



# DeepLesionBrain volumetry report

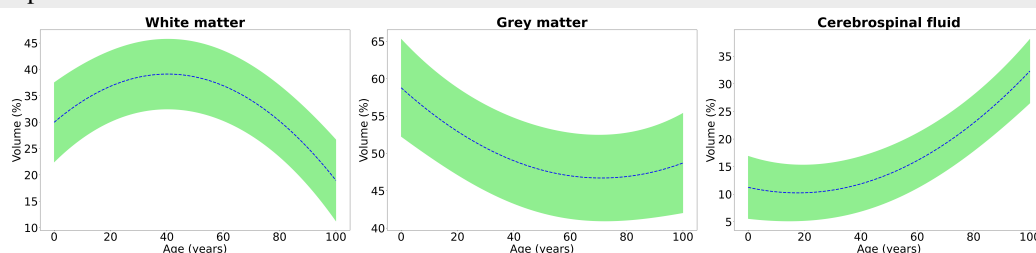
For research only

version 1.0 release 30-Jul-2021

Patient ID	Sex	Age	Report Date
aaa_153520_OFSEP_sT1W_Non-FLAIRso_CS_201	UNKNOWN	UNKNOWN	03-Oct-2022

Image information	Orientation	Scale factor	SNR
	Neurological	0.70	124.60

Tissues	Absolute vol. ( $cm^3$ )	Normalized vol. (%)
Intracranial Cavity (IC)	1282.38	100.000
White matter (including lesions)	448.98	35.011
Grey matter	588.62	45.901
Cerebrospinal fluid	229.04	17.861



Structure	Total ( $cm^3$ / %)	Right ( $cm^3$ / %)	Left ( $cm^3$ / %)	Asymmetry (%)
Lateral ventricles	13.69 / 1.068	6.64 / 0.518	7.05 / 0.550	-5.9098
Caudate	5.57 / 0.434	2.84 / 0.222	2.72 / 0.212	4.3180
Putamen	6.66 / 0.519	3.29 / 0.257	3.37 / 0.263	-2.2120
Thalamus	9.81 / 0.765	5.08 / 0.396	4.73 / 0.369	7.0852
Globus pallidus	2.37 / 0.185	1.22 / 0.096	1.14 / 0.089	6.8682
Hippocampus	7.74 / 0.603	3.96 / 0.309	3.78 / 0.295	4.6169
Amygdala	1.91 / 0.149	0.97 / 0.076	0.94 / 0.073	3.6311
Accumbens	0.61 / 0.047	0.29 / 0.023	0.32 / 0.025	-8.9552

Lesion	Count	Absolute vol. ( $cm^3$ )	Normalized vol. (%)	Lesion burden
Total Lesions	40	15.7387	1.2273	3.5055
Periventricular	3	13.9106	1.0848	3.0983
Deepwhite	17	0.6388	0.0498	0.1423
Juxtacortical	20	1.1893	0.0927	0.2649
Infratentorial	0	0.0000	0.0000	0.0000

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

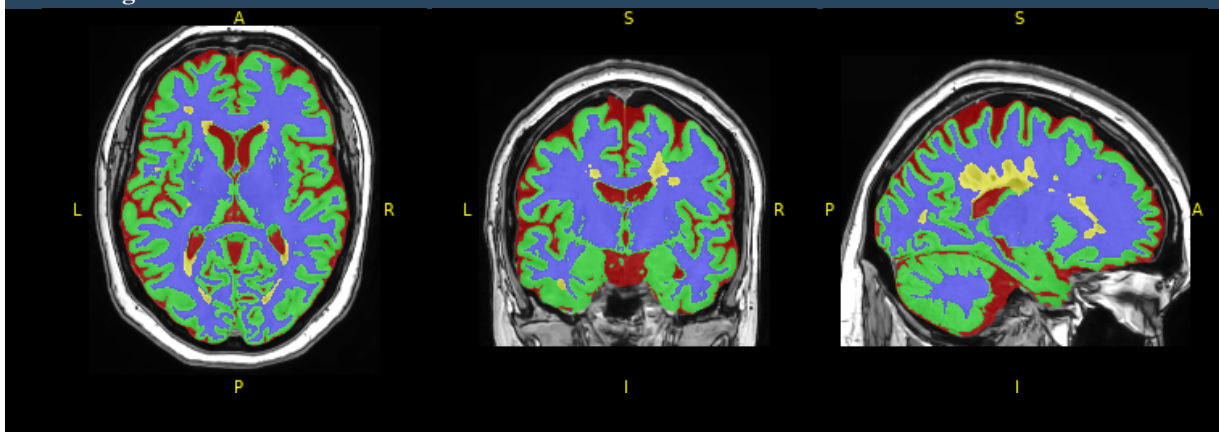
Position provides the x, y and z coordinates of the lesion center of mass.

Lesion burden is calculated as the lesion volume divided by the white matter volume.

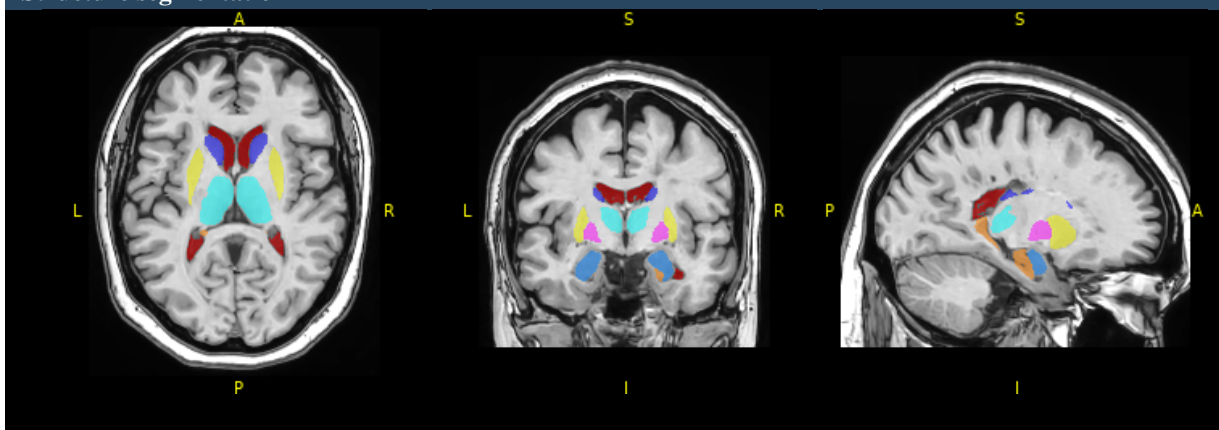
All the result images are located in the MNI space (neurological orientation).

[1] Reda Abdellah Kamraoui, Vinh-Thong Ta, Thomas Tourdias, Boris Mansencal, José V Manjon, Pierrick Coupé, *DeepLesionBrain: Towards a broader deep-learning generalization for multiple sclerosis lesion segmentation*, Medical Image Analysis, volume 76, February 2022. PDF

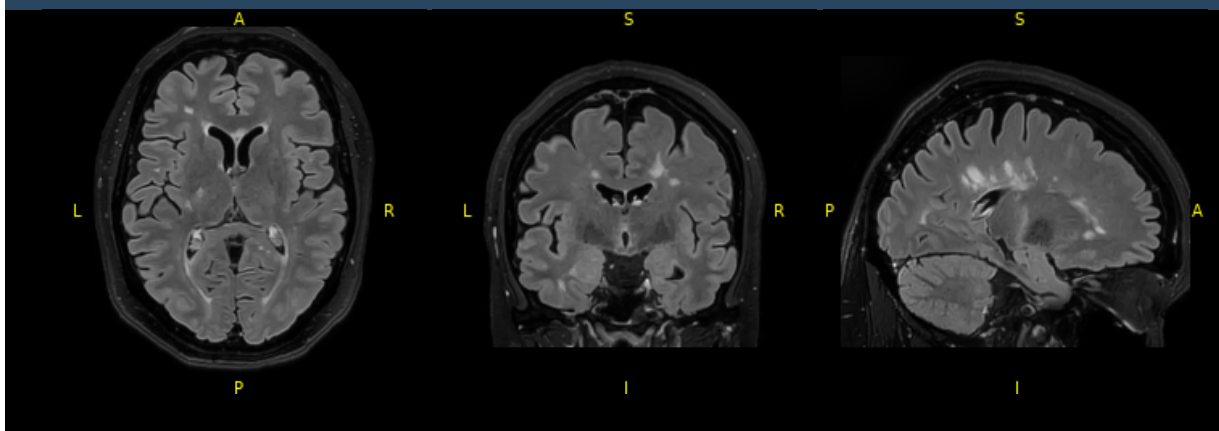
### Tissue segmentation



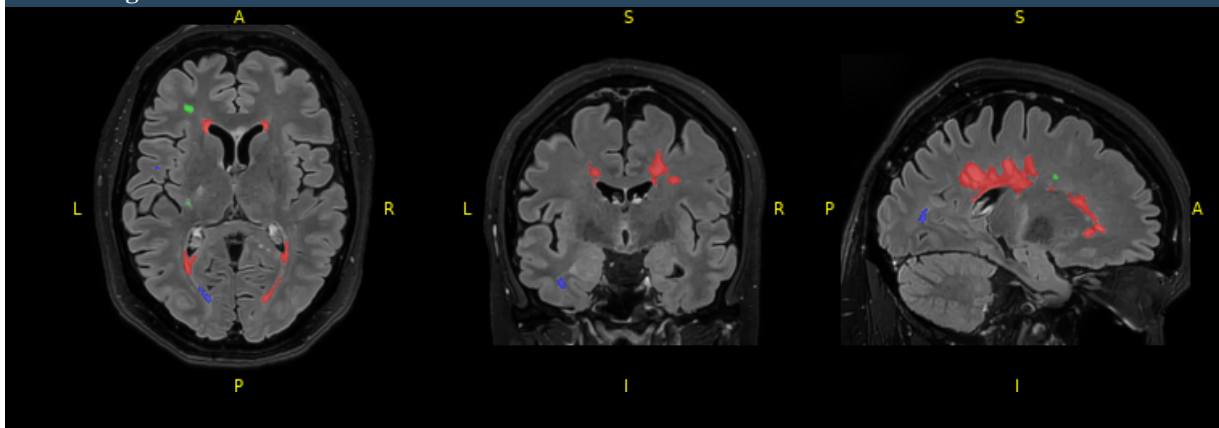
### Structure segmentation



### FLAIR



### Lesion segmentation



Periventricular Lesions	Absolute vol. ( $cm^3$ )	Normalized vol. (%)	Position (MNI coord.)
Lesion 1	6.6610	0.5194	(67, 104, 94)
Lesion 2	4.8503	0.3782	(111, 121, 101)
Lesion 3	2.3994	0.1871	(119, 71, 86)
Deepwhite Lesions	Absolute vol. ( $cm^3$ )	Normalized vol. (%)	Position (MNI coord.)
Lesion 4	0.1383	0.0108	(64, 128, 98)
Lesion 5	0.1251	0.0098	(53, 73, 73)
Lesion 6	0.1029	0.0080	(115, 142, 95)
Lesion 7	0.0959	0.0075	(64, 126, 107)
Lesion 8	0.0619	0.0048	(61, 164, 79)
Lesion 9	0.0229	0.0018	(78, 87, 82)
Lesion 10	0.0188	0.0015	(127, 84, 91)
Lesion 11	0.0181	0.0014	(111, 91, 101)
Lesion 12	0.0118	0.0009	(70, 132, 103)
Lesion 13	0.0111	0.0009	(61, 105, 78)
Lesion 14	0.0097	0.0008	(51, 91, 71)
Lesion 15	0.0070	0.0005	(51, 95, 66)
Lesion 16	0.0049	0.0004	(126, 155, 83)
Lesion 17	0.0042	0.0003	(52, 88, 56)
Lesion 18	0.0042	0.0003	(117, 153, 88)
Lesion 19	0.0014	0.0001	(135, 112, 96)
Lesion 20	0.0007	0.0001	(64, 125, 88)
Juxtacortical Lesions	Absolute vol. ( $cm^3$ )	Normalized vol. (%)	Position (MNI coord.)
Lesion 21	0.2537	0.0198	(60, 139, 96)
Lesion 22	0.2190	0.0171	(72, 48, 78)
Lesion 23	0.1550	0.0121	(117, 64, 95)
Lesion 24	0.1057	0.0082	(50, 121, 37)
Lesion 25	0.0862	0.0067	(61, 92, 114)
Lesion 26	0.0674	0.0053	(126, 133, 91)
Lesion 27	0.0528	0.0041	(48, 109, 56)
Lesion 28	0.0494	0.0038	(76, 155, 99)
Lesion 29	0.0410	0.0032	(67, 59, 86)
Lesion 30	0.0361	0.0028	(43, 78, 66)
Lesion 31	0.0229	0.0018	(124, 122, 36)
Lesion 32	0.0209	0.0016	(76, 146, 104)
Lesion 33	0.0202	0.0016	(106, 141, 125)
Lesion 34	0.0188	0.0015	(65, 135, 109)
Lesion 35	0.0132	0.0010	(42, 127, 79)
Lesion 36	0.0090	0.0007	(73, 170, 102)
Lesion 37	0.0063	0.0005	(40, 110, 88)
Lesion 38	0.0049	0.0004	(43, 74, 74)
Lesion 39	0.0042	0.0003	(131, 137, 112)
Lesion 40	0.0028	0.0002	(66, 58, 82)