For research only

BrainStructureAges report

version 1.0 release 01-Jun-2023

Subject: job1938129

Sex: Male

Age: 47.0

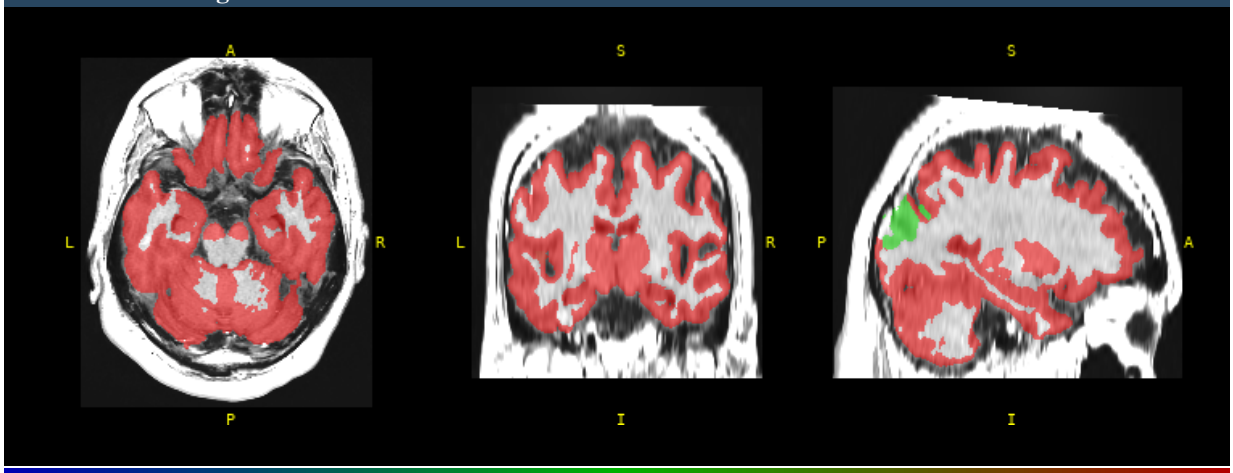
Report date: 14-Jan-2026

Quality control: C

Biological age prediction

Age estimation	66.19

Brain structure ages estimation



42.0 47.0 52.0

[1] Huy-Dung Nguyen, Michaël Clément, Boris Mansencal, Pierrick Coupé, *Brain Structure Ages - A new biomarker for multi-disease classification*, Hum Brain Mapp. 2024 Jan; 45(1) PDF

The quality control evaluates the input image quality after preprocessing. A = good, B = moderate (i.e., the output requires human verification) and C = bad (i.e., the output should not be used).

All the result images are located in the MNI space (neurological orientation).

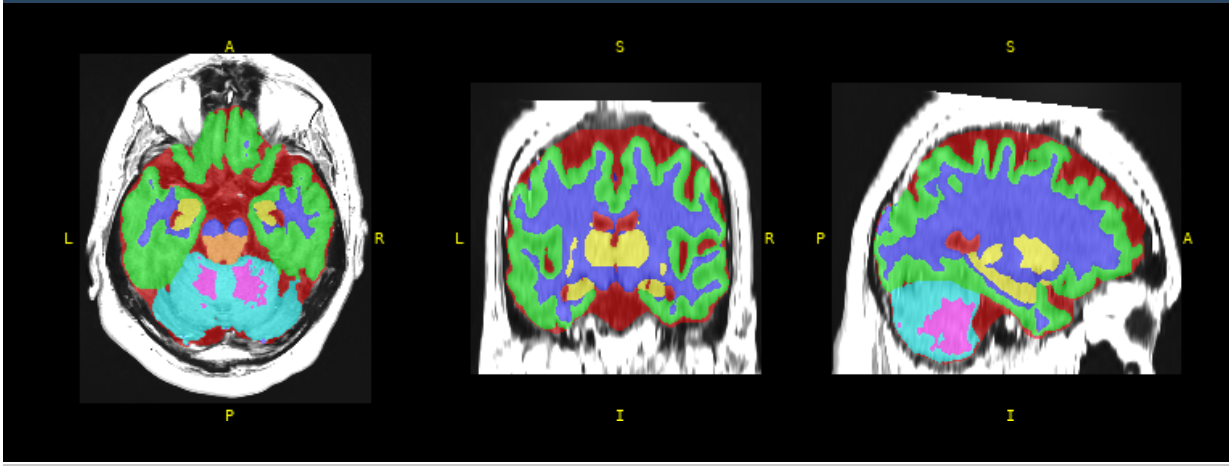
All ages are given in years.

Age estimations outside [subjects age -5y; subjects age +5y] are highlighted in the tables and clamped on figure.

Brain Structure Ages			
Subcortical	**Age**		**Age**
Right accumbens	66.26	Left accumbens	65.21
Right amygdala	66.21	Left amygdala	64.32
Right basal forebrain	66.30	Left basal forebrain	64.72
Right caudate	66.42	Left caudate	65.04
Right hippocampus	62.79	Left hippocampus	60.70
Right pallidum	65.36	Left pallidum	63.70
Right putamen	65.05	Left putamen	61.92
Right thalamus	62.30	Left thalamus	60.89
Right ventral DC	64.71	Left ventral DC	64.10
Cortical	**Age**		**Age**
Frontal lobe			
Right frontal pole	71.19	Left frontal pole	68.84
Right gyrus rectus	70.02	Left gyrus rectus	68.36
Right opercular inf. frontal gyrus	65.23	Left opercular inf. frontal gyrus	59.04
Right orbital inf. frontal gyrus	67.36	Left orbital inf. frontal gyrus	61.25
Right triangular inf. frontal gyrus	67.33	Left triangular inf. frontal gyrus	59.58
Right medial frontal cortex	68.51	Left medial frontal cortex	67.57
Right middle frontal gyrus	64.88	Left middle frontal gyrus	62.53
Right anterior orbital gyrus	69.13	Left anterior orbital gyrus	66.00
Right lateral orbital gyrus	68.61	Left lateral orbital gyrus	62.18
Right medial orbital gyrus	69.12	Left medial orbital gyrus	67.56
Right posterior orbital gyrus	66.47	Left posterior orbital gyrus	62.24
Right precentral gyrus	61.33	Left precentral gyrus	59.02
Right precentral gyrus medial segment	58.00	Left precentral gyrus medial segment	57.33
Right subcallosal area	66.17	Left subcallosal area	65.73
Right sup. frontal gyrus	62.90	Left sup. frontal gyrus	63.83
Right sup. frontal gyrus medial segment	66.34	Left sup. frontal gyrus medial segment	66.17
Right supplementary motor cortex	60.38	Left supplementary motor cortex	61.43
Temporal lobe			
Right fusiform gyrus	65.73	Left fusiform gyrus	61.44
Right planum polare	63.91	Left planum polare	56.64
Right planum temporale	55.78	Left planum temporale	49.93
Right inf. temporal gyrus	65.69	Left inf. temporal gyrus	62.39
Right middle temporal gyrus	59.73	Left middle temporal gyrus	55.79
Right sup. temporal gyrus	58.92	Left sup. temporal gyrus	51.99
Right transverse temporal gyrus	58.79	Left transverse temporal gyrus	51.63
Right temporal pole	67.16	Left temporal pole	63.23
Parietal lobe			
Right angular gyrus	53.84	Left angular gyrus	47.15
Right postcentral gyrus	59.42	Left postcentral gyrus	56.54
Right postcentral gyrus medial segment	57.81	Left postcentral gyrus medial segment	56.41
Right precuneus	57.57	Left precuneus	55.51
Right sup. parietal lobule	58.51	Left sup. parietal lobule	55.54
Right supramarginal gyrus	55.57	Left supramarginal gyrus	50.79

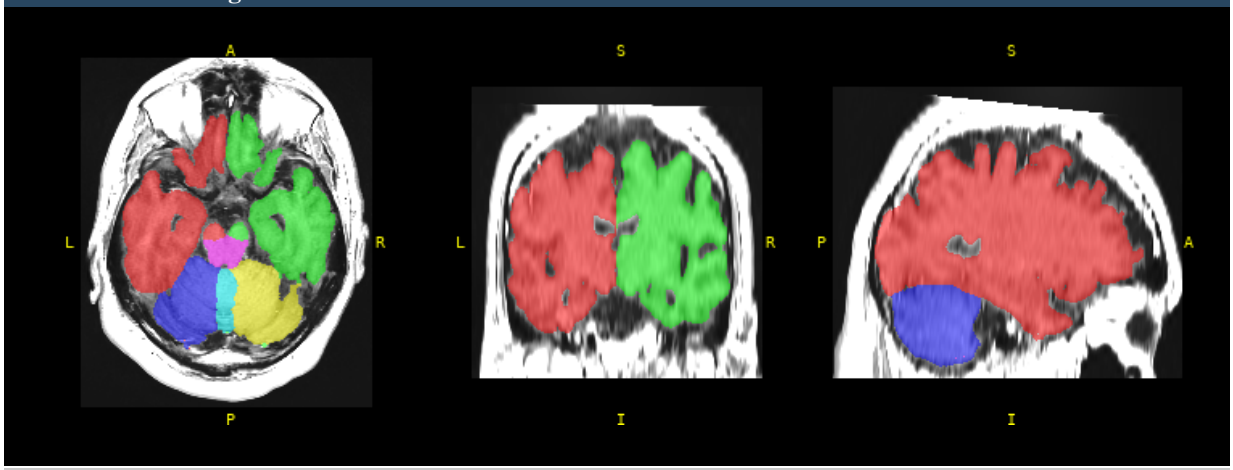
Occipital lobe			
Right calcarine cortex	57.55	Left calcarine cortex	56.21
Right cuneus	55.55	Left cuneus	52.19
Right lingual gyrus	60.42	Left lingual gyrus	58.93
Right occipital fusiform gyrus	62.44	Left occipital fusiform gyrus	58.98
Right inf. occipital gyrus	56.90	Left inf. occipital gyrus	52.73
Right middle occipital gyrus	52.00	Left middle occipital gyrus	45.04
Right sup. occipital gyrus	54.40	Left sup. occipital gyrus	47.35
Right occipital pole	55.26	Left occipital pole	54.17
Limbic cortex			
Right entorhinal area	67.51	Left entorhinal area	64.85
Right anterior cingulate gyrus	67.32	Left anterior cingulate gyrus	67.04
Right middle cingulate gyrus	61.43	Left middle cingulate gyrus	61.69
Right posterior cingulate gyrus	57.62	Left posterior cingulate gyrus	56.70
Right parahippocampal gyrus	65.67	Left parahippocampal gyrus	62.77
Insular cortex			
Right anterior insula	64.72	Left anterior insula	59.34
Right posterior insula	62.20	Left posterior insula	54.95
Right central operculum	61.99	Left central operculum	54.26
Right frontal operculum	65.10	Left frontal operculum	58.44
Right parietal operculum	57.42	Left parietal operculum	50.60
CSF	**Age**		**Age**
3rd ventricle	63.49	4th ventricle	65.26
Right inf. lateral ventricle	64.50	Left inf. lateral ventricle	60.38
Right lateral ventricle	62.55	Left lateral ventricle	61.28
Cerebellar vermis	**Age**		**Age**
Lobules I-V	62.74	Lobules VI-VII	65.29
Lobules VIII-X	66.43		

Tissue segmentation



Tissue	Volume (cm^3 / %)	
White Matter (WM)	365.19 / 30.099	[30.799, 35.246]
Grey Matter (GM)	606.47 / 49.985	[50.916, 54.421]
Subcortical GM	34.60 / 2.852	[2.956, 3.430]
Cortical GM	482.76 / 39.789	[39.855, 43.148]
Cerebellar GM	89.11 / 7.344	[7.043, 8.783]
Cerebro Spinal Fluid (CSF)	226.88 / 18.699	[10.299, 16.042]
Brain (WM+GM)	971.66 / 80.085	[82.710, 88.351]
Intracranial Cavity (IC)	1213.29 / 100.000	[100.000, 100.000]

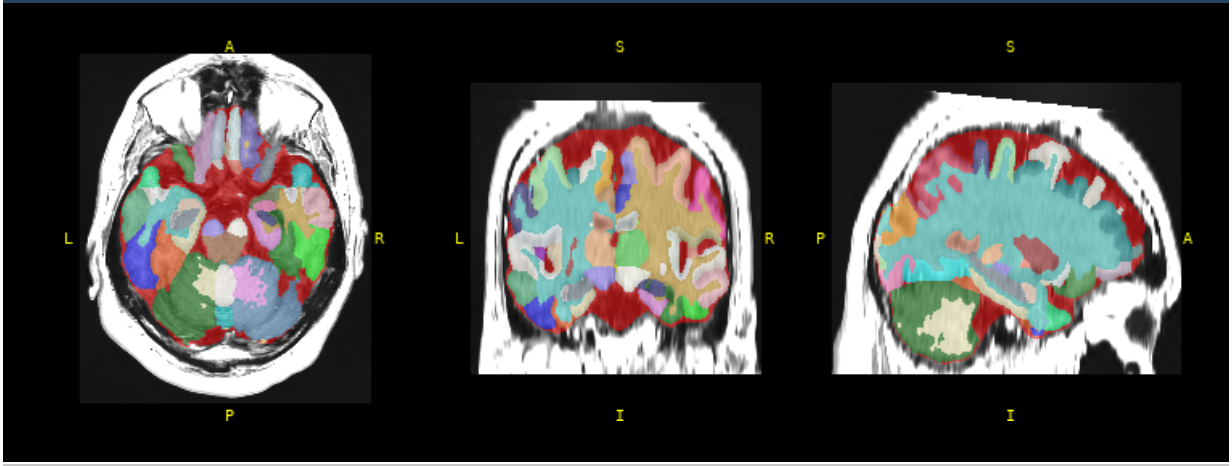
Macrostructure segmentation



Structure	Total (cm^3 / %)	Right (cm^3 / %)	Left (cm^3 / %)	Asymmetry (%)
Cerebrum	854.10 / 70.395	426.45 / 35.148	427.65 / 35.247	-0.2804
	[72.914, 78.615]	[36.426, 39.365]	[36.447, 39.292]	[-0.876, 1.064]
Cerebrum WM	336.74 / 27.754	168.06 / 13.851	168.69 / 13.903	-0.3755
	[29.045, 33.402]	[14.503, 16.694]	[14.531, 16.735]	[-1.608, 1.138]
Cerebrum GM	517.36 / 42.641	258.40 / 21.297	258.96 / 21.344	-0.2186
	[43.056, 46.334]	[21.538, 23.230]	[21.495, 23.147]	[-0.828, 1.455]
Cerebellum*	107.32 / 8.845	52.92 / 4.362	54.40 / 4.483	-2.7538
	[7.895, 9.904]	[3.974, 4.997]	[3.919, 4.914]	[-1.233, 3.980]
Cerebellum WM	28.45 / 2.345	13.13 / 1.083	15.31 / 1.262	-15.3224
	[1.540, 2.076]	[0.770, 1.050]	[0.769, 1.033]	[-3.015, 4.126]
Cerebellum GM	78.87 / 6.500	39.78 / 3.279	39.08 / 3.221	1.7801
	[6.344, 7.929]	[3.172, 3.997]	[3.142, 3.933]	[-1.130, 4.308]
Vermis	10.24 / 0.844			
	[0.693, 0.937]			
Brainstem	14.75 / 1.216			
	[1.149, 1.479]			

** Cerebellum volumes do not include vermis volume.*

Structure segmentation



Subcortical	Total (cm^3 / %)	Right (cm^3 / %)	Left (cm^3 / %)	Asymmetry (%)
Accumbens	0.51 / 0.042 [0.054, 0.082]	0.20 / 0.017 [0.024, 0.040]	0.30 / 0.025 [0.029, 0.043]	-38.8298 [-25.567, 3.459]
Amygdala	1.44 / 0.119 [0.140, 0.179]	0.68 / 0.056 [0.071, 0.092]	0.77 / 0.063 [0.067, 0.088]	-12.2717 [-4.306, 11.574]
Basal forebrain	0.75 / 0.062 [0.039, 0.059]	0.34 / 0.028 [0.017, 0.027]	0.41 / 0.033 [0.020, 0.033]	-16.7719 [-31.914, 3.608]
Caudate	4.21 / 0.347 [0.360, 0.500]	2.08 / 0.172 [0.183, 0.253]	2.13 / 0.176 [0.176, 0.248]	-2.2797 [-2.152, 8.103]
Hippocampus	5.00 / 0.413 [0.440, 0.583]	2.40 / 0.198 [0.220, 0.295]	2.61 / 0.215 [0.216, 0.291]	-8.2421 [-4.416, 8.987]
Pallidum	1.92 / 0.158 [0.191, 0.247]	1.00 / 0.083 [0.093, 0.122]	0.92 / 0.076 [0.098, 0.126]	9.1485 [-8.713, 1.230]
Putamen	5.59 / 0.461 [0.553, 0.710]	2.65 / 0.219 [0.273, 0.352]	2.94 / 0.242 [0.277, 0.360]	-10.2130 [-5.665, 2.354]
Thalamus	15.17 / 1.250 [1.036, 1.215]	7.84 / 0.646 [0.515, 0.604]	7.33 / 0.604 [0.519, 0.614]	6.8031 [-4.066, 2.458]
Ventral DC	8.79 / 0.725 [0.621, 0.756]	4.28 / 0.352 [0.306, 0.373]	4.52 / 0.372 [0.314, 0.384]	-5.4761 [-5.133, 0.380]

Cortical	Total (cm^3 / %)	Right (cm^3 / %)	Left (cm^3 / %)	Asymmetry (%)
Frontal lobe	168.91 / 13.922 [12.641, 14.453]	86.06 / 7.093 [6.344, 7.290]	82.85 / 6.829 [6.264, 7.180]	3.8011 [-1.999, 4.093]
Frontal pole	5.47 / 0.451 [0.389, 0.563]	3.20 / 0.264 [0.201, 0.293]	2.27 / 0.187 [0.179, 0.284]	34.0426 [-10.178, 23.212]
Gyrus rectus	3.30 / 0.272 [0.241, 0.378]	1.69 / 0.139 [0.119, 0.197]	1.61 / 0.132 [0.107, 0.192]	5.1261 [-16.979, 31.949]
Opercular inf. frontal gyrus	6.41 / 0.528 [0.377, 0.639]	3.51 / 0.289 [0.172, 0.347]	2.90 / 0.239 [0.170, 0.327]	18.8225 [-31.472, 37.704]
Orbital inf. frontal gyrus	2.58 / 0.212 [0.162, 0.294]	1.64 / 0.135 [0.071, 0.152]	0.94 / 0.077 [0.071, 0.160]	54.3450 [-43.024, 39.159]
Triangular inf. frontal gyrus	6.11 / 0.504 [0.381, 0.646]	2.76 / 0.228 [0.172, 0.331]	3.35 / 0.276 [0.178, 0.348]	-19.1435 [-33.094, 29.661]
Medial frontal cortex	2.33 / 0.192 [0.211, 0.331]	1.18 / 0.097 [0.098, 0.182]	1.15 / 0.095 [0.098, 0.174]	3.0180 [-28.444, 30.502]
Middle frontal gyrus	38.89 / 3.206 [2.581, 3.404]	18.86 / 1.554 [1.273, 1.738]	20.03 / 1.651 [1.266, 1.711]	-6.0545 [-9.689, 11.607]
Anterior orbital gyrus	2.43 / 0.200 [0.226, 0.380]	1.37 / 0.113 [0.111, 0.205]	1.06 / 0.087 [0.099, 0.197]	25.5840 [-25.555, 37.039]
Lateral orbital gyrus	3.51 / 0.290 [0.278, 0.444]	1.84 / 0.151 [0.124, 0.232]	1.68 / 0.138 [0.130, 0.239]	9.2414 [-34.717, 27.477]
Medial orbital gyrus	7.16 / 0.590 [0.553, 0.744]	3.50 / 0.289 [0.260, 0.377]	3.66 / 0.302 [0.276, 0.388]	-4.3437 [-19.405, 12.675]
Posterior orbital gyrus	6.27 / 0.517 [0.378, 0.553]	2.96 / 0.244 [0.177, 0.281]	3.31 / 0.273 [0.183, 0.288]	-10.9146 [-21.871, 18.776]
Precentral gyrus	25.14 / 2.072 [1.750, 2.144]	12.73 / 1.050 [0.859, 1.099]	12.41 / 1.023 [0.865, 1.086]	2.5820 [-9.305, 10.061]
Precentral gyrus medial segment	5.05 / 0.416 [0.328, 0.496]	2.33 / 0.192 [0.157, 0.251]	2.71 / 0.224 [0.159, 0.262]	-15.1702 [-24.814, 19.056]
Subcallosal area	2.25 / 0.186 [0.128, 0.262]	1.25 / 0.103 [0.063, 0.132]	1.01 / 0.083 [0.063, 0.132]	21.2358 [-13.349, 12.960]
Sup. frontal gyrus	27.91 / 2.300 [1.854, 2.505]	14.89 / 1.227 [0.899, 1.274]	13.02 / 1.073 [0.908, 1.283]	13.3559 [-13.975, 12.605]
Sup. frontal gyrus medial segment	12.85 / 1.059 [0.782, 1.136]	7.18 / 0.591 [0.379, 0.630]	5.67 / 0.467 [0.341, 0.564]	23.4693 [-17.758, 35.386]
Supplementary motor cortex	11.25 / 0.927 [0.658, 0.943]	5.17 / 0.426 [0.310, 0.483]	6.08 / 0.501 [0.313, 0.490]	-16.1558 [-23.001, 19.655]

Temporal lobe	89.47 / 7.374 [7.427, 8.754]	43.52 / 3.587 [3.710, 4.421]	45.95 / 3.788 [3.668, 4.370]	-5.4450 [-3.932, 6.084]
Fusiform gyrus	11.55 / 0.952 [0.955, 1.384]	5.68 / 0.468 [0.473, 0.715]	5.87 / 0.484 [0.453, 0.698]	-3.2902 [-13.710, 19.830]
Planum polare	5.16 / 0.425 [0.247, 0.356]	2.52 / 0.208 [0.119, 0.180]	2.64 / 0.217 [0.120, 0.187]	-4.4852 [-18.192, 17.279]
Planum temporale	2.60 / 0.214 [0.223, 0.392]	1.14 / 0.094 [0.084, 0.184]	1.46 / 0.120 [0.121, 0.223]	-24.2708 [-54.465, 9.543]
Inf. temporal gyrus	16.49 / 1.359 [1.569, 2.106]	7.10 / 0.586 [0.755, 1.073]	9.39 / 0.774 [0.765, 1.094]	-27.7233 [-16.281, 13.457]
Middle temporal gyrus	26.24 / 2.163 [1.901, 2.434]	12.82 / 1.056 [0.950, 1.254]	13.43 / 1.107 [0.888, 1.221]	-4.6742 [-10.424, 16.388]
Sup. temporal gyrus	12.08 / 0.996 [0.898, 1.243]	6.26 / 0.516 [0.424, 0.635]	5.82 / 0.480 [0.429, 0.649]	7.3419 [-21.536, 18.574]
Transverse temporal gyrus	3.37 / 0.278 [0.192, 0.301]	1.71 / 0.141 [0.084, 0.151]	1.66 / 0.137 [0.096, 0.163]	3.1313 [-35.117, 15.621]
Temporal pole	11.97 / 0.987 [1.088, 1.526]	6.28 / 0.518 [0.530, 0.772]	5.69 / 0.469 [0.546, 0.774]	9.8272 [-11.409, 9.864]
Parietal lobe	99.72 / 8.219 [7.767, 9.020]	48.97 / 4.036 [3.841, 4.523]	50.75 / 4.183 [3.886, 4.534]	-3.5806 [-5.286, 3.704]
Angular gyrus	19.31 / 1.591 [1.286, 1.915]	9.18 / 0.756 [0.675, 1.049]	10.13 / 0.835 [0.558, 0.937]	-9.8841 [-8.175, 31.722]
Postcentral gyrus	20.28 / 1.672 [1.466, 1.862]	9.97 / 0.822 [0.688, 0.906]	10.31 / 0.850 [0.744, 1.004]	-3.3141 [-20.442, 5.017]
Postcentral gyrus medial segment	1.66 / 0.137 [0.103, 0.202]	0.85 / 0.070 [0.046, 0.112]	0.81 / 0.067 [0.048, 0.103]	4.2311 [-32.565, 38.899]
Precuneus	21.00 / 1.731 [1.491, 1.893]	10.04 / 0.828 [0.734, 0.964]	10.96 / 0.903 [0.724, 0.958]	-8.7343 [-8.643, 11.425]
Sup. parietal lobule	22.03 / 1.815 [1.418, 1.979]	10.82 / 0.892 [0.688, 0.999]	11.21 / 0.924 [0.689, 1.009]	-3.5613 [-15.247, 14.563]
Supramarginal gyrus	15.44 / 1.273 [1.086, 1.533]	8.11 / 0.669 [0.492, 0.798]	7.33 / 0.604 [0.531, 0.797]	10.0893 [-23.057, 20.468]

Occipital lobe	60.38 / 4.977 [5.558, 6.835]	31.47 / 2.594 [2.817, 3.532]	28.91 / 2.383 [2.682, 3.353]	8.4941 [-3.678, 10.055]
Calcarine cortex	6.81 / 0.561 [0.425, 0.721]	3.24 / 0.267 [0.213, 0.365]	3.58 / 0.295 [0.201, 0.364]	-10.0079 [-13.223, 17.788]
Cuneus	7.22 / 0.595 [0.610, 0.901]	3.62 / 0.298 [0.296, 0.474]	3.60 / 0.297 [0.295, 0.457]	0.4119 [-18.470, 19.037]
Lingual gyrus	14.03 / 1.157 [1.132, 1.551]	6.78 / 0.558 [0.552, 0.798]	7.26 / 0.598 [0.536, 0.788]	-6.8813 [-13.883, 19.060]
Occipital fusiform gyrus	5.73 / 0.472 [0.468, 0.751]	2.64 / 0.218 [0.208, 0.392]	3.09 / 0.255 [0.219, 0.411]	-15.5008 [-39.560, 25.977]
Inf. occipital gyrus	9.72 / 0.801 [0.887, 1.301]	5.38 / 0.444 [0.441, 0.700]	4.33 / 0.357 [0.399, 0.655]	21.6036 [-17.651, 28.514]
Middle occipital gyrus	7.24 / 0.597 [0.646, 0.982]	4.47 / 0.369 [0.318, 0.521]	2.77 / 0.228 [0.289, 0.500]	47.0390 [-19.794, 29.006]
Sup. occipital gyrus	6.36 / 0.524 [0.464, 0.781]	3.63 / 0.299 [0.242, 0.438]	2.73 / 0.225 [0.196, 0.376]	28.2556 [-11.846, 41.572]
Occipital pole	3.26 / 0.269 [0.308, 0.542]	1.71 / 0.141 [0.143, 0.283]	1.55 / 0.128 [0.141, 0.280]	10.2032 [-29.465, 29.829]
Limbic cortex	36.43 / 3.003 [2.833, 3.399]	17.79 / 1.466 [1.343, 1.703]	18.65 / 1.537 [1.429, 1.764]	-4.7183 [-14.619, 7.367]
Entorhinal area	3.71 / 0.306 [0.258, 0.417]	1.97 / 0.162 [0.125, 0.217]	1.74 / 0.143 [0.124, 0.208]	12.3610 [-18.180, 21.889]
Anterior cingulate gyrus	7.43 / 0.612 [0.658, 0.994]	3.31 / 0.273 [0.281, 0.506]	4.12 / 0.339 [0.334, 0.541]	-21.7328 [-35.111, 17.371]
Middle cingulate gyrus	9.96 / 0.821 [0.663, 0.877]	4.99 / 0.411 [0.322, 0.463]	4.97 / 0.410 [0.309, 0.452]	0.2444 [-17.475, 21.840]
Posterior cingulate gyrus	9.08 / 0.748 [0.615, 0.798]	4.47 / 0.369 [0.291, 0.405]	4.61 / 0.380 [0.308, 0.408]	-2.9940 [-15.172, 10.127]
Parahippocampal gyrus	6.25 / 0.515 [0.418, 0.584]	3.05 / 0.251 [0.194, 0.282]	3.20 / 0.264 [0.218, 0.310]	-5.0406 [-21.505, 2.324]
Insular cortex	27.84 / 2.295 [2.017, 2.370]	13.38 / 1.103 [0.964, 1.165]	14.46 / 1.192 [1.026, 1.221]	-7.7097 [-10.257, 1.734]
Anterior insula	7.34 / 0.605 [0.555, 0.697]	3.58 / 0.295 [0.270, 0.350]	3.76 / 0.310 [0.281, 0.354]	-5.0460 [-9.141, 4.563]
Posterior insula	4.16 / 0.343 [0.298, 0.388]	1.96 / 0.162 [0.147, 0.200]	2.20 / 0.181 [0.146, 0.195]	-11.5047 [-8.769, 12.975]
Central operculum	8.24 / 0.679 [0.505, 0.670]	3.96 / 0.327 [0.235, 0.335]	4.27 / 0.352 [0.253, 0.349]	-7.4719 [-19.807, 10.932]
Frontal operculum	3.44 / 0.284 [0.210, 0.358]	1.60 / 0.132 [0.095, 0.183]	1.84 / 0.151 [0.102, 0.188]	-13.5640 [-31.136, 25.601]
Parietal operculum	4.66 / 0.384 [0.282, 0.432]	2.28 / 0.188 [0.116, 0.206]	2.38 / 0.196 [0.150, 0.239]	-4.6161 [-39.320, 8.085]

CSF	Total (cm^3 / %)	Right (cm^3 / %)	Left (cm^3 / %)	Asymmetry (%)
Inf. lateral ventricle	1.33 / 0.109 [0.033, 0.105]	0.85 / 0.070 [0.015, 0.063]	0.48 / 0.039 [0.014, 0.050]	55.5102 [-35.648, 64.430]
Lateral ventricle	15.34 / 1.264 [0.752, 2.763]	7.40 / 0.610 [0.353, 1.378]	7.94 / 0.655 [0.366, 1.454]	-7.1410 [-35.778, 30.303]
3rd ventricle	0.72 / 0.059 [0.036, 0.116]			
4th ventricle	1.31 / 0.108 [0.076, 0.175]			
External CSF	208.18 / 17.159 [8.716, 14.169]			

Cerebellar vermis	Total (cm^3 / %)
Lobules I-V	5.26 / 0.433 [0.331, 0.479]
Lobules VI-VII	2.26 / 0.186 [0.149, 0.229]
Lobules VIII-X	2.72 / 0.224 [0.176, 0.262]