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Do therapeutic approaches change in older patients with multiple sclerosis? An analysis from the German MS Registry

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Introduction

Multiple sclerosis (MS) presents differently across age groups, with pathophysiology evolving as patients age, leading to distinct disease courses and therapeutic responses. This imposes a particular challenge for people with MS ≥60 years of age (P≥60), as relapse and progression patterns alter, age-related physiological changes occur, and concomitant diseases become present. Therapeutic approaches may therefore differ from younger patients (P≤59). Despite the increasing number of older MS patients, there is little research in older age groups.

Methods

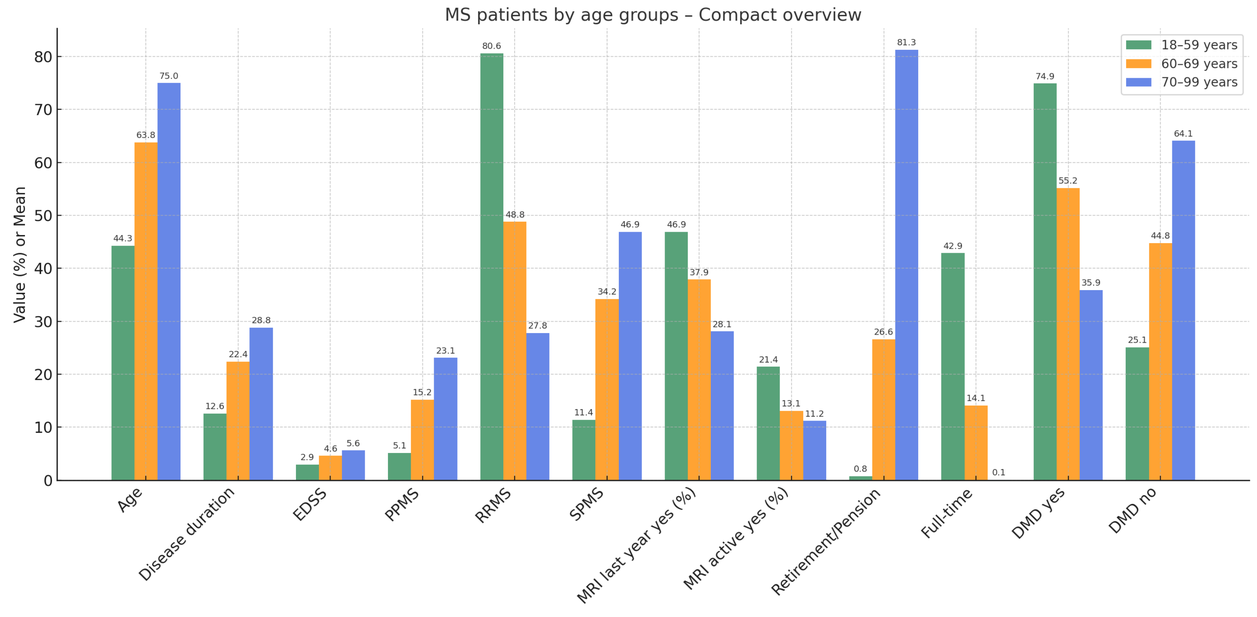
We used data from the German MS Register [data export date: Feb 2025]. Patients were included with their latest visit. Detailed DMT data was available for a subgroup of patients. Furthermore, P≥60 receiving DMT were compared with those without regarding demographic and clinical characteristics, i.e. sex, disease duration, EDSS, relapse history, MRI activity. We also compared the demographic characteristics of patients over 60 years of age across different age groups.

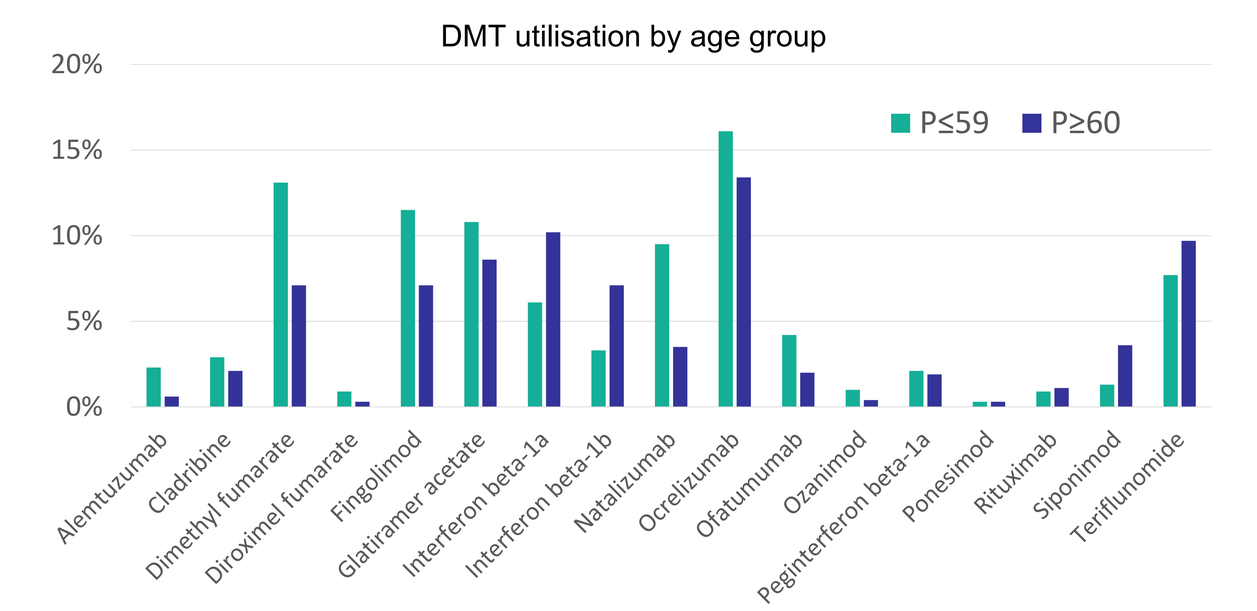
Results

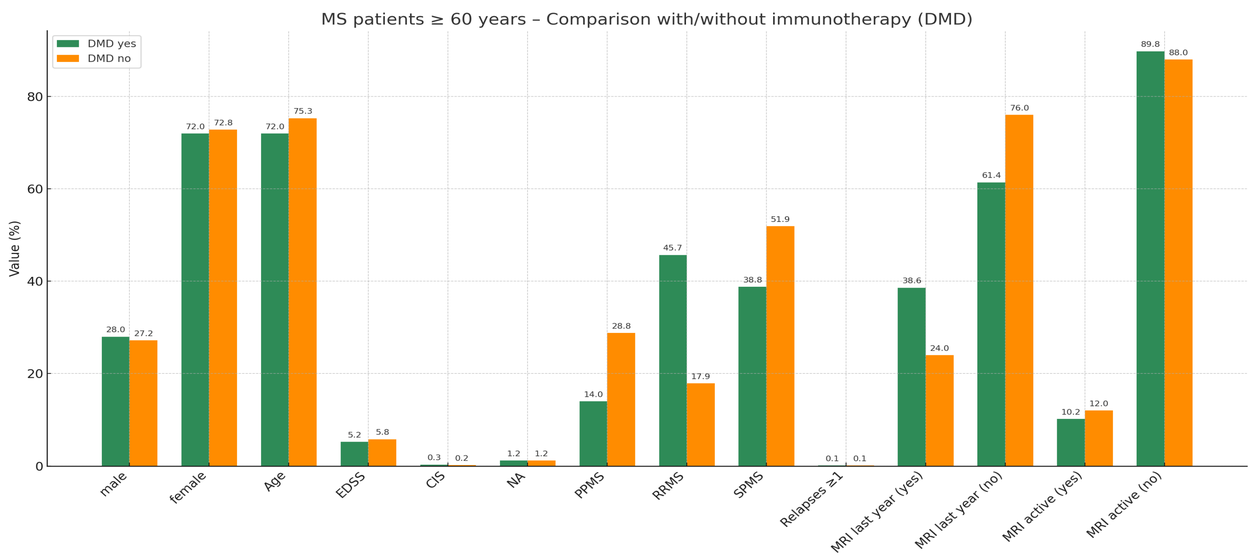
The study included a total of 47,484 PwMS of which 8,321 (18%) had reached an age of ≥60 years at the last visit while 39,163 (82%) were still younger. In the group P≥60 the mean age was 66.2 compared to 44.3 years. In P≥60 52.2% were still receiving DMT at their last visit, while 74.7% did so in P≤59. Of those in P≥60, 45% received moderate efficacy therapy (meDMT; i.e. 19% IFN), 34% high efficacy therapy (heDMT; i.e. 16% aCD20), and 21% alternative therapies (i.e. 15% steroids). In P≤59, 44% received meDMT (12% IFN), 50% heDMT (21% aCD20), and 6% alt. (3% steroids). Comparing treated with untreated patients in P≥60, showed equal sex distribution (71.2% vs. 71.2% female), higher proportion of RRMS (60% vs. 28%), lower disease progression (mean EDSS: 4.4 vs. 5.3) higher relapse rate (ARR: 0.07 vs. 0.06), higher MRI availability within 12 months (44% vs. 30%), but lower MRI activity (11% vs. 16%) when done.

Objectives/Aims

We aimed to explore if age-related changes impact disease modifying treatments (DMT) choices and clinical outcomes by studying the subgroup of P≥60 in the German MS register in comparison with the P≤59 subgroup. How do P≥60 receiving DMT differ from those without treatment?







Conclusion

Our study demonstrates that therapeutic approaches in PwMS shift significantly with increasing age. Notably, a markedly lower proportion of patients >60 years receive immunotherapy. Interestingly, treatment patterns also differ within older age groups (e.g., 60–69 vs. 70–99 years). These changes likely reflect awareness of age-related disease mechanisms, immunosenescence, and comorbidities, which is a positive development towards more individualized therapy decisions. However, several influencing factors remain insufficiently explored and warrant further investigation.

Disclosure of conflict of interest:
Nastaran Mahboobi received fees for consulting and/or investigator activities and/or lectures Biogen, Bayer, Bristol-Myers Squibb, Hexal, Jansen, Lilly, Merck, Neuraxpharm, Novartis and Roche. David Ellenberger has nothing to disclosure. Alexander Stahmann has no personal pecuniary interests to disclose, other than being the lead of the German MS Register, which receives (project) funding from a range of public and corporate sponsors, recently including The German Innovation Fund (G-BA), The German Retirement Insurance, The German MS Trust, The German MS Society, Bristol Myers Squibb, Merck Healthcare Germany GmbH, Novartis Pharma GmbH, Roche Pharma AG and TG Therapeutics/Neuraxpharm. T. Ziemssen has received consultancy and/or speaking fees from Almirall, Bayer, Biogen, Merck, Novartis, F. Hoffmann-La Roche Ltd, Sanofi, and Teva; and has received grant/research support from Biogen, Novartis, Sanofi, and Teva. Gereon Nelles received fees for consulting and/or clinical trial investigator activities and/or lectures Biogen, Bayer, Bristol-Myers Squibb, Hexal, Jansen, Lilly, Merck, Neuraxpharm, Novartis, Roche. Member of the Executive Board of the Professional Association of German Neurologists.

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