Supplementary Table 1. GEMS Pittsburgh Cohort Baseline Data by Groups at 2000-2002 With and Without PiB Data at 2009

|                                | With PiB Data at 2009 | Without PiB Data (Alive and CN at 2009) | p-value |
|--------------------------------|-----------------------|----------------------------------------|---------|
| **Number of subjects**         | 182                   | 525                                    |         |
| **Age**                        | Mean±SD/N (%)         | Mean±SD/N (%)                         | p-value |
|                                | 77.7 ± 2.7            | 78.2 ± 3.0                             | 0.065   |
| **Race - Whites**              | 176 (96.7)            | 518 (96.5)                             | 0.878   |
| **Gender - Men**               | 107 (58.8)            | 267 (49.7)                             | 0.034*  |
| **Education level, years**     | 14.7 ± 2.6            | 14.5 ± 2.8                             | 0.488   |
| **3MSE score**                 | 94.4 ± 4.8            | 93.8 ± 4.4                             | 0.132   |
| **CES-D**                      | 2.9 ± 3.5             | 3.5 ± 3.5                              | 0.051   |
| **APOE4 allele**               | 31.0 (20.7)           | 87 (19.9)                              | 0.842   |
| **Amyloid-β measures**         |                       |                                        |         |
| Amyloid-β1-42, pg/mL           | 15.5 ± 33.9           | 15.0 ± 25.9                            | 0.515   |
| Amyloid-β1-40, pg/mL           | 163.6 ± 66.3          | 172.6 ± 105.8                          | 0.582   |
| Amyloid-β1-42/1-40 ratio       | 0.1 ± 0.2             | 0.1 ± 0.1                              | 0.864   |
| **Clinical measures**          |                       |                                        |         |
| BMI, kg/m²                      | 26.9 ± 3.8            | 27.4 ± 4.5                             | 0.159   |
| SBP, mmHg                       | 131.7 ± 18.8          | 132.6 ± 18.1                           | 0.549   |
| DBP, mmHg                       | 71.4 ± 9.1            | 70.8 ± 9.5                             | 0.475   |
| History of stroke              | 2 (1.1)               | 14 (2.6)                               | 0.382   |
| History of heart attack         | 7 (3.9)               | 53 (9.9)                               | 0.012*  |
| History of hypertension         | 63 (35.6)             | 226 (43.4)                             | 0.069   |
| History of diabetes mellitus   | 10 (5.6)              | 49 (9.3)                               | 0.130   |
| History of cancer              | 30 (16.5)             | 88 (16.4)                              | 0.976   |
| Number of blocks walked/week    | 47.5 ± 58.5           | 40.1 ± 56.7                            | 0.134   |
| **Laboratory measures**        |                       |                                        |         |
| Creatinine, mg%                | 1.0 ± 0.2             | 1.0 ± 0.2                              | 0.982   |
| WBC, K/uL                       | 6.1 ± 1.3             | 6.4 ± 1.5                              | 0.019*  |
| Hematocrit, %                  | 41.1 ± 3.4            | 40.5 ± 3.4                             | 0.030*  |
| ALT, U/L                       | 24.9 ± 8.6            | 24.5 ± 8.7                             | 0.788   |
| AST, U/L                       | 23.2 ± 5.3            | 22.4 ± 6.4                             | 0.040*  |
| GGT, U/L                       | 29.6 ± 19.7           | 29.8 ± 16.5                            | 0.698   |
| Vitamin B12, pg/mL             | 506.0 ± 246.4         | 518.0 ± 262.5                          | 0.784   |
| TSH, mIU/L                      | 2.0 ± 1.3             | 2.1 ± 1.7                              | 0.747   |

*significant p<0.05
Creatinine, ALT, AST, GGT, Vitamin B12, TSH, Aβ were log-transformed for the comparisons.
Abbreviations: 3MSE, Modified Mini-Mental State Examination; AL, alanine aminotransferase; AST, aspartate aminotransferase; BMI, body mass index; BP, blood pressure; CES-D, Center for Epidemiologic Studies Depression Scale; DBP, diastolic BP; GGT, gamma-glutamyl transpeptidase; PiB, Pittsburgh compound-B; TSH, thyroid-stimulating hormone; WBC, white blood cell count
Supplementary Table 2. Associations of Amyloid-β1-42 as Measured at 2000-2002 and 2009 in the Pittsburgh GEMS Cohort

|                         | Regression Coefficient for log Amyloid-β1-42 Measured at 2000-2002 (n=160) | Regression Coefficient for log Amyloid-β1-42 Measured at 2009 (n=133) |
|-------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------|
|                         | Estimate | SE   | p-value | Estimate | SE   | p-value |
| **Baseline 2000-2002**  |          |      |         |          |      |         |
| Age                     | 0.012    | 0.011| 0.287   | 0.017    | 0.017| 0.323   |
| Race – white            | 0.267    | 0.219| 0.224   | 0.092    | 0.315| 0.772   |
| Gender – female         | 0.084    | 0.075| 0.266   | 0.003    | 0.114| 0.982   |
| Years of education      | -0.009   | 0.012| 0.463   | -0.004   | 0.019| 0.848   |
| BMI ≥30 kg/m²           | 0.031    | 0.079| 0.700   | 0.156    | 0.136| 0.251   |
| Log creatinine          | 0.430    | 0.164| 0.009   | -0.168   | 0.247| 0.498   |
| Hypertension            | 0.127    | 0.068| 0.063   | 0.153    | 0.105| 0.146   |
| Diabetes mellitus       | 0.233    | 0.117| 0.046   | 0.391    | 0.225| 0.084   |
| History of heart attack | 0.013    | 0.108| 0.906   | -0.034   | 0.190| 0.858   |
| APOE4                   | -0.008   | 0.080| 0.918   | 0.096    | 0.119| 0.421   |

Abbreviations: APOE4, apolipoprotein-E4; BMI, body mass index; GEMS, Ginkgo Evaluation of Memory Study
| CN Participants at 2009 | N  | # PiB+ | % PiB- | Age-adjusted p-value | Trend p-value |
|-------------------------|----|--------|--------|----------------------|---------------|
| **Amyloid-β1-42/1-40 Ratio at 2000 Quartiles** |    |        |        |                      |               |
| 1                       | 24 | 14     | 58.3   |                      |               |
| 2                       | 30 | 14     | 46.7   |                      |               |
| 3                       | 34 | 18     | 52.9   |                      |               |
| 4                       | 35 | 17     | 48.6   | 0.824                | 0.622         |
| **Amyloid-β1-42/1-40 Ratio at 2009 Quartiles** |    |        |        |                      |               |
| 1                       | 25 | 15     | 60.0   |                      |               |
| 2                       | 22 | 13     | 59.1   |                      |               |
| 3                       | 30 | 13     | 43.3   |                      |               |
| 4                       | 26 | 9      | 34.6   | 0.209                | 0.039         |

Abbreviations: GEMS, Ginkgo Evaluation of Memory Study; PiB, Pittsburgh compound-B
| Amyloid-β1-42 Quartiles of Change | CN at Baseline 2000-2002 | CN at Follow up 2009 |
|-----------------------------------|---------------------------|---------------------|
|                                   | n | # PiB+ at 2009 | % PiB+ at 2009 | p-value | trend p-value | n | # PiB+ at 2009 | % PiB+ at 2009 | p-value |
| 1                                 | 30 | 13 | 43.33 | 0.241 | 0.181 | 25 | 10 | 40.00 |
| 2                                 | 30 | 15 | 50.00 | 27 | 15 | 55.56 |
| 3                                 | 29 | 20 | 68.97 | 26 | 15 | 57.69 |
| 4                                 | 29 | 16 | 55.17 | 22 | 9 | 40.91 | 0.451 | 0.862 |

*Note:* Amyloid-β1-42 change quartile: 1Q: ≤-4.39, 2Q: -4.38 to -0.70, 3Q: -0.69 to 3.03, 4Q: >3.03

Abbreviations: CN, cognitively normal; GEMS, Ginkgo Evaluation of Memory Study; PiB, Pittsburgh compound-B; SUVR, standardized uptake value ratio
Ineligible (no in-person full neuropsychological battery data or did not agree to additional contact 3 deceased)

575 Potentially Eligible
(Year 8 full neuropsychological battery data and agreed to additional contact)

653 completed 2008 visit, non-demented

207 Enrolled:
169 CN
38 MCI

194 completed MRI and PET

89 MRI/PiB ineligible
144 Refused/not interested
24 died between Year 8 visit and enrollment
55 Ill/caring for ill
2 Lost to follow-up
54 Other/not specified

368 Not Enrolled

966 in 2000-2002
132 dementia
115 deceased, not demented
66 dropped out

78 Ineligible (no in-person full neuropsychological battery data or did not agree to additional contact 3 deceased)
Supplementary Figure Legend

Description of GEMS Imaging Study Recruitment