**Table S1.** Mean number of streamlines (NS) for each region pair.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Patients | Controls |  |  |
| Pair | M | SD | M | SD | *U* | *p* |
|  |
| PFC-LLTL | 5249.04 | 4950.38 | 7986.42 | 4095.53 | 181.0 | .007 |
| PFC-PCC | 16617.96 | 8371.92 | 16690.25 | 6349.44 | 318.0 | .910 |
| PFC-RLTL | 1191.13 | 1358.73 | 1401.86 | 1862.56 | 246.5 | .883 |
| PFC-RLOFC | 3747.41 | 5288.74 | 3857.48 | 332.81 | 258.5 | .311 |
| LLTL-PCC | 3700.41 | 4052.76 | 3245.67 | 5743.81 | 254.0 | .540 |
| PCC-LPHP | 4599.59 | 3378.93 | 5729.50 | 3584.98 | 285.0 | .260 |
| PCC-RPHP | 1973.74 | 1844.42 | 2815.96 | 2195.65 | 254.0 | .271 |
| RLTL-RIPL | 7653.52 | 6281.45 | 9634.67 | 6382.67 | 272.0 | .174 |
| RLTL-RLOFC | 3664.29 | 2813.64 | 3047.96 | 1988.19 | 304.0 | .557 |

Note. M = mean; SD = standard deviation, U = Mann-Whitney *U* test-statistic. PFC = Prefrontal cortex; LLTL = left lateral temporal lobe; PCC = posterior cingulate cortex; RLTL = right lateral temporal lobe; RLOFC = right lateral orbitofrontal cortex; RIPL = right inferior parietal lobule

**Table S2.** Mean fractional anisotropy (FA) for each region pair.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Patients | Controls |  |  |  |
| Pair | M | SD | M | SD | *t* | *df* | *p* |
|  | Fractional Anisotropy |
| PFC-LLTL | .423 | .021 | .430 | .017 | 1.185 | 49 | .242 |
| PFC-PCC | .417 | .019 | .424 | .024 | 1.126 | 49 | .266 |
| PFC-RLTL | .426 | .031 | .433 | .030 | .786 | 43 | .436 |
| PFC-RLOFC | .413 | .030 | .428 | .027 | 1.929 | 48 | .060 |
| LLTL-PCC | .435 | .034 | .443 | .026 | .821 | 46 | .416 |
| PCC-LPHP | .431 | .027 | .447 | .027 | 2.176 | 51 | .034 |
| PCC-RPHP | .420 | .033 | .423 | .033 | .278 | 48 | .783 |
| RLTL-RIPL | .392 | .019 | .397 | .020 | 1.074 | 51 | .288 |
| RLTL-RLOFC | .382 | .034 | .402 | .028 | 2.383 | 50 | .021 |

Note. M = mean; SD = standard deviation: PFC = Prefrontal cortex; LLTL = left lateral temporal lobe; PCC = posterior cingulate cortex; RLTL = right lateral temporal lobe; RLOFC = right lateral orbitofrontal cortex; RIPL = right inferior parietal lobule

**Table S3.** Mean resting state functional connectivity (RSFC(Z)) for each region pair.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Patients | Controls |  |  |  |
| Pair | M | SD | M | SD | *t* | *df* | *p* |
|  | RSFC |
| PFC-LLTL | 1.174 | .240 | .992 | .251 | -2.689 | 51 | .010 |
| PFC-PCC | .898 | .254 | .883 | .282 | -.201 | 51 | .841 |
| PFC-RLTL | .817 | .312 | .721 | .253 | -1.208 | 51 | .233 |
| PFC-RLOFC | .713 | .355 | .861 | .267 | 1.690 | 51 | .097 |
| LLTL-PCC | .863 | .337 | .726 | .300 | -1.539 | 51 | .130 |
| PCC-LPHP | .337 | .140 | .378 | .220 | .789 | 37.481 | .436 |
| PCC-RPHP | .169 | .219 | .286 | .286 | 1.682 | 51 | .099 |
| RLTL-RIPL | .751 | .246 | .819 | .310 | .901 | 51 | .372 |
| RLTL-RLOFC | .633 | .317 | .675 | .207 | .556 | 51 | .580 |

Note. M = mean; SD = standard deviation: RSFC(Z) = r-to-z transformed resting state functional connectivity; PFC = Prefrontal cortex; LLTL = left lateral temporal lobe; PCC = posterior cingulate cortex; RLTL = right lateral temporal lobe; RLOFC = right lateral orbitofrontal cortex; RIPL = right inferior parietal lobule, 1*t*-test for unequal variances.

**Table S4**. Partial correlations between RSFC(Z) and fractional anisotropy (FA) in patients controlling for age, medication dosage, and intracranial volume.

|  |
| --- |
| **Resting State Functional Connectivity** |
| **Fractional Anisotropy** | **dfs** | PFC-LLTL | PFC-PCC | PFC-RLTL | PFC-RLOFC | LLTL-PCC | PCC-LPHP | PCC-RPHP | RLTL-RIPL | RLTL-RLOFC |
| PFC-LLTL | 21 | -.185 | -.106 | -.014 | -.129 | .119 | .282 | -.047 | .061 | .160 |
| PFC-PCC | 21 | -.280 | -.239 | -.300 | -.101 | -.218 | .418\* | .009 | -.164 | -.053 |
| PFC-RLTL | 17 | -.189 | .002 | .059 | -.189 | -.022 | .325 | .420 | -.157 | .153 |
| PFC-RLOFC | 21 | -.192 | .032 | -.018 | -.054 | .199 | .360 | .108 | -.077 | .172 |
| LLTL-PCC | 21 | -.129 | -.105 | .169 | -.084 | .088 | .133 | .219 | .041 | .241 |
| PCC-LPHP | 23 | -.320 | -.294 | -.252 | -.308 | -.036 | .252 | .152 | -.178 | -.016 |
| PCC-RPHP | 21 | -.196 | -.247 | .028 | -.145 | -.050 | .234 | -.135 | .189 | .048 |
| RLTL-RIPL | 23 | .104 | -.048 | .076 | -.060 | .170 | .179 | .055 | -.135 | .238 |
| RLTL-RLOFC | 22 | .002 | .012 | .104 | -.086 | .192 | .052 | .117 | .127 | .228 |

Note. \*\* Pearson partial correlation is significant at the .01 level (2-tailed), \* Pearson partial correlation is significant at the .05 level (2-tailed). Abbreviations: PFC = Prefrontal cortex; LLTL = left lateral temporal lobe; PCC = posterior cingulate cortex; RLTL = right lateral temporal lobe; RLOFC = right lateral orbitofrontal cortex; RIPL = right inferior parietal lobule.

**Table S5**. Spearman partial correlations between RSFC(Z) and fractional anisotropy (FA) in patients controlling for age, medication dosage, and intracranial volume.

|  |
| --- |
| **Resting State Functional Connectivity** |
| **Number of Streamlines** | **df**s | PFC-LLTL | PFC-PCC | PFC-RLTL | PFC-RLOFC | LLTL-PCC | PCC-LPHP | PCC-RPHP | RLTL-RIPL | RLTL-RLOFC |
| PFC-LLTL | 21 | .175 | .471 | .333 | .499\* | .152 | -.028 | -.214 | .060 | .472\* |
| PFC-PCC | 21 | .346 | .506\*\* | .128 | .191 | .384 | -.242 | -.312 | .573\*\* | .429\* |
| PFC-RLTL | 17 | .091 | .361 | .365 | .199 | .243 | -.183 | -.173 | .249 | .196 |
| PFC-RLOFC | 21 | -.023 | .338 | .158 | .027 | .375 | .040 | -.217 | .058 | .020 |
| LLTL-PCC | 21 | .093 | -.337 | .073 | -.051 | -.389 | -.175 | .012 | .023 | -.053 |
| PCC-LPHP | 23 | .169 | .021 | .248 | .113 | -.087 | -.070 | .061 | .232 | -.011 |
| PCC-RPHP | 21 | .048 | .147 | .202 | .301 | .040 | .034 | -.109 | .405 | .077 |
| RLTL-RIPL | 23 | .052 | .034 | -.254 | -.109 | -.100 | -.238 | .198 | -.496\* | -.047 |
| RLTL-RLOFC | 22 | .152 | .174 | .021 | .023 | .220 | -.242 | .076 | .240 | .126 |

Note. \*\* Spearman partial correlation is significant at the .01 level (2-tailed), \* Spearman partial correlation is significant at the .05 level (2-tailed). Abbreviations: PFC = Prefrontal cortex; LLTL = left lateral temporal lobe; PCC = posterior cingulate cortex; RLTL = right lateral temporal lobe; RLOFC = right lateral orbitofrontal cortex; RIPL = right inferior parietal lobule.

**Table S6**. Factor loadings for patients for multimodal connectivity scores for both Fractional Anisotropy (FA) and Number of Streamlines (NS).

|  |
| --- |
| Fractional Anisotropy (FA) |
|  Measure | Loading | Factor Eigenvalue | Bartlett’s Test | *pBartlett* |
| PFC\_LLTL | -.79 (FA) | 1.27 | 1.81 | .18 |
| PFC\_PCC | .71 | 1.00 | .00 | .98 |
| PFC\_RLTL | .79 | 1.26 | 1.42 | .23 |
| PFC\_RLOFC | .76 | 1.16 | .64 | .42 |
| LLTL\_PCC | -.76 (FC) | 1.15 | .58 | .45 |
| PCC\_LPHP | .73 | 1.06 | .11 | .74 |
| PCC\_RPHP | .74 | 1.10 | .23 | .63 |
| RLTL\_RIPL | -.83 (FC) | 1.38 | 4.23 | .04 |
| RLTL\_RLOFC | .76 | 1.14 | .54 | .46 |
| Number of Streamlines (NS) |
| PFC\_LLTL | .80 | 1.28 | 1.93 | .16 |
| PFC\_PCC | .86 | 1.48 | 6.30 | .012 |
| PFC\_RLTL | .86 | 1.48 | 5.29 | .021 |
| PFC\_RLOFC | .81 | 1.30 | 2.30 | .13 |
| LLTL\_PCC | -.72 (NS) | 1.02 | .013 | .91 |
| PCC\_LPHP | -.71 (NS) | 1.01 | .002 | .96 |
| PCC\_RPHP | .74 | 1.08 | .17 | .68 |
| RLTL\_RIPL | -.84 (NS) | 1.42 | 5/23 | .023 |
| RLTL\_RLOFC | -.73 (NS) | 1.07 | .12 | .73 |

Note. Abbreviations: FA = fractional anisotropy, NS = number of streamlines; PFC = Prefrontal cortex; LLTL = left lateral temporal lobe; PCC = posterior cingulate cortex; RLTL = right lateral temporal lobe; RLOFC = right lateral orbitofrontal cortex; RIPL = right inferior parietal lobule. Under loading, the label in parentheses refers to which variable loads negatively on the eigenvariate.