

Appendix 1 to Leeuwis AE, Weaver NA, Biesbroek M, et al. Impact of white-matter hyperintensity location on depressive symptoms in memory-clinic patients: a lesion–symptom mapping study. *J Psychiatry Neurosci* 2019.

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Supplementary table 1. MRI sequence parameters

MRI scanner	N	Specific MRI sequence parameters
1.5 Tesla GE Signa HDxt	39 (5.7%)	3D T1-weighted sequence (172 slices, voxel size: 0.98x0.98x1.50 mm ³ , Repetition Time (TR)/Echo Time (TE): 12.3/5.2 ms), 3D FLAIR sequence (128 slices, voxel size: 1.21x1.21x1.30 mm ³ , TR/TE/Inversion Time (TI): 6500/117/1987 ms), 2D T2-weighted sequence (48 slices, voxel size: 0.98x0.98x3.00 mm ³ , TR/TE: 1000/23.9 ms), 2D T2*-weighted sequence (48 slices, voxel size: 0.98x0.98x3,00 mm ³ , TR/TE: 1000/24 ms)
3.0 Tesla GE Signa HDxt	424 (62.4%)	3.0 Tesla GE Signa HDxt–3D T1-weighted sequence (176 slices, voxel size: 0.94x0.94x1.00 mm ³ , TR/TE: 7.8/3.0 ms), 3D FLAIR sequence (132 slices, voxel size: 0.98x0.98x1.2 mm ³ , TR/TE/TI: 8000/126/2340), 2D T2-weighted sequence (48 slices, voxel size: 0.49x0.49x3.00 mm ³ , TR/TE/: 8610/112 ms), 3D SWI sequence (48 slices, voxel size: 0.49x0.49x3.00 mm ³ , TR/TE: 31/25 ms)
3.0 Tesla GE Discovery	64 (9.4%)	3.0 Tesla GE Discovery MR 750–3D T1-weighted sequence (176 slices, voxel size: 0.94x0.94x1.00 mm ³ , TR/TE: 8.2/3.2 ms), 3D FLAIR sequence (160 slices, voxel size: 0.98x0.98x1.2 mm ³ , TR/TE/TI: 8000/130/2340 ms), 2D T2-weighted sequence (48 slices, voxel size: 0.49x0.49x3.00 mm ³ , TR/TE/: 8300/112 ms), 3D SWI sequence (44 slices, voxel size: 0.49x0.49x3.00 mm ³ , TR/TE: 31/25 ms)
3.0 Tesla Philips Ingenuity	38 (5.6%)	3D T1-weighted sequence (180 slices, voxel size: 0.87x0.87x1.00 mm ³ , TR/TE: 9.9/4.6 ms), 3D FLAIR sequence (321 slices, voxel size: 1.04x1.04x0.56 mm ³ , TR/TE/TI: 4800/279/1650 ms), 2D T2-weighted sequence (45 slices, voxel size: 0.49x0.49x3.3 mm ³ , TR/TE: 2500–5000/100 ms), 3D SWI sequence (247 slices, voxel size: 0.43x0.43x0.60 mm ³ , TR/TE: 29x20 ms)
3.0 Tesla Philips Achieva and Ingenia	115 (16.9%)	3D T1-weighted sequence (192 slices, voxel size: 1.00x1.00x1.00 mm ³ , TR/TE: 7.9/4.5 ms), 2D FLAIR sequence (48 slices, voxel size: 0.96x0.95x3.00 mm ³ , TR/TE/TI: 1000/125/2800 ms), 2D T2-weighted sequence (48 slices, voxel size: 0.96x0.96x3.00 mm ³ , TR/TE/TE2: 3198/140 ms), 2D T2*-weighted sequence (48 slices, voxel size: 0.96x0.96x3.00 mm ³ , TR/TE: 1653/20 ms)

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Supplementary table 2. Region of interest-based analyses in a subgroup of patients with CSF biomarkers

Anatomical regions (JHU atlas)	All (n = 446)	
	st β	p
Total WMH volume	-0.04	0.43
Forceps major	-0.07	0.18
Forceps minor	0.07	0.13
Anterior thalamic	-0.02	0.65
Corticospinal tract	-0.02	0.66
Cingulum	0.00	0.98
Inferior fronto-occipital	-0.05	0.35
Inferior longitudinal	-0.03	0.52
Superior longitudinal	-0.04	0.44
SLF, temporal part	-0.04	0.45
Uncinate fasciculus	-0.02	0.75

JHU: John Hopkins University; SLF: Superior longitudinal fasciculus.

Results are presented as standardized beta (st β). This assumption-free region of interest-based analysis served to identify strategic white matter tracts in which WMH volume is correlated with depressive symptoms, independent of total WMH burden. The GDS, as measure of depressive symptoms, was standardized into a z-score. We excluded the tract parahippocampal white matter (JHU atlas) from our analyses due to the limited WMH in this tract. Age, sex and amyloid status were first entered into a linear regression model. We performed analyses in the group with CSF biomarkers (positive Alzheimer biomarkers n = 242; negative Alzheimer biomarkers n = 204). CSF biomarkers were considered positive for AD when tau / A β ₁₋₄₂ ratio was > 0.52 [26]. To check if associations between depressive symptoms and the anatomical region differed according to amyloid status, interaction terms (amyloid status*anatomical region) were included in the model, but there were no significant interactions.