Real-World Care of Alzheimer’s Disease Patients (n=2,358) in Germany: Insights from Registry of the Neurologists Network NeuroTransData (NTD) using the Physician/Patient Platform (DESTINY)

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What is DESTINY?

Web-based platform DESTINY (**D**atabas**E**-as**S**isted **T**herapy dec**I**sio**N** support s**Y**stem), which integrates standardized data acquisition and a clinical registry. This platform facilitates the collection and analysis of real-world data, enabling physicians to make informed decisions about patient treatment and optimizing care protocols, especially for neurological conditions like Alzheimer's disease, multiple sclerosis, and others. DESTINY also plays a role in supporting therapeutic decision-making by providing real-time insights from clinical data gathered during patient visits.

Scan the QR code to access our website and learn more about the advanced capabilities and unique features of this platform.

BACKGROUND

NeuroTransData (NTD) is a collaborative network of neurologists and psychiatrists in Germany dedicated to optimizing therapeutic protocols and enhancing patient outcomes through data-driven methodologies and advanced analytics. Standardized data acquisition is facilitated via **DESTINY** (**D**atabas**E**-as**S**isted **T**herapy dec**I**sio**N** support s**Y**stem), a web-based platform that integrates a comprehensive clinical registry, allowing for systematic physician-patient interactions.

Dementia currently affects approximately 1.7 million people in Germany, with projections estimating an increase to 3.3 million by 2060. Alzheimer’s disease (AD) represents the most common subtype and is characterised by progressive cognitive decline across domains including memory, orientation, language, and daily function. Within the European Union, Lecanemab is at present the only approved amyloid-lowering treatment, whereas Donanemab has not received authorisation. In routine clinical practice in Germany, the diagnostic work-up of patients with mild cognitive impairment (MCI) or early AD combines standardised cognitive assessments, most commonly the Mini-Mental State Examination (MMST) or Montreal Cognitive Assessment (MoCA), with structural brain imaging such as MRI or CT. In selected cases, cerebrospinal fluid (CSF) biomarkers and ApoE genotyping are additionally performed. However, despite the clinical relevance of these diagnostic procedures, real-world data on how they are applied in daily practice and how treatment patterns vary across cognitive stages remain limited. This study therefore aimed to characterise diagnostic practices and treatment strategies for patients with MCI or early AD dementia by analysing data from the NeuroTransData (NTD) registry.

METHODS

We conducted a retrospective analysis of anonymised registry data from the DESTINY physician–patient platform supplemented by practice management system (PMS) data. The dataset included 2,358 patients with MCI due to AD or mild AD dementia (ICD-10 F00/G30), drawn from 42 neurology practices in Germany between September 1998 and April 2025. Patients were stratified into three groups according to their first available MMST score: less than 16 (severe dementia, n=325), 16 to 25 (mild to moderate dementia, n=1,065), and 26 or higher (MCI, n=396). An additional 572 patients (24.3%) had no MMST score documented. Extracted variables comprised age, sex, cognitive test results, imaging modality, CSF biomarker measurements (Aβ42, p-tau, total tau), ApoE genotype, and prescriptions of antidementia medication including cholinesterase inhibitors, memantine, and Ginkgo. All diagnoses were supported by imaging and cognitive testing; purely clinical diagnoses did not occur. Data were analysed descriptively, with results presented by MMST subgroup.

RESULTS

Among the 2,358 patients, 396 (16.8%) were classified as MCI, 1,065 (45.2%) as mild to moderate dementia, and 325 (13.8%) as severe dementia. The mean age of the total cohort was 82.5 years (range 44–100). Patients with severe dementia had a mean age of 79.7 years, those with mild to moderate dementia 78.3 years, and those with MCI 75.2 years. Females represented 56.9% of the cohort with a mean age of 83.6 years, whereas males comprised 43.1% with a mean age of 81.1 years.

All patients underwent neuropsychological testing combined with brain imaging, most often MRI or CT. Documented MRI sequences included T1 and T2, with FLAIR and DWI used less frequently. CSF biomarker information was scarcely available in DESTINY, with only 15–17 values recorded for each of Aβ42, p-tau, and total tau, as most lumbar puncture results were stored in the PMS. ApoE genotyping was performed almost exclusively in privately insured patients. Amyloid-PET was restricted to privately insured patients as no reimbursement is available under statutory health insurance. With regard to treatment, 1,715 patients (72.7%) received at least one antidementia medication. Donepezil was prescribed to 819 patients (47.8% of treated), memantine to 619 (36.1%), rivastigmine to 139 (8.1%), galantamine to 123 (7.2%), and Ginkgo to 15 (0.9%). In patients with severe dementia (MMST <16), 88.9% were treated, with memantine being the most frequently used agent, followed by donepezil. Among those with mild to moderate dementia, all patients received treatment, most commonly donepezil followed by memantine. In the MCI group, 67.4% were treated, predominantly with cholinesterase inhibitors. Information on dosage and treatment duration was largely missing from DESTINY.

DISCLOSURES

Dr. med. Arnfin Bergmann has received consulting fees from advisory board/speaker/other activities for NeuroTransData.

Prof. Dr. med Stefan Braune has received honoraria for clinical services from the Kassenärztliche Vereinigung Bayern und private health insurances, for clinical studies and lecturing from Novartis, Merck, Roche and Sanofi. He received honoraria for consulting from NeuroTransData and as board member.

Dr. med. Oliver Fasold has received honoraria for clinical services from the Kassenärztliche Vereinigung Berlin and private health insurances, for clinical studies and lecturing from Novartis, Merck, GAIA, Biogen, Roche and Sanofi. He received honoraria for consulting from NeuroTransData and as board member.

Dr. Niloofar Tavakoli, and NTD Study Group declare that they have no conflicts of interest to disclose.

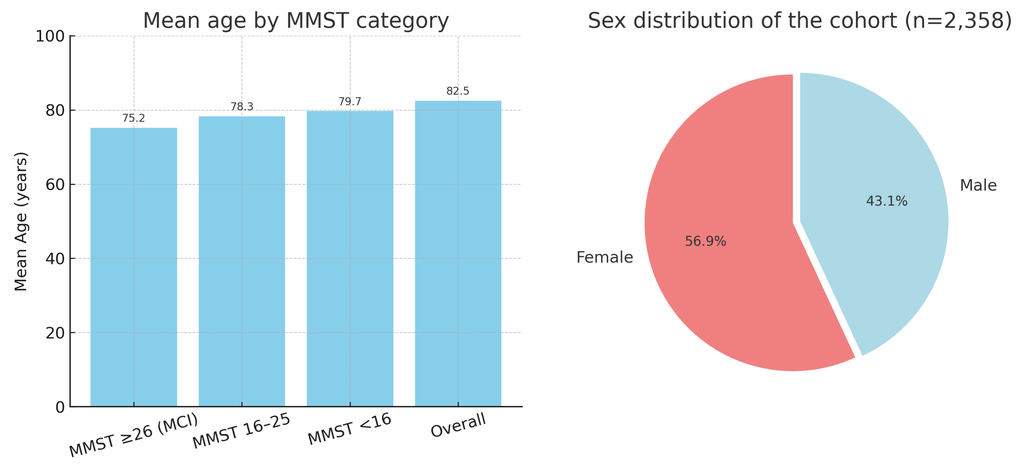

Figure 1. Demographic Characteristics of the Cohort: Mean Age by MMST Category and Sex Distribution

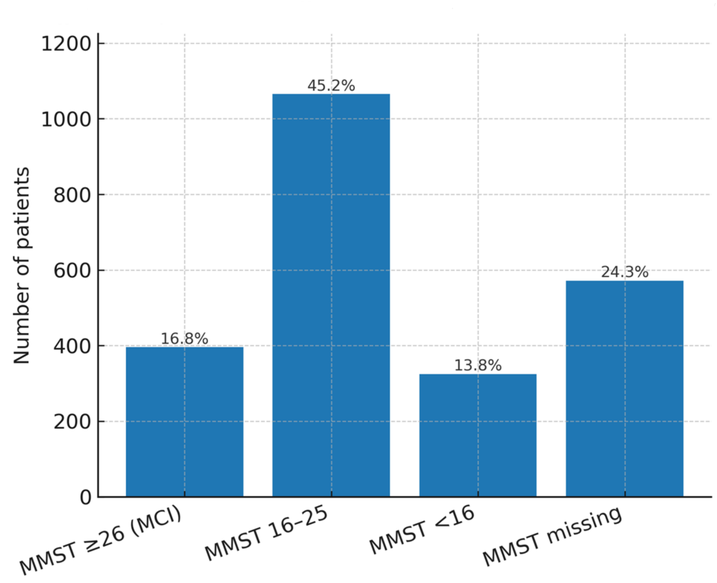

Figure 2. Patient distribution by MMST category (n=2,358)

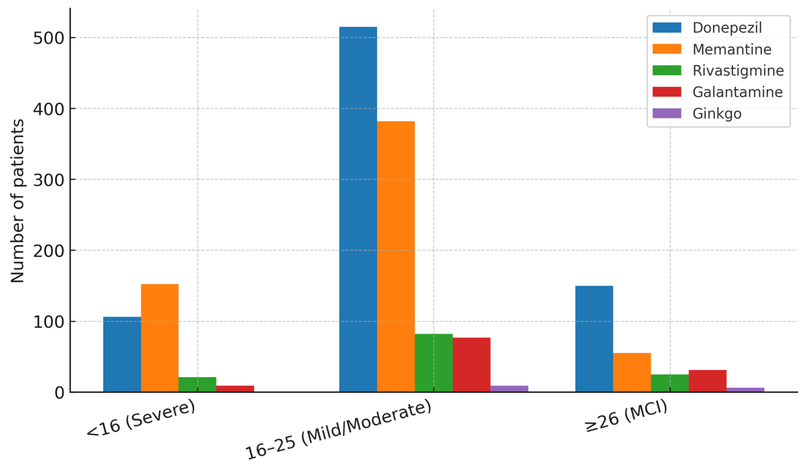

Figure 3. Antidementia medication by MMST group (counts)

CONCLUSIONS

This large real-world cohort study shows that diagnostic evaluation of patients with MCI and early AD in Germany routinely combines neuropsychological testing with structural brain imaging, while CSF biomarkers and ApoE genotyping were used only selectively. Therapeutic strategies generally follow guideline recommendations, with cholinesterase inhibitors most often used in MCI and mild dementia, and memantine more frequently employed in severe dementia. The study also highlights substantial data gaps, particularly concerning MMST scores, CSF biomarker results, and detailed medication records. These findings underscore the importance of fully integrating registry and practice management data in order to obtain more comprehensive information on diagnostic pathways and treatment courses. Prospective projects will be essential to address these gaps and to enable more robust real-world analyses of AD care.

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