**Table S1.** Concordance between major stroke and incident pattern-detected stroke (p-stroke) detected using a longitudinal pattern recognition methodology using both episodic memory and orientation as cognitive indicators

|  |  |  |
| --- | --- | --- |
|  | Major Stroke | No Major Stroke |
| p-stroke: both measures detected | 943 | 2,737 |
| p-stroke: episodic memory detected | 580 | 2,955 |
| p-stroke: orientation detected | 302 | 1,440 |
| No p-stroke | 439 | 3,328 |
|  |  |  |  |  |  |

**Note**: p-stroke: pattern-recognition detected stroke.

**Table S2**. Survival models modeling demographic predictors for the onset of p-stroke and major stroke

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Model 1: Predictors of p-stroke | | |  | Model 2: Predictors of Major Stroke Diagnosis | | |
| Characteristic | aHR | 95% C.I. | p |  | aHR | 95% C.I. | p |
| Age, years | 1.047 | 1.044-1.050 | <0.001 |  | 1.046 | 1.042-1.050 | <0.001 |
| Female sex | 1.110 | 1.062-1.160 | <0.001 |  | 1.041 | 0.966-1.122 | 0.289 |
| Race/Ethnicity |  |  |  |  |  |  |  |
| White | 1.000 |  |  |  | 1.000 |  |  |
| Black | 0.965 | 0.904-1.032 | 0.299 |  | 1.000 | 0.903-1.107 | 0.994 |
| Hispanic | 1.021 | 0.936-1.113 | 0.637 |  | 0.655 | 0.562-0.763 | <0.001 |
| Other | 1.082 | 0.926-1.264 | 0.324 |  | 0.625 | 0.465-0.840 | 0.002 |
| Education, years | 1.014 | 1.006-1.021 | <0.001 |  | 0.971 | 0.960-0.983 | <0.001 |

**Note**: p-stroke: pattern-recognition detected cerebro-vascular and ischemic disease.

**Table S3.** C-log-log survival models modeling demographic predictors for the onset of p-stroke detected using orientation

|  |  |  |  |
| --- | --- | --- | --- |
|  | Model 1: Predictors of p-stroke | | |
| Characteristic | aHR | 95% C.I. | p |
| Age, years | 1.047 | 1.043-1.050 | <0.001 |
| Female sex | 1.236 | 1.166-1.310 | <0.001 |
| Race/Ethnicity |  |  |  |
| White | 1.000 |  |  |
| Black | 1.284 | 1.184-1.394 | <0.001 |
| Hispanic | 1.088 | 0.975-1.216 | 0.133 |
| Other | 1.099 | 0.888-1.359 | 0.387 |
| Education, years | 0.948 | 0.940-0.957 | <0.001 |

**Table S4.** Longitudinal associations derived from multilevel random-sloes models examining associations between incident major stroke and p-stroke with changes in episodic memory as the outcome

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Model 1: Examining change in episodic memory concomitant with incident p-stroke | | | | |  | | Model 2: Examining change in episodic memory concomitant with incident self-reported stroke | | | | | |  | | Model 3: Examining change in episodic memory concomitant with incident p-stroke and self-reported stroke | | | | | | |  | | Model 4: Examining change in episodic memory concomitant with incident p-stroke and self-reported stroke allowing for the possibility that cognitive performance worsens after p-stroke | | | |
| Fixed Effects | B | | SE | |  | |  | | B | | SE | |  | |  | | | B | | SE | |  | |  | | B | SE |  |
| Incident p-stroke | -2.033 | | 0.022 | |  | |  | |  | |  | |  | |  | | | -2.016 | | 0.022 | |  | |  | | -1.986 | 0.023 |  |
| Incident stroke |  | |  | |  | |  | | -0.874 | | 0.047 | |  | |  | | | -0.698 | | 0.044 | |  | |  | | -0.455 | 0.060 |  |
| Incident p-stroke x stroke | |  | |  | |  | |  | |  | |  | |  | | |  | |  | |  | |  | | -0.461 | | 0.077 |  | |
|  |  | |  | |  | |  | |  | |  | |  | |  | | |  | |  | |  | |  | |  |  |  |
| Year of birth | 0.030 | | 0.002 | |  | |  | | -0.023 | | 0.002 | |  | |  | | | 0.033 | | 0.002 | |  | |  | | 0.032 | 0.002 |  |
| Age in years | -0.088 | | 0.002 | |  | |  | | -0.160 | | 0.002 | |  | |  | | | -0.084 | | 0.002 | |  | |  | | -0.084 | 0.002 |  |
| Race/Ethnicity | -2.033 | | 0.022 | |  | |  | | -0.874 | | 0.047 | |  | |  | | | -2.016 | | 0.022 | |  | |  | | -1.986 | 0.023 |  |
| White | Reference | | | | |  | | Reference | | | | | |  | | Reference | | | | | | |  | | Reference | | | |
| Black | -1.368 | | 0.049 | |  | |  | | -1.326 | | 0.049 | |  | |  | | | -1.360 | | 0.049 | |  | |  | | -1.360 | 0.049 |  |
| Hispanic | -1.069 | | 0.119 | |  | |  | | -1.032 | | 0.117 | |  | |  | | | -1.069 | | 0.119 | |  | |  | | -1.071 | 0.119 |  |
| Other | -0.500 | | 0.065 | |  | |  | | -0.466 | | 0.064 | |  | |  | | | -0.512 | | 0.065 | |  | |  | | -0.512 | 0.065 |  |
| Female | 1.161 | | 0.034 | |  | |  | | 1.090 | | 0.033 | |  | |  | | | 1.155 | | 0.033 | |  | |  | | 1.155 | 0.033 |  |
| Education, years | 0.320 | | 0.006 | |  | |  | | 0.319 | | 0.006 | |  | |  | | | 0.319 | | 0.006 | |  | |  | | 0.320 | 0.006 |  |
| Constant | 10.620 | | 0.152 | |  | |  | | 15.500 | | 0.154 | |  | |  | | | 10.361 | | 0.152 | |  | |  | | 10.399 | 0.152 |  |
|  |  | |  | |  | |  | |  | |  | |  | |  | | |  | |  | |  | |  | |  |  |  |
| Random Effects | ES | | SE | |  | |  | | ES | | SE | |  | |  | | | ES | | SE | |  | |  | | ES | SE |  |
| Slopes | 0.080 | | 0.002 | |  | |  | | 0.127 | | 0.002 | |  | |  | | | 0.079 | | 0.002 | |  | |  | | 0.079 | 0.002 |  |
| Intercepts | 2.158 | | 0.018 | |  | |  | | 2.129 | | 0.018 | |  | |  | | | 2.158 | | 0.018 | |  | |  | | 2.157 | 0.018 |  |
| Corr(I,S) | -0.503 | | 0.015 | |  | |  | | -0.471 | | 0.012 | |  | |  | | | -0.512 | | 0.015 | |  | |  | | -0.510 | 0.016 |  |
|  |  | |  | |  | |  | |  | |  | |  | |  | | |  | |  | |  | |  | |  |  |  |
| AIC | 600,910 | |  | |  | |  | | 607,444 | |  | |  | |  | | | 600,253 | |  | |  | |  | | 600,220 |  |  |

**Note:** All associations shown were significant at the *P*<1E-06 level. p-stroke: pattern-detected indicator of cerebrovascular and ischemic disease.