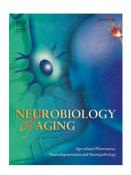
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Patterns of progressive atrophy vary with age in Alzheimer's disease patients

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ACCEPTED MANUSCRIPT

1 Patterns of progressive atrophy vary with age in

2 Alzheimer's disease patients

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- 17 *Data used in preparation of this article were obtained from the Alzheimer's Disease Neuroimaging
- 18 Initiative (ADNI) database (adni.loni.usc.edu). As such, the investigators within the ADNI contributed
- 19 to the design and implementation of ADNI and/or provided data but did not participate in analysis or
- 20 writing of this report. A complete listing of ADNI investigators can be found at:
- 21 http://adni.loni.usc.edu/wp-content/uploads/how_to_apply/ADNI_Acknowledgement_List.pdf
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- Abbreviations: 95% CI (95% confidence interval), ADNI (Alzheimer's Disease Neuroimaging
- 26 Initiative), AD (Alzheimer's disease), Aβ (amyloid beta), BSI (Boundary Shift Integral), CSF
- 27 (cerebrospinal fluid), FWE (Family Wise Error), GM (grey matter), MCI (mild cognitive impairment),
- 28 MRI (magnetic resonance imaging), VBM (voxel based morphometry), TIV (Total intracranial volume),
- 29 WM (white matter), WMH (white matter hyperintensity), DARTEL (Diffeomorphic Anatomical
- 30 Registration Through Exponentiated Lie-algebra), GWAS (Genome Wide Association Study), Region
- of Interest (ROI), SVD (Small Vessel Disease), MMSE (Mini-Mental State Examination)

Highlights (limited to 85 characters for each bullet, including spaces):

- Atrophy rates are greater at younger ages in MCI and AD patients
- Younger patients atrophy more in the precuneus, parietal and superior temporal lobes
- APOE genotype and WMH volume do not account for the atrophy patterns with age
- Clinical trials in younger AD patients may benefit from revised outcome measures

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