

Biomarker Status and Treatment-related Cognitive Trajectories in Dementia With Lewy Bodies

Cen Chen, PhD, Hong Xu, MD PhD, Anna Rennie PhD, Tobias Borgh Skillbäck MD, PhD, Silke Kern MD, PhD, Henrik Zetterberg MD PhD, Linus Jönsson PhD, Daniel Ferreira PhD, Maria Eriksdotter, MD PhD

Conclusions

- Cholinesterase inhibitors (ChEIs) were associated with slower cognitive decline in DLB compared with memantine and no treatment.
- Alzheimer's disease (AD) biomarker positivity was linked to faster cognitive decline in DLB.
- ChEI slowed decline in AD biomarker positive but not negative DLB.
- Findings possibly bring implications for treatment guidelines for DLB.

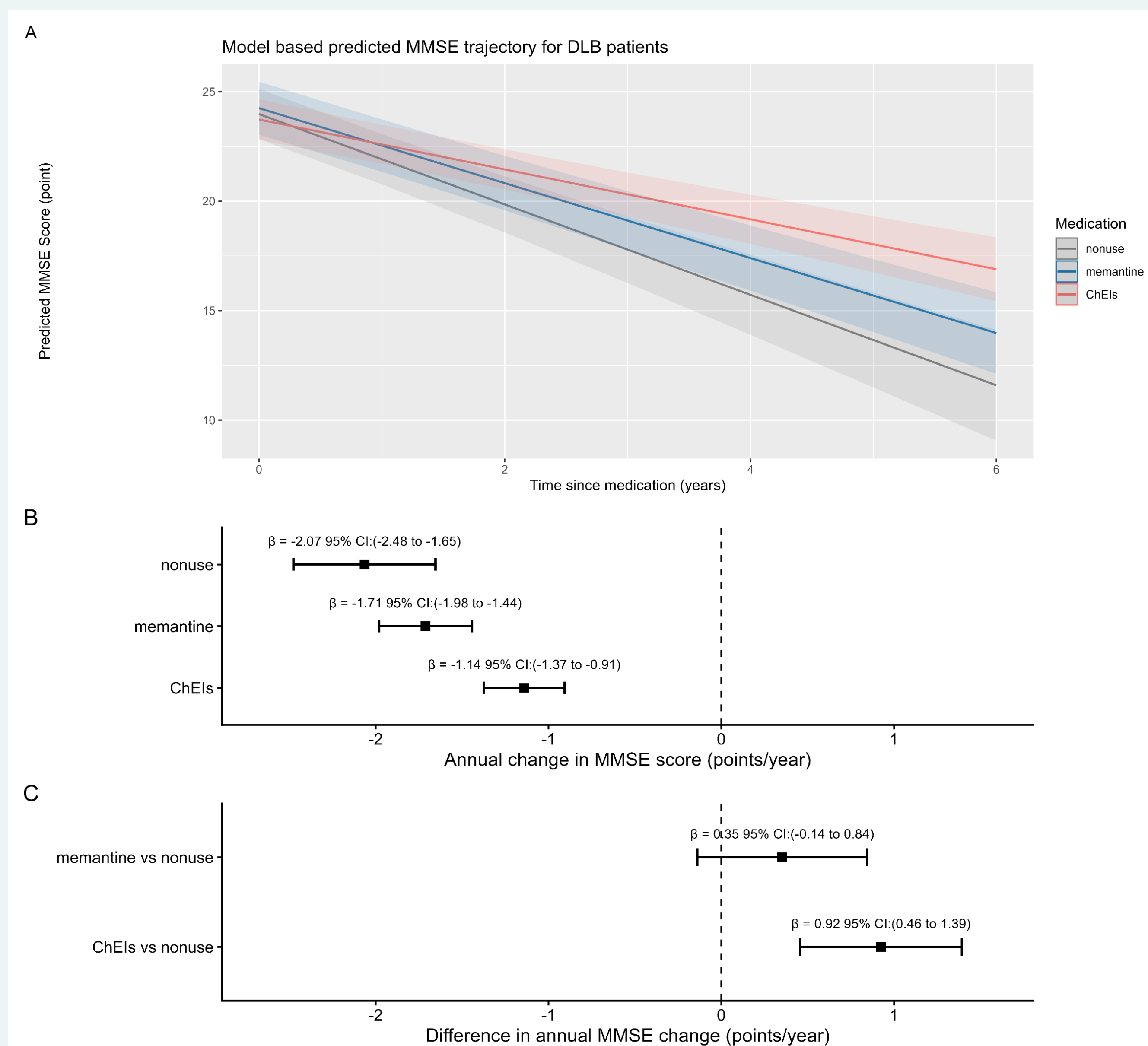


Figure 1. Predicted MMSE trajectories by treatment status (ChEIs, n=261; memantine, n=35; nonuse, n=47).

Introduction

- DLB is clinically and biologically heterogeneous, and coexisting AD pathology is common.
- Whether longitudinal cognitive outcomes differ according to AD biomarker status and type of ChEI is unclear.

Aims

- To examine the association of AD biomarker status with longitudinal cognitive decline in DLB.
- To explore whether cognitive trajectories differ by AD biomarker status in their response to antidementia treatments.

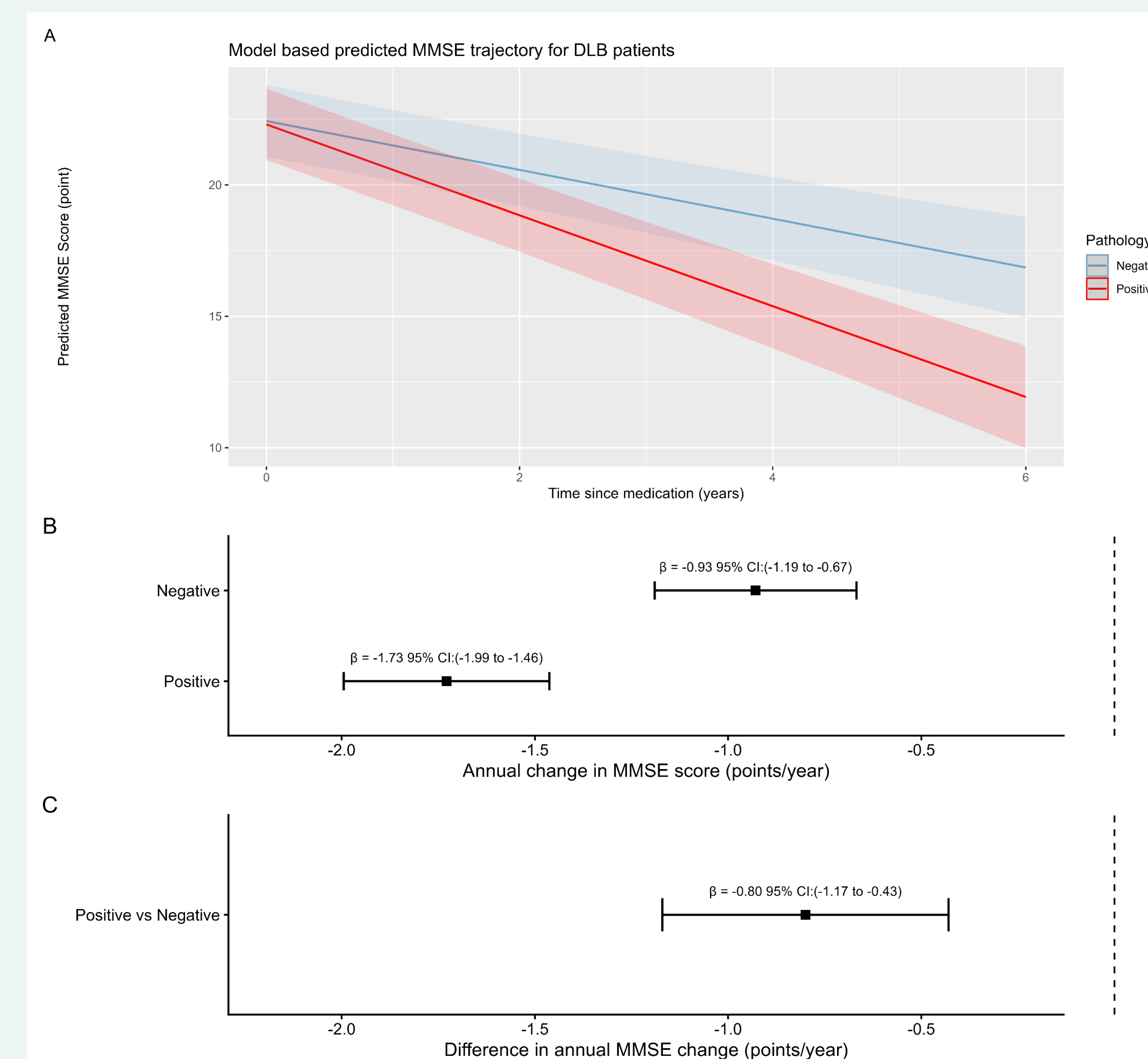


Figure 2. Predicted MMSE trajectories by AD pathology status (Positive, n=196; negative, n=164).

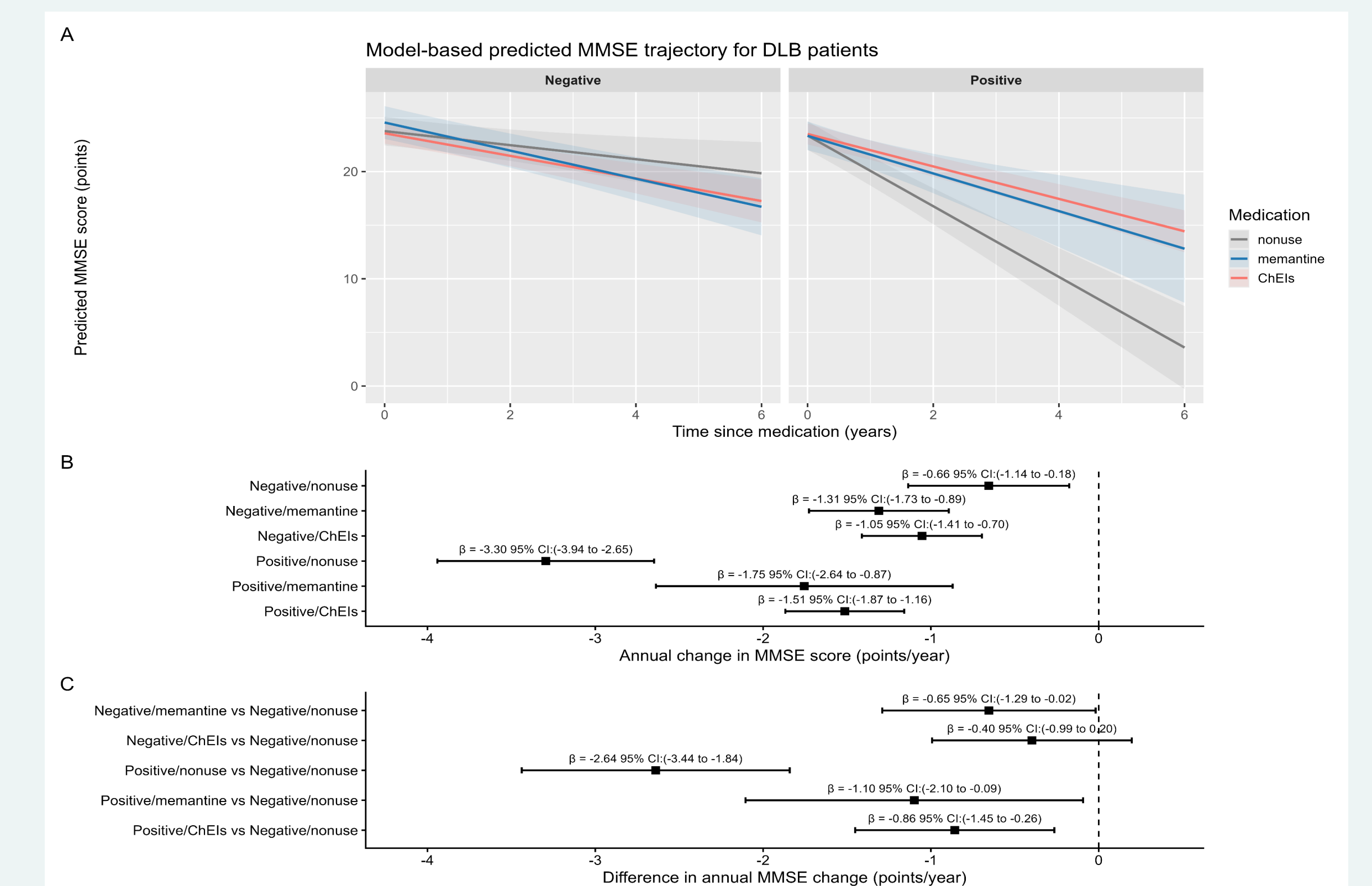


Figure 3. Predicted MMSE trajectories by AD pathology status (negative vs positive) and treatment status (ChEIs, memantine and nonuse) (positive/ChEIs, n=141; positive/memantine, n=22; positive/nonuse, n=22; negative/ChEIs, n=120; negative/memantine, n=13; negative/nonuse, n=25).

Methods

- 360 individuals from SveDem with incident DLB (2010–2020) were included.
- AD biomarker status defined by CSF A β 42/40 or A β 42/p-tau ratios, and initiation of antidementia treatments (ChEIs, memantine, combination therapy or no treatment) within 3 months after DLB diagnosis.
- Cognitive decline assessed via MMSE trajectories using linear mixed-effects models, incorporating inverse probability of treatment and censoring weighting.