

# Search strategies of literature databases

## Search strings

### 1. PubMed (MEDLINE & PMC)

#1: (("st elevat\*[Title/Abstract] OR "st segment"[Title/Abstract] OR "with st segment"[Title/Abstract] OR "with st elevat\*[Title/Abstract] OR "Q-Wave"[Title/Abstract]) AND ("Myocardial Ischemia"[MeSH Terms:noexp] OR "myocardial isch\*[Title/Abstract] OR "myocardial infarction"[MeSH Terms:noexp] OR "myocardial infarction\*[Title/Abstract] OR "acute coronary syndrome\*[Title/Abstract] OR "ACS"[Title/Abstract] OR "acute coronary syndrome"[MeSH Terms] OR "ischemic syndrome\*[Title/Abstract] OR "coronary disease"[MeSH Terms] OR "coronary disease\*[Title/Abstract] OR "coronary artery disease\*[Title/Abstract])) OR "non st elevated myocardial infarction"[MeSH Terms] OR "st elevation myocardial infarction"[MeSH Terms] OR "STEMI"[Title/Abstract] OR "STEACS"[Title/Abstract] OR "STE-ACS"[Title/Abstract] OR "Q-wave-MI"[Title/Abstract] OR "acute myocardial Infarction"[Title/Abstract] OR "chest pain"[Title/Abstract] OR "unstable angina\*[Title/Abstract] OR "angina, unstable"[MeSH Terms]

#2: "catheterization lab\*[Title/Abstract] OR "Catheterization team"[Title/Abstract] OR "cath lab\*[Title/Abstract] OR "pci lab\*[Title/Abstract] OR "catheter lab\*[Title/Abstract] OR "heart cent\*[Title/Abstract] OR "heart team\*[Title/Abstract] OR "catheterization capab\*[Title/Abstract] OR (("first medical contact"[Title/Abstract] OR "FMC"[Title/Abstract]) AND ("balloon"[Title/Abstract] OR "device"[Title/Abstract] OR "PCI"[Title/Abstract] OR "percutaneous coronary"[Title/Abstract] OR "reperfusion"[Title/Abstract])) OR ("door-to-balloon"[Title/Abstract] OR "D2BT"[Title/Abstract] OR "DTBT"[Title/Abstract] OR "door-to-catheter"[Title/Abstract] OR "door-to-PCI"[Title/Abstract] OR "door-to-device"[Title/Abstract] OR "door-to-reperfusion"[Title/Abstract] OR "door-to-wire"[Title/Abstract] OR "D2B"[Title/Abstract] OR "DTB"[Title/Abstract]) OR ("PCI"[Title/Abstract] OR "percutaneous coronary intervention"[MeSH Terms] OR "percutaneous coronary intervention\*[Title/Abstract] OR "percutaneous intervention\*[Title/Abstract] OR "PTCA"[Title/Abstract] OR "revascularization"[Title/Abstract] OR "Myocardial Revascularization"[MeSH Terms:noexp] OR "angioplast\*[Title/Abstract] OR "angioplasty"[MeSH Terms] OR "atherectomy"[MeSH Terms] OR "atherectom\*[Title/Abstract] OR "invasive management"[Title/Abstract] OR "invasive strateg\*[Title/Abstract] OR "Coronary Artery Bypass"[MeSH Terms] OR "Bypass grafting"[Title/Abstract] OR "CABG"[Title/Abstract] OR "early percutaneous"[Title/Abstract] OR "early invasive"[Title/Abstract] OR "primary invasive"[Title/Abstract] OR "early coronary artery bypass\*[Title/Abstract] OR "early aortocoronary bypass\*[Title/Abstract] OR "primary coronary artery bypass\*[Title/Abstract] OR "primary aortocoronary bypass\*[Title/Abstract] OR "early reperfusion therapy"[Title/Abstract] OR "reflow"[Title/Abstract])

#3: #1 or #2

#4: "emergency medical services"[MeSH Terms:noexp] OR "ambulances"[MeSH Terms] OR "air ambulances"[MeSH Terms] OR "transportation of patients"[MeSH Terms:noexp] OR "emergency medical service\*[Title/Abstract] OR "emergency service\*[Title/Abstract] OR "ems system\*[Title/Abstract] OR "emergency health service"[Title/Abstract] OR "prehospital emergency\*[Title/Abstract] OR "Prehospital EMS"[Title/Abstract] OR "doctor car\*[Title/Abstract] OR "rapid response car"[Title/Abstract] OR "rapid response vehicle"[Title/Abstract] OR "helicopter emergency"[Title/Abstract] OR "HEMS"[Title/Abstract] OR "ambulance\*[Title/Abstract] OR "SMUR"[Title/Abstract] OR "physician-staffed"[Title/Abstract] OR "physician response vehicle\*[Title/Abstract] OR "emergency medical technician\*[Title/Abstract] OR "EMT"[Title/Abstract] OR "EMT-P"[Title/Abstract] OR "paramedic\*[Title/Abstract] OR "emergency responder\*[Title/Abstract] OR "nurse\*[Title/Abstract] OR

"paramedics"[MeSH Terms] OR "emergency technician\*" [Title/Abstract] OR "Nurses"[MeSH Terms:noexp] OR "rescue personnel"[Title/Abstract] OR "Emergency Responders"[MeSH Terms:noexp] OR "prehospital"[Title/Abstract] OR "pre-hospital"[Title/Abstract] OR "out-of-hospital"[Title/Abstract]

#5: "Electrocardiography"[MeSH Terms:noexp] OR "electrocardiogra\*" [Title/Abstract] OR "ECG"[Title/Abstract] OR "EKG"[Title/Abstract] OR "cardioscope\*" [Title/Abstract] OR "mobile app\*" [Title/Abstract] OR "smartphone\*" [Title/Abstract] OR "tablet app\*" [Title/Abstract] OR "iphone\*" [Title/Abstract] OR "ipad\*" [Title/Abstract] OR "android\*" [Title/Abstract] OR "Mobile Applications"[MeSH Terms] OR "Software"[MeSH Terms:noexp]

#6: "prehospital electrocardiogra\*" [Title/Abstract] OR "pre hospital electrocardiogra\*" [Title/Abstract] OR "Prehospital ECG"[Title/Abstract] OR "Pre-hospital ECG"[Title/Abstract] OR "PH-ECG"[Title/Abstract] OR "out-of-hospital ECG"[Title/Abstract] OR "PHECG"[Title/Abstract]

#7: (#4 AND #5) OR #6

#8: #3 AND #7

## 2. Web of Science (Science Citation Index Expanded(SCIE))

#1: (((TS="st elevat\*" ) OR (TS="st segment") OR (TS="with st segment") OR (TS="with st elevat\*" ) OR (TS=Q-Wave)) AND ((TS="myocardial isch\*" ) OR (TS="myocardial infarcTson\*" ) OR (TS="acute coronary syndrome\*" ) OR (TS=ACS) OR (TS="ischemic syndrome\*" ) OR (TS="coronary disease\*" ) OR (TS="coronary artery disease\*" ))) OR (TS=STEMI) OR (TS=STEACS) OR (TS=STE-ACS) OR (TS=Q-wave-MI) OR (TS="acute myocardial InfarcTson") OR (TS="chest pain") OR (TS="unstable angina\*" )

#2: (TS="catheterizaTson lab\*" ) OR (TS="CatheterizaTson team") OR (TS="cath lab\*" ) OR (TS="pci lab\*" ) OR (TS="catheter lab\*" ) OR (TS="heart cent\*" ) OR (TS="heart team\*" ) OR (TS="catheterizaTson capab\*" ) OR (((TS="first medical contact") OR (TS=FMC)) AND ((TS=balloon) OR (TS=device) OR (TS=PCI) OR (TS="percutaneous coronary") OR (TS=reperfusion))) OR ((TS=door-to-balloon) OR (TS=D2BT) OR (TS=DTBT) OR (TS=door-to-catheter) OR (TS=door-to-PCI) OR (TS=door-to-device) OR (TS=door-to-reperfusion) OR (TS=door-to-wire) OR (TS=D2B) OR (TS=DTB)) OR ((TS=PCI) OR (TS="percutaneous coronary intervenTson\*" ) OR (TS="percutaneous intervenTson\*" ) OR (TS=PTCA) OR (TS=revascularizaTson) OR (TS=angioplast\* ) OR (TS=atherectom\* ) OR (TS="invasive management") OR (TS="invasive strateg\*" ) OR (TS="Bypass grafTsnng") OR (TS=CABG) OR (TS="early percutaneous") OR (TS="early invasive") OR (TS="primary invasive") OR (TS="early coronary artery bypass\* ) OR (TS="early aortocoronary bypass\*" ) OR (TS="primary coronary artery bypass\*" ) OR (TS="primary aortocoronary bypass\* ) OR (TS="early reperfusion therapy") OR (TS=reflow))

#3: #1 OR #2

#4: (TS="emergency medical service\*" ) OR (TS="emergency service\*" ) OR (TS="ems system\*" ) OR (TS="emergency health service") OR (TS="prehospital emergency\*" ) OR (TS="Prehospital EMS") OR (TS="doctor car\*" ) OR (TS="rapid response car") OR (TS="rapid response vehicle") OR (TS="helicopter emergency") OR (TS=HEMS) OR (TS=ambulance\* ) OR (TS=SMUR) OR (TS=physician-staffed) OR (TS="physician response vehicle\*" ) OR (TS="emergency medical technician\*" ) OR (TS=EMT) OR (TS=EMT-P) OR (TS=paramedic\* ) OR (TS="emergency responder\*" ) OR (TS=nurse\* ) OR (TS="emergency technician\*" ) OR (TS="rescue personnel") OR (TS=prehospital) OR (TS=pre-hospital) OR (TS=out-of-hospital)

#5: (TS=electrocardiogra\* ) OR (TS=ECG) OR (TS=EKG) OR (TS=cardioscope\* ) OR (TS="mobile app\*" ) OR (TS=smartphone\* ) OR (TS="tablet app\*" ) OR (TS=iphone\* ) OR (TS=ipad\* ) OR (TS=android\* ) OR (TS=Software\* )

#6: (TS="prehospital electrocardiogra\*" ) OR (TS="pre hospital electrocardiogra\*" ) OR (TS="Prehospital ECG") OR

(TS="Pre-hospital ECG") OR (TS=PH-ECG) OR (TS="out-of-hospital ECG") OR (TS=PHECG)

#7: (#4 AND #5) OR #6

#8: #3 and #7

### 3. Cochrane Library (Cochrane Central Register of Controlled Trials(CENTRAL))

#1: (((("st" NEXT elevat\*):ti,ab,kw OR "st segment":ti,ab,kw OR "with st segment":ti,ab,kw OR ("with st" NEXT elevat\*):ti,ab,kw OR Q-Wave:ti,ab,kw) AND ([mh ^"Myocardial Ischemia"] OR ("myocardial" NEXT isch\*):ti,ab,kw OR [mh ^"myocardial infarction"] OR ("myocardial" NEXT infarction\*):ti,ab,kw OR ("acute coronary" NEXT syndrome\*):ti,ab,kw OR ACS:ti,ab,kw OR [mh "acute coronary syndrome"] OR ("ischemic" NEXT syndrome\*):ti,ab,kw OR [mh "coronary disease"] OR ("coronary" NEXT disease\*):ti,ab,kw OR ("coronary artery" NEXT disease\*):ti,ab,kw) OR [mh "non st elevated myocardial infarction"] OR [mh "st elevation myocardial infarction"] OR STEMI:ti,ab,kw OR STEACS:ti,ab,kw OR STE-ACS:ti,ab,kw OR Q-wave-MI:ti,ab,kw OR "acute myocardial Infarction":ti,ab,kw OR "chest pain":ti,ab,kw OR ("unstable" NEXT angina\*):ti,ab,kw OR [mh "angina, unstable"]

#2: ("catheterization" NEXT lab\*):ti,ab,kw OR "Catheterization team":ti,ab,kw OR ("cath" NEXT lab\*):ti,ab,kw OR ("pci" NEXT lab\*):ti,ab,kw OR ("catheter" NEXT lab\*):ti,ab,kw OR ("heart" NEXT cent\*):ti,ab,kw OR ("heart" NEXT team\*):ti,ab,kw OR ("catheterization" NEXT capab\*):ti,ab,kw OR (("first medical contact":ti,ab,kw OR FMC:ti,ab,kw) AND (balloon:ti,ab,kw OR device:ti,ab,kw OR PCI:ti,ab,kw OR "percutaneous coronary":ti,ab,kw OR reperfusion:ti,ab,kw)) OR ("door to balloon":ti,ab,kw OR D2BT:ti,ab,kw OR DTBT:ti,ab,kw OR "door to catheter":ti,ab,kw OR "door to PCI":ti,ab,kw OR "door to device":ti,ab,kw OR "door to reperfusion":ti,ab,kw OR "door to wire":ti,ab,kw OR D2B:ti,ab,kw OR DTB:ti,ab,kw) OR (PCI:ti,ab,kw OR [mh "percutaneous coronary intervention"] OR ("percutaneous coronary" NEXT intervention\*):ti,ab,kw OR ("percutaneous" NEXT intervention\*):ti,ab,kw OR PTCA:ti,ab,kw OR revascularization:ti,ab,kw OR [mh ^"Myocardial Revascularization"] OR angioplast\*:ti,ab,kw OR [mh angioplasty] OR [mh atherectomy] OR atherectom\*:ti,ab,kw OR "invasive management":ti,ab,kw OR ("invasive" NEXT strateg\*):ti,ab,kw OR [mh "Coronary Artery Bypass"] OR "Bypass grafting":ti,ab,kw OR CABG:ti,ab,kw OR "early percutaneous":ti,ab,kw OR "early invasive":ti,ab,kw OR "primary invasive":ti,ab,kw OR ("early coronary artery" NEXT bypass\*):ti,ab,kw OR ("early aortocoronary" NEXT bypass\*):ti,ab,kw OR ("primary coronary artery" NEXT bypass\*):ti,ab,kw OR ("primary aortocoronary" NEXT bypass\*):ti,ab,kw OR "early reperfusion therapy":ti,ab,kw OR reflow:ti,ab,kw)

#3: #1 OR #2

#4: [mh ^"emergency medical services"] OR [mh ambulances] OR [mh "air ambulances"] OR [mh ^"transportation of patients"] OR ("emergency medical" NEXT service\*):ti,ab,kw OR ("emergency" NEXT service\*):ti,ab,kw OR ("ems" NEXT system\*):ti,ab,kw OR "emergency health service":ti,ab,kw OR ("prehospital" NEXT emergency\*):ti,ab,kw OR "Prehospital EMS":ti,ab,kw OR ("doctor" NEXT car\*):ti,ab,kw OR "rapid response car":ti,ab,kw OR "rapid response vehicle":ti,ab,kw OR "helicopter emergency":ti,ab,kw OR HEMS:ti,ab,kw OR ambulance\*:ti,ab,kw OR SMUR:ti,ab,kw OR physician-staffed:ti,ab,kw OR ("physician response" NEXT vehicle\*):ti,ab,kw OR ("emergency medical" NEXT technician\*):ti,ab,kw OR EMT:ti,ab,kw OR EMT-P:ti,ab,kw OR paramedic\*:ti,ab,kw OR ("emergency" NEXT responder\*):ti,ab,kw OR nurse\*:ti,ab,kw OR [mh paramedics] OR ("emergency" NEXT technician\*):ti,ab,kw OR [mh ^Nurses] OR "rescue personnel":ti,ab,kw OR [mh ^"Emergency Responders"] OR prehospital:ti,ab,kw OR pre-hospital:ti,ab,kw OR out-of-hospital:ti,ab,kw

#5: [mh ^Electrocardiography] OR electrocardiogra\*:ti,ab,kw OR ECG:ti,ab,kw OR EKG:ti,ab,kw OR cardioscope\*:ti,ab,kw OR ("mobile" NEXT app\*):ti,ab,kw OR smartphone\*:ti,ab,kw OR ("tablet" NEXT app\*):ti,ab,kw OR iphone\*:ti,ab,kw OR ipad\*:ti,ab,kw OR android\*:ti,ab,kw OR [mh "Mobile Applications"] OR [mh ^Software]

#6: ("prehospital" NEXT electrocardiogra\*):ti,ab,kw OR ("pre hospital" NEXT electrocardiogra\*):ti,ab,kw OR "Prehospital ECG":ti,ab,kw OR "Pre hospital ECG":ti,ab,kw OR "PH ECG":ti,ab,kw OR "out of hospital ECG":ti,ab,kw OR PHECG:ti,ab,kw

#7: (#4 AND #5) OR #6

#8: #3 AND #7

該当した5文献（日本）

Author	Year	Journal	Study design	Country	No. sites	No. patients	Age	% Male	% mortality	Mean D2B, min
Mori	2021	J Cardiol	Retrospective (Cardiologistの有 無でも分けた)	Japan (Kanagawa)	52 (K-ACTIVE)	2035	68-71	75-80%	3.9% vs 5.8% 2.4% vs 11.9%	65 vs 69 (cardiologist) 80 vs 88 (non-cardiologist)
Arinaga	2022	MEDICINA	retrospective	Japan (Fukuoka)	1	23 vs 25	76/78	69.6% vs 76.0%	4.3% vs 0%	49 vs 59 (差なし)
Kohashi	2023	Int Heart J	retrospective	Japan (Saitama, Ageo)	1	77 vs 160	70/71	84% vs 82%	6% vs 16%	66 vs 70
Kirigaya	2024	J Cardiol	retrospective	Japan (Kanagawa)	57 (K-ACTIVE)	270 vs 247	72/73	74% vs 72%	18% vs 21% (shock合併)	74 vs 83
Yufu	2024	Circ J	retrospective	Japan (Oita)		123 vs 117	70/70	76% vs 72%	Rural 5.6% vs 7.1% Urban 3.5% vs 3.9%	Rural 64 vs 88 Urban 61 vs 76

該当した9文献（海外）

Author	Year	Journal	Subject	Country	No. sites	No. patients	Age	% Male	% mortality	Mean D2B, min
Liu	2020	J Telemed Telecare	STEMI	China		70 vs 70 (WeChatで伝送)				60 vs 95 (median, door to wire time)
Park	2020	Korean Circ J	STEMI	Korea		20 vs 95	64/62	90% vs 77.9%	No data	45 vs 58
Brunetti	2020	Am J Emerg Med	STEMI	Italy		23 vs 24	69/67	74% vs 88%	No data	51 vs 41 (mean, FMC to wire time, 距 離38km vs 19km)
Saberian	2020	Turkish J of emergency medicine	STEMI	Turkey	1	183 vs 115	58.2 vs 60.2	85.2% vs 78.3%	院内死亡は6% vs 4.3%	18.5 vs 42.5 (median)
Thanavaro	2021	Heart & Lung	STEMI	USA	6	1193	59.7-64.0	62.4-73.3%	2.8~15.5%	6つの病院ごとに評価 No data
Song	2022	Clin Exp Emerg Med	AMI	Korea	3	1237 Group C: PH recognition with 12L-ECG	73 vs 68	66.5% vs 77.4%	生存退院は89.3% vs 95.3%	(救急室滞在時間に注目)
Savage	2023	JAHA	STEMI	Australia	4	1832 vs 666	62.2	79.20%	1.6% vs 6.6%	34 vs 86 (median)
Nelson	2024	Prehospital Emergency care	STEMI	USA		1852 vs 1301	65.2	67.40%	No data	55 vs 74.5 (抄録のみ)
Wei	2024	TECHNOLOGY AND HEALTH CARE	STEMI	China	1	73 vs 217	56/62	58.9% vs 69.1%	30日死亡 2.73% vs 4.14%	64.3 vs 75.3 (Door to wire time)