**Supporting** **Table 2**  
Diagnostic outcomes in studies of patients with stable CAD.\*

| **Study** | **MCG diagnostic criteria** | **Target indication/ test population/*control* (n)** | **Specificity/ sensitivity  (ROC AUC)** | **PPV/NPV (ROC AUC)** | **Reference** | |
| --- | --- | --- | --- | --- | --- | --- |
| Van Leeuwen et al. 2003 [e9]  Shielded, 37-channel MCG at rest | Spatial distribution of the QT interval with SI cut-off of 3.18 selected as best discriminator | Anatomic CAD  Patients with CAD and angiographically proven ≥75% stenosis with prior MI (31) or without prior MI (23)  *Subjects without hemodynamically relevant CAD on angiography, or healthy volunteers with no history of CVD* *and normal ECG* *(20)* | 80%/74% | — | ECG | |
| Van Leeuwen et al. 2006 [e14]  Shielded, 37-channel MCG at rest | >10% deviation from the normal course of the MFM orientation during QT interval selected as a discriminator | Anatomic CAD  Patients with CAD without MI (43)  Patients with CAD with prior MI (36;  15 with VT)  *Patients with angiographically proven non-obstructive CAD and healthy volunteers (50*) | 90%/68%  90%/85% | — | ECG  Echo  Angiography | |
| Gapelyuk et al. 2007 [e15]  Shielded, 7-channel MCG at rest | Three-parameter index (based on ST slope at measurement positions A4 and A6, and the deviation in the MFM orientation) identified by LDA as best discriminant index | Anatomic CAD  Patients with stable CAD and angiographically proven >50% stenosis without previous MI (101)  *Healthy subjects with normal findings in ECG, echocardiography, and bicycle ergometry test, and no history of cardiac symptoms (59)* | 83%/84% (91%) | — | ECG | |
| On et al. 2007 [e16]  Shielded, 64-channel MCG at rest | Sum of the integral values of the QRS (QRSi) or JT (JTi) intervals with JTi/QRSi <1.0 prespecified as discriminant | Anatomic CAD  Patients with angina pectoris and angiographically proven >75% stenosis of a vessel (14) with no (11) or previous (3) MI  *Healthy volunteers (30)* | 80%/71% | — | ECG | |
| Park 2008 [e18]  Shielded, 55-channel MCG conducted at rest and under dobutamine stress, with ischemia determined based on the current distribution at QRSmax | Reduction of epicardial current density and strength at QRSmax between rest and stress used as diagnostic for ischemia | Functional ischemia  Patients with angiographically proven obstructive CAD (42)  Patients with suspected CAD with angiographically proven non-obstructive CAD (58) | 82.8%/97.6% | 80.4%/98.0% | ECG | |
| Wu et al. 2008 [e20]  Shielded, 64-channel MCG at rest | Peak in the time-dependent area ratio of T wave propagation identified as best discriminant | Anatomic CAD  Patients with CAD and angiographically proven >50% stenosis of a vessel (51)  *Healthy volunteers and subjects with angiographically proven non-obstructive CAD (40)* | 70%/74.5% | — | ECG | |
| Goernig et al. 2009 [e21]  Shielded, 31-channel MCG at rest | Spatiotemporal correlation analysis of 11 MCG parameters. Analysis combining three parameters (mean value correlation QRS at T, STDEV correlation T at QRS and QRS form) was identified as best discriminant | Anatomic CAD  Patients who suffered MI 16–64 (mean 28) days earlier with angiographically proven >70% stenosis (108)  *Subjects without known CAD and with echocardiographic proven normal LVEF* *(70)* | 64%/72.6% | 86.4%/73.4% | ECG | |
| Gapelyuk et al. 2010 [e22]  Shielded, 7-channel MCG at rest | Combination of Kullback-Leibler entropy at ST-T and normalized residual magnetic field strength at QRS selected as best discriminant index | Anatomic CAD  Patients with symptomatic stable CAD and angiographically proven >50% stenosis in main coronary arteries without previous MI (101)  *Healthy subjects with normal findings in ECG, echocardiography, and bicycle ergometry test, and no history of cardiac symptoms (59)* | 88%/88% (94%) | — | ECG | |
| Wu et al. 2013 [e24]  Shielded, 64-channel MCG at rest | SI-QTc ≥9 msec or QTc dispersion ≥79 msec identified as best determinant | Anatomic CAD  Patients with CAD and angiographically proven stenosis and no history of MI (51)  *Patients with angiographically proven non-obstructive CAD (24) and patients after orthotopic heart transplantation (26)* | 71%/86% | 86%/71% | ECG | |
| Chen et al. 2014 [e25]  Shielded, 61-channel MCG at rest | Cut-off value of 0.4506 for the area ratio at Tmax (area of the positive proportion of the magnetic field relative to the total area within a circle encompassing the field extrema)  determined as best discriminant | Anatomic CAD  Patients with CAD and angiographically proven >70% stenosis in at least one coronary artery without previous MI (15)  *Healthy subjects (38)* | 73.8%/86.7% | — | — | |
| Shin et al. 2017 [e28]  Shielded, 64-channel MCG at rest and post-exercise | Quantitative and qualitative analysis of the change in  ST-segment fluctuation score  (–51% cut-off selected as best cut-off) and the non-dipole phenomenon during the interval from the beginning of the T wave to the Tmax | Anatomic CAD and functional ischemia  Patients with CAD (≥70% stenosis in  ≥1 proximal epicardial coronary artery) and objective evidence of myocardial ischemia or ≥1 coronary stenosis of ≥80% and classic angina without provocative testing (71)  *Asymptomatic patients without angiographically proven CAD (25)* | 82%/73.9% (0.79)  (△ST segment-fluctuation score)  88.0%/84.8% (0.864)  (non-dipole)  ROC AUC for combination 0.93 | 79.1%/77.4%  (△ST segment-fluctuation score)  86.7%/86.3%  (non-dipole) | ECG |
| Shin et al. 2018 [e29]  Shielded, 64-channel MCG at rest and post-exercise | Scoring system based on five MCG parameters (T wave score at stress; T wave dispersion at stress; T wave vector MCG at rest; % change in half RT interval vector MCG; and % change in  T wave vector MCG) with cut-off of –0.27 shown as best discriminant of significant stenosis | Anatomic CAD  Training set: patients with indication for angiography due to chest pain or suspected CAD with ≥1 vessel with 70% stenosis, and without ACS or history of MI within 3 months (35)  Internal cross-validation set: patients with indication for angiography due to chest pain or suspected CAD (45 [e27]  *Training set Patients with indication for angiography due to chest pain or suspected CAD without significant stenosis (73)* | 77%/89% (0.91) | 74%/91% | ECG | |
| Wu et al. 2014 [e26]  Shielded, 64-channel MCG at rest | Combination of QTc heterogeneity parameters SI-QTc ≥9 msec or QTc dispersion ≥79 msec identified as the optimal QTc heterogeneity determinant | Anatomic CAD  Patients with suspected CAD and angiographically proven ≥70% stenosis of a vessel and no history of MI (36)  *Patients with angiographically proven non-obstructive CAD (19)* | 68.4%/86.1% (0.77) | — | Stress myocardial perfusion imaging | |
| Brisinda et al. 2003 [e31]  Unshielded,  36-channel MCG at rest | ST and T, or one of the following: 1) Pattern with ≥2 dipoles in the time interval between 100 msec at the end of  S wave (S100) and Tmax;  2) Direction of the current vector between –20° and +110° for the same time interval; 3) If the current vector direction lies between +110° and –20°, one of three parameters had to be satisfactory: a) Change in the angle of the current vector >60 in 30 msec of the change of angle of S100–Tmax; b) Change in the pole distance >20 mm (in 30 msec of S100–Tmax); c) Ratio magnetic field poles strength > ± 0.3 (in 30 msec of S100–Tmax) | Anatomic CAD and functional ischemia  Patients with documented CAD by angiography (four by SPECT and exercise test) (21)  *Healthy subjects* (13) | 92.3%/92.6% | 92.3%/NR | ECG | |
| Budnyk et al. 2004 [e34]  Unshielded, 7-channel MCG post-exercise | MR, Nst, IFH, and IFV identified by LDA as best discriminant indices for CAD | Anatomic CAD  Patients with CAD (42; 11 with prior MI)  *Healthy volunteers without cardiac pathology (44)* | 67%/67% (MR) 70%/64% (Nst) 70%/61% (IFH) 70%/58% (IFV) | 69%/64% 71%/62% 70%/61% 69%/59% | ECG | |
| Fenici et al. 2004 [e36]  Unshielded,  36-channel MCG at rest | Angle (A), distance (D), and ratio (R) dynamics of the dipoles during the T wave interval and ST angle as prespecified criteria | Anatomic CAD  Patients with IHD and angiographically proven >70% coronary stenosis and positive stress/SPECT (19)  *Healthy volunteers (20)* | 20 Hz low pass filtering: 100%/32% (A) 90%/42% (D) 80%/42% (R) 70%/79% (ST)  50 Hz adaptive filtering: 100%/47% (A) 65%/74% (D) 50%/63% (R) 75%/79% (ST) | 20 Hz low pass filtering: 100%/60% (A) 80%/62% (D) 67%/59% (R) 71%/79% (ST)  50 Hz adaptive filtering: 100%/66% (A) 67%/72% (D) 55%/59% (R) 75%/79% (ST) | ECG | |
| Ono et al. 2004 [e53]  64-channel MCG at rest | MFM wave front vector calculated for the ST-T period as a parameter for Bayesian classification | Previous MI Patients with old MI in whom coronary angiography was carried out to determine the area of the infarction (6)  *Subjects with normal ECG (15)* | 100%/83% | 100%/94% | ECG | |
| Fenici et al. 2005 [e37]  Unshielded,  36-channel MCG at rest | Machine learning classification based on scores for the dipoles (>0) and T wave extrema (angle [>45°], distance [>20 mm], ratio [>0.3]) of the MFM in 30 msec intervals during the Tmax/3 to Tmax, and ST and T (0– 90° normal) as prespecified discriminatory criteria | Anatomic CAD  Subgroup of patients classified as ischemic on the basis of clinical criteria and diagnostic tests, and who did not receive PCI (32)  *Healthy subjects with no evidence of CVD at clinical history, normal physical examination, and echocardiography (33)* | 85%/75% | 83%/78% | ECG | |
| Hailer et al. 2005 [e38]  Unshielded, 4-channel MCG at rest | Current density vector map at  10 msec intervals during ST-T interval classified on a scale of 0 (normal) to 4 (grossly abnormal) with a cut-off of 39.2% identified as discriminatory | Anatomic CAD  Patients with stable angina and CAD angiographically proven ≥50% stenosis of a vessel with no history of MI (174)  *Healthy subjects with no history of CVD, normal ECG at rest and stress, and normal echocardiogram at rest (*117) | 70.1%/73.3% | — | ECG | |
| Steinberg et al. 2005 [e39]  Unshielded, 9-channel MCG at rest | Algorithm-generated score of a scale of 0–100 based on  four MCG parameters during Tmax/3 and Tmax: 1) Direction of the main vector from the plus to minus pole () between –20° and +110°; 2) Change in the angle of the main vector ≥45° in a time interval of 30 msec; 3) Change in the distance separating the plus and minus poles ≥20 mm in a time interval of 30 msec;  4) Change in the ratio of the pole strengths ≥0.3 in a time interval of 30 msec. Score cut-off of >49 applied based on a previous cohort | Anatomic CAD  Patients with suspected CAD and angiographically proven >50% stenosis (19)  *Patients with angiographically proven non-obstructive CAD (10)* | 40.0%/84.2% | 72.7%/57.1% | ECG | |
| Tolstrup et al. 2006 [e40]  9- or 36-channel MCG at rest | NR | Anatomic CAD  Patients with stable angina, Class I–II (20) or unstable angina Class III–IV (17) | 83.3%/80.6% (all)  100%/76.5% (stable angina) | 96.2%/45.5% (all)  100%/42.9% (stable angina) | Stress SPECT | |
| Fenici & Brisinda 2007 [e41]  Unshielded,  36-channel MCG at rest | Automated analysis of the dynamic motion of the effective magnetic vector during the  T wave identified as best discriminator | Anatomic CAD  Patients with stable angina and CAD (51), of whom 35 had prior MI  *Healthy subjects (52)* | 96%/56% | 94%/69% | ECG | |
| Quan et al. 2008 [e42]  Unshielded, 4-channel MCG at rest | Average classification (scores  0–4) of total current density maps (ACTM) and the ratio of abnormal maps (RAM) from MFMs generated at 12 sec intervals from the beginning of the J point to the end of the  T wave were identified as best discriminators | CAD with restenosis post stent implantation  Patients with CAD who had stent implantation and who had angiographically proven restenosis (≥50% in diameter) within 12 months (ISR group) (16)  *Patients with CAD who had stent implantation and who had no stenosis or stenosis <50% diameter within the 12-month follow-up period (36)* | 69.4%/80.0% (80.2) (ACTM)  75%/66.7% (69.1) (RAM) | 54.6%/88.5% (ACTM)  55.6%/83.3% (RAM) | ECG  Angiography | |
| Liu et al. 2009 [e56]  64-channel MCG | QTc interval mapping with QTc SD ≥21.3 msec, QTc dispersion ≥88.5 msec, or SI-QTc ≥0.31 sec determined as best discriminators | Anatomic CAD  Patients with CAD undergoing PCI (25) and patients with suspected CAD prior to angiogram (43; 28 with CAD and  15 with patent coronaries)  *Healthy subjects (15)* | 73%/71% (0.95)  (QTc SD  ≥21.3 msec)  87%/60% (0.85)  (QTc dispersion ≥88.5 msec)  80%/93% (0.86)  (SI-QTc ≥0.31 msec) | — | — | |
| Ogata et al. 2009 [e57]  Unshielded,  64-channel MCG at rest | Averaged total score (0–4) of four current distribution parameters measured at four time intervals during the T wave (maximum current vector, total current vector, current integral map, and current rotation) with a score of >1 as prespecified cut-off to define CHD | Anatomic CAD  Patients with CHD and angiographically proven >75% stenosis of a vessel (56)  *Subjects with normal ECG and no history of CVD (101)* | 74.3%/85.7% | — | ECG | |
| Kangwanariyakul et al. 2010 [e58] | Machine-learning approach to analysis of the JT interval using algorithms of neural network, with BNN identified as best model | IHD  Patients with IHD (29)  *Healthy subjects with no evidence of cardiac abnormal symptoms (22)* | 54.6%/96.7% (0.85) | — | — | |
| Wu et al. 2013 [e43]  Unshielded,  64-channel MCG | Area ratio of an extrema circle (L) and the curvature of magnetic field zero line (θ) extracted from MCG data in the Tmax/3 to Tmax interval, with Lmax 0.34 and θmax 2.9 selected as best cut-offs | Anatomic CAD Patients with CAD documented by angiography (28)  *Healthy subjects* (50) | 72%/71.4% | — | ECG | |
| Chaikovsky et al. 2014 [e44]  Unshielded, 7-channel MCG at rest | Integrated complex index, consisting of six MCG parameters (AIQRStotal, AIST-Ttotal, Adur, Ccor, R/Tcurrent, and normality degree of maps) | Anatomic CAD  Patients who underwent coronary angiography with ≥70% stenosis of a vessel and no history of MI (54; Group 1a)  *Patients without hemodynamically significant stenosis in any of the coronary arteries (25; Group 1b)*  *Healthy volunteers (30; Group 2)* | 84%/93%  (vs Group 1b)  94%/93%  (vs Group 2) | 85%/93%  (vs Group 1b)  94%/93%  (vs Group 2 | Angiography | |
| Brisinda et al. 2015 [e45]  Unshielded MCG at rest | Machine learning method to calculate the dynamic motion of the effective magnetic vector during the T wave | Anatomic CAD Patients presenting with chronic stable angina diagnosed with IHD by coronary angiography and/or stress SPECT (53)  *Healthy subjects* (52) | 96%/54% | 93.5%/67.5% | ECG | |
| Park et al. 2015 [e27]  Shielded, 64-channel MCG at rest and post-exercise/dobutamine stress | Change in ST-segment fluctuation score between rest and stresswith a cut-off of −39.0%  Bulls-eye mapping of current between beginning of T wave and Tmax at rest vs stress | Anatomic CAD  Patients with CAD and angiographically proven ≥50% stenosis of a vessel (42)  *Patients with angiographically proven non-obstructive CAD (5)* | 73.9%/86.7% (0.835)  (ST fluctuation score)  92.3%/90.5% (0.914) (mapping) | — | Fractional flow reserve | |
| Chaikovsky et al. 2017 (0528) [e49]  Unshielded, 9-channel MCG at rest | Binary k-NN classification of current density vector map during ST-T interval with distance metrics | Anatomic CAD  Patients presenting with suspected CAD and angiographically proven ≥50% stenosis of a vessel (82)  *Patients without hemodynamically significant stenosis (54)* | 89%/93% | 93%/89% | — | |
| Tao et al. 2018 [e59] Unshielded, 4-channel MCG | Machine learning classification (SVM-XGBoost model) of 164 MCG features measured during segments of the T wave and categorized as time domain, frequency domain, or information theory features | Anatomic CAD Patients with IHD with clinically identified stenosis (227), including NSTEMI (16)  *Healthy subjects (347)* | NR/97.8% (0.98) | 86.6%/NR | — | |

\*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.

CAD = coronary artery disease; MCG = magnetocardiography; ROC = receiver operating curve; AUC = area under the curve; PPV = positive predictive value; NPV = negative predictive value; SI = smoothness index; MI = myocardial infarction; CVD = cardiovascular disease; ECG = electrocardiogram; MFM = magnetic field map; VT = ventricular tachycardia; LDA = linear discriminant analysis; STDEV = standard deviation; LVEF = left ventricular ejection fraction; QTc = corrected QT; Tmax = peak intensity of the T wave; ACS = acute coronary syndrome; STα = magnetic field map angle α for the ST segment; Tα = magnetic field map angle α for the T wave apex; SPECT = single-photon emission computed tomography; NR = not reported; MR = moment of maximal ventricular repolarization; Nst = number of maps with abnormal current direction within repolarization period; IFH = indicator of heterogeneity in the current density within repolarization period; IFV = indicator of variability of the current density within the repolarization period; PCI = percutaneous coronary intervention; ISR = in-stent restenosis; SD = standard deviation; CHD = coronary heart disease; BNN = Bayesian neural network; IHD = ischemic heart disease; Tmax/3 = one-third of peak intensity; Lmax = maximum area ratio of the negative and positive portions of the extrema circle; θmax = maximum curvature of the magnetic field zero line within the extrema circle; AI = abnormality index, i.e., the ratio of the sum of the lengths of vectors oriented in the correct direction at every timepoint to the sum of the lengths of vectors oriented in a direction other than the proper direction; Adur = interval duration as a percentage of the overall ST-T interval duration; Ccor = correlation index for spatial structure uniformity of maps during the ST-T interval; R/Tcurrent = total current ratio between the R and T peaks; SVM = support vector machine; NSTEMI = non-ST segment elevation myocardial infarction.