MELODEM Workshop Paper Results

Table of Contents

## Table 1: Participant characteristics

| **Characteristic** | **Overall** | **Apolipoprotein E** | |
| --- | --- | --- | --- |
| **Non-carrier** | **Carrier** |
| REGARDS | | | |
| No. of participants | 5,381 |  |  |
| Age | 64 (59, 70) |  |  |
| Sex |  |  |  |
| male | 2,121 (39%) |  |  |
| female | 3,260 (61%) |  |  |
| simulated | | | |
| No. of participants | 974 | 503 | 471 |
| Age | 65.0 (61.5, 68.4) | 65.1 (61.9, 68.4) | 64.9 (61.4, 68.3) |
| Sex |  |  |  |
| male | 463 (48%) | 236 (47%) | 227 (48%) |
| female | 511 (52%) | 267 (53%) | 244 (52%) |
| First biomarker | 0.02 (-0.67, 0.67) | -0.06 (-0.76, 0.56) | 0.11 (-0.58, 0.77) |
| UKBB | | | |
| No. of participants | 3,060 | 2,211 | 849 |
| Age | 62.5 (59.2, 65.8) | 62.5 (59.2, 65.9) | 62.5 (59.2, 65.6) |
| Sex |  |  |  |
| male | 1,387 (45%) | 996 (45%) | 391 (46%) |
| female | 1,673 (55%) | 1,215 (55%) | 458 (54%) |
| Race/Ethnicity |  |  |  |
| White | 2,970 (97%) | 2,142 (97%) | 828 (98%) |
| Black | 20 (0.7%) | 16 (0.7%) | 4 (0.5%) |
| Asian | 38 (1.2%) | 31 (1.4%) | 7 (0.8%) |
| Other | 32 (1.0%) | 22 (1.0%) | 10 (1.2%) |
| Body mass index | 27.0 (24.5, 30.0) | 27.0 (24.5, 30.0) | 26.9 (24.4, 29.9) |
| Smoking status | 1,448 (47%) | 1,029 (47%) | 419 (49%) |
| Physical activity | 2,335 (78%) | 1,683 (78%) | 652 (79%) |
| Education |  |  |  |
| High school | 1,829 (60%) | 1,328 (60%) | 501 (59%) |
| Less than high school | 1,231 (40%) | 883 (40%) | 348 (41%) |
| WHICAP | | | |
| No. of participants | 3,819 | 2,756 | 1,063 |
| Age | 72.3 (69.7, 75.7) | 72.3 (69.7, 75.7) | 72.3 (69.5, 75.5) |
| Sex |  |  |  |
| male | 1,330 (35%) | 965 (35%) | 365 (34%) |
| female | 2,489 (65%) | 1,791 (65%) | 698 (66%) |

## Table 2: Heterogeneity in the effect of APOE-4 on dementia risk using time since birth

| **Age, years** | **Estimated effect of APOE-4 on dementia-free survival time, years** | **P-value for heterogeneity in effect** | **Best linear projection of effect** | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Women versus men** | **Black versus White** | **Asian versus White** | **Other versis White** |
| REGARDS | | | | | | |
| 60 | 0.45 (-0.04, 0.93) | 0.05 | -1.6 (-2.6, -0.66) |  |  |  |
| 65 | 0.43 (0.00, 0.87) | 0.31 | -1.6 (-2.5, -0.67) |  |  |  |
| 70 | 0.31 (-0.08, 0.70) | 0.47 | -1.1 (-1.9, -0.25) |  |  |  |
| 75 | -0.50 (-0.84, -0.16) | 0.049 | -0.66 (-1.4, 0.04) |  |  |  |
| simulated | | | | | | |
| 60 | -1.7 (-2.5, -0.86) | 0.40 | 0.02 (-1.6, 1.6) |  |  |  |
| 65 | -4.2 (-4.8, -3.7) | 0.08 | -0.17 (-1.3, 0.99) |  |  |  |
| 70 | -7.1 (-7.6, -6.6) | 0.13 | -0.14 (-1.2, 0.89) |  |  |  |
| UKBB | | | | | | |
| 60 | 0.01 (-0.36, 0.39) | 0.996 | 0.02 (-0.75, 0.79) | 1.3 (-2.2, 4.7) | -0.69 (-4.5, 3.1) | -2.2 (-6.2, 1.9) |
| 65 | -0.03 (-0.30, 0.23) | 0.97 | 0.31 (-0.23, 0.85) | 1.7 (-0.69, 4.0) | 0.31 (-2.6, 3.2) | -0.09 (-2.3, 2.1) |
| WHICAP | | | | | | |
| 70 | -0.07 (-0.37, 0.23) | 0.18 | -0.44 (-1.1, 0.19) |  |  |  |
| 75 | -0.21 (-0.45, 0.03) | 0.24 | -0.25 (-0.74, 0.23) |  |  |  |

## Table 3: Heterogeneity in the effect of APOE-4 on dementia risk using time since baseline

| **Time since baseline visit, years** | **Estimated effect of APOE-4 on dementia-free survival time, years** | **P-value for heterogeneity in effect** | **Best linear projection of effect** | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Age, per year** | **Women versus men** | **Black versus White** | **Asian versus White** | **Other versis White** |
| REGARDS | | | | | | | |
| 5.0 | 0.10 (-0.13, 0.33) | 0.28 | 0.36 (0.14, 0.59) | -0.76 (-1.2, -0.30) |  |  |  |
| 10 | -0.24 (-0.46, -0.03) | 0.71 | -0.02 (-0.25, 0.21) | -0.09 (-0.54, 0.35) |  |  |  |
| simulated | | | | | | | |
| 0.70 | -0.45 (-0.57, -0.33) | 0.002 | 0.03 (-0.09, 0.14) | 0.08 (-0.15, 0.32) |  |  |  |
| UKBB | | | | | | | |
| 5.0 | -0.01 (-0.30, 0.27) | 0.08 | 0.14 (-0.16, 0.43) | 0.15 (-0.44, 0.74) | 1.4 (-2.1, 4.8) | 1.7 (-0.88, 4.3) | -0.85 (-4.0, 2.3) |
| 10 | -0.09 (-0.25, 0.06) | 0.28 | -0.03 (-0.19, 0.12) | 0.15 (-0.17, 0.47) | -0.52 (-3.7, 2.7) | 0.94 (-0.29, 2.2) | -0.30 (-1.8, 1.2) |
| WHICAP | | | | | | | |
| 5.0 | 0.17 (-0.81, 1.1) | 0.83 | 0.29 (-0.70, 1.3) | -0.90 (-3.0, 1.2) |  |  |  |
| 10 | -0.23 (-1.3, 0.89) | 0.92 | 0.43 (-0.69, 1.5) | -1.4 (-3.9, 1.1) |  |  |  |
| 15 | -0.81 (-1.8, 0.22) | 0.84 | -0.49 (-1.5, 0.51) | -0.34 (-2.6, 1.9) |  |  |  |

## Cumulative incidence of dementia stratified by study

