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| **Table S1. *Neural correlates of caregivers’ severity of psychopathology*** | | | | | |
| Smaller patient and healthy control volume in several medial frontal, prefrontal, cingulo, temporal, and parietal regions was associated with greater severity of caregiver and partner psychopathology (SCL-90) when controlling for caregiver/partner sex, caregiver/partner age, patient diagnosis, patient dementia severity, patient cognitive functioning, scanner field strength, and patient total intracranial volume. Montreal Neurological Institute coordinates (x, y, z) given for maximum *T*-score for the cluster (cluster size > 150 mm3). Results are significant at *p <* .005, uncorrected. | | | | | |
| **Anatomical Region** | **Cluster Volume mm3** | **x** | **y** | **z** | **maximum *T*-score** |
| Left supplementary motor area | 3510 | -3 | 22 | 45 | 3.76 |
| Right supplementary motor area | † |  |  |  |  |
| Superior medial frontal gyrus | † |  |  |  |  |
| Left medial orbitofrontal cortex | 2970 | -3 | 69 | 2 | 3.81 |
| Right medial orbitofrontal cortex | † |  |  |  |  |
| Left cerebellum | 901 | -20 | -64 | -62 | 3.56 |
| Right inferior frontal operculum | 735 | 63 | 14 | 10 | 3.05 |
| Right cuneus | 665 | 9 | -80 | 40 | 3.41 |
| Right ventrolateral prefrontal cortex | 618 | 48 | 21 | -12 | 3.01 |
| Right ventral anterior insula | † |  |  |  |  |
| Left inferior frontal gyrus | 550 | -57 | 20 | 26 | 3.56 |
| Right inferior frontal gyrus | 446 | 56 | 32 | 0 | 3.11 |
| Right cerebellum | 446 | 24 | -62 | -63 | 3.22 |
| Left ventrolateral prefrontal cortex | 371 | -54 | 33 | -12 | 2.99 |
| Right inferior temporal gyrus | 371 | 46 | -16 | -24 | 3.66 |
| Right superior occipital gyrus | 365 | 20 | -96 | 24 | 3.02 |
| Left anterior cingulate cortex | 354 | -4 | 30 | 24 | 3.05 |
| Right superior frontal gyrus | 324 | 28 | 26 | 54 | 3.19 |
| Right middle frontal gyrus | 231 | 45 | -4 | 57 | 3.28 |
| Left superior temporal pole | 297 | -58 | 9 | -3 | 3.41 |
| Right precuneus | 257 | 9 | -68 | 57 | 3.09 |
| Left supramarginal gyrus | 236 | -64 | -28 | 34 | 2.98 |
| Right middle temporal gyrus | 226 | 69 | -40 | -3 | 3.18 |
| Superior medial frontal gyrus | 223 | 3 | 42 | 38 | 3.08 |
| Mid cingulate cortex | 213 | 6 | -4 | 44 | 3.39 |
| Left precuneus | 192 | -9 | -62 | 69 | 3.06 |
| Right superior temporal pole | 169 | 20 | 20 | -32 | 3.03 |
| Left lingual gyrus | 165 | -8 | -36 | 2 | 2.98 |
| Results considered significant at *p <* .005 | | | | | |
| †signifies that these regions were included in the cluster above. | | | | | |

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| **Table S2. *Neural correlates of caregiver global health*** | | | | | |
| Larger patient and healthy control volume in multiple medial frontal, anterior temporal, insular, and ventro-striatal regions was associated with better caregiver and partner global health (SF-36) when controlling for caregiver/partner sex, caregiver/partner age, patient diagnosis, patient dementia severity, patient cognitive functioning, scanner field strength, and patient total intracranial volume. Montreal Neurological Institute coordinates (x, y, z) given for maximum *T*-score for the cluster (cluster size > 150 mm3). Results are significant at *p <* .005, uncorrected. | | | | | |
| **Anatomical Region** | **Cluster Volume mm3** | **x** | **y** | **z** | **maximum *T*-score** |
| Right superior temporal gyrus | 2305 | 56 | 4 | -3 | 3.38 |
| Right superior temporal pole | † |  |  |  |  |
| Right insula | † |  |  |  |  |
| Left ventrolateral orbitofrontal cortex | 358 | -48 | 21 | -3 | 3.14 |
| Right superior temporal gyrus | 334 | 63 | -10 | 9 | 3.30 |
| Right thalamus | 233 | 14 | -16 | 15 | 2.78 |
| Left cerebellum crus 2 area | 219 | -28 | -81 | -40 | 2.89 |
| Left precentral gyrus | 216 | -46 | -2 | 39 | 3.22 |
| Superior frontal gyrus | 179 | 3 | 21 | 46 | 2.99 |
| Supplementary motor area | † |  |  |  |  |
| Right precentral gyrus | 159 | 42 | 3 | 42 | 3.06 |
| Right Heschl’s gyrus | 159 | 38 | -24 | 9 | 2.82 |
| Results considered significant at *p <* .005 | | | | | |
| †signifies that these regions were included in the cluster above. | | | | | |

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| **Table S3. *Neural correlates of caregiver health, excluding healthy controls***  Excluding healthy controls, the table displays regions in which smaller patient brain volume was associated with greater severity of caregiver psychopathology symptoms and worse caregiver mental and physical health when controlling for caregiver sex, caregiver age, patient diagnosis, patient dementia severity, patient cognitive functioning, scanner field strength, and patient total intracranial volume. Montreal Neurological Institute coordinates (x, y, z) given for maximum *T*-score for the cluster (cluster size > 150 mm3). Results are significant at *p* < .005, uncorrected. | | | | | |
| **Anatomical Region** | **Cluster Volume mm3** | **x** | **y** | **z** | **maximum *T*-score** |
| ***Caregiver severity of psychopathology symptoms*** | |  |  |  |  |
| Supplementary motor area | 2480 | -3 | 22 | 45 | 3.61 |
| Superior medial frontal gyrus | † |  |  |  |  |
| Medial orbitofrontal cortex | 1978 | 2 | 68 | -4 | 3.53 |
| Left cerebellum | 918 | -21 | -63 | -63 | 3.54 |
| Right cerebellum | 570 | 24 | -62 | -63 | 3.40 |
| Left inferior frontal gyrus | 496 | -57 | 20 | 26 | 3.43 |
| Left superior temporal pole | 361 | -58 | 9 | -3 | 3.27 |
| Right superior frontal gyrus | 354 | 30 | 28 | 56 | 3.40 |
| Left anterior cingulate cortex | 280 | -4 | 30 | 24 | 3.15 |
| Right ventral anterior insula | 280 | 45 | 16 | -8 | 2.91 |
| Right inferior orbitofrontal cortex | 273 | 56 | 30 | -2 | 2.90 |
| Right middle frontal gyrus | 257 | 46 | -4 | 57 | 3.09 |
| Right cuneus | 253 | 9 | -80 | 40 | 3.09 |
| Right superior occipital gyrus | 216 | 18 | -96 | 24 | 2.97 |
| Right inferior temporal gyrus | 203 | 45 | -16 | -24 | 3.34 |
| Left inferior orbitofrontal cortex | 186 | -54 | 32 | -12 | 2.82 |
| Right mid cingulate cortex | 172 | 6 | -4 | 44 | 3.20 |
| ***Caregiver global health*** |  |  |  |  |  |
| Right superior temporal gyrus | 1262 | 54 | 4 | -3 | 3.38 |
| Left cerebellum | 523 | -28 | -81 | -40 | 3.10 |
| Right ventral anterior insula | 358 | 45 | 20 | -8 | 3.10 |
| Left cerebellum | 324 | -18 | -56 | -62 | 3.01 |
| Right superior temporal gyrus | 230 | 63 | -12 | 9 | 3.14 |
| Left inferior orbitofrontal cortex | 226 | -50 | 21 | -3 | 2.93 |
| Right cerebellum | 216 | 9 | -88 | -30 | 2.79 |
| Vermis cerebellum | 196 | 0 | -52 | -2 | 2.92 |
| Results considered significant at *p* < .005 | | | | | |
| †signifies that these regions were included in the cluster above. | | | | | |

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| **Table S4. *Neural correlates of caregiver health, excluding individuals with FTD***  Excluding individuals with FTD, the table displays regions in which smaller patient and healthy control brain volume was associated with greater severity of psychopathology symptoms and worse global health in caregivers and study partners when controlling for caregiver sex, caregiver age, patient diagnosis, patient dementia severity, patient cognitive functioning, scanner field strength, and patient total intracranial volume. Montreal Neurological Institute coordinates (x, y, z) given for maximum *T*-score for the cluster (cluster size > 150 mm3). Results are significant at *p* < .005, uncorrected. | | | | | |
| **Anatomical Region** | **Cluster Volume mm3** | **x** | **y** | **z** | **maximum *T*-score** |
| ***Caregiver severity of psychopathology symptoms*** | |  |  |  |  |
| Right inferior frontal operculum | 2248 | 58 | 16 | 21 | 4.49 |
| Right inferior frontal triangularis | † |  |  |  |  |
| Medial orbitofrontal cortex | 982 | 3 | 66 | -8 | 3.50 |
| Right middle temporal pole | 591 | 32 | 15 | -34 | 3.22 |
| Right inferior temporal gyrus | 570 | 46 | -18 | -26 | 4.05 |
| Right fusiform gyrus | † |  |  |  |  |
| Right supramarginal gyrus | 489 | 58 | -44 | 40 | 3.71 |
| Right inferior parietal gyrus | † |  |  |  |  |
| Right postcentral gyrus | 388 | 62 | -3 | 21 | 3.25 |
| Right precentral gyrus | † |  |  |  |  |
| Left inferior frontal triangularis | 344 | -56 | 20 | 24 | 3.09 |
| Right precentral gyrus | 294 | 46 | -6 | 57 | 3.13 |
| Right cerebellum, area 8 | 277 | 21 | -40 | -57 | 3.08 |
| Right postcentral gyrus | 236 | 40 | -36 | 60 | 3.26 |
| Right middle frontal gyrus | 206 | 39 | 56 | 12 | 2.96 |
| Right cuneus | 186 | 12 | -80 | 40 | 3.03 |
| Right ventral anterior insula | 176 | 44 | 18 | -12 | 3.00 |
| ***Caregiver global health*** |  |  |  |  |  |
| Right superior temporal pole | 1252 | 58 | 12 | -3 | 3.37 |
| Right inferior frontal operculum | † |  |  |  |  |
| Right superior temporal gyrus | † |  |  |  |  |
| Thalamus | 746 | 0 | -21 | -3 | 3.05 |
| Right anterior insula | 489 | 38 | 14 | 9 | 3.29 |
| Right superior temporal gyrus | 284 | 63 | -12 | 9 | 3.21 |
| Right mid cingulate cortex | 230 | 10 | 2 | 46 | 3.19 |
| Left precentral gyrus | 206 | -48 | 3 | 30 | 3.18 |
| Right Heschl's gyrus | 176 | 38 | -24 | 8 | 2.94 |
| Right mid cingulate cortex | 155 | 10 | -15 | 45 | 3.29 |
| Results considered significant at *p* < .005 | | | | | |
| †signifies that these regions were included in the cluster above. | | | | | |