**Table 1.** Summary of observational studies using cardiac testing for evaluation of coronary heart disease and cardiovascular outcomes in apparently asymptomatic individuals with diabetes mellitus

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Author**  | **Study\* Indication** | **N** | **Age** |  | **Modality** | **Abnormal study#** | **Follow-up (years)\*\*** | **Cardiac Deaths** | **Non-fatal MI** | **Annual Cardiovascular Event Rate§** | **Risk Ratio for Abnormal Study (95% CI)** |
| **DM Duration (years)\*\*** | **Normal study** | **Abnormal study** | **All patients** | **Normal studies** | **Abnormal studies** | **All patients** | **Normal study** | **Abnormal study** | **All patients** |
| Torremocha, 20017 | 1 | 72 | 55±7 | 15 (1-49) | SPECT and treadmill | 8 (11%) | 3.25 ± 1.0 | 1(1.6%)  | 1(12.5%) | 2 (2.8%) | 2 (3%) | 0 (0%) | 2 (2.8%) | 2.9% | 7.7% | 3.4% | 2.7 (0.64-11.0) |
| Le Feuvre, 20058 | 1 | 100 | 61±10 | 14 ± 9 | SPECT and DSE | 62 (62%) | 2.0 ± 0.5 | 0 | 0 | 0 | 0 | 2 (3.2%) | 2 (2%) | 5.3% | 4.4% | 4.5% | 0.8 (0.2-2.7)! |
| Sejil, 20069 | 1 | 203 | 54±13 | 18 ± 7.6 | SPECT and/or treadmill | 32 (16%) | 6.0 | 4 (2.5%) | 2 (6.5%) | 6 (3.0%) | n/a | n/a | n/a | 1.6% | 5.9% | 2.3% | 3.7 (1.9-7.3)! |
| Sholte, 200910 | 1 | 120 | 53±10 | 9.5 ± 7.3 | SPECT | 40 (33%) | 1.0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.25% | 12.5% | 5.0% | 10.0 (1.2-82.7)! |
| Choi, 200911 | 1 | 116 | 62±7 | 11.1 ± 6.9 | SPECT and CCTA | 28 (24%) | 2.0 ± 0.3 | 1 (1.1%) | 1 (3.6%) | 2 (1.7%) | 0 | 0 | 0 | 2.8% | 5.4% | 3.4% | 1.9 (0.5-7.4)! |
| Jacqueminet, 201012 | 1 | 204 | 65±6 | 15 ± 9 | SPECT or DSE | 25 (12%) | 3.0 ± 1.1 | n/a | n/a | 3 (1.5%) | n/a | n/a | 2 (1.0%) | n/a | n/a | 0.8% | n/a |
| Giovacchini, 201313 | 1 | 77 | 63±9 | 8.9 ± 6.3 | SPECT | 25 (32%) | 4.1 (0.8-6.1) | n/a | n/a | 5 (6.5%) | n/a | n/a | 2 (2.6%) | n/a | n/a | 2.2% | 2.8 (0.6-12.5) |
| De Lorenzo, 200214 | 1, 2 | 180 | 61±10 | n/a | SPECT | 46 (26%) | 3.0 ± 1.5 | n/a | n/a | 7 (3.9%) | n/a | n/a | 6 (3.3%) | 1.2% | 5.8% | 2.4% | 4.7 (1.6 - 13.5)! |
| Yamasaki, 201015 | 3 | 485 | 67±8 | n/a | SPECT | 47 (9.7%) | 3.0 | n/a | n/a | 5 (1.0%) | n/a | n/a | 9 (1.9%) | n/a | n/a | 1.0% | 1.9 times |
| SPECT = single photon emission computed tomography, CCTA = coronary computed tomography angiography, MCE = Dipyridamole stress myocardial contrast echo, DSE = Dobutamine stress echocardiography, MI = myocardial infarction, n/a = not available\* Study indication: 1 = screening, 2 = pre-operative, 3 = unclear/not stated\*\* Duration and follow-up given as mean ± standard deviation or median (interquartile range)# Definition of abnormal study varies from study to study § Definition of cardiovascular hard events varies significantly from study to study, and includes cardiac mortality, non-fatal MI, unstable angina, heart failure admission, coronary revascularization, stroke! Calculated by our group as not provided by the authors  |

**Table 2.** Cardiovascular outcomes after randomization of asymptomatic individuals with diabetes mellitus to screening for evaluation of coronary heart disease

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **Size, N** | **Age, year ± SD** | **Males, N (%)** | **DM Duration, year ± SD** | **Cardiac Deaths, N (%)** | **Non-fatal MI, N (%)** | **Annual Event Rate (%)** |  |
| **Trial** | **Modality** | **Follow-up year ± SD** | **Screened Group**  | **No Screening** | **Screened Group**  | **No Screening** | **Screened Group**  | **No Screening** | **Screened Group**  | **No Screening** | **Screened Group**  | **No Screening** | **Screened Group**  | **No Screening** | **Screened Group**  | **No Screening** | **Hazard Ratio for Screening** |
| DIAD, 200920 | SPECT | 4.8 ± 0.9 | 561 | 562 | 60.7 ± 6.7 | 60.8 ± 6.4 | 290 (52%) | 311 (55%) | 8.2 ± 7.1 | 8.9 ± 6.9 | 8 (1.4%) | 7 (1.2%) | 7 (1.2%) | 10 (1.8%) | 0.56% | 0.63% | 0.89 (0.4-1.9) |
| FACTOR-64, 201421 | CCTA | 4.0 ± 1.7 | 452 | 448 | 61.5 ± 7.9 | 61.6 ± 8.3 | 234 (52%) | 235 (53%) | 12 ± 9 | 13.5 ± 11  | 7 (1.5%) | 8 (1.8%) | 7 (1.5%) | 8 (1.8%) | 0.77% | 0.89% | 0.87 (0.4-1.8) |
| **Total** |  | **4.4 ± 1.4** | **1013** | **1010** | **61.1 ± 7.3** | **61.2 ± 7.3** | **524 (52%)** | **546 (54%)** | **9.9 ± 8.2** | **10.9 ± 9.2** | **15 (1.5%)** | **15 (1.5%)** | **14 (1.4%)** | **18 (1.8%)** | **0.65%** | **0.74%** | **0.87 (0.5-1.4)** |
| DM = diabetes mellitus, MI = myocardial infarction, SPECT = single photon emission computed tomography, CCTA = coronary computed tomography angiography |