# Online Supplementary Table 7: Detection bias in individual studies

| Title | Firt author | Journal | Year | Judgement on the risk of detection bias | Quote | Comment |
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| 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 | The MR images were analyzed by two radiologists (Wu L.M. and Chen B.H., with over 9 and 6 years of cardiac MR experience, respectively) with over 5 years of experience in cardiovascular diagnostic imaging who were blinded to patient identification and timepoint allocation. | Blinded MRI interpretation was performed. |
| Acute Microvascular Impairment Post-Reperfused STEMI Is Reversible and Has Additional Clinical Predictive Value: A CMR OxAMI Study | Borlotti | JACC Cardiovasc Imaging | 2019 | Low | Both global and segmental analyses were performed on anonymized images using cvi42 software (Circle Cardiovascular Imaging Inc., Calgary, Canada) by 3 experienced operators (A.B., D.V., A.B.); all of the images were reviewed by an experienced CMR cardiologist (E.D.A). | Blinded MRI interpretation was performed. |
| 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 | Unclear | NA | It remains unclear whether blinded MRI interpretation was performed. |
| Dynamic changes in injured myocardium, very early after acute myocardial infarction, quantified using T1 mapping cardiovascular magnetic resonance | Alkhalil | J Cardiov Magn Reson | 2018 | Low | Cvi42 image analysis software (Circle Cardiovascular Imaging Inc., Calgary, Canada) was used for image analysis by two experienced operators in CMR image analysis, blinded to CMR timing and measurements of the same patient across three time points. | Blinded MRI interpretation was performed. |
| 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 blinded MRI interpretation was performed. |

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| 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 | Unclear | NA | It remains unclear whether blinded MRI interpretation was performed. |
| Morphine Does Not Affect Myocardial Salvage in ST-Segment Elevation Myocardial Infarction | Gwag | Plos One | 2017 | Unclear | NA | It remains unclear whether blinded MRI interpretation was performed. |
| 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 | Qualitative analysis was performed separately for T2-STIR and CE-SSFP, by HE blinded to all other data. | Blinded MRI interpretation was performed. |
| T mapping for assessment of myocardial injury and microvascular obstruction at one week post myocardial infarction | Cameron | Eur J Radiol | 2015 | Unclear | NA | It remains unclear whether blinded MRI interpretation was performed. |
| Prognosis after ST-elevation myocardial infarction: a study on cardiac magnetic resonance imaging versus clinical routine | deWaha | Trials | 2014 | Low | CMR measurements were performed offline in a core lab by operators blinded to the baseline and outcome data using a dedicated CMR evaluation software (View-Forum release 5.2, Philips Medical Systems, Washington, United States). | Blinded MRI interpretation was performed. |
| Impact of overweigt on myocardial infarct size in patients undergoing primary percutaneous coronary interventions: A magnetic resonance imaging study | Sohn | Atherosclerosis | 2014 | Low | Image analysis was performed using commercialized software(CAAS MRV version 1.0, Pie Medical Imaging B.V., the Netherlands) by two experienced CMR imagers (training level III) who were blinded to the patient's data. | Blinded MRI interpretation was performed. |
| 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 | The CMR images were analyzed using validated software (ARGUS, Siemens Medical System, Erlangen, Germany) at our MRI core laboratory by two experienced radiologists who were blinded to the clinical information of the patient. | Blinded MRI interpretation was performed. |
| 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 | CMR images were sent on storable media to theCMRcore laboratory at the University of Leipzig Heart Center (Leipzig, Germany) for blinded assessment. | Blinded MRI interpretation was performed. |

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| 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 | Study design. This was a randomized, controlled, parallel group, open-label trial, with blinded evaluation of the endpoints. | Blinded MRI interpretation was performed. |
| The assessment of area at risk and myocardial salvage after coronary revascularization in acute myocardial infarction: comparison between CMR and SPECT | Hadamitzky | JACC Cardiavasc Imaging | 2013 | Unclear | Images of SPECT and CMR were analyzed by different observers blinded to the results of the other modality. For image examples describing infarct characterization, see Figure 1. | It remains unclear whether MRI interpreation was performed without knowledge of the time from symptom onset until reperfusion. |
| 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 | CMR image analysis was performed by fully blinded observers on an independent work station in the CMR core laboratory, which has proven low intraobserver and interobserver variability as well as reproducibility for assessment of infarct size, MSI, and MO.9 | Blinded MRI interpretation was performed. |
| 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 | All CMR studies were analyzed offline using customized software (MASS, Medis, The Netherlands) by consensus of 2 experienced operatorswhowere blinded toclinicaldata. | Blinded MRI interpretation was performed. |
| 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 | Unclear | NA | It remains unclear whether blinded MRI interpretation was performed. |
| 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 Cardiov Magn Reson | 2012 | Low | The diagnostic performance for edema detection of each T2w sequence was also analyzed independently and blindly by two readers (PC/NM). | Blinded MRI interpretation was performed. |
| A high loading dose of clopidogrel reduces myocardial infarct size in patients undergoing primary percutaneous coronary intervention: a magnetic resonance imaging study | Song | Am Heart J | 2012 | Low | Infarct size by delayed enhanced images and area at risk (AAR) on T2-weighted images were analyzed with visual assessment by consensus of 2 experienced radiologists who were blinded to the clinical information of the patient. | Blinded MRI interpretation was performed. |

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| Microvascular resistance predicts myocardial salvage and infarct characteristics in st-elevation myocardial infarction | Payne | J Am Heart Assoc | 2012 | Unclear | All of the cardiologists were blinded to the PCI and IMR results. | It remains unclear whether MRI interpreation was performed without knowledge of the time from symptom onset until reperfusion. |
| Quantification of myocardial area at risk: validation of coronary angiographic scores with cardiovascular magnetic resonance methods | Moral | Rev Esp Cardiol (Engl Ed) | 2012 | Low | All studies were analyzed on a workstation (QMASS MR 7.1, Medis Medical Imaging Systems, The Netherlands) by 2 cardiologists specialized in imaging and blinded to both the clinical and angiographic results. | Blinded MRI interpretation was performed. |
| 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 | Two experienced observers who were blinded to the clinical data of the patients analyzed the studies using the QMASS MR 6.1.5 software package (Medis Medical; Leiden, The Netherlands). | Blinded MRI interpretation was performed. |
| 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 | Image analysis was performed using an independent workstation with dedicated software (Extended MR Workspace 2.6, Philips Healthcare) by consensus of two experienced cardiac radiologists, one with 14 years of experience and the other with 5 years of experience in cardiac MRI, respectively; they did not have access to the clinical and angiographic findings. | Blinded MRI interpretation was performed. |
| 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 | CMR studies were analyzed by an experienced observer blinded to all patient data using customized software (QMASS MR, 6.1.5, Medis, Leiden, The Netherlands). | Blinded MRI interpretation was performed. |
| Reliability of myocardial salvage assessment by cardiac magnetic resonance imaging in acute reperfused myocardial infarction | Desch | Int J Cardiovasc Imaging | 2012 | Unclear | NA | It remains unclear whether blinded MRI interpretation was performed. |
| 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 | Images were analysed using an off-line workstation (PhilipsViewForum) by two observers blinded to theECG and angiographic data. | Blinded MRI interpretation was performed. |

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| 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 | The CMR images were analysed off-line using commercial software (MASS 6.0; Medis, Leiden, The Netherlands) by two experienced observers blinded to all clinical details. | Blinded MRI interpretation was performed. |
| 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 | The cardiovascular MR images were analyzed off-line by using commercial software (MASS 6.0; Medis, Leiden, the Netherlands) with consensus between two experienced observers who were blinded to all clinical details (A.N.M. and T.A.F., with each having more than 3 years of experience in clinical cardiovascular MR and having completed advanced training in cardiovascular MR). | Blinded MRI interpretation was performed. |
| 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 | All measurements were performed by fully blinded operators at the CMR core laboratory, which has proven excellent reproducibility for infarct size (22), myocardial salvage, and microvascular obstruction assessment (14). | Blinded MRI interpretation was performed. |
| The evaluation of an electrocardiographic myocardial ischemia acuteness score to predict the amount of myocardial salvage achieved by early percutaneous coronary intervention Clinical validation with myocardial perfusion single photon emission computed tomography and cardiac magnetic resonance | Engblom | J Electrocardiol | 2011 | Low | For determination of MaR from the T2-weighted images, the hyperintense regions were manually delineated by independent and blinded observers as previously described. | Blinded MRI interpretation was performed. |
| 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 | Off-line image analysis was performed by fully blinded observers. | Blinded MRI interpretation was performed. |
| Long-term prognostic value of myocardial salvage assessed by cardiovascular magnetic resonance in acute reperfused myocardial infarction | Eitel | Heart | 2011 | Low | Offline image analysis was performed on an independent workstation with dedicated software (View-Forum release 5.2, Philips Medical Systems) by fully blinded observers as described elsewhere. | Blinded MRI interpretation was performed. |
| Cardiovascular magnetic resonance of the myocardium at risk in acute reperfused myocardial infarction: comparison | Ubachs | J Cardiov Magn Reson | 2010 | Low | In short, in all short-axis slices, the hyperintense regions were delineated manually by independent and blinded | Blinded MRI interpretation was performed. |

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| of T2-weighted imaging versus the circumferential endocardial extent of late gadolinium enhancement with transmural projection | | | | | observers after manual tracing of the endocardial and epicardial borders of the left ventricle. | |
| Myocardial salvage by CMR correlates with LV remodeling and early ST-segment resolution in acute myocardial infarction | Masci | JACC Cardiovasc Imaging | 2010 | Low | All CMR studies were stored in DICOM format and centrally analysed in the centre A using in-house developed cardiac vendor-independent software (CardioViewer) by consensus of two experienced observers, unaware of clinical and angiographic data. | Blinded MRI interpretation was performed. |
| A pilot study of rapid cooling by cold saline and endovascular cooling before reperfusion in patients with ST-elevation myocardial infarction | Gotberg | Circ Cardiovasc Interv | 2010 | Low | For assessment of MaR, the endocardial and epicardial borders were manually traced in each T2-weighted short-axis image. The myocardium with increased signal intensity was manually delineated, as previously described, by an experienced observer blinded to all other data. [...] The assessment of IS was performed by an observer blinded to all other data. | Blinded MRI interpretation was performed. |
| Quantification of myocardial area at risk with T2-weighted CMR: comparison with contrast-enhanced CMR and coronary angiography | Wright | JACC Cardiovasc Imaging | 2009 | Low | Moreover, CMR readers were blinded to the clinical and angiographical data. | Blinded MRI interpretation was performed. |
| 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 | Unclear | NA | It remains unclear whether blinded MRI interpretation was performed. |