assay. *Clin Chem*. Dec 2019;65(12):1592-1601. doi:10.1373/clinchem.2019.307405. *Not prospective.*
312. Sörensen NA, Neumann JT, Ojeda F, et al. Challenging the 99th percentile: A lower troponin cutoff leads to low mortality of chest pain patients. *Int J Cardiol*. Apr 1 2017;232:289-293. doi:10.1016/j.ijcard.2016.12.167. *Not prospective.*
313. Stähli BE, Yonekawa K, Altwegg LA, et al. Clinical criteria replenish high-sensitive troponin and inflammatory markers in the stratification of patients with suspected acute coronary syndrome. *PLoS One*. 2014;9(6):e98626. doi:10.1371/journal.pone.0098626. *Not prospective.*
314. Steiro OT, Tjora HL, Langørgen J, et al. Clinical risk scores identify more patients at risk for cardiovascular events within 30 days as compared to standard ACS risk criteria: the WESTCOR study. *Eur Heart J Acute Cardiovasc Care*. May 11 2021;10(3):287-301. doi:10.1093/ehjacc/zuaa016. *Not prospective.*
315. Stopyra JP, Riley RF, Hiestand BC, et al. The HEART Pathway Randomized Controlled Trial One-year Outcomes. *Acad Emerg Med*. Jan 2019;26(1):41-50. doi:10.1111/acem.13504. *Not high-sensitivity Tn.*
316. Strebel I, Twerenbold R, Boeddinghaus J, et al. Diagnostic value of the cardiac electrical biomarker, a novel ECG marker indicating myocardial injury, in patients with symptoms suggestive of non-ST-elevation myocardial infarction. *Ann Noninvasive Electrocardiol*. Jul 2018;23(4):e12538. doi:10.1111/anec.12538. *No defined ADP.*
317. Suh D, Keller DI, Hof D, von Eckardstein A, Gawinecka J. Rule-out of non-ST elevation myocardial infarction by five point of care cardiac troponin assays according to the 0 h/3

h algorithm of the European Society of Cardiology. *Clin Chem Lab Med*. Mar 28 2018;56(4):649-657. doi:10.1515/cclm-2017-0486. *No defined ADP.*

318. Tada M, Azuma H, Yamada N, et al. A comprehensive validation of very early rule-out strategies for non-ST-segment elevation myocardial infarction in emergency departments: protocol for a multicentre prospective cohort study. *BMJ Open*. Sep 3 2019;9(9):e026985. doi:10.1136/bmjopen-2018-026985. *Not published/peer reviewed.*
319. Tan JWC, Tan HJG, Sahlen AO, et al. Performance of cardiac troponins within the HEART score in predicting major adverse cardiac events at the emergency department. *Am J Emerg Med*. Aug 2020;38(8):1560-1567. doi:10.1016/j.ajem.2019.158420. *Not prospective.*
320. Tan WCJ, Inoue K, AbdelWareth L, et al. The Asia-Pacific Society of Cardiology (APSC) Expert Committee Consensus Recommendations for Assessment of Suspected Acute Coronary Syndrome Using High-Sensitivity Cardiac Troponin T in the Emergency Department. *Circ J*. Jan 24 2020;84(2):136-143. doi:10.1253/circj.CJ-19-0874. *Neither primary study nor SR.*
321. Thelin J, Borna C, Erlinge D, Öhlin B. The combination of high sensitivity troponin T and copeptin facilitates early rule-out of ACS: a prospective observational study. *BMC cardiovascular disorders*. 2013;13(1):1-8. *Not ED or pre-ED presentation.*
322. Thelin J, Melander O, Öhlin B. Early rule-out of acute coronary syndrome using undetectable levels of high sensitivity troponin T. *Eur Heart J Acute Cardiovasc Care*. Oct 2015;4(5):403-9. doi:10.1177/2048872614554107. *Not ED or pre-ED presentation.*
323. Tjora HL, Steiro OT, Langørgen J, et al. Aiming toWards Evidence baSed inTerpretation of Cardiac biOmarkers in patients pResenting with chest pain-the WESTCOR study: study design. *Scand Cardiovasc J*. Oct 2019;53(5):280-285. doi:10.1080/14017431.2019.1634280. *No defined ADP.*
324. Tjora HL, Steiro OT, Langørgen J, et al. Diagnostic Performance of Novel Troponin Algorithms for the Rule-Out of Non-ST-Elevation Acute Coronary Syndrome. *Clin Chem*. Feb 1 2022;68(2):291-302. doi:10.1093/clinchem/hvab225. *Not prospective.*
325. Toh LC, Khoo C, Goh CH, et al. Impact of a rapid access chest pain clinic in Singapore to improve evaluation of new-onset chest pain. *Postgrad Med J*. Jan 31 2022;doi:10.1136/postgradmedj-2021-141427. *Not ED or pre-ED presentation.*
326. Torralba F, Navarro A, la Hoz JC, et al. HEART, TIMI, and GRACE Scores for Prediction of 30-Day Major Adverse Cardiovascular Events in the Era of High-Sensitivity Troponin. *Arq Bras Cardiol*. Mar 13 2020;114(5):795-802. Os Escores HEART, TIMI e GRACE para Predição de Eventos Cardiovasculares Adversos Maiores no Período de 30 Dias na Era de Troponina I de Alta Sensibilidade. doi:10.36660/abc.20190206. *Not English.*
327. Trambas C, Pickering JW, Than M, et al. Impact of High-Sensitivity Troponin I Testing with Sex-Specific Cutoffs on the Diagnosis of Acute Myocardial Infarction. *Clin Chem*. Jun 2016;62(6):831-8. doi:10.1373/clinchem.2015.252569. *No defined ADP.*
328. Truong QA, Bayley J, Hoffmann U, et al. Multi-marker strategy of natriuretic peptide with either conventional or high-sensitivity troponin-T for acute coronary syndrome diagnosis in emergency department patients with chest pain: from the "Rule Out Myocardial Infarction using Computer Assisted Tomography" (ROMICAT) trial. *Am Heart J*. Jun 2012;163(6):972-979.e1. doi:10.1016/j.ahj.2012.03.010. *No defined ADP.*
329. Twerenbold R, Badertscher P, Boeddinghaus J, et al. 0/1-Hour Triage Algorithm for Myocardial Infarction in Patients With Renal Dysfunction. *Circulation*. Jan 30 2018;137(5):436-451. doi:10.1161/circulationaha.117.028901. *Not prospective.*

330. Twerenbold R, Boeddinghaus J, Nestelberger T, et al. Clinical Use of High-Sensitivity Cardiac Troponin in Patients With Suspected Myocardial Infarction. *J Am Coll Cardiol*. Aug 22 2017;70(8):996-1012. doi:10.1016/j.jacc.2017.07.718. *Neither primary study nor SR.*
331. Twerenbold R, Boeddinghaus J, Nestelberger T, et al. How to best use high-sensitivity cardiac troponin in patients with suspected myocardial infarction. *Clin Biochem*. Mar 2018;53:143-155. doi:10.1016/j.clinbiochem.2017.12.006. *Neither primary study nor SR.*
332. Twerenbold R, Jaeger C, Rubini Gimenez M, et al. Impact of high-sensitivity cardiac troponin on use of coronary angiography, cardiac stress testing, and time to discharge in suspected acute myocardial infarction. *Eur Heart J*. Nov 21 2016;37(44):3324-3332. doi:10.1093/eurheartj/ehw232. *No defined ADP.*
333. Twerenbold R, Neumann JT, Sörensen NA, et al. Prospective Validation of the 0/1-h Algorithm for Early Diagnosis of Myocardial Infarction. *J Am Coll Cardiol*. Aug 7 2018;72(6):620-632. doi:10.1016/j.jacc.2018.05.040. *Not prospective.*
334. van den Berg P, Collinson P, Morris N, Body R. Diagnostic accuracy of a high-sensitivity troponin I assay and external validation of 0/3 h rule out strategies. *Eur Heart J Acute Cardiovasc Care*. Feb 8 2022;11(2):127-136. doi:10.1093/ehjacc/zuab102. *Not prospective.*
335. van der Linden N, Wildi K, Twerenbold R, et al. Combining High-Sensitivity Cardiac Troponin I and Cardiac Troponin T in the Early Diagnosis of Acute Myocardial Infarction. *Circulation*. Sep 4 2018;138(10):989-999. doi:10.1161/circulationaha.117.032003. *Not prospective.*
336. van Dongen DN, Fokkert MJ, Tolsma RT, et al. Accuracy of pre-hospital HEART score risk classification using point of care versus high sensitive troponin in suspected NSTE-ACS. *Am J Emerg Med*. Aug 2020;38(8):1616-1620. doi:10.1016/j.ajem.2019.158448. *Not prospective.*
337. van Dongen DN, Tolsma RT, Fokkert MJ, et al. Pre-hospital risk assessment in suspected non-ST-elevation acute coronary syndrome: A prospective observational study. *Eur Heart J Acute Cardiovasc Care*. Mar 2020;9(1_suppl):5-12. doi:10.1177/2048872618813846. *Not high-sensitivity Tn.*
338. Van Hise CB, Greenslade JH, Parsonage W, Than M, Young J, Cullen L. External validation of heart-type fatty acid binding protein, high-sensitivity cardiac troponin, and electrocardiography as rule-out for acute myocardial infarction. *Clin Biochem*. Feb 2018;52:161-163. doi:10.1016/j.clinbiochem.2017.10.001. *Not prospective.*
339. Vigen R, Kutscher P, Fernandez F, et al. Evaluation of a Novel Rule-Out Myocardial Infarction Protocol Incorporating High-Sensitivity Troponin T in a US Hospital. *Circulation*. Oct 30 2018;138(18):2061-2063. doi:10.1161/circulationaha.118.033861. *Not prospective.*
340. Visser A, Wolthuis A, Breedveld R, ter Avest E. HEART score and clinical gestalt have similar diagnostic accuracy for diagnosing ACS in an unselected population of patients with chest pain presenting in the ED. *Emerg Med J*. Aug 2015;32(8):595-600. doi:10.1136/emermed-2014-203798. *No defined ADP.*
341. Westwood M, Ramaekers B, Grimm S, et al. High-sensitivity troponin assays for early rule-out of acute myocardial infarction in people with acute chest pain: a systematic review and economic evaluation. *Health Technol Assess*. May 2021;25(33):1-276. doi:10.3310/hta25330. *Systematic Review.*
342. Westwood M, van Asselt T, Ramaekers B, et al. High-sensitivity troponin assays for the early rule-out or diagnosis of acute myocardial infarction in people with acute chest pain:

a systematic review and cost-effectiveness analysis. *Health Technol Assess*. Jun 2015;19(44):1-234. doi:10.3310/hta19440. *Systematic Review.*

343. Westwood ME, Armstrong N, Worthy G, et al. Optimizing the Use of High-Sensitivity Troponin Assays for the Early Rule-out of Myocardial Infarction in Patients Presenting with Chest Pain: A Systematic Review. *Clin Chem*. Jan 8 2021;67(1):237-244. doi:10.1093/clinchem/hvaa280. *Systematic Review.*
344. Wibring K, Lingman M, Herlitz J, Amin S, Bång A. Prehospital stratification in acute chest pain patient into high risk and low risk by emergency medical service: a prospective cohort study. *BMJ Open*. Apr 15 2021;11(4):e044938. doi:10.1136/bmjopen-2020-044938. *Not ED or pre-ED presentation.*
345. Widera C, Pencina MJ, Bobadilla M, et al. Incremental prognostic value of biomarkers beyond the GRACE (Global Registry of Acute Coronary Events) score and high-sensitivity cardiac troponin T in non-ST-elevation acute coronary syndrome. *Clin Chem*. Oct 2013;59(10):1497-505. doi:10.1373/clinchem.2013.206185. *Not prospective.*
346. Wildi K, Boeddinghaus J, Nestelberger T, et al. External validation of the clinical chemistry score. *Clin Biochem*. May 2021;91:16-25. doi:10.1016/j.clinbiochem.2021.02.006. *Not prospective.*
347. Wildi K, Boeddinghaus J, Nestelberger T, et al. Comparison of fourteen rule-out strategies for acute myocardial infarction. *Int J Cardiol*. May 15 2019;283:41-47. doi:10.1016/j.ijcard.2018.11.140. *Retrospective.*
348. Wildi K, Cullen L, Twerenbold R, et al. Direct Comparison of 2 Rule-Out Strategies for Acute Myocardial Infarction: 2-h Accelerated Diagnostic Protocol vs 2-h Algorithm. *Clin Chem*. Jul 2017;63(7):1227-1236. doi:10.1373/clinchem.2016.268359. *It is unclear how hs-TnT was used.*
349. Wildi K, Lopez-Ayala P, Koechlin L, et al. Validation of the Novel European Society of Cardiology 0/2-hour Algorithm Using Hs-cTnT in the Early Diagnosis of Myocardial Infarction. *Am J Cardiol*. Sep 1 2021;154:128-130. doi:10.1016/j.amjcard.2021.06.003. *Unclear ADP. Only hs-TnT was used to classify patients.*
350. Wildi K, Nelles B, Twerenbold R, et al. Safety and efficacy of the 0 h/3 h protocol for rapid rule out of myocardial infarction. *Am Heart J*. Nov 2016;181:16-25. doi:10.1016/j.ahj.2016.07.013. *Not prospective.*
351. Wildi K, Nestelberger T, Wussler D, et al. Impact of Food and Drug Administration Regulatory Approach on the 0/2-Hour Algorithm for Rapid Triage of Suspected Myocardial Infarction. *Circ Cardiovasc Qual Outcomes*. Jan 2019;12(1):e005188. doi:10.1161/circoutcomes.118.005188. *No defined ADP.*
352. Wildi K, Twerenbold R, Jaeger C, et al. Clinical impact of the 2010-2012 low-end shift of high-sensitivity cardiac troponin T. *Eur Heart J Acute Cardiovasc Care*. Oct 2016;5(6):399-408. doi:10.1177/2048872616642952. *No defined ADP.*
353. Wong CP, Lui CT, Sung JG, Lam H, Fung HT, Yam PW. Prognosticating Clinical Prediction Scores Without Clinical Gestalt for Patients With Chest Pain in the Emergency Department. *J Emerg Med*. Feb 2018;54(2):176-185. doi:10.1016/j.jemermed.2017.10.006. *Not prospective.*
354. Yang SM, Chan CH, Chan TN. HEART pathway and Emergency Department Assessment of Chest Pain Score–Accelerated Diagnostic Protocol application in a local emergency department of Hong Kong: an external prospective validation study. *Hong Kong Journal of Emergency Medicine*. 2020;27(1):30-38. *Not high-sensitivity Tn.*
355. Yean KS, Abd. Wahab MB, Zakaria MIB. A study on modified accelerated diagnostic protocol to safely discharge low-risk chest pain patients in emergency department. *Hong*

Kong Journal of Emergency Medicine. 2020;27(3):134-145. *Exclusions based on post-ED ETT.*

356. Young JM, Pickering JW, George PM, et al. Heart Fatty Acid Binding Protein and cardiac troponin: development of an optimal rule-out strategy for acute myocardial infarction. *BMC Emerg Med*. Aug 31 2016;16(1):34. doi:10.1186/s12873-016-0089-y. *Not prospective.*
357. Zhao Y, Izadnegahdar M, Lee MK, et al. High-Sensitivity Cardiac Troponin-Optimizing the Diagnosis of Acute Myocardial Infarction/Injury in Women (CODE-MI): Rationale and design for a multicenter, stepped-wedge, cluster-randomized trial. *Am Heart J*. Nov 2020;229:18-28. doi:10.1016/j.ahj.2020.06.013. *No outcomes within 6 weeks reported.*
358. Zhao Y, Sivaswamy A, Lee MK, et al. A feasibility study for CODE-MI: High-sensitivity cardiac troponin–Optimizing the diagnosis of acute myocardial infarction/injury in women. *American Heart Journal*. 2021;234:60-70. *No outcomes within 6 weeks reported.*
359. Zi Y, Ying-Xiong H, Zi-Yu Z, et al. Point-of-care sensitive cardiac troponin I in the rapid triage of chest pain patients in emergency department. *Journal of the American College of Cardiology*. 2014;64(16S):C131-C131. *Not published/peer reviewed.*

APPENDIX C. CRITERIA USED IN QUALITY ASSESSMENT

Question	Yes	No	Unclear
1. Design a. Randomized control trial b. Nonrandomized comparison of interventions c. Single group			
2. Was the article free of discrepancies (eg, between text and tables)? Add note if No (High concern)?			
3. Were patient eligibility criteria sufficiently clear? Add note if No (High concern).			
4. Were the ADP (and comparator) sufficiently clear? Add note if No (High concern)			
5. Were outcomes adequately defined without problem? Add note if No (High concern). Not every outcome requires an explicit definition (*eg*, duration of ED stay).			
6. Was the setting sufficiently clearly defined? (*eg,,* do we know the hospital (and ED) type?) Add note if No (High concern).			
7. Were there missing results data for ANY patients for outcomes that occurred in ED or hospital? Were there missing results data for >20% of patients (or imbalance between study groups) for outcomes that occurred after ED/hospital discharge? Add Note if Yes			
8. Outcome assessment a. No (or inadequate) description of how final determination of MI was diagnosed [Unclear RoB] b. Independent or blind adjudication of MI for each patient by reference to secure medical records [Low RoB] c. Record linkage (eg identified through ICD codes on database records) [Moderate RoB] d. Self report (by patient or family) with no reference to original structured injury data or imaging [High RoB]			
9. If RCT, was there inadequate randomization method or allocation concealment? Whether randomization was done at the level of the ED or the patient, answer No (low RoB), unless there’s an obvious flaw.			
10. If observational study, eligible patients having ADP were all selected or a random selection was selected. No concerns about biased selection of ADP patients. Add note if No (high RoB)			
11. If observational study, comparator group (or ED) was sufficiently similar (and selected patients were all included or a random sample were included). Add note if No (high RoB)			
12. If observational study, Adjustment for confounders. a. Crude analysis (unadjusted comparison between ADP and no ADP) [High RoB] b. Regression adjustment or patient-matching (accounting for at least age, sex, and symptom duration OR a risk score) [Low RoB] c. Regression adjustment or patient-matching (not accounting at least one of for age, sex, symptom duration, or risk score) [Moderate RoB] d. Propensity score analysis (or equivalent) [Low RoB]			

APPENDIX D. QUALITY RATINGS FOR ALL ELIGIBLE STUDIES

Appendix Table D-1. Quality Rating for Comparative Studies

Author, Year, PMID	Free of Discrepancies	Eligibility Clear	ADP Clear	Outcomes Adequately Defined	Setting Clearly Defined	Missing Results	Outcome Assessment Blind / Independent	RCT	Observational study			Effect on Clinical Measures Overall	Effect on Health Service Use Measures Overall
								Adequate Randomization and Allocation Concealment	Patients Selected at Random	Comparator Group Similar	Adjustment for Confounders		
RCT													
Anand 2021 33752439 RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low RoB)	Yes (low RoB)	Yes (low RoB)				Low RoB (RCT)	Low RoB (RCT)
Than 2016 26947800 RCT	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (high RoB)	Yes (low RoB)	Yes (low RoB)				Low RoB (RCT)	Low RoB (RCT)
NRCS													
Barnes 2021 33436490 NRCS	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low RoB)	No or inadequate description (unclear RoB)		Yes (low RoB)	Yes (low RoB)	Yes regression adjustment (low RoB)	Medium RoB (NRCS)	Low RoB (NRCS)
Hyams 2018 29478861 NRCS	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low RoB)	No (moderate RoB)		Yes (low RoB)	Yes (low RoB)	Yes regression adjustment (low RoB)	Medium RoB (NRCS)	Low RoB (NRCS)
Sandeman 2021 34824100 NRCS	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low RoB)	Record linkage (moderate RoB)		Yes (low RoB)	Yes (low RoB)	Yes regression adjustment (low RoB)	Medium RoB (NRCS)	Low RoB (NRCS)
Stoyanov 2020 31298551 NRCS	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low RoB)	Yes (low RoB)		Yes (low RoB)	No (high RoB)	Yes regression adjustment (low RoB)	Medium RoB (NRCS)	Low RoB (NRCS)
Than 2021 33753972 NRCS	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low RoB)	No or inadequate description (unclear RoB)		Yes (low RoB)	No or inadequate description (unclear RoB)	Crude analysis (high RoB)	High RoB (NRCS)	High RoB (NRCS)

Appendix Table D-2. Quality Rating for Single Group Studies

Author, Year, PMID	Free of Discrepancies	Eligibility Clear	ADP Clear	Outcomes Adequately Defined	Setting Clearly Defined	Missing Results	Outcome Assessment Blind / Independent	RCT	Observational study			Measurement of Clinical Measures Overall	Measurement of Health Service Use Measures Overall
								Adequate Randomization and Allocation Concealment	Patients Selected at Random	Comparator Group Similar	Adjustment for Confounders		
Single Group													
Chew 2019 31478763 Lambrakis 2021 33998255 RCT (analyzed as single group)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low RoB)	Yes (low RoB)		Yes (low RoB)			Low RoB (single)	Low RoB (single)
Conde 2013 23810070 NRCS (analyzed as single group)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low RoB)	No or inadequate description (unclear RoB)		Yes (low RoB)			Medium RoB (single)	Low RoB (single)
Costable 2014 NA Single group	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern	No (low RoB)	No or inadequate description (unclear RoB)		Yes (low RoB)			Medium RoB (single)	Low RoB (single)
Crowder 2015 26387473 NRCS (analyzed as single group)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low RoB)	No or inadequate description (unclear RoB)		Yes (low RoB)			Low RoB (single)	Low RoB (single)
Ford 2021 33662739 NRCS (analyzed as single group)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low RoB)	Record linkage (moderate RoB)		Yes (low RoB)			Medium RoB (single)	Low RoB (single)
Ljung 2019 30661856 NRCS (analyzed as single group)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low RoB)	Yes (low RoB)		Yes (low RoB)			Low RoB (single)	Low RoB (single)

Author, Year, PMID	Free of Discrepancies	Eligibility Clear	ADP Clear	Outcomes Adequately Defined	Setting Clearly Defined	Missing Results	Outcome Assessment Blind / Independent	RCT	Observational study			Measurement of Clinical Measures Overall	Measurement of Health Service Use Measures Overall
								Adequate Randomization and Allocation Concealment	Patients Selected at Random	Comparator Group Similar	Adjustment for Confounders		
Suh 2022 35571147 NRCS (analyzed as single group)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (Low concern)	No (low RoB)	Yes (low RoB)		Yes (low RoB)			Low RoB (single)	Low RoB (single)
Sweeney 2020 32104767 NRCS (analyzed as single group)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low RoB)	No or inadequate description (unclear RoB)		Yes (low RoB)			n/a	Low RoB (single)
Twerenbold 2019 31345421 Single group	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (l ow concern)	No (low RoB)	Yes (low RoB)		Yes (low RoB)			Low RoB (single)	Low RoB (single)
Vigen 2020 32320036 NRCS (analyzed as single group)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	Yes (low concern)	No (low RoB)	Record linkage (Moderate RoB)		Yes (low RoB)			Medium RoB (single)	Medium RoB (single)

APPENDIX E. PEER REVIEW DISPOSITION

Comment #	Reviewer #	Comment	Author Response
Are the objectives, scope, and methods for this review clearly described?			
1	1	Yes	Thank you.
2	2	Yes	Thank you.
3	3	Yes	Thank you.
4	5	Yes	Thank you.
5	6	Yes	Thank you.
6	11	Yes	Thank you.
Is there any indication of bias in our synthesis of the evidence?			
7	1	No	Thank you.
8	2	No	Thank you.
9	3	No	Thank you.
10	5	No	Thank you.
11	6	No	Thank you.
12	11	No	Thank you.
Are there any published or unpublished studies that we may have overlooked?			
13	1	Yes - references to consider are included in comments	Thank you. Please see our response to Comment #19.
14	2	No	Thank you.
15	3	No	Thank you.
16	5	No	Thank you.
17	6	No	Thank you.
18	11	No	Thank you.
Additional suggestions or comments can be provided below.			
19	1	This report from the ESP seeks to summarize current available knowledge on the topic of using high-sensitivity troponin (HSTN) assays in combination with accelerated diagnostic protocols. A variety of important clinical	Thank you.

Comment #	Reviewer #	Comment	Author Response
		comparisons are made with appropriate notation on the confidence of each comparison. The implications of adopting the findings to clinical practices could result in fewer hospital admissions without any appreciable increase in adverse cardiovascular events. The executive summary provides concise, understandable statements of key findings that should be easy for clinicians in the field to understand and adopt. The Key Questions are well reasoned and applicable to clinical care in the ED. The methods are thoroughly described and readily reproducible. Inclusion/exclusion criteria are appropriate for the intended analysis. ROBINS-I, PROSPERO, and appropriate online software options were applied. Studies are organized in a thoughtful manner based on the clinical importance of the reported outcomes. The tables supplement the text by providing greater detail in a format that is digestible to the reader, the tables also help demonstrate the heterogeneity of the literature. The limitations section adequately reflects the fact that most of the work on hstn, ADPs, and implementation has been done internationally and very little in the VA. As noted, the international work, often done in countries with integrated health care systems, may actually have good overlap with the VA due to similar infrastructures. The authors identify one of the more important gaps in the literature as being the documentation of best practices for implementation. The authors express optimism in what the widespread adoption of HSTN/ADP could mean for the VA, but acknowledge that local practices groups are often difficult to convince into a change in practice.	

Comment #	Reviewer #	Comment	Author Response
		If the authors wish to expand on the discussion about implementation, some references to consider are (PMIDs): 36328155, 35604774, 34224384 And the following description of implementation in a VAMC: https://vpjournal.net/article/view/3867	Thank you. The Discussion now comments on the potential implementation challenges associated with hs-cTn in the US and VA. Per the suggested references, we highlight the experience of one large VA’s transition to hs-cTn.
20	2	Thorough	Thank you.
21	3	I appreciate the authors’ thoroughness and skill in navigating a challenging set of evidence on an important topic that is highly relevant to an emergency department clinical scenario that is common, costly, and will benefit from this synthesis. I think the manuscript could be improved in a few areas, primarily around the framing of some of the discussion points.	Thank you.
		Major - Title: Need to include some reference to “emergency department” in the title given the focus of the literature review was restricted to that care setting.	We revised the title to reference the Emergency Department.
		- Discussion: Generally agree with statement that given the state of available evidence regarding ADPs that individual EDs should have freedom to create their own approach (page 5, line 8; page 38, line 9). However, I think it is important to caveat that this should still be based on the available evidence. The way this is currently worded, it implies that there are no limits, when, in fact, it should be about adopting and adapting what is supported by the evidence (risk tools, troponin timing, etc) to their local requirements. I think this should be the overall message and main take-home points from the evidence review: (1) importance of standardizing practice to avoid overuse of health services and testing; but, (2) no clear and obvious best in choice from the evidence; with (3) support for a variety of approaches; therefore, (4) importance of factoring in local structural needs and preferences in adopting a tailored but still standardized approach.	We agree that EDs should implement evidence-based ADPs, and we do not want to give the impression that there are no limits. We revised the Discussion and Conclusion to note the importance of adopting evidence-based interventions and EDs may need to tailor an evidence-based ADP to fit within their local context. We also revised the Discussion and Conclusions to highlight the helpful key messages proposed by the reviewer.

Comment #	Reviewer #	Comment	Author Response
		- Discussion: Really liked the last paragraph under “Implications for VA Policy” (page 6, lines 6-16). These are excellent points and describes many of the features of an integrated health system that could be leveraged and are ripe for adopting and standardizing into routine practice. This approach seems like a natural and obvious next step in implementing this evidence synthesis. Recognize the focus of this review was not on implementation, but still wondering if there is a way to elevate this point within the manuscript?—could it even go in the Executive Summary?	We revised the Discussion to provide additional context on potential implementation challenges (see response to Comment 19, Reviewer 1). The Discussion now highlights the experience of one large VA during their transition to hs-cTn. We also revised the Executive Summary to elevate the importance of implementation.
		Minor - Introduction: In general, probably better to use a more general term than “ED physicians” when referencing providers who may be drawing on this evidence for incorporation in ED care (page 2, line 18). For example, there are increasingly advance practice providers (PAs, NPs) being used in this role. Options could include “ED provider” or “ED clinicians”—I tend to lean toward the latter in my work.	Thank you. We revised the text to be more inclusive in our definition of individuals who provide care in an ED setting.
		- Results: When introducing ADPs, I think worth referencing the table on clinical risk tools (Appendix C, page 93) that summarizes those evaluated in this evidence review (page 3, lines 12). Given ADPs are the major focus of this review, readers will quickly want to understand which chest pain risk scores (beyond just the abbreviations) were being evaluated and the references for these.	The text referenced by the reviewer is in the Executive Summary. Per ESP style, we do reference appendices in the Executive Summary.
		- Discussion: “administers” should be “administrators” (page 5, line 6)	Thank you.
		- Discussion: Definitely a minor point, but I don’t agree with this statement: “Studies, and by extension ADPs,	The intent of our comment was for the need for standardized language in the literature. We clarified the

Comment #	Reviewer #	Comment	Author Response
		should categorize patients as rule-in, rule-out, grey zone rule-out and grey zone rule-in and avoid terms that do not correspond to clinical diagnosis (e.g., low risk, discharge) which only muddy interpretation of results” (page 6, lines 33-36). Agree with need to approach with a standard language, but disagree with need to correspond these to categories of clinical diagnoses. That later approach is not consistent with how emergency providers approach these clinical scenario—their heuristic is more consistent with the process of stratifying patients into categories of risk rather than arriving at definitive diagnoses. Even if a patient is “ruled-out” for acute MI in that moment, most emergency providers would still consider that patient to be in a low risk category because their heuristic is simultaneously both excluding MI and also assessing the patient’s risk for having MACE within the short term (studies usually assess this to be a 4-6 week horizon).	text to note terms like low or high risk should be clearly defined.
		- Limitations: Agree with the point regarding effect rather than implementation. Also seems this section should reinforce some of the limitations noted throughout the rest of the manuscript: heterogeneity of studies with respect to populations, locations, methods, outcomes, etc.	The objective of the Limitations section is to describe the limitations of the review (e.g., methods or focus) and not the limitations identified literature. As noted, we describe in other sections the limitations of the scientific literature.
22	5	Congratulations on an amazing job of organizing this complicated report in a clinically meaningful way. Despite the lack of clarity within the literature on defining ADP’s the criteria used in the quality assessment distilled the studies to a more manageable number for the readers to digest. There is enough confidence in the ADPs to answer meaningful questions as well as highlight area where further studies are needed. Although no “best protocol” for ADP plus hs-TN with low MACE risk stood out, this report provides a foundation which will help subsequent pilots and research to narrow the scope of questions that will provide meaningful clinical answers for the VA. This work will save a lot of time for groups that wish to use this report for future meta-analysis	Thank you.

Comment #	Reviewer #	Comment	Author Response
		when more studies are completed. I appreciate the complexity and the challenge that it took to create, distill, and synthesize this data. The information is descriptive which adds to its length which appears to be necessary to provide adequate understanding of the protocols as medical definitions and terminology variability was notable. The inconsistent descriptions proved to be difficult to combine studies in a typical meta-analytic approach. It provides information on which source trials are most informative. A reader can find relevant information pertinent to their interest in the tables (Table 3. Description of Accelerated Diagnostic Protocol on pg 22) that categorize the accelerated diagnostic protocol with the more descriptive information in the body of the report. The prioritization presents the more important data of MACE, LOS, admit status and ED revisits as well as cardiac testing and revascularization. Overall, the report does not have enough comparable data to support new VA protocols and highlights the need for further investigation to attempt to single out an ADP + hs TN with low risk for the VA emergency Departments. As there are not uniformity in terms and uniformity in ADPs to supply comparable data, the report supplies the data needed for the additional work required. If future studies present similar metrics and comparable ADPs, even underpowered studies could be combined though the cumulative reporting to gain power across studies. As noted in the Research Gaps/Future Research on page 6, it will continue to be important to understand whether hs-cTN ADPs can be successfully and safely implemented in US EDs that may not be part of large integrated health systems. On page 3, last paragraph is meaningful as direct comparisons of shorter vs longer duration ADPS as noted with a moderate confidence, the studies reported “no	

Comment #	Reviewer #	Comment	Author Response
		evidence of difference between shorter and longer duration ADPs in 30 day MACE (RD – 0.1%, 95% CI – 0.2 – 0.03) or 30 day MI (RD – 0.1%, 95% CI – 0.2 to 0.01), but shorter ADPs probably reduce ED length of stay (by 2 to 4 hours in each study, mostly reporting as statistically significant and probably increase discharge to the community from the ED (in two studies, by either 3% or 21% both statistically significant)”. Summarizing across different ADPs studies using common risk scores adds meaningful information that the 01 vs 03 vs 06 appears not to make a difference in outcomes. This supports the metric concerns of ED LOS does not impact negatively on quality of care and may actually improve quality by reducing crowding and provides supports to narrow future studies to use ADPs with 02 or possibly 01 analysis.	
		Page 15 Synthesis and Certainty of evidence fourth paragraph, it would be important to comment that CIs can be used in place of P values to test hypotheses, so studies using CIs in place of p values is using statistics correctly. In Appendix Table J-5 in Appendix F, if a confidence interval (CI) is reported statistical significance can be inferred.	Thank you. We edited for clarity and revised the text that describes the method for conducting synthesis & certainty of evidence. Edits also included removing language around the specific GRADE domains (e.g., precision and the role of p-values / 95% CI) and instead we reference the interested reader to the relevant GRADE publication (ref 22).
		This sentence it the last paragraph is unclear: “In both studies, the novel ADP was associated with a significantly shorter length of stay (mean [SD] High-STEACS 0/3 ADP 6.8 [4.1] vs. 0/6/12 ADP 10 [4.1]; p<0.001;21 and median [inter quartile range] 0/3/6 ADP 6.5 [6.3 to 19.8] vs. 0/6/12 GRACE ADP 8.9 [3.7 to 38]; p<0.001); Appendix Table K-1).” The p values suggest the medians are different in the two groups, but when you look at the IQR they do not seem that different. So maybe the p values are testing each median? Perhaps comment on the lack of clarity? How were these p values interpreted?	We revised the sentence to clarify the findings.
		In Appendix Table K-6 pg 102, I’m not sure what the p values are testing. What is the “Beta” parameter in the MD	We revised the Appendix table to clarify the interpretation of the beta coefficient. Specifically, the coefficient is the

Comment #	Reviewer #	Comment	Author Response
		(95% CI) column. In appendix table K-6 should it note what the parameters are for column MD (95% CI) and what is the P value testing in the column Reported P value?	association of the novel ADP compared to standard ADP and the outcome is log-transformed duration of stay. The coefficient is adjusted by age, sex, diabetes, creatinine, and history of MI, heart failure or cerebrovascular disease. For example, the coefficient -0.0135 is interpreted as the novel ADP results in a -1.34% reduction in ED length of stay.
		Page 36 minor spelling error on mortality as “morality” in paragraph three and disposition as “disposotion” in paragraph four.	Thank you.
23	6	This was a very much needed report, at the least to describe the current state of literature and evidence for clinical use of hs-cTn in risk-stratifying chest pain.	Thank you.
24	11	This is an excellent synthesis of review on the topic of use of HsTn in the clinical evaluation of patients. It fairly summarizes the literature on this topic, which is indeed a bit over-interpreted by the field. The suggestions for further study and for VA implications are fair and in line with what is actually published on the subject.	Thank you.
		My only suggestion is to add one element in the Discussion sections. There is little to no discussion in the review on the natural variation between hsTroponin I and hsTroponin T. TnT is only marketed by Roche, but we have a lot of Roche labs in the VA system (and thus will have both markers in use in VA longitudinally). The two troponin markers are not exactly the same and cannot necessarily be protocolized interchangeably. A note to this effect in the discussion is likely sufficient at this juncture, as I'm not aware of any literature that addresses the impact of marker variation on the specifics of protocol synthesis and validation. Bottom-line: Any VA-wide protocols or studies will need to account for the inherent differences between these two markers.	Thank you. We revised the Discussion to comment that troponin I and T are not interchangeable. Any ED that aims to implement a protocol will need to account for these inherit differences.

APPENDIX F. DESIGN DETAILS

Author, Year, PMID, Cohort Name, Protocol Number, Country, Funder	Study Design	Study Dates	Study Location Details	Inclusion Criteria	Exclusion Criteria
Anand 2021 33752439 *HiSTORIC* NCT03005158 Scotland Non-industry	RCT	2014-16	Multiple EDs	Sites able to implement rule-out pathway and submitted data to national registry. ED or acute medical patients with suspected ACS and a hs-cTnI < sex-specific 99th percentile url	STEMI, out-of-hospital cardiac arrest, admitted previously during the trial
Barnes 2021 33436490 *STAT-Chest Pain* ACTRN12618000797279 Australia Non-industry	Pre-Post comparison	2018-19	Single ED	ED patients with potential ACS, ≥18 yo	STEMI, myocardial revascularization within the preceding 6 mo, admission to hospital for other reasons, a clear non-cardiac cause of the symptoms, or prior enrolment in the study
Chew 2019 31478763 **Lambrakis 2021** 33998255 *RAPID-TnT* ACTRN12615001379505 Australia Industry and non-industry	RCT [analyzed as single group]	2015-2019	Multiple EDs	Chest pain or suspected ACS as the principal cause for investigation and a baseline ECG interpreted as not definitive for coronary ischemia, ≥18 yo, intention to undertake troponin testing, willing to give written consent	STEMI, comorbidity that precludes completing the clinical history questionnaire, non-cardiac chest pain, transfer from another hospital, presented for suspected ACS within 30 days of last presentation, required permanent dialysis
Conde 2013 23810070 NA Argentina NR	Pre-post comparison [analyzed as single group]	2011-2012	Single ED	ED patients with probable ACS, >18 yo	Unstable angina or MI without STEMI, angina equivalent.

Author, Year, PMID, Cohort Name, Protocol Number, Country, Funder	Study Design	Study Dates	Study Location Details	Inclusion Criteria	Exclusion Criteria
Costable 2014 NA Argentina NR	Single group	2013	Single ED	ED patients with suspected ACS and who were evaluated according to the chest pain unit protocol, > 18 yo.	STEMI, non-cardiac chest pain, admission indicated by another physician, transfer of patient due to lack of beds, patient refusal to stay for observation, impossibility of follow-up
Crowder 2015 26387473 NR NR Canada NR	Pre-post comparison [analyzed as single group]	2011-2012	Multiple EDs	Patients with chest pain or potential ACS and who had a troponin assay performed during the study periods.	STEMI
Ford 2021 33662739 NR NR US None	Pre-post comparison [analyzed as single group]	2017-2018	Single ED	ED patients with a chief complaint of chest pain, ≥ 18 yo.	NR
Hyams 2018 29478861 NR NR US NR	Pre-post comparison	2014-2016	Single ED	ED patients with a chief complaint of ‘‘chest pain,’’ ‘‘chest tightness,’’ or ‘‘chest pressure, >18 yo	STEMI, patients with nonpainful ACS presentations such as shortness of breath unless accompanied by symptoms related to chest discomfort. Patients without a documented follow-up at least 6 wks after the ED visit, without adequate information (such as ECG or troponin) documented in their electronic medical record to calculate a HEART score

Author, Year, PMID, Cohort Name, Protocol Number, Country, Funder	Study Design	Study Dates	Study Location Details	Inclusion Criteria	Exclusion Criteria
Ljung 2019 30661856 *FASTEST* NR Sweden Industry and non-industry	Pre-post comparison [analyzed as single group]	2013-2016	Multiple EDs	Chest pain suggestive of ACS with a duration ≥10 minutes and an onset of last episode ≤12 hours. ≥18 yo, willing to have blood samples taken according to the study protocol, a signed written informed consent in Swedish	STEMI, new left bundle branch block on ECG at presentation or previous participation in the study
Sandeman 2021 34824100 NR NR Scotland Industry and non-industry	Pre-post comparison	2014-2017	Single ED	Patients with suspected ACS presenting to a secondary care hospital, all patients who had an hs-cTnT measurement on presentation to hospital since the introduction of the assay	STEMI, patient were not residents in Scotland, had a previous presentation during the study period
Stoyanov 2020 31298551 *RAPID-CPU* NCT03111862 Germany Industry	Pre-post comparison	2016-2017	Single ED	Initial presentation of clinically suspected ACS (based on a broad spectrum of symptoms including atypical symptoms and dyspnea)	STEMI, patients on chronic haemodialysis, repeated presentations beyond the index admission ('frequent flyer'); patients referred from other hospitals for early or primary PCI without receiving a standard diagnostic work-up; diagnostic set of hsTnT samples not available (*eg*, missing initial or consecutive blood sample). Patients with atrioventricular nodal re-entrant tachycardia. Inappropriate command of the English/German language or permanent residence in a foreign country.
Suh 2022 35571147 NR NCT03590535 US Industry	Pre-post comparison [analyzed as single group]	2018-2020	Single ED	Patients with ACS and received troponin testing as part of their evaluation, ≥19 yo	STEMI, pre-heart transplant, without capacity to consent, left ventricular assist device, who were presenting after a cardiac arrest, lacked fluency in either English or Spanish, or were

Author, Year, PMID, Cohort Name, Protocol Number, Country, Funder	Study Design	Study Dates	Study Location Details	Inclusion Criteria	Exclusion Criteria
					otherwise unable to participate in telephone follow-up
Sweeney 2020 32104767 NR NR UK NR	Pre-post comparison [analyzed as single group]	2015-2018	Multiple EDs	ED patients with a triage diagnosis of chest pain	NR
Than 2021 33753972 NR NR New Zealand NR	QIP and Pre-post comparison	2020-2020	Single ED	Patients presenting with symptoms of chest pain and symptoms of MI, ≥18 yo	STEMI, <18 yo, a clear cause of symptoms other than MI; transfer from another hospital; pregnancy; unable to be followed-up; or staff considered recruitment inappropriate (*eg,* receiving palliative care), unable or unwilling to consent
Than 2016 26947800 NR ACTRN126130007457 41 New Zealand Non-industry	RCT	2013-2014	Single ED	Possible cardiac symptoms suggestive of MI and for which serial cTn analysis were performed, ≥18 yo	STEMI, noncoronary pathology of symptoms; transfer from another hospital; pregnancy; unable to be followed-up; or staff considered recruitment inappropriate (*eg,* receiving palliative care); need for admission because of other medical conditions regardless of a negative cTn result; previously enrolled in this study; unable to consent.
Twerenbold 2019 31345421 NR NR Switzerland, Argentina Industry and non-industry	Single group	2015-2017	Multiple EDs	Adult ED patients with symptoms suggestive of MI	STEMI

Author, Year, PMID, Cohort Name, Protocol Number, Country, Funder	Study Design	Study Dates	Study Location Details	Inclusion Criteria	Exclusion Criteria
Vigen 2020 32320036 NR NR US Non-industry	Pre-post comparison, [analyzed as single group]	2017-2018	Single ED	Patients had both ECG and troponin testing obtained within 3 hr of arrival and prior to the disposition decision, did not undergo hemodialysis in the ED.	Patients undergoing emergent hemodialysis, testing was done on an outpatient basis or in day surgery, missing values for time from cTn draw to disposition time, disposition decision time was recorded prior to a cTn draw time, redundant encounters.

APPENDIX G. SUMMARY OF RISK SCORES

Risk Score [Key Reference]	Items
HEART (History, Electrocardiogram, Age, Risk factors, Troponin), [Hyams 2018 29478861]	• History • Electrocardiogram • Age • Risk factors • Troponin Each item is scored 0, 1, or 2. High risk = 7-10; Medium risk = 4-6; Low risk = 0-3
TIMI (Thrombolysis in Myocardial Infarction), [Than 2016 26947800]	• Age ≥65 y • Coronary artery disease (CAD) risk factor ≥3 (family history of premature coronary artery disease (CAD), dyslipidemia, diabetes, hypertension, current smoker) • Known coronary artery disease (CAD) (stenosis ≥50%) • Acetylsalicylic acid/aspirin use in the last 7 days • Recent severe angina (*eg*, ≥2 events in last 24 h) Each item is score 0 or 1. Not low risk ≥1; Low risk = 0
EDACS (the Emergency Department Assessment of Chest Pain Score), [Than 2016 26947800]	• Age (classified by predefined age ranges: ≤30, 30-39, 40-49, 50-59, 60-69, 70-79, 80-89, ≥90); scored 2-20 [even numbers only]; • If age 18-50 ys then coronary artery disease event (CAD) or coronary artery disease risk factors; scored 3, 4 or 5 • Symptoms (diaphoresis, pain radiates to arm or shoulder, pain occurs or worsened with inspiration, pain reproduced by palpation); scored 3, 5, -4, or -6. • Male; scored 6 Not low risk ≥16; Low risk <16
GRACE (Global Registry of Acute Coronary Events), [Fox 2006 17032691]	• Killip class (4 classes: I, II, III, IV); scored 0, 20, 39, or 59 • SBP mm Hg; scored 58, 53, 43, 34, 24, 10, 0 • Heart rate beats/min; scored 0, 3, 9, 15, 24, 38, or 46 • Age; scored 0, 8, 25, 41, 58, 75, 91, or 100 • Creatinine level mg/dL; scored 1, 4, 7, 10, 13, 21, or 28 • Cardiac arrest at admission; scored 39 • ST-segment deviation; scored 28

	• Elevated cardiac enzyme levels; scored 14 High risk >140; intermediate risk 109-140; low risk <109.

APPENDIX H. SUMMARY OF HS-CTN

Author, Year, PMID	Arm	Test Manufacturer & Name	Troponin Var (I or T)	Limit of Detection	99th Percentile
Anand 2021 33752439	Early rule-out pathway (High-STEACS): High-STEACS ADP 0/3	Abbott Architect STAT	hs-cTnI	NR	Women; 16 ng/L; Men; 34 ng/L
	Standard rule-out pathway: ADP 0/6/12			Same	
Barnes 2021 33436490	Single Troponin Accelerated Triage (STAT)-Chest Pain: STAT ADP 0/2/6 HEART	Abbott Architect	hs-cTnI	1.2 ng/L (reported as <2 ng/L)	Women upper limit of normal; <16 ng/L; Men upper limit of normal; <26 ng/L
	Standard pathway: ADP 0/(2 or 3)/6 TIMI			Same	
Chew 2019 31478763 Lambrakis 2021 33998255	ADP 0/1	5th generation Roche Elecys	hs-cTnT	5 ng/L	14 ng/L
	ADP 0/3 [arm excluded from analysis due to hs-cTnT being blinded]			Same	
Conde 2013 23810070	Post-implementation: ADP 0/3	NR	hs-cTnT	NR	NR
	Pre-implementation [arm excluded from analysis due to standard troponin]	4th generation troponin	cTnT	NR	NR
Costable 2014	hs-cTn Chest Pain Protocol: ADP 0/3	NR	hs-cTnT	NR	NR
Crowder 2015 26387473	Post-implementation: ADP 0/2-4	Roche	hs-cTnT	NR	14 ng/L
	Pre-implementation [arm excluded from analysis due to standard troponin]	4th generation Roche	cTnT	NR	NR
	Historical control [arm excluded from analysis due to standard troponin]	NA	NA	NA	NA
Ford 2021 33662739	Post-implementation: ADP 0/1/3 HEART	5th generation Roche	hs-cTnT	NR	19 ng/L
	Pre-implementation [arm excluded from analysis due to standard troponin]	TnI-Ultra Siemens	cTnI	NR	40 ng/L

Author, Year, PMID	Arm	Test Manufacturer & Name	Troponin Var (I or T)	Limit of Detection	99th Percentile
Hyams 2018 29478861	HEART Pathway Post-implementation: ADP 0/3 HEART	Roche	hs-TnT	NR	NR
	Pre-implementation hs-cTn alone			Same	
Ljung 2019 30661856	Post-implementation: ADP 0/1 HEART	Roche and Abbott	hs-cTnT, hs-cTnI	Roche; 5 ng/L; Abbott; 1.2-1.9 ng/L	Roche; 14 ng/L; Abbott; Women; 15.6 ng/L; Abbott; Men; 34.2 ng/L
	Pre-implementation [arm excluded from analysis due to standard troponin]	Roche, Abbott, Siemens-Stratus	hs-cTnT, hs-cTnI, cTn	Roche; 5 ng/L; Abbott; 1.2-1.9 ng/L; Siemens-Stratus; 30 ng/L	Roche; 14 ng/L; Abbott; Women; 15.6 ng/L; Abbott; Men; 34.2 ng/L; Stratus; 70 ng/L
Sandeman 2021 34824100	Post-implementation: ADP 0/3/6	Roche Cobas e602 platform	hs-TnT	3 ng/L	14 ng/L
	Pre-implementation: ADP 0/6/12 GRACE			Same	
Stoyanov 2020 31298551	ESC 0/1 Post-implementation: ADP ESC 0/1	Roche Cobas e411	hs-TnT	5 ng/L	NR
	ESC 0/3 Pre-implementation: ADP ESC 0//3			Same	
Suh 2022 35571147	Post-implementation: ADP 0/1 mHEART	5th generation Roche Elecsys	hs-TnT	6 ng/L	Women; 14 ng/L; Men; 22 ng/L (the US (FDA)-approved sex-specific 99th percentile values)
	Pre-implementation [arm excluded from analysis due to standard troponin]	Abbott i-STAT and 4th generation Roche	POC cTnI or cTnT	NR	NR
Sweeney 2020 32104767	Post-implementation chest pain algorithm: ADP 0/3 TIMI & GRACE	Abbott Architect STAT cTnI	hs-cTnI	NR	NR
	Pre-implementation [arm excluded from analysis due to standard troponin]	NR	cTn	NR	NR
Than 2021 33753972	COVID-ADP: COVID-ADP 0/2 EDACS	Abbott Architect i2000	hs-TnI	1.9 ng/L	Women; 16 ng/L; Men; 34 ng/L; Overall; 26 ng/L
	EDACS: ADP 0/2/6 EDACS			Same	
	EDACS-ADP: ADP 0/2 EDACS	Abbot Architect	hs-cTnI	NR	Women; 16 ng/L; Men; 34 ng/L

Author, Year, PMID	Arm	Test Manufacturer & Name	Troponin Var (I or T)	Limit of Detection	99th Percentile
Than 2016 26947800	ADAPT-ADP: ADP 0/2 TIMI			Same	
Twerenbold 2019 31345421	ADP ESC 0/1	Roche Elecsys 2010	hs-cTnT	5 ng/L	14 ng/L
Vigen 2020 32320036	Post-implementation: ADP 0/1/3 mHEART	NR	hs-cTnT	NR	NR
	Pre-implementation [arm excluded from analysis due to standard troponin]	4th generation Roche	cTnT	0.01 ng/L	NR

APPENDIX I. BASELINES

Author, Year, PMID	N Enrolled	Race/Ethnicity, %	Age, Mean (SD) or %	Male, %	History of CVD, %	CVD Risk Factors, %
Anand 2021 33752439	31492	NR	59 (17)	55%	Prior MI; 8% Prior revascularization; 10.4% History CVD; NR Stroke/TIA; NR PAD; NR MI 30 days: 0.3%	Hypertension; NR Diabetes; 6% Smoking; NR BMI; NR FHx; NR Hyperlipidemia; NR
Barnes 2021 33436490	2255	NR	54 (17)	53%	Prior MI; 10% Prior revascularization; 10% History CVD; NR Stroke/TIA; 4% PAD; 2% MI 30 days: 0.0%	Hypertension; 35% Diabetes; 14% Smoker, current; 19% BMI; 13% FHx CAD; 9% Hyperlipidemia; 29%
Chew 2019 31478763 Lambrakis 2021 33998255	1646	NR	Median (IQR) 58.7 (48.6,69.4)	53.2%	Prior MI; 10.3% Prior revascularization; 10.4% Stroke/TIA; 3.2% History CVD; 27.8% PAD; NR MI 30 days: 1%	Hypertension; 19.7% Diabetes; 15.8% Smoking; 34.6% BMI; NR FHx; 61.2% Hyperlipidemia; 43.3%
Conde 2013 23810070	300	NR	65	51%	Prior MI; 1% Prior revascularization; 23% History CVD; 3% Stroke/TIA; NR PAD; NR MI 30 days: NR	Hypertension; 58% Diabetes; 15% Smoking; 50% BMI; NR FHx; NR Hyperlipidemia; 64%
Costable 2014	528	NR	58 (13)	58%	Prior MI; 8% Prior revascularization; 16.8% History CVD; 3.6% Stroke/TIA; NR PAD; NR MI 30 days: 6.3%	Hypertension; 38% Diabetes; 12% Smoking; 39% BMI; NR FHx; NR Hyperlipidemia; 45%

Author, Year, PMID	N Enrolled	Race/Ethnicity, %	Age, Mean (SD) or %	Male, %	History of CVD, %	CVD Risk Factors, %
Crowder 2015 26387473	5754	NR	61.4	49.9%	Prior MI; NR Prior revascularization; NR History CVD; NR Stroke/TIA; NR PAD; NR MI 30 days: NR	Hypertension; NR Diabetes; NR Smoking; NR BMI; NR FHx; NR Hyperlipidemia; NR
Ford 2021 33662739	1616	NR	Median (IQR) 55 (41, 66)	51%	Prior MI; NR Prior revascularization; NR History CVD; NR Stroke/TIA; NR PAD; NR MI 30 days: NR	Hypertension; NR Diabetes; NR Smoking; NR BMI; NR FHx; NR Hyperlipidemia; NR
Hyams 2018 29478861	866	NR	54.7	50.1%	Prior MI; 11.8% Prior revascularization; 15.4% History CVD; NR Stroke/TIA; 2.2% PAD; NR MI 6 weeks: 4.8%	Hypertension; 50.5% Diabetes;22.5% Smoking; 22.6% BMI; 46.4% FHx; 31.3% Hyperlipidemia; 32%
Ljung 2019 30661856	621	NR	63 (53, 71)	54%	Prior MI; 19% Prior revascularization; 19% History CVD; 21% Stroke/TIA; 8% PAD; 2% MI 30 days: 0.5%	Hypertension; 43% Diabetes; 12% Smoking; 52% BMI (≥ 30 kg/m2); 19% FHx; 29% Hyperlipidemia; NR
Sandeman 2021 34824100	10315	NR	63.6 (16.4)	54%	Prior MI; 6.4% Prior revascularization; NR History CVD; 4.2% Stroke/TIA; NR PAD; NR MI 30 days: NR	Hypertension; NR Diabetes; 17.7% Smoking; NR BMI; NR FHx; NR Hyperlipidemia; NR
Stoyanov 2020 31298551	2525	NR	62 (18)	58%	Prior MI; 17% Prior revascularization; 6.6% History CVD; NR	Hypertension; 65.4% Diabetes; 21.2% Smoking; 21.8%

Author, Year, PMID	N Enrolled	Race/Ethnicity, %	Age, Mean (SD) or %	Male, %	History of CVD, %	CVD Risk Factors, %
					Stroke/TIA; NR PAD; NR MI 30 days: NR	BMI; NR FHx; 26.3% Hyperlipidemia; 44.9%
Suh 2022 35571147	821	White (Non-Hispanic) 13.4% Black 25.5% Hispanic/Latino 60.4% Asian (Any) 2.6% Other1 53.7% Other2 1.1%	60.4 (15.9)	45.6%	Prior MI; NR Prior revascularization; NR History CVD; 25.9% Stroke/TIA; NR PAD; 32.9% MI 30 days: 2.6%	Hypertension; 68.6% Diabetes; 36.2% Smoking; 11.2% BMI; 41.2% FHx; 15.4% Hyperlipidemia; 44.7%
Sweeney 2020 32104767	15882	NR	49.9 (14.2)	NR	Prior MI; NR Prior revascularization; NR History CVD; NR Stroke/TIA; NR PAD; NR MI 30 days: NR	Hypertension; NR Diabetes; NR Smoking; NR BMI; NR FHx; NR Hyperlipidemia; NR
Than 2021 33753972	2416	White 72.2% Other1 Pacific 0.9% Other2 New Zealand Maori 3.5% Other3 11.1%	63 (13)	61.8%	Prior MI; NR Prior revascularization; NR History CVD; 35.3% Stroke/TIA; NR PAD; NR MI 30 days: NR	Hypertension; 55% Diabetes; 15% Smoking; 15.2% BMI; NR FHx; 54.3% Hyperlipidemia; 55.6%
Than 2016 26947800	558	Asian (Any) 2.5% Other1 Maori; 3.8% Other2 Pacific Islander; 1.6% Other3 (New Zealand European +	58.7 (11.9)	60.9%	Prior MI; 23.3% Prior revascularization; 27.4% History CVD; NR Stroke/TIA; 5.9% PAD; 5.7% MI 30 days: NR	Hypertension; 52% Diabetes; 14% Smoking; 15.1% BMI; NR FHx; 35.7% Hyperlipidemia; 50.9%

Author, Year, PMID	N Enrolled	Race/Ethnicity, %	Age, Mean (SD) or %	Male, %	History of CVD, %	CVD Risk Factors, %
		Other European); 84.0%				
Twerenbold 2019 31345421	2296	NR	Median 60	64%	Prior MI; 17% Prior revascularization; 30% History CVD; 29% Stroke/TIA; 2% PAD; 3% MI 30 days: 9.9%	Hypertension; 51% Diabetes; 13% Smoking; 19% BMI; NR FHx; 16% Hyperlipidemia; 41%
Vigen 2020 32320036	14552	White 55% Black 41.9% Hispanic/Latino 38.2% Non-Hispanic 61.8% Other1 3%	54.2 (14.6)	53%	Prior MI; NR Prior revascularization; NR History CVD; NR Stroke/TIA; NR PAD; NR MI 30 days: NR	Hypertension; NR Diabetes; NR Smoking; NR BMI; NR FHx; NR Hyperlipidemia; NR

Abbreviations. BMI=body mass index; CVD=cardiovascular disease; FHx=family history; IQR=interquartile range; MI=myocadiac infarction; N=sample size; NR=not reported; PAD=peripheral arterial disease; PMID=PubMed identifier; SD=standard deviation; TIA=transient ischemic attack.

APPENDIX J. MACE OUTCOMES

Appendix Table J-1. MACE Comparative Studies

Study PMID, Study	Follow-up Time (days)	Outcome Definition	Subgroup	Arm	n/N (%)	OR (95% CI)*	Reported P value
Overall Comparison: ADP vs hs-cTn without ADP							
Hyams 2018 29478861	6 wk	Mortality, nonfatal MI, revascularization		ADP 0/3 HEART	25/449 (5.6)	0.73 (0.42,1.24) RD -1.8 (-5.1, 1.5)*	NR
				Hs-cTn	31/417 (7.4)		
Overall Comparison: ADP vs ADP							
Anand 2021 33752439	30	MI (type 1/4b/4c) or cardiac death		High-STEACS ADP 0/3	56/16792 (0.3)	0.86 (0.59, 1.24) RD -0.1 (-0.2, 0.03)*	0.068
				ADP 0/6/12	57/14700 (0.4)		
Anand 2021 33752439	30	MI (type 1/2/4b/4c) or cardiac death		High-STEACS ADP 0/3	68/16792 (0.4)	0.84 (0.60, 1.17)* RD -0.1 (-0.2, 0.05)*	NR
				ADP 0/6/12	71/14700 (0.5)		
Than 2016 26947800	30	Death, cardiac arrest, emergency revascularization, cardiogenic shock, ventricular arrhythmia needing intervention, high-degree atrioventricular block needing intervention, and MI		ADP 0/2 EDACS	2/279 (0.7) (all events occurred in non-low risk patients)	RD 0.3 (-0.9, 1.5)*	NR
				ADPAT ADP 0/2 TIMI	1/279 (0.4) (all events occurred in non-low risk patients)		
Subgroup Comparison							
Hyams 2018 29478861	6 wk	Mortality, nonfatal MI, revascularization	HEART score ≤3	ADP 0/3 HEART	0/denominator NR (0)		NR
				Hs-cTn	0/denominator NR (0)		

Study PMID, Study	Follow-up Time (days)	Outcome Definition	Subgroup	Arm	n/N (%)	OR (95% CI)*	Reported P value
Than 2016 26947800	30	Death, cardiac arrest, emergency revascularization, cardiogenic shock, ventricular arrhythmia needing intervention, high-degree atrioventricular block needing intervention, and MI	Low risk patients	ADP 0/2 EDACS	0/116 (0)		NR
				ADAPT ADP 0/2 TIMI	0/85 (0)		
Twerenbold 2019 31345421	30	Cardiovascular death and MI	CP ≤3h and rule-out group	ADP ESC 0/1	0/655 (0.0)	RD -0.3 (-0.6, 0.04)*	0.171
			CP >3h and rule-out group	ADP ESC 0/1	3/1063 (0.3)		
Twerenbold 2019 31345421	30	Cardiovascular death and MI	Female and rule-out group	ADP ESC 0/1	2/663 (0.3)	RD 0.2 (-0.3, 0.7)*	0.372
Twerenbold 2019 31345421	30	Cardiovascular death and MI	Male and rule-out group	ADP ESC 0/1	1/1049 (0.1)		
Twerenbold 2019 31345421	30	Cardiovascular death and MI	Age >65 years and rule-out group	ADP ESC 0/1	2/500 (0.3)	RD 0.1 (-0.4, 0.6)*	0.688
Twerenbold 2019 31345421	30	Cardiovascular death and MI	Age ≤65 years and rule-out group	ADP ESC 0/1	3/1219 (0.2)		
Twerenbold 2019 31345421	30	Cardiovascular death and MI	CP ≤3h and discharge	ADP ESC 0/1	0/614 (0)	RD -0.1 (-0.3, 0.1)*	0.435
Twerenbold 2019 31345421	30	Cardiovascular death and MI	CP >3h and discharge	ADP ESC 0/1	1/1004 (0.1)		
Twerenbold 2019	30	Cardiovascular death and MI	Female and discharge	ADP ESC 0/1	1/614 (0.2)	RD 0.2 (- 0.2, 0.5)*	0.202

Study PMID, Study	Follow-up Time (days)	Outcome Definition	Subgroup	Arm	n/N (%)	OR (95% CI)*	Reported P value
31345421							
Twerenbold 2019 31345421	30	Cardiovascular death and MI	Male and discharge	ADP ESC 0/1	0/1004 (0)		
Twerenbold 2019 31345421	30	Cardiovascular death and MI	Age >65 years and discharge	ADP ESC 0/1	0/509 (0)	RD -0.1 (- 0.3, 0.1)*	0.501
Twerenbold 2019 31345421	30	Cardiovascular death and MI	Age ≤65 years and discharge	ADP ESC 0/1	1/1120 (0.1)		

Notes. * Calculated by research team.
*Abbreviation*s. ADP=accelerated diagnostic protocol; CI=confidence interval; CP=chest pain; EDACS=Emergency Department Assessment of Chest Pain Score; ESC=European Society of Cardiology; HEART=History, Electrocardiogram, Age, Risk factors, Troponin; High-STEACS=High-Sensitivity Troponin in the Evaluation of Patients With Suspected Acute Coronary Syndrome; hs-cTn=high-sensitivity cardiac troponin; MACE=major adverse cardiac events; MI= myocardial infarction, n/N%=(number of events/sample size)%; NR=not reported; OR=odds ratio; PMID=PubMed identifier; RD=risk difference; TIMI=Thrombolysis in Myocardial Infarction; wk=week.

Appendix Table J-2. MACE: Rule Out, Low Risk Not Described as Rule Out, Discharge or Grey Zone, and Rule In or High Risk

Study, Year, PMID	ADP	Follow-up Time (days)	Outcome Definition	n/N (%)
Rule Out				
Chew 2019 31478763	ADP 0/1	30	Death and MI	6/1187 (0.5)
			Death, MI, and unstable angina	10/1187 (0.8)
Twerenbold 2019 31345421	ADP ESC 0/1	30	Cardiovascular death and MI	3/1420 (0.2)
Low Risk Not Described as Rule Out				
Than 2016 26947800	ADP 0/2 EDACS	30	Death, cardiac arrest, emergency revascularization, cardiogenic shock, ventricular arrhythmia needing intervention, high-degree atrioventricular block needing intervention, and MI	0/116 (0)
	ADAPT ADP 0/2 TIMI	30	Death, cardiac arrest, emergency revascularization, cardiogenic shock, ventricular arrhythmia needing intervention, high-degree atrioventricular block needing intervention, and MI	0/85 (0)
Hyams 2018 29478861	ADP 0/3 HEART	6 wk	Death, nonfatal MI, revascularization (based on HEART score ≤3)	0/denominator NR (0)
Discharge				
Suh 2022 35571147	ADP 0/1 mHEART	30	MI, revascularization, ventricular arrhythmia, high degree atrioventricular block requiring intervention, cardiogenic shock requiring mechanical support, cardiac arrest with return of spontaneous circulation, and death	4/381 (1)
Twerenbold 2019 31345421	ADP ESC 0/1	30	Cardiovascular death and MI	1/1619 (0.06)
Observe / Grey Zone				
Chew 2019 31478763	ADP 0/1	30	Death and MI	7/308 (2.3)
			Death, MI, and unstable angina	9 /308 (2.9)
			MI with or without revascularization	3/308 (1)
Twerenbold 2019 31345421	ADP ESC 0/1	30	Cardiovascular death and MI	31/581 (5.3)
Rule In				
Chew 2019 31478763	ADP 0/1	30	Death and MI	5/136 (3.7)

Study, Year, PMID	ADP	Follow-up Time (days)	Outcome Definition	n/N (%)
Twerenbold 2019 1345421	ADP ESC 0/1	30	Cardiovascular death and MI	197/295 (66.8)
High Risk Not Described as Rule In				
Suh 2022 35571147	ADP 0/1 mHEART	30	MI, revascularization, ventricular arrhythmia, high degree atrioventricular block requiring intervention, cardiogenic shock requiring mechanical support, cardiac arrest with return of spontaneous circulation, and death	35/395 (8.9)
Twerenbold 2019 1345421	ADP ESC 0/1	30	Cardiovascular death and MI (Based on admitted)	230/677 (34)
Than 2016 26947800	ADP 0/2 EDACS	30	Death, cardiac arrest, emergency revascularization, cardiogenic shock, ventricular arrhythmia needing intervention, high-degree atrioventricular block needing intervention, and MI	2/279 (0.7)
	ADAPT ADP 0/2 TIMI	30	Death, cardiac arrest, emergency revascularization, cardiogenic shock, ventricular arrhythmia needing intervention, high-degree atrioventricular block needing intervention, and MI	1 /279 (0.4)

*Abbreviation*s. ADP=accelerated diagnostic protocol; EDACS=Emergency Department Assessment of Chest Pain Score; ESC=European Society of Cardiology; HEART=History, Electrocardiogram, Age, Risk factors, Troponin; MACE=major adverse cardiac events; mHEART=modified HEART; MI=myocardial infarction; n/N%=(number of events/sample size)%; NR=not reported; PMID=PubMed identifier; TIMI=Thrombolysis in Myocardial Infarction; wk=week.

APPENDIX K. ED LENGTH OF STAY OUTCOMES

Appendix Table K-1. ED Length of Stay (Continuous) Comparative Studies

Study, Year, PMID	Outcome Definition	Subgroup	Arm*	N	Mean (SD)	MD (95% CI)	Reported P Value
Overall Comparison: ADP vs ADP							
Anand 2021 33752439	LOS		High-STEACS ADP 0/3	16792	6.8 (4.1)	Geometric Mean 0.78 (0.73, 0.83)	<0.001
			ADP 0/6/12	14700	10 (4.1)		
Barnes 2021 33436490	LOS		STAT ADP 0/2/6 HEART	1124	Median (IQR) 3.6 (2.6, 5.4)	IRR 0.71 (0.65, 0.77)	<0.001
			ADP 0/(2 or 3)/6 TIMI	1131	Median (IQR) 4.3 (3.3, 7.1)		
Sandeman 2021 34824100	LOS		ADP 0/3/6	3673	Median (IQR) 6.5 (6.3,19.8)	1.34% (-2.21%, -0.26%) reduction in LOS associated with early rule-out	<0.001
			ADP 0/6/12 GRACE	6642	Median (IQR) 8.9 (3.7,38.0)		
Stoyanov 2020 31298551	LOS		ADP ESC 0/1	1282	Median (IQR) 3.2 (2.7,4.4)	Difference in median hours: -2.1*	<0.001
			ADP ESC 0/3	1243	Median (IQR) 5.3 (4.7,6.5)		
Than 2021 33753972	LOS		COVID-ADP 0/2 EDACS	1343	Median (IQR) 3.4 (2.6,4.6)	Difference in median hours: -0.4*	<0.001
			ADP 0/2/6 EDACS	1073	Median (IQR) 3.8 (2.8,4.9)		
Subgroup Comparisons							
Costable 2014	LOS	CP >6h	ADP 0/3	264	2.9 (2)		0.352
		CP ≤6h	ADP 0/3	264	5.1 (2.8)		
Sandeman 2021 34824100	LOS	Patients with troponin <5 ng/L	ADP 0/3/6	945	Median (IQR) 3.7 (170,329)	2.99% (-4.32, -1.64) reduction in LOS associated with early rule-out pathway	NR
			ADP 0/6/12 GRACE	2188	Median (IQR) 3.9 (3,8.1)		

Study, Year, PMID	Outcome Definition	Subgroup	Arm*	N	Mean (SD)	MD (95% CI)	Reported P Value
Sandeman 2021 34824100	LOS	Patients with troponin 5–14 ng/L	ADP 0/3/6	1380	Median (IQR) 5.2 (3.6,14.0)	3.61% (-5.30%, -1.90%) reduction in LOS associated with early rule-out pathway with	NR
			ADP 0/6/12 GRACE	1885	Median (IQR) 7 (3.6,20.2)		
Sandeman 2021 34824100	LOS	Patients with troponin >14 ng/L	ADP 0/3/6	1348	Median (IQR) 42.8 (11.3,103.1)	0.99% (-0.95%, 2.98%) reduction in LOS associated with early rule-out pathway with duration of stay	NR
			ADP 0/6/12 GRACE	2569	Median (IQR) 37.7 (11.1,100.1)		
Than 2021 33753972	LOS	Discharged from ED	COVID-ADP 0/2 EDACS	NR	Mean 3.4 Median (IQR) 3.1 (2.4,4.1)	Difference in median hours: -0.5 hours*	NR
			ADP 0/2/6 EDACS	NR	Mean 3.9 Median (IQR) 3.7 (2.7,4.6)		

Notes. * Calculated by research team.

*Abbreviation*s. ADP=accelerated diagnostic protocol; CI=confidence interval; CP=chest pain; ED=emergency department; EDACS=Emergency Department Assessment of Chest Pain Score; ESC=European Society of Cardiology; GRACE=Global Registry of Acute Coronary Events; h=hour; HEART=History, Electrocardiogram, Age, Risk factors, Troponin; High-STEACS=High-Sensitivity Troponin in the Evaluation of Patients With Suspected Acute Coronary Syndrome; IQR=interquartile range; IRR=incidence rate ratio; LOS=length of stay; MD=mean difference; N=sample size; NR=not reported; PMID=PubMed identifier; SD=standard deviation; STAT=single troponin accelerated triage; TIMI=Thrombolysis in Myocardial Infarction.

Appendix Table K-2. ED Length of Stay (Categorical) Comparative Studies

Study PMID, Study Design	Follow-up Time (days)	Outcome Definition	Subgroup	Arm	n/N (%)	OR (95% CI)	Reported P value
Overall Comparison: ADP vs. ADP							
Barnes 2021 33436490	ED visit	Discharge <3h		STAT ADP 0/2/6 HEART	425/1124 (37.8)	aOR 2.1 (1.73,2.55) RD 16.5 (12.8, 20.2)*	<0.001
				ADP 0/(2 or 3)/6 TIMI	241/1131 (21.3)		
Sandeman 2021 34824100	ED visit	Discharge ≤4h		ADP 0/3/6	1281/3650 (34.9)	RD 2.3 (0.4, 4.2)*	NR
				ADP 0/6/12 GRACE	2150/6597 (32.6)		
Than 2016 26947800	ED visit	Discharge <6h[a]		ADP 0/2 EDACS	90 /279 (32.3)	RD -2.1 (-10.3, 6)	0.65
				ADAPT ADP 0/2 TIMI	96/279 (34.4)		
Than 2021 33753972	ED visit	Discharge <2h		COVID-ADP 0/2 EDACS	109/1343 (8.1)	44.6% increase	NR
				ADP 0/2/6 EDACS	60/1073 (5.6)		
Than 2021 33753972	ED Visit	Discharge <3h		COVID-ADP 0/2 EDACS	594/1343 (44.2)	35.2% increase	NR
				ADP 0/2/6 EDACS	351/1073 (32.7)		
Subgroup Comparison							
Sandeman 2021 34824100	30	Discharge ≤4h	Patients with troponin <5 ng/L	ADP 0/3/6	604/945 (63.9)	RD 11.4 (7.7, 15.1)*	NR
				ADP 0/6/12 GRACE	1149/2188 (52.5)		
Sandeman 2021 34824100	30	Discharge ≤4h	Patients with troponin 5–14 ng/L	ADP 0/3/6	512/1380 (37.1)	RD 2 (-1.3, 5.3)*	NR
				ADP 0/6/12 GRACE	661/1885 (35.1)		

Study PMID, Study Design	Follow-up Time (days)	Outcome Definition	Subgroup	Arm	n/N (%)	OR (95% CI)	Reported P value
Sandeman 2021 34824100	30	Discharge ≤4h	Patients with troponin >14 ng/L	ADP 0/3/6	165/1348 (12.2)	RD* -1 (-3.2, 1.2)	NR
				ADP 0/6/12 GRACE	340/2569 (13.2)		
Than 2016 26947800	ED visit	Discharge <6h[a]	Low-risk patients	ADP 0/2 EDACS	73/279 (26.2)	RD 3.2 (-4.3,10.7)	NR
				ADAPT ADP 0/2 TIMI	64/279 (22.9)		

Notes. [a] Discharge <6h and no MACE defined as death, cardiac arrest, emergency revascularization, cardiogenic shock, ventricular arrhythmia needing intervention, high-degree atrioventricular block needing intervention, and MI.

Abbreviations. ADP=accelerated diagnostic protocol; aOR=adjusted odds ratio; CI=confidence interval; ED=emergency department; EDACS=Emergency Department Assessment of Chest Pain Score; GRACE=Global Registry of Acute Coronary Events; h=hour; HEART=History, Electrocardiogram, Age, Risk factors, Troponin); n/N%=(number of events/sample size)%; NR=not reported; OR=odds ratio; PMID=PubMed identifier; RD=risk difference; STAT=single troponin accelerated triage; TIMI=Thrombolysis in Myocardial Infarction.

Appendix Table K-3. ED Length of Stay (Continuous): Rule Out, Low Risk Not Described as Rule Out, Discharge or Grey Zone, and Rule In or High-Risk

Study, Year, PMID	ADP	N	Median (IQR) Length of Stay
Rule Out			
Chew 2019 31478763	ADP 0/1	1187	4.6 (3.5, 7.5)
Twerenbold 2019 31345421	ADP ESC 0/1	1420	2.5 (2.2, 3.6)
Low Risk Not Described as Rule Out			
Ljung 2019 30661856	ADP 0/1 HEART	308	4.05 (3.3,5.4)
Costable 2014	ADP 0/3	264	Mean (SD) 2.9 (2)
Sandeman 2021 34824100	ADP 0/3/6	945	3.65 (2.8, 5.5)
	ADP 0/6/12 GRACE	2188	3.9 (3, 8.1)
Discharge			
Lambrakis 2021 33998255 Chew 2019 31478763	ADP 0/1	737	3.8 (3.1,4.7)
Ljung 2019 30661856	ADP 0/1 HEART	419	3.8 (3.1,4.9)
Twerenbold 2019 31345421	ADP ESC 0/1	1619	2.5 (2.2,3.4)
Than 2021 33753972	COVID-ADP 0/2 EDACS	NR	3.1 (2.4, 4.1)
	ADP 0/2/6 EDACS	NR	3.7 (2.7, 4.6)
Observe / Grey Zone			
Chew 2019 31478763	ADP 0/1	308	12.0 (5.1,34.4)
Twerenbold 2019 31345421	ADP ESC 0/1	581	2.6 (2.4, 4.6)
Rule In			
Chew 2019 31478763	ADP 0/1	270	51 (27.6, 77.6)
Twerenbold 2019 31345421	ADP ESC 0/1	295	2.5 (2.3, 4.4)
High Risk Not Described as Rule In			
Ljung 2019 30661856	ADP 0/1 HEART (based on admitted)	202	46.7 (24.4,73.6)
	ADP 0/1 HEART (based on HEART score ≥4)	139	4.53 (3.4,24.7)
	ADP 0/1 HEART (based on hs-TnT>14 ng/L hs-cTnI ≥35 ng/L (♂) hs-cTnI ≥16 ng/L (♀))	130	45.2 (5.1,74.1)

Study, Year, PMID	ADP	N	Median (IQR) Length of Stay
Twerenbold 2019 31345421	ADP ESC 0/1 (based on admitted)	677	3 (2.3,5.3)
Sandeman 2021 34824100	ADP 0/3/6 (based on hs-TnT >14 ng/L)	1384	42.8 (11.3,103.1)
	ADP 0/6/12 GRACE (based on hs-TnT >14 ng/L)	2569	37.6 (11.2,100.9)

Abbreviations. ADP=accelerated diagnostic protocol; ED=emergency department; EDACS=Emergency Department Assessment of Chest Pain Score; ESC=European Society of Cardiology; GRACE=Global Registry of Acute Coronary Events; HEART=History, Electrocardiogram, Age, Risk factors, Troponin; hs-cTnI/T=highly-sensitive cardiac troponin I/T; IQR=interquartile range; N=sample size; NR=not reported; PMID=PubMed identifier; SD=standard deviation.

Appendix Table K-4. ED Length of Stay (Categorical): Rule Out, Low Risk Not Described as Rule Out, Discharge or Grey Zone, and Rule In or High Risk

Study, Year, PMID	ADP	Outcome Definition	n/N (%)
Low Risk Not Described as Rule Out			
Than 2016 26947800	ADP 0/2 EDACS	Discharge <6h and no MACE within 30 days[a]	73/279 (26.2)
	ADAPT ADP 0/2 TIMI	Discharge <6h and no MACE within 30 days[a]	64/279 (22.9)
Sandeman 202134824100	ADP 0/3/6	Discharge ≤4h (based on hs-TnT <5 ng/L)	604/945 (63.9)
	ADP 0/6/12 GRACE	Discharge ≤4h (based on hs-TnT <5 ng/L)	1149/2188 (52.5)
High Risk Not Described as Rule In			
Sandeman 2021 34824100	ADP 0/3/6	Discharge ≤4h (based on hs-TnT >14 ng/L)	165/1348 (12.2)
	ADP 0/6/12 GRACE	Discharge ≤4h (based on hs-TnT >14 ng/L)	340/2569 (13.2)

Notes. [a] Discharge <6h and no MACE defined as death, cardiac arrest, emergency revascularization, cardiogenic shock, ventricular arrhythmia needing intervention, high-degree atrioventricular block needing intervention, and MI.
Abbreviations. ADP=accelerated diagnostic protocol; ED=emergency department; EDACS=Emergency Department Assessment of Chest Pain Score; GRACE=Global Registry of Acute Coronary Events; h=hour; hs-cTnT=high-sensitivity cardiac troponin T; MACE=major adverse cardiac events; n/N %=(number of events/sample size) %; PMID=PubMed identifier; TIMI=Thrombolysis in Myocardial Infarction.

APPENDIX L. DISCHARGE OUTCOMES

Appendix Table L-1. ED Discharge to Community versus Hospital Admission Comparative Studies

Study PMID, Study Design	Follow-up Time (days)	Outcome Definition	Subgroup	Arm	n/N (%)	OR (95% CI)*	Reported P Value
Overall Comparison: ADP vs hs-cTn without ADP							
Hyams 2018 29478861	ED Visit	ED discharge*		ADP 0/3 HEART	232/449 (51.7)*	RD 15.2 (8.7, 21.7)*	<0.001
				Hs-cTn	152/417 (36.5)*		
Overall Comparison: ADP vs ADP							
Anand 2021 33752439	ED Visit	ED discharge		High-STEACS ADP 0/3	11842/16792 (71)	aOR 1.59 (1.45, 1.75) RD 21 (20.0, 22.0)*	<0.001
				ADP 0/6/12	7407/14700 (50)		
Barnes 2021 33436490	ED Visit	ED discharge		STAT ADP 0/2/6 HEART	709/1124 (63)	aOR 2.75 (2.29, 3.29) RD 25 (21.0, 29.0)*	<0.001
				ADP 0/2 or 3/6 TIMI	430/1131 (38)		
Than 2021 33753972	ED visit	ED discharge for patients with chest pain presentation*		COVID-ADP 0/2 EDACS	90.7%*	RD 3 (0.5, 5.5)*	NR
				ADP 0/2/6 EDACS	87.7%*		

Notes. * Calculated by research team.
Abbreviations. ADP=accelerated diagnostic protocol; aOR=adjusted odds ratio; CI=confidence interval; ED=emergency department; EDACS=Emergency Department Assessment of Chest Pain Score; High-STEACS=High-sensitivity Troponin in the Evaluation of Patients With Suspected Acute Coronary Syndrome; HEART=History, Electrocardiogram, Age, Risk factors, Troponin; hs-cTn=high-sensitivity cardiac troponin; n/N %=(number of events/sample size) %; NR=not reported; OR=odds ratio; PMID=PubMed identifier; RD=risk difference; STAT=single troponin accelerated triage; TIMI=Thrombolysis in Myocardial Infarction.

Appendix Table L-2. ED Discharge to Community versus Hospital Admission: Rule Out, Low Risk Not Described as Rule Out, Discharge or Grey Zone, and Rule In or High Risk

Study, Year, PMID	ADP	Outcome Definition	n/N (%)
Rule Out			
Chew 2019 31478763	ADP 0/1	ED discharge to home	589/1187 (49.6)
Twerenbold 2019 31345421	ADP ESC 0/1	ED discharge to home	1243/1420 (88)
Low Risk Not Described as Rule Out			
Ljung 2019 30661856	ADP 0/1 HEART	ED discharge to home (based on HEART score ≤3)	269/308 (87.3)
Observe / Grey Zone			
Chew 2019 31478763	ADP 0/1	ED discharge to home	84/308 (27.3)
Twerenbold 2019 31345421	ADP ESC 0/1	ED discharge to home	352/581 (61)
Rule In			
Chew 2019 31478763	ADP 0/1	ED discharge to home	12/136 (8.8)
Twerenbold 2019 31345421	ADP ESC 0/1	ED discharge to home	2/295 (8)
High Risk Not Described as Rule In			
Ljung 2019 30661856	ADP 0/1 HEART	ED discharge (based on HEART score ≥4)	87/139 (62.6)
		ED discharge (based on hs-cTnT >14 ng/L hs-cTnI ≥35 ng/L (♂) hs-cTnI ≥16 ng/L (♀))	41/130 (31.5)

Abbreviations. ADP=accelerated diagnostic protocol; ED=emergency department; ESC=European Society of Cardiology; HEART=History, Electrocardiogram, Age, Risk factors, Troponin; hs-cTnI/T=high-sensitivity cardiac troponin I/T; n/N %=(number of events/sample size) %; PMID=PubMed identifier.

APPENDIX M. RETURN TO ED OR HOSPITAL OUTCOMES

Appendix Table M-1. Return to ED or Hospital Comparisons

Study PMID, Study	Follow-up Time (days)	Outcome Definition	Subgroup	Arm	n/N (%)	RD (95% CI)*	Reported P Value
ADP Comparison							
Barnes 2021 33436490	30	All cause		STAT ADP 0/2/6 HEART	107/1124 (9.5)	RD 1.1 (-1.3, 3.4)*	NR
				ADP 0/(2 or 3)/6 TIMI	95/1131 (8.4)		
Subgroup Comparison							
Barnes 2021 33436490	30	Chest pain	Patients who returned to ED	STAT ADP 0/2/6 HEART	33/107 (31.0)	RD -2 (-14.9, 10.9)*	NR
				ADP 0/2 or 3/6 TIMI	31/95 (33.0)		

Notes. * Calculated by research team.
Abbreviations. ADP=accelerated diagnostic protocol; CI=confidence interval; ED=emergency department; HEART=History, Electrocardiogram, Age, Risk factors, Troponin; n/N %=(number of events/sample size) %; OR=odds ratio; PMID=PubMed identifier; RD=risk difference; STAT=single troponin accelerated triage; TIMI=Thrombolysis in Myocardial Infarction.

Appendix Table M-2. Return to ED or Hospital Comparisons: Rule Out, Low Risk Not Described as Rule Out, Discharge or Grey Zone, and Rule In or High Risk

Study, Year, PMID	ADP	Follow-up Time (Days)	Outcome Definition	n/N (%)
Rule Out				
Chew 2019 31478763	ADP 0/1	30	Chest pain related	41/1187 (3.5)
Low Risk Not Described as Rule Out				
Ljung 2019 30661856	ADP 0/1 HEART	30	All-cause (Based on HEART score ≤3)	16/308 (5.2)
Discharge				
Ljung 2019 30661856	ADP 0/1 HEART	30	All-cause	45/419 (10.7)
Observe / Grey Zone				
Chew 2019 31478763	ADP 0/1	30	Myocardial injury related	11/308 (3.6)
			Chest pain related	22/308 (7.1)
Rule In				
Chew 2019 31478763	ADP 0/1	30	Chest pain related	7/136 (5.1)
High Risk Not Described as Rule In				
Ljung 2019 30661856	ADP 0/1 HEART	30	All-cause (Based on admitted)	36/202 (17.8)
			All-cause (Based on HEART score ≥4)	27 /139 (19.4)
			All-cause (Based on hs-TnT >14 ng/L hs-cTnI ≥35 ng/L (♂) hs-cTnI ≥16 ng/L (♀)	29/130 (22.3)

Abbreviations. ADP=accelerated diagnostic protocol; ED=emergency department; HEART=History, Electrocardiogram, Age, Risk factors, Troponin; hs-cTnI/T=high-sensitivity cardiac troponin I/T; n/N %=(number of events/sample size) %; PMID = PubMed identifier.

APPENDIX N. MI OUTCOMES

Appendix Table N-1. MI Comparative Studies

Study PMID, Study Design	Follow-up Time (days)	Outcome Definition	Subgroup	Arm	n/N (%)	OR (95% CI)	Reported P Value
Overall Comparison: ADP vs hs-cTn without ADP							
Hyams 2018 29478861	6 wk	MI		ADP 0/3 HEART	21/449 (4.7)	0.96 (0.52,1.81) RD -0.1 (-2.9, 2.7)*	NR
				hs-cTn	20/417 (4.8)		
Overall Comparison: ADP vs ADP							
Anand 2021 33752439	30	Type 1/4b/4c		High-STEACS ADP 0/3	38/16792 (0.2)	0.76 (0.49, 1.17)* RD -0.1 (-0.2, 0.01)*	NR
				ADP 0/6/12	44/14700 (0.3)		
Anand 2021 33752439	30	Type 1/2/4b/4c		High-STEACS ADP 0/3	50/16792 (0.3)	0.75 (0.52, 1.10)* RD -0.1 (-0.2,0.03)*	NR
				ADP 0/6/12	58/14700 (0.4)		
Barnes 2021 33436490	30	MI		STAT ADP 0/2/6 HEART	0/1124 (0)		NR
				ADP 0/(2 or 3)NR/6 TIMI	0/1131 (0.0)		
Than 2016 26947800	30	NSTEMI		ADP 0/2 EDACS	2/279 (0.7)	RD 0.7 (-2.1,0.6)	NR
				ADAPT ADP 0/2 TIMI	0/279 (0)		
Than 2016 26947800	30	STEMI		ADP 0/2 EDACS	0/279 (0)	RD -0.4 (-0.7,1.4)	NR
				ADAPT ADP 0/2 TIMI	1/279 (0.4) all in non–low-risk patients		

Study PMID, Study Design	Follow-up Time (days)	Outcome Definition	Subgroup	Arm	n/N (%)	OR (95% CI)	Reported P Value
Than 2016 26947800	ED visit	STEMI		ADP 0/2 EDACS	2/279 (0.7)	RD -0.4 (-1.6,2.3)	NR
				ADAPT ADP 0/2 TIMI	3 /279 (1.1)		
Than 2016 26947800	ED visit	NSTEMI		ADP 0/2 EDACS	34/279 (12.2) all in non-low-risk patients	RD 2.9 (-8.4,2.6)	NR
				ADAPT ADP 0/2 TIMI	26 /279 (9.3) all in non-low-risk patients		
Subgroup Comparison							
Than 2016 26947800	30	NSTEMI	Low-risk patients	ADP 0/2 EDACS	0/116 (0)		NR
				ADAPT ADP 0/2 TIMI	0/85 (0)		
Than 2016 26947800	30	STEMI	Low-risk patients	ADP 0/2 EDACS	0/116 (0)		NR
				ADAPT ADP 0/2 TIMI	0/85 (0)		

Notes. * Calculated by research team.
Abbreviations. ADP=accelerated diagnostic protocol; CI=confidence interval; ED=emergency department; EDACS=Emergency Department Assessment of Chest Pain Score; HEART=History, Electrocardiogram, Age, Risk factors, Troponin; High-STEACS=High-Sensitivity Troponin in the Evaluation of Patients With Suspected Acute Coronary Syndrome; hs-cTn=high-sensitivity cardiac troponin; MI=myocardial infarction; n/N %=(number of events/sample size) %; NR=not reported; NSTEMI=non ST-elevation myocardial infarction; OR=odds ratio; PMID=PubMed identifier; RD=risk difference; STAT=single troponin accelerated triage; STEMI=ST-elevation myocardial infarction; TIMI=Thrombolysis in Myocardial Infarction; wk=week.

Appendix Table N-2. MI: Rule Out, Low Risk Not Described as Rule Out, Discharge or Grey Zone, and Rule In or High Risk

Study, Year, PMID	ADP	Follow-up Time (days)	Outcome Definition	n/N (%)
Rule Out				
Chew 2019 31478763	ADP 0/1	30	Type 1/2/4a/5	5/1187 (0.4)
			MI or myocardial injury	9/1187 (0.8)
Twerenbold 2019 31345421	ADP ESC 0/1	30	MI	2/1420 (0.1)
Low Risk Not Described as Rule Out				
Ljung 2019 30661856	ADP 0/1 HEART	30	MI (Based on HEART score ≤3)	0/308 (0)
Than 2016 26947800	ADP 0/2 EDACS	30	NSTEMI	0/116 (0)
			STEMI	0/116 (0)
	ADAPT ADP 0/2 TIMI	30	NSTEMI	0/85 (0)
			STEMI	0/85 (0)
Discharge				
Ljung 2019 30661856	ADP 0/1 HEART	30	MI	2/419 (0.5)
Twerenbold 2019 31345421	ADP ESC 0/1	30	MI	0 /1619 (0)
Costable 2014	ADP 0/3	30	MI	0/479 (0)
Observe / Grey Zone				
Chew 2019 31478763	ADP 0/1	30	Type 1/2/4a/5	6/308 (1.9)
			MI or myocardial injury	9/308 (2.9)
Twerenbold 2019 31345421	ADP ESC 0/1	30	MI	30/581 (5.2)
Rule In				
Chew 2019 31478763	ADP 0/1	30	Type 1/2/4a/5	5/136 (3.7)
			MI or myocardial injury	8/136 (5.9)
Twerenbold 2019 31345421	ADP ESC 0/1	30	MI	195/295 (66.1)

Study, Year, PMID	ADP	Follow-up Time (days)	Outcome Definition	n/N (%)
High Risk Not Described as Rule In				
Ljung 2019 30661856	ADP 0/1 HEART	30	MI after discharge (among those who admitted)	1/202 (0.5)
			MI (patients with HEART ≥4)	0/139 (0)
			MI (patients with hs-cTnT >14 ng/L hs-cTnI ≥35 ng/L (♂) hs-cTnI ≥16 ng/L (♀))	1/130 (0.8)
	ADP 0/1 HEART	In-hospital stay	MI (among those who admitted)	44/202 (21.8)
Twerenbold 2019 31345421	ADP ESC 0/1	30	MI (based on admitted)	227/677 (33.5)
Than 2016 26947800	ADP 0/2 EDACS	30	NSTEMI	2/279 (0.7)
			STEMI	0/279 (0)
Than 2016 26947800	ADAPT ADP 0/2 TIMI	30	NSTEMI	0/279 (0)
			STEMI	1/279 (0.4)
Costable 2014	ADP 0/3	30	MI (based on admitted)	33/49 (67.3)

Abbreviations. ADP=accelerated diagnostic protocol; EDACS=Emergency Department Assessment of Chest Pain Score; ESC=European Society of Cardiology; HEART=History, Electrocardiogram, Age, Risk factors, Troponin; hs-cTnI/T=high-sensitivity cardiac troponin I/T; MI=myocardial infarction; n/N %=(number of events/sample size) %; NSTEMI=non ST-elevation myocardial infarction; PMID=PubMed identifier; STEMI=ST-elevation myocardial infarction; TIMI=Thrombolysis in Myocardial Infarction.

APPENDIX O. DEATH OUTCOMES

Appendix Table O-1. Death Comparative Studies

Study PMID, Study Design	Follow-up Time (Days)	Outcome Definition	Subgroup	Arm	n/N (%)	OR (95% CI)*	Reported P Value
Overall Comparison: ADP vs hs-cTn without ADP							
Hyams 2018 29478861	6 wk	All-cause		ADP 0/3 HEART	1/449 (0.2)	0.23 (0.03,2.08) RD -0.8 (-1.8, 0.2)*	NR
				hs-cTn	4/417 (1.0)		
Overall Comparison: ADP vs ADP							
Barnes 2021 33436490	30	All-cause		STAT ADP 0/2/6 HEART	0/1124 (0)		NR
				ADP 0/(2 or 3)/6 TIMI	0/1131 (0)		
Sandeman 2021 34824100	30	All-cause		ADP 0/3/6	141/3673 (3.8)	RD 0.1 (-0.7, 0.9)*	NR
				ADP 0/6/12 GRACE	245/6642 (3.7)		
Sandeman 2021 34824100	30	Cardiovascular		ADP 0/3/6	82/3673 (2.2)	RD 0.1 (-0.5, 0.7)*	NR
				ADP 0/6/12 GRACE	139/6642 (2.1)		
Than 2016 26947800	ED Visit	All-cause		ADP 0/2 EDACS	0/279 (0)	RD -0.4 (-0.7, 1.4)*	NR
				ADAPT ADP 0/2 TIMI	1/279 (0.4) occurred in non-low risk patients		
Subgroup Comparison							
Sandeman 2021 34824100	30	All-cause	Patients with troponin <5 ng/L	ADP 0/3/6	1/945 (0.1)	RD 0 (- 0.2, 0.2)*	NR
				ADP 0/6/12 GRACE	1/2188 (0.1)		
Sandeman 2021 34824100	30	All-cause	Patients with troponin 5–14 ng/L	ADP 0/3/6	12/1380 (0.9)	RD 0.2 (- 0.4, 0.8)*	NR
				ADP 0/6/12 GRACE	14/1885 (0.7)		
Sandeman 2021	30	All-cause		ADP 0/3/6	128/1348 (9.5)		NR

Study PMID, Study Design	Follow-up Time (Days)	Outcome Definition	Subgroup	Arm	n/N (%)	OR (95% CI)*	Reported P Value
34824100			Patients with troponin >14 ng/L	ADP 0/6/12 GRACE	230/2569 (9)	RD 0.5 (- 1.4, 2.4)*	
Sandeman 2021 34824100	30	Cardiovascular	Patients with troponin <5 ng/L	ADP 0/3/6	1/945 (0.1)	RD 0 (- 0.2, 0.2)*	NR
				ADP 0/6/12 GRACE	1/2188 (0.1)		
Sandeman 2021 34824100	30	Cardiovascular	Patients with troponin 5–14 ng/L	ADP 0/3/6	8/1380 (0.6)	RD 0.4 (-0.1, 0.9)*	NR
				ADP 0/6/12 GRACE	4/1885 (0.2)		
Sandeman 2021 34824100	30	Cardiovascular	Patients with troponin >14 ng/L	ADP 0/3/6	73/1348 (5.4)	RD 0.2 (-1.3, 1.7)*	NR
				ADP 0/6/12 GRACE	134/2569 (5.2)		

Notes. * Calculated by research team.
Abbreviations. ADP=accelerated diagnostic protocol; CI=confidence interval; ED=emergency department; EDACS=Emergency Department Assessment of Chest Pain Score; GRACE=Global Registry of Acute Coronary Events; HEART=History, Electrocardiogram, Age, Risk factors, Troponin; hs-cTn=high-sensitivity cardiac troponin; n/N %=(number of events/sample size) %; NR=not reported; OR=odds ratio; PMID=PubMed identifier; RD=risk difference; STAT=single troponin accelerated triage; TIMI=Thrombolysis in Myocardial Infarction; wk=week.

Appendix Table O-2. Death: Rule Out, Low Risk Not Described as Rule-Out, Discharge or Grey Zone, and Rule In or High Risk

Study, Year, PMID	ADP	Follow-up Time (Days)	Outcome Definition	n/N (%)
Rule Out				
Chew 2019 31478763	ADP 0/1	30	All-cause	1/1187 (0.1)
			Cardiovascular	1/1187 (0.1)
Twerenbold 2019 31345421	ADP ESC 0/1	30	All-cause	2/1420 (0.1)
			Cardiovascular	1/1420 (0.1)
Low-Risk Not Described as Rule Out				
Ljung 2019 30661856	ADP 0/1 HEART	30	All-cause after discharge (based on HEART score ≤3)	0/308 (0)
Sandeman 202134824100	ADP 0/3/6	30	All-cause (based on hs-TnT < 5 ng/L)	1/945 (0.1)
			Cardiovascular (based on hs-TnT < 5 ng/L)	1/945 (0.1)
Sandeman 2021 34824100	ADP 0/6/12 GRACE	30	All-cause (based on hs-TnT < 5 ng/L)	1/2188 (0.1)
			Cardiovascular (based on hs-TnT < 5 ng/L)	1/2188 (0.1)
Discharge				
Ljung 2019 30661856	ADP 0/1 HEART	30	All-cause	0/419 (0)
Twerenbold 2019 31345421	ADP ESC 0/1	30	All-cause	1/1619 (0.1)
			Cardiovascular	1/1619 (0.1)
Costable 2014	ADP 0/3	30	All-cause	0/479 (0)
Observe / Grey Zone				
Chew 2019 31478763	ADP 0/1	30	All-cause	1/308 (0.3)
			Cardiovascular	1/308 (0.3)
Twerenbold 2019 31345421	ADP ESC 0/1	30	All-cause	1/581 (0.2)
			Cardiovascular	1/581 (0.2)

Study, Year, PMID	ADP	Follow-up Time (Days)	Outcome Definition	n/N (%)
Rule In				
Chew 2019 31478763	ADP 0/1	30	All-cause	0/136 (0.0)
			Cardiovascular	0/136 (0.0)
Twerenbold 2019 31345421	ADP ESC 0/1	30	All-cause	5/295 (1.7)
			Cardiovascular	3/295 (1)
High Risk Not Described as Rule In				
Ljung 2019 30661856	ADP 0/1 HEART	30	All-cause after discharge (based on admitted)	0/202 (0)
Ljung 2019 30661856	ADP 0/1 HEART	30	All-cause after discharge (based on HEART score ≥4)	0/139 (0)
Ljung 2019 30661856	ADP 0/1 HEART	30	All-cause after discharge (based on hs-TnT >14 ng/L hs-cTnI ≥35 ng/L (♂) hs-cTnI ≥16 ng/L (♀))	0/130 (0)
Twerenbold 2019 31345421	ADP ESC 0/1	30	All-cause (based on admitted)	7/677 (1)
			Cardiovascular (based on admitted)	4/677 (0.6)
Costable 2014	ADP 0/3	30	All-cause (based on admitted)	0/49 (0)
Sandeman 2021 34824100	ADP 0/3/6	30	All-cause (based on hs-TnT >14 ng/L)	128/1348 (9.5)
			Cardiovascular (based on hs-TnT >14 ng/L)	73/1348 (5.4)
Sandeman 2021 34824100	ADP 0/6/12 GRACE	30	All-cause (based on hs-TnT >14 ng/L)	230/2569 (9)
			Cardiovascular (based on hs-TnT >14 ng/L)	134/2569 (5.2)

Abbreviations. ADP=accelerated diagnostic protocol; ESC=European Society of Cardiology; GRACE=Global Registry of Acute Coronary Events; HEART=History, Electrocardiogram, Age, Risk factors, Troponin); hs-TnI/T=high-sensitivity cardiac troponin I/T; n/N %=(number of events/sample size) %; PMID=PubMed identifier.

APPENDIX P. CARDIAC TESTING OUTCOMES

Appendix Table P-1. Cardiac Testing Comparative Studies

Study, Year, PMID	Test Category	Test	Subgroup	ADP	n/N (%)	OR (95% CI)*
Overall Comparison: ADP vs ADP						
Barnes 2021 33436490	Stress test, ECG	Stress ECG	-	STAT ADP 0/2/6 HEART	90/1124 (8.0)	1.2 (0.85, 1.57)* RD 1 (-1.2, 3.2)*
				ADP 0/(2 or 3)/6 TIMI	79 /1131 (7.0)	
	Stress test, imaging	Myocardial perfusion scan	-	STAT ADP 0/2/6 HEART	23/1124 (2.0)	0.50 (0.30, 0.83)* RD -2 (-3.4, -0.6)*
				ADP 0/(2 or 3)/6 TIMI	45/1131 (4.0)	
	Angiogram, standard	Angiogram	-	STAT ADP 0/2/6 HEART	10/1124 (0.9)	0.77 (0.34, 1.77)* RD -0.2 (-1.0, 0.6)*
				ADP 0/(2 or 3)/6 TIMI	13/1131 (1.1)	
	Angiogram, imaging	CT angiogram	-	STAT ADP 0/2/6 HEART	52/1124 (4.6)	1.6 (1.04, 2.5)* RD 1.7 (0.1, 3.3)*
				ADP 0/(2 or 3)/6 TIMI	33/1131 (2.9)	
Stoyanov 2020 31298551	Stress test, ECG	Stress ECG	Rule out and direct discharge	ADP ESC 0/1	89/806 (11)	1.1 (0.77,1.49)* RD 0.6 (-2.6, 3.8)*
				ADP ESC 0/3	70/672 (10.4)	
	Stress test, imaging	Myocardial perfusion scan	-	-	-	
		Stress echocardiogram	Rule out and direct discharge	ADP ESC 0/1	5/806 (0.6)	0.69 (0.21, 2.28)* RD -0.3 (-1.2, 0.6)*
				ADP ESC 0/3	6/672 (0.9)	
		Cardiac MRI stress test	Rule out and direct discharge	ADP ESC 0/1	7/806 (0.9)	1.9 (0.50, 7.6)* RD 0.5 (-0.3, 1.3)*
				ADP ESC 0/3	3/672 (0.4)	
	Angiogram, standard	Angiogram	-	ADP ESC 0/1	328/1282 (25.6)	0.85 (0.73, 0.99)* RD -3.2 (-6.7, 0.3)*
				ADP ESC 0/3	358/1243 (28.8)	
	Angiogram, imaging	CT angiogram	Rule out and direct discharge	ADP ESC 0/1	9/806 (1.1)	1.5 (0.50, 4.5)* RD 0.4 (-0.6, 1.4)*
				ADP ESC 0/3	5/672 (0.7)	

Notes. * Calculated by research team.
Abbreviations. ADP=accelerated diagnostic protocol; CI=confidence interval; CT=computerized tomography scan; ECG=electrocardiogram; ESC=European Society of Cardiology; HEART=History, Electrocardiogram, Age, Risk factors, Troponin; MRI=magnetic resonance imaging; n/N %=(number of events/sample size) %; OR=odds ratio; PMID=PubMed identifier; RD=risk difference; STAT=single troponin accelerated triage; TIMI=Thrombolysis in Myocardial Infarction.

Appendix Table P-2. Cardiac Testing: Rule Out, Low Risk Not Described as Rule Out, Discharge or Grey Zone, and Rule In or High Risk

Outcome (Test)	Diagnosis Category	Study, Year, PMID	ADP	n/N	%
Stress test, any	Rule out	Chew 2019 31478763	ADP 0/1	61/1187	5.1
		Twerenbold 2019 31345421	ADP ESC 0/1	125/1420	8.8
	Low risk	Ljung 2019 30661856	ADP 0/1 HEART	31/308	10.1
	Discharge	Twerenbold 2019 31345421	ADP ESC 0/1	104/1619	6.4
	Observe/grey zone	Chew 2019 31478763	ADP 0/1	41/308	13.2
		Twerenbold 2019 31345421	ADP ESC 0/1	58/581	10.0
	Rule in	Chew 2019 31478763	ADP 0/1	19/136	14.0
		Twerenbold 2019 31345421	ADP ESC 0/1	92/677	13.6
	High risk	Ljung 2019 30661856[a]	ADP 0/1 HEART	21/139	15.1
		Ljung 2019 30661856[b]	ADP 0/1 HEART	12/130	9.2
Stress test, ECG	Rule out	Chew 2019 31478763	ADP 0/1	17/1187	1.4
		Twerenbold 2019 31345421	ADP ESC 0/1	81/1420	5.7
		Stoyanov 2020 31298551[c]	ADP ESC 0/1	89/806	11
		Stoyanov 2020 31298551[c]	ADP ESC 0/3	70/672	10.4
	Discharge	Twerenbold 2019 31345421	ADP ESC 0/1	61/1619	3.8
	Observe/grey zone	Chew 2019 31478763	ADP 0/1	15/308	4.9
		Twerenbold 2019 31345421	ADP ESC 0/1	39/581	6.7
	Rule in	Chew 2019 31478763	ADP 0/1	3/136	2.2
		Twerenbold 2019 31345421[d]	ADP ESC 0/1	11/295	3.7
		Twerenbold 2019 31345421[e]	ADP ESC 0/1	70/677	10.3
	High risk	-	-	-	-
Stress test, imaging	Rule out	Chew 2019 31478763[f]	ADP 0/1	40/1187	3.4
		Chew 2019 31478763[g]	ADP 0/1	4/1187	0.3
		Stoyanov 2020 31298551[h]	ADP ESC 0/1	5/806	0.6
		Stoyanov 2020 31298551[h]	ADP ESC 0/3	6/672	0.9

Outcome (Test)	Diagnosis Category	Study, Year, PMID	ADP	n/N	%
		Stoyanov 2020 31298551[i]	ADP ESC 0/1	7/806	0.9
		Stoyanov 2020 31298551[i]	ADP ESC 0/3	3/672	0.4
	Discharge	-	-	-	-
	Observe/grey zone	Chew 2019 31478763[f]	ADP 0/1	25/308	8.1
		Chew 2019 31478763[g]	ADP 0/1	3/308	1.0
	Rule in	Chew 2019 31478763	ADP 0/1	7/136	5.1
	High risk	-	-	-	-
Angiogram, Standard	Rule out	Chew 2019 31478763	ADP 0/1	59/1187	5.0
		Twerenbold 2019 31345421	ADP ESC 0/1	82/1420	5.8
		Stoyanov 2020 31298551	ADP ESC 0/1	328/1282	25.6
		Stoyanov 2020 31298551	ADP ESC 0/3	358/1243	28.8
	Discharge	Twerenbold 2019 31345421	ADP ESC 0/1	14/1619	0.9
	Observe/grey zone	Chew 2019 31478763	ADP 0/1	43/308	14.0
		Twerenbold 2019 31345421	ADP ESC 0/1	109/581	18.8
	Rule in	Chew 2019 31478763	ADP 0/1	69/136	50.7
		Twerenbold 2019 31345421[d]	ADP ESC 0/1	211/295	71.5
		Twerenbold 2019 31345421[e]	ADP ESC 0/1	388/677	57.3
	High risk	-	-	-	-
Angiogram, imaging	Rule out	Stoyanov 2020 31298551[c]	ADP ESC 0/1	9/806	1.1
		Stoyanov 2020 31298551[c]	ADP ESC 0/3	5/672	0.7
	Discharge	-	-	-	-
	Observe/grey zone	-	-	-	-
	Rule in	Chew 2019 31478763	ADP 0/1	0/136	0.0
	High risk	-	-	-	-

Notes. [a] High risk based on HEART score ≥4; [b] High risk based on hs-TnT > 14 ng/L hs-cTnI ≥ 35 ng/L (♂) hs-cTnI ≥16 ng/L (♀); [c] Rule out and discharge subgroup; [d] Rule in subgroup; [e] Admitted subgroup; [f] Stress echocardiogram; [g] Cardiac MRI stress test; [h] Stress echocardiogram in rule out and direct discharge group; [i] Stress MRI in rule out and direct discharge group.

Abbreviations. ADP=accelerated diagnostic protocol; ECG=electrocardiograph; ESC=European Society of Cardiology; HEART=History, Electrocardiogram, Age, Risk factors, Troponin; n/N=number of events/sample size; PMID=PubMed identifier.

APPENDIX Q. REVASCULARIZATION OUTCOMES

Appendix Table Q-1. Revascularization Comparative Studies

Study PMID, Study Design	Follow-up Time (days)	Outcome Definition	Subgroup	Arm	n/N (%)	OR (95% CI)*	Reported P Value
Overall Comparison: ADP vs hs-cTn without ADP							
Hyams 2018 29478861	6 wk	CABG		ADP 0/3 HEART	5/449 (1.1)	0.3 (0.11,0.84) RD -2.5 (-4.5, -0.5)*	NR
				hs-cTn	15/417 (3.6)		
Hyams 2018 29478861	6 wk	PCI		ADP 0/3 HEART	13/449 (2.9)	1.33 (0.53,3.84) RD 0.7 (-1.4, 2.8)*	NR
				hs-cTn	9/417 (2.2)		
Hyams 2018 29478861	6 wk	Any revascularization		ADP 0/3 HEART	18/449 (4.0)	RD -1.7 (-4.6, 1.1)*	NR
				hs-cTn	24/417 (5.8)		
Subgroup Comparison							
Stoyanov 2020 31298551	30	PCI	Patients who received coronary angiography	ADP ESC 0/1	140/328 (42.7)	RD 0.2 (-7.2, 7.6)*	NR
				ADP ESC 0/3	152/358 (42.5)		

Notes. * Calculated by research team.
Abbreviations. ADP=accelerated diagnostic protocol; CABG=coronary artery bypass graft; CI=confidence interval; ESC=European Society of Cardiology; HEART=History, Electrocardiogram, Age, Risk factors, Troponin; hs-cTn=high-sensitivity cardiac troponin; n/N %=(number of events/sample size) %; NR=not reported; OR=odds ratio; PCI=percutaneous coronary intervention; PMID=PubMed identifier; RD=risk difference; wk=week.

Appendix Table Q-2. Revascularization: Rule Out, Low Risk Not Described as Rule Out, Discharge or Grey Zone, and Rule In or High Risk

Study, Year, PMID	ADP	Follow-up Time (Days)	Outcome Definition	n/N (%)
Rule Out				
Chew 2019 31478763	ADP 0/1	30	PCI	11/1187 (0.9)
			CABG	4/1187 (0.3)
			Any revascularization	15/1187 (1.3)
Twerenbold 2019 31345421	ADP ESC 0/1	30	PCI	49/1420 (3.5)
			CABG	1/1420 (0.1)
			Any revascularization	62/1420 (4.4)
Discharge				
Twerenbold 2019 31345421	ADP ESC 0/1	30	PCI	1/1619 (0.1)
			CABG	0/1619 (0)
			Any revascularization	10/1619 (0.6)
Observe / Grey Zone				
Chew 2019 31478763	ADP 0/1	30	PCI	15/308 (4.9)
			CABG	3/308 (1.0)
			Any revascularization	18/308 (5.8)
Twerenbold 2019 31345421	ADP ESC 0/1	30	PCI	53/581 (9.1)
			CABG	17/581 (2.9)
			Any Revascularization	69/581 (11.9)
Rule In				
Chew 2019 31478763	ADP 0/1	30	PCI	27/136 (19.9)
			CABG	6/136 (4.4)
			Any revascularization	33/136 (24.3)

Study, Year, PMID	ADP	Follow-up Time (Days)	Outcome Definition	n/N (%)
Twerenbold 2019 31345421	ADP ESC 0/1	30	PCI	116/295 (39.3)
			CABG	36/295 (12.2)
			Any revascularization	151/295 (51.2)
High Risk Not Described as Rule In				
Twerenbold 2019 31345421	ADP ESC 0/1	30	CABG (based on admitted)	54/677 (8)
			PCI (based on admitted)	217/677 (32.1)
			Any revascularization (based on admitted)	272/677 (40.2)

Abbreviations. ADP=accelerated diagnostic protocol; CABG=coronary artery bypass graft; ESC=European Society of Cardiology; n/N %=(number of events/sample size) %; PCI=percutaneous coronary intervention; PMID=PubMed identifier.Appendix R. Hospital length of Stay outcomes

APPENDIX R. HOSPITAL LENGTH OF STAY OUTCOMES

Appendix Table R-1. Hospital Length of Stay: Rule Out, Low Risk Not Described as Rule Out, Discharge or Grey Zone, and Rule In or High Risk

Study, Year, PMID	ADP	Follow-up Time (Days)	Outcome Definition	N	Median (IQR)
Rule Out					
Twerenbold 2019 1345421	ADP 0/1	30	Nights	1420	0 (0,0)
Discharge					
Twerenbold 2019 1345421	ADP 0/1	30	Nights	1619	0 (0,0)
Observe / Grey Zone					
Twerenbold 2019 31345421	ADP 0/1	30	Nights	581	1 (0,5)
Rule In					
Twerenbold 2019 31345421	ADP 0/1	30	Nights	295	5 (3,9)
High Risk Not Described as Rule In					
Twerenbold 2019 31345421	ADP 0/1	30	Nights	677	5 (2,8)

Abbreviations. ADP=accelerated diagnostic protocol; ESC=European Society of Cardiology; IQR=interquartile range; N=sample size; PMID=PubMed identifier.