**Supplementary Materials**

**Table S1:** Sample characteristics of the reference population used in computations of the statistical distance measure (DM)

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| **Sample Characteristics** | **Values** |
| Number of participants at baseline | 1361 |
| Number of deaths during the follow-up period | 31 |
| Age at baseline\* | 53.8 ± 5.2 [24, 60] |
| Females (%) | 59.88 |
| Whites (%) | 99.04 |
| Participants from US field centers (%) | 70.32 |
| Low educated participants (below high school) (%) | 3.53 |
| Smokers (smoked >100 cigarettes in lifetime) (%) | 41.81 |
| Medication use: anti-diabetic (%) | 3.09 |
| Medication use: anti-hypertensive (%) | 18.15 |
| Medication use: lipid-lowering (%) | 15.43 |
| Fasting (>=8 hrs.) (%) | 92.8 |
| Follow-up period\* | 9.7 ± 2.3 [0, 12.5] |
| Follow-up period for dead\* | 6.2 ± 3.1 [1, 12.4] |
| Follow-up period for alive\* | 9.8 ± 2.3 [0, 12.5] |
| Prevalence of cancer, N (%) | 134 (9.85) |
| Prevalence of CVD, N (%) | 43 (3.16) |
| Prevalence of AD or dementia, N (%) | 1 (0.07) |
| Prevalence of diabetes, N (%) | 47 (3.45) |
| Incidence of cancer, N (%) | 127 (9.33) |
| Incidence of CVD, N (%) | 38 (2.79) |
| Incidence of AD or dementia, N (%) | 1 (0.07) |
| Incidence of diabetes, N (%) | 37 (2.72) |
| Adiponectin, ng/mL (Adip)\*\* | 10603 ± 5930 0.08 [1.7e-03] |
| Albumin, g/dL (Album)\*\* | 4.1 ± 0.3 0.03 [0.25] |
| Absolute monocyte count, 10e9/L (Abs.M)\*\* | 0.6 ± 0.2 8.3e-03 [0.76] |
| Creatinine, mg/dL (Creat)\*\* | 1.0 ± 0.2 6.1e-03 [0.82] |
| Cystatin, mg/L (Cysc)\*\* | 0.8 ± 0.2 0.16 [1.6e-09] |
| Dehydroepiandrosterone sulfate, ug/dL (DHEA)\*\* | 105.4 ± 67.5 -0.21 [1.5e-14] |
| Hemoglobin, g/dL (Hgb)\*\* | 14.2 ± 1.3 0.04 [0.16] |
| Glycosylated hemoglobin, % (HbA1c)\*\* | 5.5 ± 0.5 0.15 [1.2e-08] |
| High-sensitivity C-reactive protein, mg/L (hsCRP)\*\* | 2.4 ± 4.0 -0.04 [0.19] |
| Insulin-like growth factor 1, ng/mL (IGF1)\*\* | 149.0 ± 61.2 -0.11 [2.8e-05] |
| Interleukin 6, pg/mL (IL-6)\*\* | 1.2 ± 3.7 -0.03 [0.28] |
| Mean corpuscular volume, fl (MCV)\*\* | 91.5 ± 5.1 0.04 [0.11] |
| N-terminal pro b-type natriuretic peptide, pg/mL (NT-proBNP)\*\* | 64.5 ± 122.3 0.03 [0.30] |
| Red cell distribution width, % (RDW)\*\* | 13.5 ± 1.0 0.03 [0.24] |
| Sex-hormone binding globulin, nmol/L (SHBG)\*\* | 61.3 ± 37.2 -0.12 [1.7e-05] |
| Soluble receptor for advanced glycation endproduct, pg/mL (sRAGE)\*\* | 520.0 ± 297.8 0.02 [0.45] |
| Total cholesterol, mg/dL (T.Chol)\*\* | 207.0 ± 38.6 0.13 [3.1e-06] |
| Transferrin receptor, mg/L (Transf.R)\*\* | 2.9 ± 1.0 -0.03 [0.27] |
| White blood cell count, 10e9/L (WBC)\*\* | 5.8 ± 1.7 -0.01 [0.65] |

**Notes:** 1) \*: these rows display mean ± SD [range is shown in brackets]; 2) \*\*: these rows display mean ± SD and correlation with age [p-value for the null hypothesis on zero correlation is shown in brackets]

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**Figure S1: Kaplan-Meier estimates of conditional survival function according to the quartiles of DM.** Quartiles are calculated from individuals who survived until 80 years. The numbers in the legend denote values of DM in respective quartiles. The dark lines denote the point estimates of the survival functions and lighter colored areas denote their 95% confidence intervals.