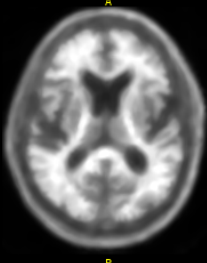
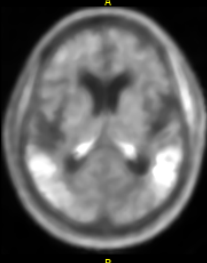
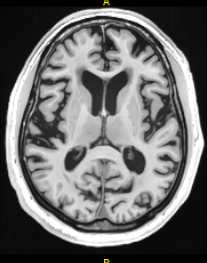
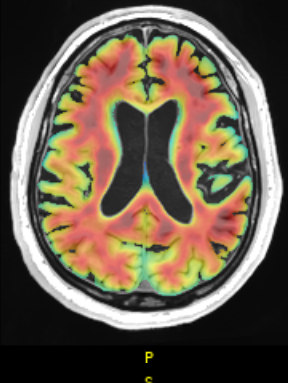
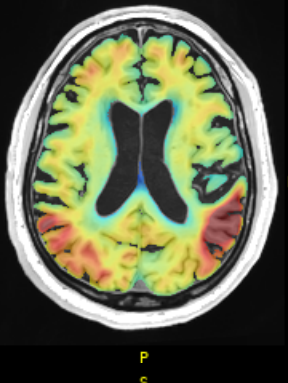
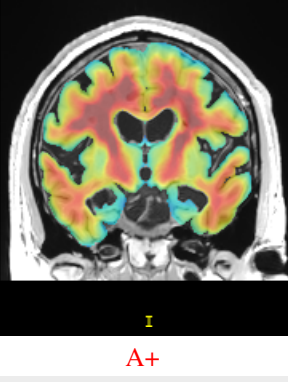
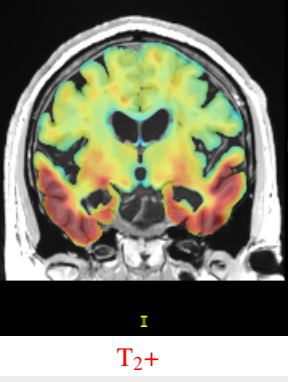
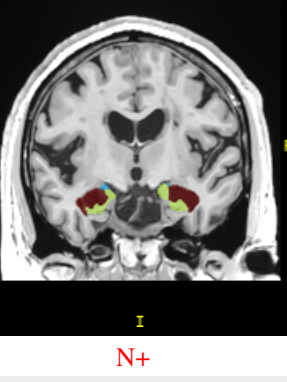


Subject: ADNI_022_S_6796_MR_Accelerated_Sagittal_MPRAGE_br_raw_20190904140224381_84_...

	Amyloid PET ¹⁸ F-Florbetaben	Tau PET ¹⁸ F-Flortaucipir	T1w
Sex: Male			
Age: 72.0			
Report date: 03-Jul-2025			
Quality control T1w: A			

A / T₂ / N Biomarkers

Amyloid	Tau	Neurodegeneration
		
		
A+	T ₂ +	N+
Centiloid = 73.54	CenTauRz = 11.00	HAVAs = 0.94

Amyloid (A): AMYPAD recommendations, Centiloid (CL) < 10 indicates A-, 10 ≤ CL < 30 indicates A^{inter}, and CL ≥ 30 indicates A+.

Tau (T₂): CenTauR recommendations, CenTauRz < 2 indicates T₂-, otherwise T₂+

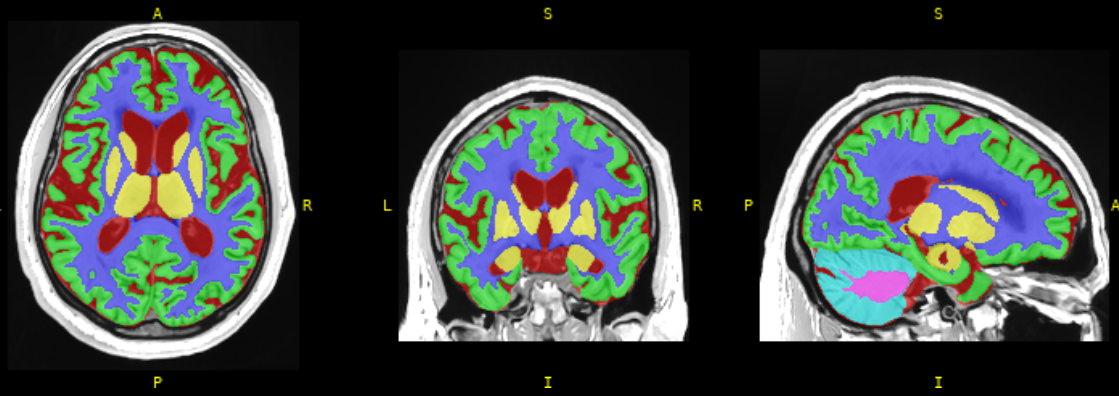
Neurodegeneration (N): HAVAs recommendations, HAVAs < 0.5 indicates N-, otherwise N+.

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).

Pierrick Coupé, Boris Mansencal, Floreal Morandat, Sergio Morell-Ortega, Nicolas Villain, José V. Manjon, Vincent Planche, *petBrain: A New Pipeline for Amyloid, Tau Tangles and Neurodegeneration Quantification Using PET and MRI*, To appear. PDF

Tissue segmentation



Tissue	Volume (cm^3 / %)	
White Matter (WM)	373.47 / 28.134	[27.342, 32.227]
Grey Matter (GM)	689.57 / 51.948	[49.169, 52.991]
Subcortical GM	40.16 / 3.026	[2.668, 3.190]
Cortical GM	530.81 / 39.987	[38.613, 42.189]
Cerebellar GM	118.61 / 8.935	[6.906, 8.581]
Cerebro Spinal Fluid (CSF)	247.05 / 18.611	[14.629, 21.382]
Brain (WM+GM)	1063.04 / 80.082	[77.390, 84.061]
Intracranial Cavity (IC)	1327.44 / 100.000	[100.000, 100.000]

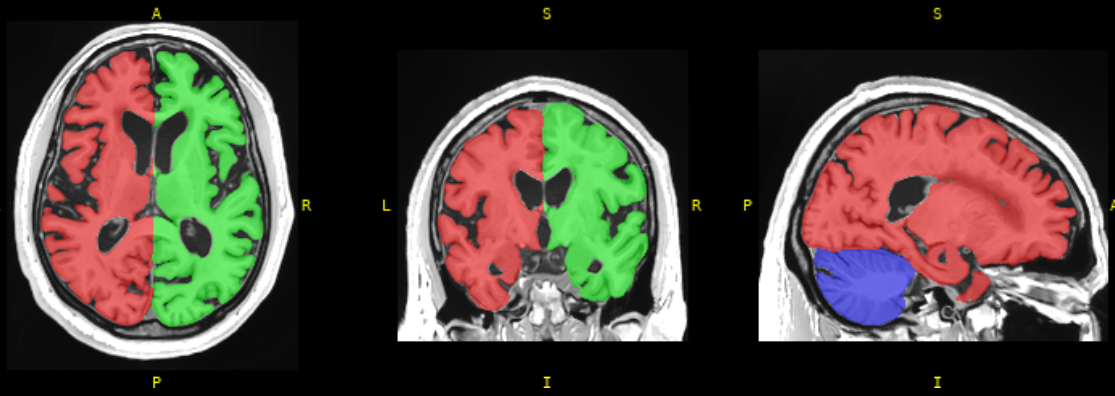
All the volumes are presented in absolute value (measured in cm^3) and in relative value (measured in relation to the IC volume).

The Asymmetry Index is calculated as the difference between right and left volumes divided by their mean (in percent).

Values between brackets show expected limits (95%) of normalized volume in function of sex and age for each measure for reference purpose.

Values outside the limits are highlighted in red.

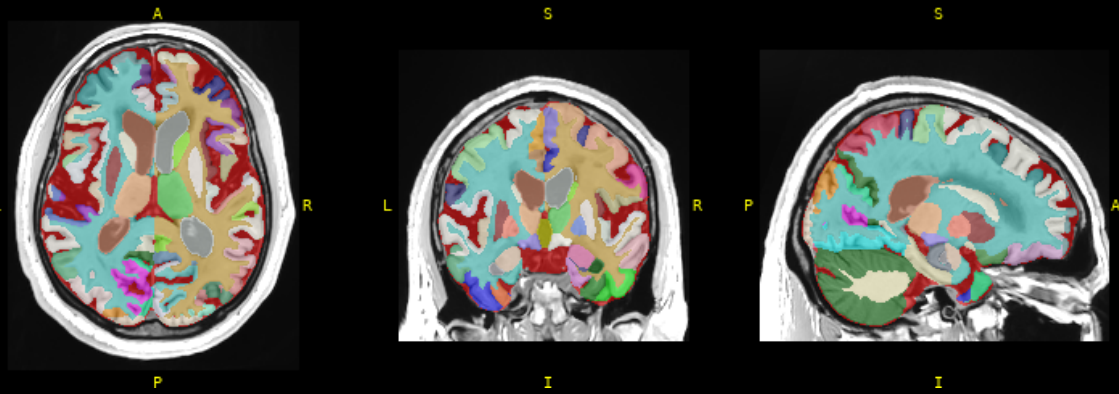
Macrostructure segmentation



Structure	Total (cm^3 / %)	Right (cm^3 / %)	Left (cm^3 / %)	Asymmetry (%)
Cerebrum	923.14 / 69.543 [67.999, 74.744]	465.97 / 35.103 [33.989, 37.429]	457.17 / 34.440 [33.944, 37.355]	1.9051 [-1.085, 1.713]
Cerebrum WM	352.17 / 26.530 [25.834, 30.555]	178.14 / 13.420 [12.916, 15.269]	174.03 / 13.110 [12.910, 15.303]	2.3329 [-1.797, 1.839]
Cerebrum GM	570.97 / 43.013 [41.514, 45.139]	287.83 / 21.683 [20.775, 22.650]	283.14 / 21.330 [20.721, 22.526]	1.6413 [-0.978, 2.076]
Cerebellum*	129.08 / 9.724 [7.637, 9.534]	64.52 / 4.861 [3.854, 4.820]	64.55 / 4.863 [3.781, 4.723]	-0.0461 [-1.109, 4.573]
Cerebellum WM	21.30 / 1.604 [1.359, 1.887]	10.75 / 0.810 [0.674, 0.945]	10.55 / 0.794 [0.683, 0.947]	1.9161 [-5.311, 4.154]
Cerebellum GM	107.78 / 8.120 [6.257, 7.777]	53.77 / 4.051 [3.138, 3.922]	54.01 / 4.069 [3.082, 3.848]	-0.4338 [-0.847, 5.261]
Vermis	10.82 / 0.815 [0.658, 0.901]			
Brainstem	17.35 / 1.307 [1.110, 1.434]			

* Cerebellum volumes do not include vermis volume.

Structure segmentation



Subcortical	Total (cm^3 / %)	Right (cm^3 / %)	Left (cm^3 / %)	Asymmetry (%)
Accumbens	0.64 / 0.048 [0.040, 0.072]	0.32 / 0.024 [0.018, 0.035]	0.32 / 0.024 [0.021, 0.039]	-2.0101 [-32.582, 4.038]
Amygdala	1.96 / 0.148 [0.128, 0.172]	1.00 / 0.075 [0.066, 0.089]	0.96 / 0.072 [0.061, 0.084]	3.6095 [-6.047, 16.886]
Basal forebrain	0.89 / 0.067 [0.047, 0.064]	0.43 / 0.033 [0.020, 0.030]	0.46 / 0.034 [0.025, 0.035]	-5.7762 [-31.238, 0.132]
Caudate	5.55 / 0.418 [0.317, 0.464]	2.78 / 0.209 [0.160, 0.235]	2.77 / 0.209 [0.156, 0.230]	0.4053 [-4.267, 10.455]
Hippocampus	6.07 / 0.457 [0.409, 0.554]	3.05 / 0.230 [0.205, 0.282]	3.02 / 0.227 [0.201, 0.277]	1.0585 [-6.967, 10.840]
Pallidum	2.32 / 0.175 [0.167, 0.223]	1.07 / 0.081 [0.081, 0.109]	1.25 / 0.094 [0.084, 0.115]	-14.9584 [-10.958, 2.810]
Putamen	8.59 / 0.647 [0.494, 0.661]	4.32 / 0.325 [0.244, 0.330]	4.27 / 0.322 [0.247, 0.334]	1.1031 [-7.163, 4.661]
Thalamus	14.14 / 1.065 [0.932, 1.119]	7.25 / 0.546 [0.463, 0.559]	6.89 / 0.519 [0.464, 0.562]	5.1346 [-5.141, 4.529]
Ventral DC	8.12 / 0.611 [0.574, 0.690]	3.88 / 0.292 [0.282, 0.340]	4.24 / 0.319 [0.291, 0.352]	-8.8884 [-6.520, 0.614]

Cortical	Total (cm^3 / %)	Right (cm^3 / %)	Left (cm^3 / %)	Asymmetry (%)
Frontal lobe	172.96 / 13.030 [12.177, 13.914]	86.39 / 6.508 [6.124, 7.026]	86.57 / 6.522 [6.031, 6.925]	-0.2043 [-2.191, 4.463]
Frontal pole	6.78 / 0.511 [0.383, 0.575]	3.51 / 0.265 [0.200, 0.298]	3.27 / 0.246 [0.174, 0.288]	7.0583 [-7.236, 27.986]
Gyrus rectus	3.50 / 0.264 [0.230, 0.345]	1.63 / 0.123 [0.113, 0.186]	1.87 / 0.141 [0.101, 0.170]	-13.4311 [-17.365, 36.382]
Opercular inf. frontal gyrus	5.91 / 0.445 [0.341, 0.587]	2.58 / 0.195 [0.156, 0.317]	3.33 / 0.251 [0.156, 0.304]	-25.2717 [-35.589, 40.883]
Orbital inf. frontal gyrus	1.99 / 0.150 [0.153, 0.279]	0.98 / 0.074 [0.068, 0.143]	1.01 / 0.076 [0.066, 0.150]	-3.5484 [-47.722, 41.857]
Triangular inf. frontal gyrus	5.90 / 0.444 [0.354, 0.590]	2.90 / 0.219 [0.157, 0.304]	2.99 / 0.225 [0.169, 0.324]	-3.0518 [-37.681, 32.594]
Medial frontal cortex	3.72 / 0.280 [0.191, 0.303]	1.34 / 0.101 [0.089, 0.168]	2.38 / 0.179 [0.087, 0.154]	-55.9585 [-31.011, 39.554]
Middle frontal gyrus	37.95 / 2.859 [2.467, 3.243]	19.55 / 1.472 [1.217, 1.654]	18.40 / 1.386 [1.207, 1.611]	6.0460 [-11.502, 12.945]
Anterior orbital gyrus	2.98 / 0.224 [0.212, 0.361]	1.68 / 0.127 [0.100, 0.194]	1.30 / 0.098 [0.095, 0.187]	25.7212 [-29.589, 44.883]
Lateral orbital gyrus	3.75 / 0.282 [0.266, 0.423]	2.02 / 0.152 [0.122, 0.219]	1.73 / 0.130 [0.125, 0.229]	15.3516 [-37.376, 29.958]
Medial orbital gyrus	10.20 / 0.769 [0.560, 0.751]	5.05 / 0.380 [0.269, 0.380]	5.15 / 0.388 [0.282, 0.391]	-2.0466 [-19.923, 13.533]
Posterior orbital gyrus	5.93 / 0.447 [0.380, 0.546]	2.67 / 0.202 [0.178, 0.279]	3.26 / 0.246 [0.184, 0.281]	-19.7076 [-23.709, 20.374]
Precentral gyrus	24.95 / 1.879 [1.722, 2.089]	12.41 / 0.935 [0.848, 1.066]	12.54 / 0.945 [0.844, 1.058]	-1.0818 [-10.369, 11.623]
Precentral gyrus medial segment	5.40 / 0.407 [0.324, 0.482]	2.56 / 0.193 [0.152, 0.247]	2.84 / 0.214 [0.157, 0.250]	-10.1100 [-24.937, 22.054]
Subcallosal area	4.11 / 0.310 [0.178, 0.318]	2.06 / 0.155 [0.087, 0.160]	2.05 / 0.154 [0.089, 0.160]	0.6252 [-15.068, 11.537]
Sup. frontal gyrus	26.91 / 2.027 [1.785, 2.384]	13.21 / 0.995 [0.871, 1.210]	13.70 / 1.032 [0.870, 1.227]	-3.6774 [-15.610, 14.610]
Sup. frontal gyrus medial segment	10.21 / 0.769 [0.718, 1.037]	5.19 / 0.391 [0.354, 0.572]	5.02 / 0.378 [0.305, 0.508]	3.4779 [-18.345, 40.460]
Supplementary motor cortex	12.76 / 0.961 [0.676, 0.928]	7.04 / 0.530 [0.318, 0.474]	5.72 / 0.431 [0.325, 0.485]	20.6306 [-25.592, 20.428]

Temporal lobe	110.07 / 8.292 [7.300, 8.549]	52.90 / 3.985 [3.657, 4.326]	57.17 / 4.307 [3.591, 4.252]	-7.7518 [-4.241, 7.066]
Fusiform gyrus	16.11 / 1.213 [0.921, 1.360]	8.19 / 0.617 [0.455, 0.705]	7.92 / 0.597 [0.438, 0.687]	3.3513 [-15.325, 22.692]
Planum polare	5.19 / 0.391 [0.237, 0.341]	2.55 / 0.192 [0.117, 0.173]	2.65 / 0.200 [0.115, 0.178]	-3.9276 [-19.607, 17.826]
Planum temporale	2.44 / 0.184 [0.215, 0.365]	0.64 / 0.048 [0.083, 0.173]	1.81 / 0.136 [0.115, 0.210]	-95.7895 [-59.013, 13.414]
Inf. temporal gyrus	26.67 / 2.009 [1.628, 2.130]	12.71 / 0.958 [0.781, 1.088]	13.96 / 1.052 [0.799, 1.109]	-9.3414 [-17.981, 14.107]
Middle temporal gyrus	27.25 / 2.052 [1.819, 2.340]	13.33 / 1.004 [0.909, 1.200]	13.92 / 1.049 [0.864, 1.192]	-4.3635 [-12.032, 17.605]
Sup. temporal gyrus	14.21 / 1.070 [0.868, 1.218]	6.23 / 0.469 [0.416, 0.625]	7.97 / 0.601 [0.416, 0.625]	-24.5193 [-20.692, 19.149]
Transverse temporal gyrus	2.23 / 0.168 [0.183, 0.296]	1.07 / 0.080 [0.080, 0.146]	1.16 / 0.088 [0.094, 0.164]	-8.7144 [-41.393, 14.446]
Temporal pole	15.97 / 1.203 [1.026, 1.443]	8.19 / 0.617 [0.502, 0.737]	7.78 / 0.586 [0.506, 0.718]	5.1906 [-11.623, 13.839]
Parietal lobe	102.45 / 7.718 [7.613, 8.801]	54.30 / 4.091 [3.748, 4.426]	48.14 / 3.627 [3.804, 4.412]	12.0250 [-5.643, 4.970]
Angular gyrus	15.31 / 1.153 [1.259, 1.830]	9.10 / 0.685 [0.657, 1.010]	6.21 / 0.468 [0.538, 0.888]	37.7250 [-8.094, 37.359]
Postcentral gyrus	17.60 / 1.326 [1.455, 1.844]	8.62 / 0.650 [0.682, 0.900]	8.98 / 0.676 [0.739, 0.985]	-3.9799 [-21.114, 5.740]
Postcentral gyrus medial segment	2.05 / 0.154 [0.108, 0.198]	1.01 / 0.076 [0.049, 0.110]	1.03 / 0.078 [0.049, 0.103]	-2.0408 [-37.489, 47.885]
Precuneus	22.52 / 1.697 [1.462, 1.903]	11.35 / 0.855 [0.721, 0.969]	11.17 / 0.842 [0.712, 0.955]	1.5765 [-9.466, 12.386]
Sup. parietal lobule	25.17 / 1.896 [1.386, 1.907]	13.31 / 1.002 [0.685, 0.973]	11.86 / 0.893 [0.667, 0.972]	11.5169 [-15.627, 16.976]
Supramarginal gyrus	19.80 / 1.492 [1.074, 1.491]	10.91 / 0.822 [0.487, 0.778]	8.89 / 0.670 [0.526, 0.776]	20.3635 [-25.650, 22.166]

Occipital lobe	79.00 / 5.951 [5.615, 6.857]	40.80 / 3.073 [2.841, 3.516]	38.20 / 2.878 [2.716, 3.405]	6.5832 [-4.379, 10.811]
Calcarine cortex	8.79 / 0.662 [0.420, 0.712]	4.23 / 0.319 [0.208, 0.363]	4.56 / 0.344 [0.198, 0.359]	-7.4548 [-15.459, 22.240]
Cuneus	10.13 / 0.763 [0.607, 0.889]	4.82 / 0.363 [0.297, 0.471]	5.31 / 0.400 [0.292, 0.448]	-9.7820 [-19.311, 22.763]
Lingual gyrus	17.08 / 1.287 [1.156, 1.571]	8.30 / 0.625 [0.568, 0.811]	8.78 / 0.661 [0.542, 0.789]	-5.5691 [-13.452, 21.289]
Occipital fusiform gyrus	6.15 / 0.463 [0.475, 0.755]	3.50 / 0.264 [0.207, 0.384]	2.65 / 0.200 [0.228, 0.422]	27.6015 [-46.467, 25.903]
Inf. occipital gyrus	14.55 / 1.096 [0.928, 1.352]	8.62 / 0.649 [0.445, 0.706]	5.93 / 0.447 [0.427, 0.691]	36.9659 [-22.259, 29.240]
Middle occipital gyrus	10.27 / 0.773 [0.652, 0.979]	4.52 / 0.341 [0.324, 0.518]	5.75 / 0.433 [0.289, 0.501]	-23.8498 [-20.574, 35.532]
Sup. occipital gyrus	7.45 / 0.561 [0.481, 0.784]	4.06 / 0.306 [0.248, 0.433]	3.38 / 0.255 [0.209, 0.378]	18.3623 [-12.084, 43.515]
Occipital pole	4.58 / 0.345 [0.294, 0.503]	2.74 / 0.206 [0.140, 0.266]	1.84 / 0.138 [0.134, 0.258]	39.3822 [-30.374, 33.388]
Limbic cortex	40.17 / 3.026 [2.752, 3.294]	20.63 / 1.554 [1.317, 1.648]	19.53 / 1.471 [1.383, 1.707]	5.4876 [-16.157, 7.312]
Entorhinal area	3.75 / 0.282 [0.270, 0.419]	2.17 / 0.164 [0.132, 0.220]	1.58 / 0.119 [0.129, 0.212]	31.7821 [-20.311, 26.241]
Anterior cingulate gyrus	10.19 / 0.768 [0.572, 0.877]	5.22 / 0.394 [0.243, 0.442]	4.97 / 0.374 [0.291, 0.489]	5.0611 [-43.855, 15.906]
Middle cingulate gyrus	9.63 / 0.725 [0.646, 0.864]	4.90 / 0.369 [0.319, 0.453]	4.73 / 0.356 [0.299, 0.447]	3.4532 [-17.538, 24.704]
Posterior cingulate gyrus	10.76 / 0.811 [0.636, 0.811]	5.45 / 0.410 [0.300, 0.412]	5.32 / 0.401 [0.317, 0.412]	2.4028 [-15.871, 11.336]
Parahippocampal gyrus	5.84 / 0.440 [0.409, 0.564]	2.90 / 0.218 [0.188, 0.273]	2.94 / 0.222 [0.212, 0.301]	-1.5965 [-23.687, 4.094]
Insular cortex	26.16 / 1.971 [1.903, 2.285]	12.57 / 0.947 [0.912, 1.130]	13.59 / 1.024 [0.968, 1.175]	-7.7740 [-11.487, 2.600]
Anterior insula	7.48 / 0.564 [0.533, 0.691]	3.84 / 0.289 [0.259, 0.347]	3.64 / 0.274 [0.270, 0.349]	5.3242 [-10.049, 5.619]
Posterior insula	4.57 / 0.344 [0.280, 0.381]	2.16 / 0.162 [0.138, 0.195]	2.41 / 0.182 [0.139, 0.193]	-11.3221 [-12.059, 15.449]
Central operculum	6.44 / 0.485 [0.471, 0.631]	3.05 / 0.230 [0.221, 0.318]	3.39 / 0.255 [0.235, 0.332]	-10.4029 [-21.456, 13.103]
Frontal operculum	4.07 / 0.306 [0.194, 0.330]	2.24 / 0.168 [0.086, 0.168]	1.83 / 0.138 [0.095, 0.174]	20.0356 [-38.809, 27.269]
Parietal operculum	3.61 / 0.272 [0.269, 0.424]	1.29 / 0.097 [0.111, 0.200]	2.32 / 0.175 [0.144, 0.235]	-57.1301 [-44.455, 9.137]

CSF	Total (cm^3 / %)	Right (cm^3 / %)	Left (cm^3 / %)	Asymmetry (%)
Inf. lateral ventricle	5.57 / 0.420 [0.054, 0.197]	2.81 / 0.212 [0.026, 0.105]	2.76 / 0.208 [0.023, 0.096]	1.9893 [-38.751, 51.958]
Lateral ventricle	54.32 / 4.092 [1.483, 4.697]	27.89 / 2.101 [0.686, 2.306]	26.43 / 1.991 [0.759, 2.475]	5.3503 [-35.876, 21.131]
3rd ventricle	2.36 / 0.178 [0.072, 0.187]			
4th ventricle	2.04 / 0.153 [0.074, 0.183]			
External CSF	182.76 / 13.768 [11.811, 17.857]			

Cerebellar vermis	Total (cm^3 / %)
Lobules I-V	4.90 / 0.369 [0.308, 0.450]
Lobules VI-VII	2.74 / 0.206 [0.140, 0.218]
Lobules VIII-X	3.19 / 0.240 [0.177, 0.258]