

Online Supplementary Table 6: Attrition bias in individual studies

Title	First author	Journal	Year	Judgement on the risk of attrition bias	Quote	Comment
Myocardial Extracellular Volume Fraction Allows Differentiation of Reversible Versus Irreversible Myocardial Damage and Prediction of Adverse Left Ventricular Remodeling of ST-Elevation Myocardial Infarction	Chen	J Magn Reson Imaging	2020	Low	Twenty-eight patients were recruited, three of whom had a three-vessel disease, and one had severe arrhythmias.	Reasons for excluding enrolled patients from analysis were given.
Acute Microvascular Impairment Post-Reperused STEMI Is Reversible and Has Additional Clinical Predictive Value: A CMR OxAMI Study	Borlotti	JACC Cardiovasc Imaging	2019	Low	Of 104 patients with STEMI who consented, 40 were excluded because of claustrophobia or technical issues (n = 12), bystander cardiomyopathy (n = 6), poor-quality image (n = 10), and declined follow-up scan (n = 12). A total of 64 patients underwent acute and follow-up scan. The measurement of IMR, CFR, and T ₁ was feasible in 53 of 64 patients. Clinical and demographic baseline characteristics are shown in Table 1.	Reasons for excluding enrolled patients from analysis were given.
Elevated serum uric acid affects myocardial reperfusion and infarct size in patients with ST-segment elevation myocardial infarction undergoing primary percutaneous coronary intervention	Mandurino-Mirizzi	J Cardiovasc Med	2018	Low	Out of the dataset including 126 patients, we analyzed N = 101 patients, of whom 87 (86.1%) presented with anterior myocardial infarction (MI), who had CMR and SUA data: eSUA was present in 16 (15.8%) patients; none of the patients was assuming allopurinol or febuxostat at the time of the index event.	Reasons for excluding enrolled patients from analysis were given.
Dynamic changes in injured myocardium, very early after acute myocardial infarction, quantified using T1 mapping cardiovascular magnetic resonance	Alkhalil	J Cardiovasc Magn Reson	2018	Unclear	NA	It remains unclear whether enrolled patients were excluded from analysis.

CMR Native T1 Mapping Allows Differentiation of Reversible Versus Irreversible Myocardial Damage in ST-Segment-Elevation Myocardial Infarction: An OxAMI Study (Oxford Acute Myocardial Infarction)	Liu	Circ Cardiovasc Imaging	2017	Unclear	NA	It remains unclear whether enrolled patients were excluded from analysis.
Acute Infarct Extracellular Volume Mapping to Quantify Myocardial Area at Risk and Chronic Infarct Size on Cardiovascular Magnetic Resonance Imaging	Garg	Circ Cardiovasc Imaging	2017	Low	Seventy patients were considered for inclusion, of which 50 had baseline and follow-up CMR (Figure 1).	Reasons for excluding enrolled patients from analysis were given.
Morphine Does Not Affect Myocardial Salvage in ST-Segment Elevation Myocardial Infarction	Gwag	Plos One	2017	Low	NA	A flow chart indicates that the data of all included patients were analyzed.
Multi-vendor, multicentre comparison of contrast-enhanced SSFP and T2-STIR CMR for determining myocardium at risk in ST-elevation myocardial infarction	Nordlund	Eur Heart J Cardiovasc Imaging	2016	Low	Of the 215 patients included in the study, 200 (93%) had complete T2-STIR datasets, 204 (95%) had complete CE-SSFP datasets, and 191 (89%) had complete LGE datasets. [...] Sixty-five per cent of T2-STIR vs. 97% of CE-SSFP datasets were considered of diagnostic quality (P, 0.001, Figure 1).	Reasons for excluding enrolled patients from analysis were given.
T mapping for assessment of myocardial injury and microvascular obstruction at one week post myocardial infarction	Cameron	Eur J Radiol	2015	Low	NA	The data of all included patients were analyzed.
Prognosis after ST-elevation myocardial infarction: a study on cardiac magnetic resonance imaging versus clinical routine	deWaha	Trials	2014	High	The reasons for a lack of CMR were claustrophobia (n = 19), death prior to CMR (n = 18), refusal (n = 15), pacemaker (n = 5), obesity (n = 7) and reasons that could not be further clarified (n = 10). Due to a prior myocardial infarction, 29 additional patients were excluded. T2-weighted imaging covering the whole left ventricle was performed in 287 patients. T2-weighted images of 29 patients were of poor quality,	Ten patients were excluded from analysis for reasons not specified.

					but judged to be analyzable. Finally, follow-up was completed in 278 (97%) patients.	
Impact of overweight on myocardial infarct size in patients undergoing primary percutaneous coronary interventions: A magnetic resonance imaging study	Sohn	Atherosclerosis	2014	Low	From January 2006 to November 2009, 349 STEMI patients visited the emergency room at Samsung Medical Center. Among them, 62 patients presented >12 h after symptom onset and 30 patients who did not receive primary PCI, but received coronary artery bypass surgery or thrombolysis, and were thus excluded from this study. Twenty-seven patients who refused to undergo CMR or did not undergo CMR because of hemodynamic instability were also excluded.	Reasons for excluding enrolled patients from analysis were given.
Impact of white blood cell count on myocardial salvage, infarct size, and clinical outcomes in patients undergoing primary percutaneous coronary intervention for ST-segment elevation myocardial infarction: a magnetic resonance imaging study	Chung	Int J Cardiovasc Imaging	2014	Low	NA	The data of all included patients were analyzed.
Intracoronary compared with intravenous bolus abciximab application during primary percutaneous coronary intervention in ST-segment elevation myocardial infarction: cardiac magnetic resonance substudy of the AIDA STEMI trial	Eitel	J Am Coll Cardiol	2013	Low	NA	Reasons for excluding enrolled patients from analysis were given in a flow chart.
Remote ischemic post-conditioning of the lower limb during primary percutaneous coronary intervention safely reduces enzymatic infarct size in anterior myocardial infarction: a randomized controlled trial	Crimi	JACC Cardiovasc Interv	2013	Low	We enrolled 100 patients. Four patients (2 RIPC and 2 control) had missing blood samples for primary endpoint assessment and were excluded.	Reasons for excluding enrolled patients from analysis were given.

The assessment of area at risk and myocardial salvage after coronary revascularization in acute myocardial infarction: comparison between CMR and SPECT	Hadamitzky	JACC Cardiovasc Imaging	2013	Low	Of these, 27 were excluded because the image quality of the CMR study was insufficient for automated analysis (all in T2 studies), resulting in a study population of 180 patients.	Reasons for excluding enrolled patients from analysis were given.
Right ventricular injury in ST-elevation myocardial infarction: risk stratification by visualization of wall motion, edema, and delayed-enhancement cardiac magnetic resonance	Grothoff	Circ Cardiovasc Imaging	2012	Low	Image quality for RV edema quantification was inappropriate in 29 (6.4%) patients; 7 patients were lost to follow-up. In 414 patients, clinical outcome data were available.	Reasons for excluding enrolled patients from analysis were given.
Distal protection device aggravated microvascular obstruction evaluated by cardiac MR after primary percutaneous intervention for ST-elevation myocardial infarction	Yoon	Int J Cardiol	2012	Low	NA	Reasons for excluding enrolled patients from analysis were given in a flow chart.
Comparison of magnetic resonance imaging findings in non-ST-segment elevation versus ST-segment elevation myocardial infarction patients undergoing early invasive intervention	Xu	Int J Cardiovasc Imaging	2012	Low	NA	The data of all included patients were analyzed.
T2-weighted cardiac MR assessment of the myocardial area-at-risk and salvage area in acute reperfused myocardial infarction: Comparison of state-of-the-art dark blood and bright blood T2-weighted sequences	Viallon	J Cardio Magn Reson	2012	Low	The quality of the images was judged excellent and adequate for analysis in all 30 CMR datasets.	The data of all included patients were analyzed.
A high loading dose of clopidogrel reduces myocardial infarct size in patients undergoing primary	Song	Am Heart J	2012	Low	Of 207 patients who underwent CE-MRI, 9 patients were excluded from the present analysis, including 3 patients with evidence of previous myocardial infarction on CE-MRI, 1 patient with subacute	Reasons for excluding enrolled patients from analysis were given.

percutaneous coronary intervention: a magnetic resonance imaging study					stent thrombosis before CE-MRI, and 5 patients with unavailable clopidogrel loading dose data in the referring hospital.	
Microvascular resistance predicts myocardial salvage and infarct characteristics in st-elevation myocardial infarction	Payne	J Am Heart Assoc	2012	Low	NA	The data of all included patients were analyzed.
Quantification of myocardial area at risk: validation of coronary angiographic scores with cardiovascular magnetic resonance methods	Moral	Rev Esp Cardiol (Engl Ed)	2012	Low	Five (7%) patients were excluded since CMR could not be performed owing to claustrophobia, and none of them for other causes. Data from the remaining 70 patients were evaluated.	Reasons for excluding enrolled patients from analysis were given.
Analysis of post-infarction salvaged myocardium by cardiac magnetic resonance. Predictors and influence on adverse ventricular remodeling	Monmeneu	Rev Esp Cardiol (Engl Ed)	2012	Low	NA	Reasons for excluding enrolled patients from analysis were given.
Aborted Myocardial Infarction: Evaluation of Changes in Area at Risk, Late Gadolinium Enhancement, and Perfusion Over Time and Comparison With Overt Myocardial Infarction	Lee	AJR Am J Roentgenol	2012	Low	NA	The data of all included patients were analyzed.
Cardiovascular magnetic resonance-derived intramyocardial hemorrhage after STEMI: Influence on long-term prognosis, adverse left ventricular remodeling and relationship with microvascular obstruction	Husser	Int J Cardiol	2013	Low	In total, 335 patients underwent a CMR study at the 1st week after STEMI (median 6 days). Of these, 31 patients (9%) were excluded from the study due to insufficient image quality in T2 imaging, resulting in 304 patients with a complete 1st week CMR study. For evaluation of late LV remodeling after STEMI, CMR was repeated at 6 months (189±32 days) in 234 patients. The reasons for exclusion were: MACE during the first 6 months (n=23), contraindications to CMR (n=14), patient/cardiologist decision (n=26) or patient not contactable (n=7).	Reasons for excluding enrolled patients from analysis were given.

Reliability of myocardial salvage assessment by cardiac magnetic resonance imaging in acute reperfused myocardial infarction	Desch	Int J Cardiovasc Imaging	2012	Low	NA	The data of all included patients were analyzed.
Dynamic Changes in ST Segment Resolution After Myocardial Infarction and the Association with Microvascular Injury on Cardiac Magnetic Resonance Imaging	Weaver	Heart Lung Circ	2011	Low	Forty-three patients were enrolled in the trial and 41 successfully completed the CMR. Two were unable to undergo the CMR due to severe claustrophobia.	Reasons for excluding enrolled patients from analysis were given.
Reperfusion haemorrhage as determined by cardiovascular MRI is a predictor of adverse left ventricular remodelling and markers of late arrhythmic risk	Mather	Heart	2011	Low	Fifty-three patients were recruited. Two patients were unable to complete the first CMR scan due to claustrophobia. Two patients refused to attend follow-up and one patient died from an intracranial haemorrhage before follow-up. Therefore, 48 patients completed baseline and follow-up CMR scans.	Reasons for excluding enrolled patients from analysis were given.
Timing of cardiovascular MR imaging after acute myocardial infarction: effect on estimates of infarct characteristics and prediction of late ventricular remodeling	Mather	Radiology	2011	Low	Fifty-seven patients were recruited. Four patients were unable to complete the first cardiovascular MR examination because of claustrophobia, and a further four patients refused to attend follow-up. One patient died of an intracranial hemorrhage before final follow-up. Therefore, 48 patients completed baseline and all follow-up cardiovascular MR examinations.	Reasons for excluding enrolled patients from analysis were given.
Myocardium at risk in ST-segment elevation myocardial infarction: comparison of T2-weighted edema imaging with the MR-assessed endocardial surface area and validation against angiographic scoring	Fuernau	JACC Cardiovasc Imaging	2011	Low	NA	Reasons for excluding enrolled patients from analysis were given in a flow chart.
The evaluation of an electrocardiographic myocardial ischemia acuteness score to predict the	Engblom	J Electrocardiol	2011	Unclear	NA	It remains unclear whether enrolled patients were excluded from analysis.

amount of myocardial salvage achieved by early percutaneous coronary intervention Clinical validation with myocardial perfusion single photon emission computed tomography and cardiac magnetic resonance						
Prognostic value and determinants of a hypointense infarct core in T2-weighted cardiac magnetic resonance in acute reperfused ST-elevation-myocardial infarction	Eitel	Circ Cardiovasc Imaging	2011	Low	NA	Reasons for excluding enrolled patients from analysis were given in a flow chart.
Long-term prognostic value of myocardial salvage assessed by cardiovascular magnetic resonance in acute reperfused myocardial infarction	Eitel	Heart	2011	Low	NA	Reasons for excluding enrolled patients from analysis were given in a flow chart.
Cardiovascular magnetic resonance of the myocardium at risk in acute reperfused myocardial infarction: comparison of T2-weighted imaging versus the circumferential endocardial extent of late gadolinium enhancement with transmural projection	Ubachs	J Cardiovasc Magn Reson	2010	Low	NA	The data of all included patients were analyzed.
Myocardial salvage by CMR correlates with LV remodeling and early ST-segment resolution in acute myocardial infarction	Masci	JACC Cardiovasc Imaging	2010	Low	Thirty-seven (12%) patients were excluded from the study because of insufficient T2-weighted imaging quality, yielding a total of 260 patients (218 men, age 59+11 years). P	Reasons for excluding enrolled patients from analysis were given.
A pilot study of rapid cooling by cold saline and endovascular cooling before	Gotberg	Circ Cardiovasc Interv	2010	Low	One patient in the normothermia group had a visible thrombus in the left main coronary artery and underwent emergency CABG after angiography had been performed and was therefore excluded from	Reasons for excluding enrolled patients from analysis were given.

reperfusion in patients with ST-elevation myocardial infarction					further analysis. One patient in the hypothermia group was prevented from immediate angiography because there was another STEMI patient at the catheterization laboratory, delaying cooling beyond the prespecified 6 hours duration of ischemia, and was therefore excluded from further analysis.	
Quantification of myocardial area at risk with T2-weighted CMR: comparison with contrast-enhanced CMR and coronary angiography	Wright	JACC Cardiovasc Imaging	2009	Low	This study comprises 108 of the 119 patients in whom T2W CMR-derived AAR quantification was able to be performed.	Reasons for excluding enrolled patients from analysis were given.
Impact of primary coronary angioplasty delay on myocardial salvage, infarct size, and microvascular damage in patients with ST-segment elevation myocardial infarction: insight from cardiovascular magnetic resonance	Francone	J Am Coll Cardiol	2009	Low	Seventy-five patients were initially recruited, but 5 patients were excluded because of claustrophobia (n = 3) or clinical instability (n = 2). A follow-up CMR was performed in 58 patients; the remaining 12 patients declined.	Reasons for excluding enrolled patients from analysis were given.