Additional file 1. Demographics and Descriptive Statistics for Discovery and Replication Cohorts.

| Variable                        | Discovery |           | Replication |           |
|---------------------------------|-----------|-----------|-------------|-----------|
|                                 | n         | Mean      | SD          | n         | Mean      | SD          |
| Age (years)                     | 4450      | 51.40     | 13.20       | 2578      | 50.00     | 12.50       |
| Sex                             | n         | Females/Males | %Female | n         | Females/Males | %Female |
|                                 | 4450      | 2506/1944 | 56.31%      | 2578      | 1583/995  | 61.40%      |
| Epigenetic Age Measures         | n         | Mean      | SD          | n         | Mean      | SD          |
| DNAm GrimAge (years)            | 4450      | 48.82     | 10.89       | 2578      | 60.47     | 10.63       |
| DNAm PhenoAge (years)           | 4450      | 43.73     | 11.45       | 2578      | 44.98     | 9.75        |
| Horvath Age (EEAA; years)       | 4450      | 60.13     | 9.83        | 2578      | 54.75     | 9.35        |
| Hannum Age (IEAA; years)        | 4450      | 47.38     | 9.64        | 2578      | 46.97     | 9.13        |
| DNAm Telomere Length (TL; kbp)  | 4450      | 7.42      | 0.26        | 2578      | 7.31      | 0.26        |
| DunedinPoAm (years)             | 4450      | 1.05      | 0.07        | 2578      | 1.03      | 0.09        |
| Continuous Phenotypes           | n         | Mean      | SD          | n         | Mean      | SD          |
| Average Heart Rate (beats/min)  | 4444      | 69.20     | 11.40       | 2572      | 69.70     | 11.10       |
| Body Mass Index (kg/m²)         | 4423      | 26.80     | 4.96        | 2567      | 27.20     | 5.35        |
| Creatinine (µmol/L)             | 4427      | 71.20     | 14.60       | 2566      | 70.10     | 14.50       |
| Diastolic Pressure (mmHg)       | 4447      | 80.80     | 10.50       | 2573      | 80.10     | 9.93        |
| Forced Expiratory Flow (L/s)    | 3750      | 2.99      | 1.23        | 2191      | 2.99      | 1.21        |
| Forced Expiratory Volume (L)    | 3776      | 3.02      | 0.84        | 2191      | 3.00      | 0.82        |
| Forced Vital Capacity (L)       | 3775      | 3.97      | 0.99        | 2197      | 3.93      | 0.97        |
| General Factor of Fluid Intelligence | 4324 | -0.06 | 0.99 | 2529 | 0.02 | 0.99 |
| General Factor of Intelligence  | 4291      | 0.03      | 1.01        | 2504      | 0.08      | 0.99        |
| Glucose (mmol/L)                | 4297      | 4.78      | 0.58        | 2511      | 4.72      | 0.60        |
| HDL Cholesterol (mmol/L)        | 4396      | 1.46      | 0.40        | 2546      | 1.48      | 0.41        |
| Neuroticism                     | 4426      | 3.60      | 3.09        | 2565      | 4.24      | 3.31        |
| Pack Years                      | 4380      | 7.54      | 14.30       | 2522      | 8.65      | 15.50       |
| QT Interval (corrected for heart rate; milliseconds) | 4374 | 7.70 | 24.20 | 2542 | 0.17 | 23.60 |
| Scottish Index of Multiple Deprivation (rank 1 : 6,505 = most to least deprived) | 4236 | 3980.00 | 1840.00 | 2457 | 3900.00 | 1890.00 |
| Systolic Pressure (mmHg)        | 4447      | 134.00    | 18.40       | 2573      | 132.00    | 17.10       |
| Total Cholesterol (mmol/L)      | 4409      | 5.21      | 1.05        | 2551      | 5.19      | 1.06        |
| Waist : Hip Ratio               | 4383      | 0.87      | 0.09        | 2535      | 0.87      | 0.10        |
| Ordinal Variables                      |    n   |   Median |   IQR |    n   |   Median |   IQR |
|---------------------------------------|--------|---------|-------|--------|---------|-------|
| Educational Attainment (years)        |  4303  |     4   |     3 |  2434  |     4   |     3 |
| Self-Report Diseases                  |        |         |       |        |         |       |
| Alzheimer’s Disease Maternal          |  4450  |   228   |  5.12%|  2531  |   128   |  5.06%|
| Alzheimer’s Disease Paternal          |  4450  |   134   |  3.01%|  2531  |    87   |  3.44%|
| Back Pain                             |  1693  |   480   |  28.35%|  1475  |    295  |  20.00%|
| Bowel Cancer                          |  4450  |    20   |  0.45%|  2531  |    11   |  0.43%|
| Breast Cancer                         |  4450  |    63   |  1.42%|  2531  |    40   |  1.58%|
| Chronic Kidney Disease                |  4427  |    85   |  1.92%|  2563  |    40   |  1.56%|
| COPD                                  |  4450  |    48   |  1.08%|  2531  |    32   |  1.26%|
| Depression                            |  4450  |   371   |  8.34%|  2531  |   414   | 16.36%|
| Diabetes                              |  4450  |   147   |  3.30%|  2531  |    89   |  3.52%|
| Heart Disease                         |  4450  |   196   |  4.40%|  2531  |    95   |  3.75%|
| Lung Cancer                           |  4450  |     5   |  0.11%|  2531  |     4   |  0.16%|
| Neck Pain                             |  1693  |   431   | 25.46%|  1475  |   257   | 17.42%|
| SCID Depression                       |  4450  |   825   | 18.54%|  2578  |   984   | 38.17%|
| Stroke                                |  4450  |    59   | 1.33% |  2531  |    41   |  1.62%|