

NATIONWIDE REAL WORLD ANALYSIS OF MEMANTINE USE IN DEMENTIA: THE CURRENT CARE LANDSCAPE IN HUNGARY

Petra Halmos¹, Dániel Bereczki², Balázs Dobi³, Péter Vinnai³, Tibor Kovács²

¹ Semmelweis University, Doctoral College János Szentágothai Neurosciences Division, Budapest, Hungary
² Semmelweis University, Department of Neurology, Budapest, Hungary
³ Semmelweis University, HUN-REN SE Neuroepidemiological Research Group, Budapest, Hungary

INTRODUCTION

Dementia is a leading cause of dependency and disability; therefore, it is a public health priority that requires the development of national strategies to reduce its economic and social burden and to ensure that the healthcare system is prepared for the implementation of emerging disease-modifying therapies.

AIMS

The **aim** of this **nationwide retrospective cohort study** was to systematically assess the current state of dementia care, focusing on pharmacological treatment practices, particularly memantine, and their impact on survival.

METHODS

DATA SOURCE AND TIMEFRAME

We utilised the NEUROHUN nationwide healthcare administrative database, which encompasses both inpatient and outpatient care data, as well as pharmacy reports. For this study, we analysed the observation period from 2010 to 2020.

STATISTICAL ANALYSIS

Descriptive statistics were used for baseline characterisation. Kaplan–Meier survival curves and log-rank tests were applied for unadjusted time-to-event analysis, and multivariable Cox proportional hazards models were used for adjusted mortality risk estimation. Adherence and persistence were calculated based on prescription fill patterns.

SELECTION OF PATIENTS

Patients with dementia and MCI were identified based on ICD-10 codes and subsequently classified, as detailed in the methods table.

ICD-10	Definition
F00 + G30	Alzheimer’s disease (AD)
F01	Vascular dementia (VaD)
F02 + F03	Other dementias (mD)
F06.7	Mild cognitive impairment (MCI)

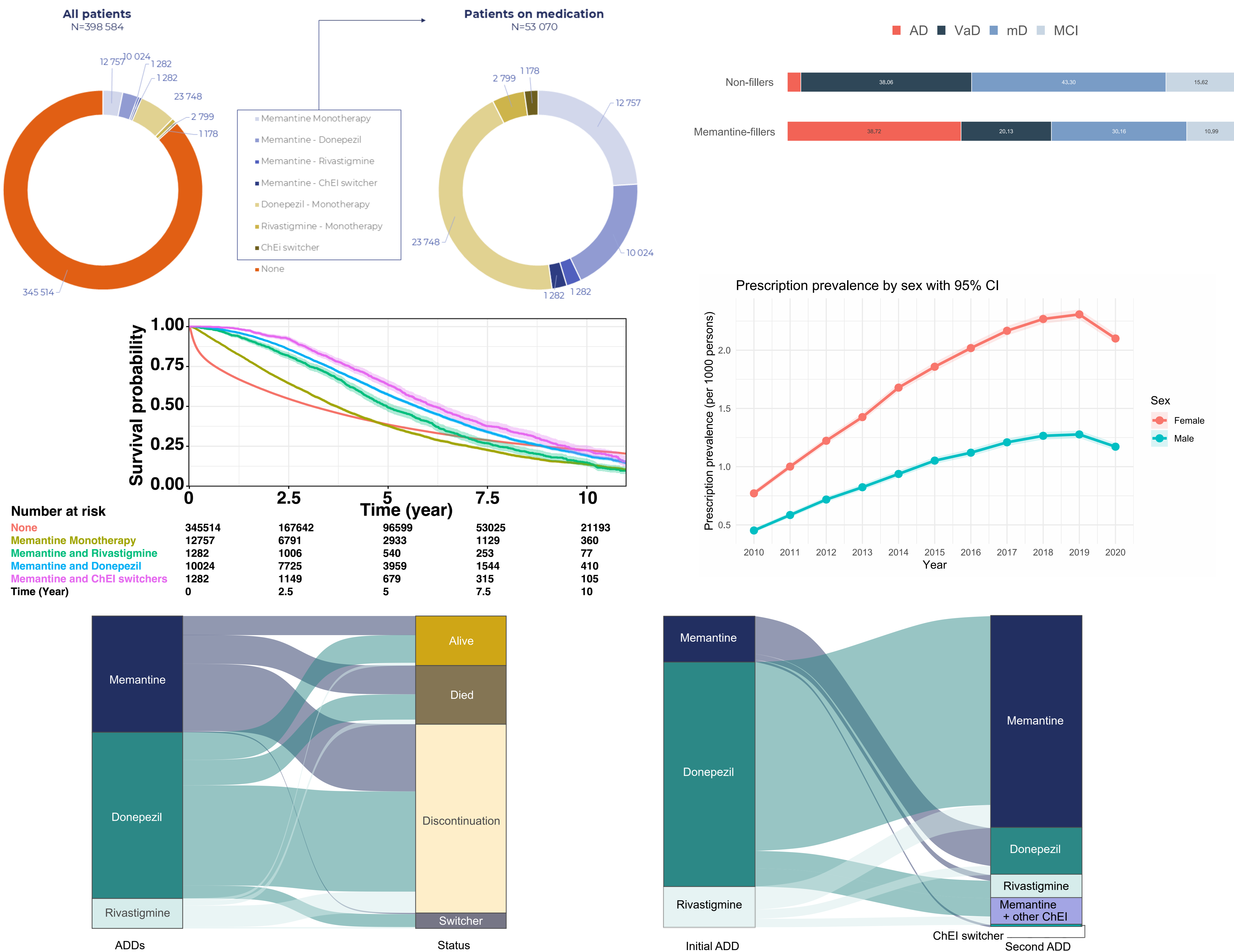
OUTCOMES

Primary outcome: all-cause mortality.

Secondary outcome: treatment persistence, defined as time to discontinuation of memantine treatment.

Sex, age at diagnosis, diagnostic reclas-sification, the order of medications prescribed, and changes in place of residence were evaluated.

RESULTS



CONCLUSIONS

Early and accurate diagnosis is essential to meaningfully modify cognitive trajectories. Dementia care must shift toward **personalised medicine**, acknowledging interindividual heterogeneity in risk, pathophysiology, and clinical phenotype. Given the **overlap with risk factors of other non-communicable diseases**, effective management requires **interdisci-plinary integration and cross-specialty collaboration**. Scalable digital cognitive assess-ment may facilitate early detection, risk stratification, and longitudinal **monitoring**, supporting targeted risk reduction and the identification of individuals in preclinical and prodromal stages, enabling **timelyaccess** to appropriate interventions and **improving population-level outcomes**.

Medication	HR	CI 95%	p-value
Memantine Monotherapy	0,926	0,906 - 0,947	<0.001
Donepezil and Rivastigmine	0,646	0,600 - 0,696	<0.001
Memantine and Donepezil	0,630	0,613 - 0,647	<0.001
Memantine and ChEI switchers	0,621	0,580 - 0,666	<0.001