**Supporting** **Table 3**  
Diagnostic outcomes in studies of patients with ACS*.*\*

| **Study** | **MCG diagnostic criteria for ischemia** | **Target indication/ test population/*control* (n)** | **Specificity/ sensitivity (ROC AUC)** | **PPV/NPV (ROC AUC)** | | **Reference** | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Lim et al. 2007 [e64]  Shielded, 64-channel MCG at rest | Field map angle of T wave peak and angle of maximum current of T wave peak identified as best diagnostic discriminators vs age-matched and young controls, respectively | NSTEMI  Patients with NSTEMI (83)  *Age-matched subjects presenting with chest pain, but no clinical evidence to indicate MI (57)*  *Young subjects (165)* | 75%/86% (0.87)  (field map angle)  92%/76% (0.93) (angle of maximum current) | 84%/78%  84%/93% | | —  Angiography Troponin T | |
| Lim et al. 2009 [e66]  Shielded, 64-channel MCG at rest | Combination of the binary boundaries of 10 MCG parameters measured during Tmax (3) or between Tmax/3 and Tmax (7), with a score of >4 determined as best discriminator | ACS  Patients with NSTEMI (83) or unstable angina (110)  *Age-matched (19) and young (185) controls admitted to hospital for chest pain; normal clinical results* | 85%/96.4% (NSTEMI) | — | | — | |
| Kwon et al. 2010 [e68]  Shielded, 64-channel MCG at rest | Algorithm of weighted maximum of posteriori as a function of  five prespecified MCG variables, T\_FMA, T\_FMA – R\_FMA, TT\_CAMx, TT\_CAMx – R\_FMA, and TT\_CMD | ACS and non-ACS CAD  Patients admitted to hospital with suspected ACS diagnosed as CAD with angiographically proven ≥50% stenosis of a vessel (237)  Subgroup of patients with chest pain and angiographically proven CAD, but with no abnormality of ECG or troponin (102)  *Patients with angiographically proven non-obstructive CAD (127*)  *Healthy subjects (89)* | 85%/84% | 91.3%/74% | — | |
| Van Leeuwen et al. 2011 [e70]  Shielded, 61-channel MCG at rest | ST-T interval map with information content cut-off of 94.8% determined as best discriminator | STEMI Patients with STEMI who received successful invasive diagnosis and revascularization treatment (97)  *Healthy subjects with no history of CVD and normal resting ECG and echocardiograms* (39) | 85%/87% | — | | — | |
| Lin et al. 2011 [e69]  Shielded, 9-channel MCG at rest | Analysis based on three MCG parameters (pre-peak repolarization [angle, trajectory, and angular deviation], post-peak repolarization [angle, trajectory, and angular deviation] and the pre-post angle change) and map morphology | ACS  Patients presenting with chest pain, and diagnosed CAD with angiographically proven ≥70% stenosis (190)  *Patients with angiographically proven non-obstructive CAD (97)* | 73.2%/88.9% | — | | ECG | |
| Zhao et al. 2018 [e72]  Shielded, 61-channel MCG at rest | Integrated maximum current density (defined as the average of the maximum current density vector of the current density map measured during the T wave) based on the sum score for four parameters (magnitude, angle, frequency, and area) identified as best discriminant | STEMI  Patients with STEMI (102)  *Healthy subjects (39)* | 84.6%/91.2% | — | | — | |
| Park et al. 2004 [e73]  Unshielded,  9-channel MCG at rest | ≥1 of the following MCG parameters prespecified as defining ischemia: direction of the main vector from plus to minus pole () between –20° and +110°; change in the angle of the main vector ≥45° in a time interval of 30 msec between Tmax/3 and Tmax; change in the distance separating the plus and minus poles ≥20 mm in a time interval of 30 msec between Tmax/3 and Tmax; change in the ratio of the pole strengths ≥0.3 in a time interval of 30 msec between Tmax/3 and Tmax | Unstable angina  Patients with symptoms of unstable angina, who were diagnosed with CHD angiographically (53)  *Patients with normal troponin levels in whom CHD could be ruled out* (33) | 93.9%/94.3% | 91.2%/96.2% | | ECG  Troponin | |
| Park et al. 2005 [e74]  Unshielded,  9-channel MCG at rest | NSTEMI  Patients presenting with acute chest pain diagnosed as CAD by coronary angiography and without persistent  ST segment elevation on ECG (143)  *Subjects presenting with chest pain with normal ECG, troponins, or coronary angiography (42)* | 92.8%/95.1% (visual)  82.5%/86.4% (automated) | 97.8%/84.8% (visual)  94.5%/63.5% (automated) | | ECG  Echo  Troponin | |
| Tolstrup et al. 2006 [e40]  Unshielded 9- or  36-channel MCG | NR | Unstable angina  Patients with unstable angina,  Class III–IV (17) | 66.7%/85.7% | 92.3%/50.0% | | Stress SPECT | |
| Tolstrup et al. 2006 [e75]  Unshielded, 9-channel MCG at rest | Effective magnetic dipole vector analysis, based on an automated analysis of pre-peak (3 parameters) and post-peak (4 parameters) ventricular repolarization | ACS  Patients with acute chest pain with a diagnosis of IHD by gold standard criteria (55)  *Patients with acute chest pain without IHD (70)* | 74.3%/76.4% | 70.0%/80.0% | | Stress testing  Troponin  Angiography | |
| Park et al. 2007 [e79] | NR | NSTEMI  Patients with acute chest pain NSTEMI and with angiographically proven CAD (264; 62 with BBB)  Subgroup with BBB (56) | 93.5%/86.9% | 97.6%/71.4% | | Echocardiography  Troponin | |
| Parkhomenko et al. 2012 [e80]  Unshielded  Post-exercise | Averaged deviations of largest vectors of current density distributions (CDD) on ST slope starting at 60 msec from the  J point to Tapex (D2) and differences in directions of vectors of CDD on R and Tapex (△RT), with cut-offs >8.1 and >69.5 grads, respectively, identified as best discriminants | STEMI  Patients with STEMI and ischemia on stress test (21)  Patients with STEMI and no ischemia (11)  *Healthy controls* (34) | 71%/91% (D2 >8.1)  76%/91% (△RT >69.5 grads) | —  — | | — | |
| Shrivastava et al. 2016 [e82] | Current density mapping at  J point + 60 msec with analysis by a 17-segment AHA model | Unstable angina  High-risk patients with unstable angina with ischemia (7)  *High-risk patients with unstable angina without ischemia (11*) | 33%/57% | — | | Gold standard | |
| Ghasemi-Roudsari et al. 2018 [e78]  Unshielded,  15-channel MCG | Logistic regression model based on 10 parameters measuring depolarization (QR\_MMR, QR\_interval, QR\_angle, RS\_MMR, RS\_interval, RS\_angle, QR\_peak, QR\_pd, RS\_peak, and RS\_pd) with a cut-off of 0.2 determined and internally cross-validated as best discriminant for IHD | NSTEMI  Patients with suspected IHD (55) and patients with NSTEMI requiring admission for chest pain (15)  *Healthy age-matched subjects (51) and non-IHD patients with chest pain (18)* | 1. 35%/95.4% (rule-out) | NR/97.7% (0.78) | | — | |

\*Only those studies that report diagnostic performance outcomes are tabulated. Where multiple MCG parameters were assessed, those with the best performance are reported.  
 = average angle of direction for the abnormal current vector during ventricle repolarization period.

ACS = acute coronary syndrome; MCG = magnetocardiography; ROC = receiver operating curve; AUC = area under the curve; PPV = positive predictive value; NPV = negative predictive value; NSTEMI = non-ST-elevation myocardial infarction; MI = myocardial infarction; Tmax = peak intensity; Tmax/3 = one-third of peak intensity; T\_FMA = orientation of the magnetic field map at Tmax; TT\_CAMx = maximum values of the main current angle in the ST period; R\_FMA = orientation of the magnetic field map at Rpeak; TT\_CMD = maximum value of a dynamic change of the strength of the main current vector within a time interval of 30 ms in the ST period; CAD = coronary artery disease; ECG = electrocardiogram; STEMI = ST-elevation myocardial infarction; CVD = cardiovascular disease; CHD = coronary heart disease; NR = not reported; SPECT = single-photon emission computed tomography; IHD = ischemic heart disease; BBB = bundle branch block; AHA = American Heart Association; MMR = moment of maximal ventricular repolarization.