

## Persons with multiple sclerosis older than 55 years – preliminary results from a subgroup analysis from the German MS registry

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### Background and Research Problem:

Data on efficacy of disease modifying therapies (DMTs) in people with MS (PwMS) older than 55 years (PwMS>55) is limited. This is mainly attributed to the fact that PwMS of this age group are rarely included in clinical trials relevant for approval of DMTs. Importantly, however, in PwMS>55 disease progression appears to mostly occur independently of clinical relapses and visible inflammation on magnetic resonance imaging (MRI), making this subgroup less likely to respond to DMTs. In addition, the same individuals may be at a higher risk of treatment associated complications, due to age-related changes of the immune system.

### Objective:

To study the subpopulation of PwMS>55 in the German MS registry (GMSR).

### Methods:

Analysis of PwMS>55 in comparison with the GMSR population younger than 55 years (PwMS<55). Endpoints of interest were the proportions of patients receiving DMTs, signs of inflammation on MRI, and clinical relapses. Other aspects were the comparison of the grade of disability, leading symptoms, and the proportions of patients with untreated symptoms.

### Results

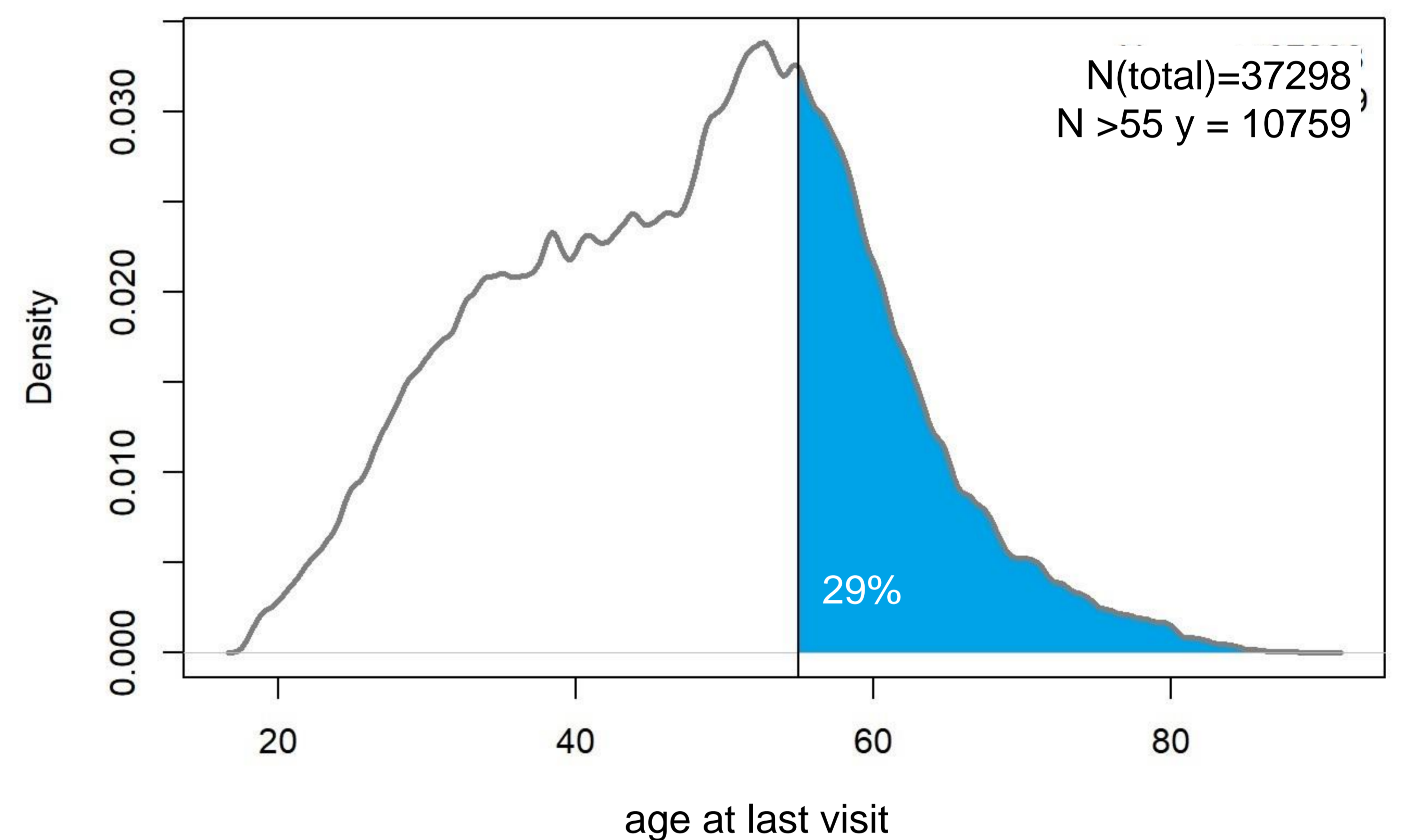
At the time of analysis (01.03.2022), 37,298 individuals were included in the GMSR with visits since 2014.

PwMS>55 comprised of 10,759 patients with a mean age of 62.0 years, while PwMS<55 were 26,539 individuals (mean age 41.4 years). As expected, in PwMS>55 compared with the younger population, the mean EDSS was higher (EDSS 4.4 vs. 2.7), the proportion of patients with reported MRI worsening was lower (4.7 vs. 9.8%), as well as the annual relapse rate (0.08 vs. 0.15).

Accordingly, the rate of PwMS>55 labeled relapsing-remitting was lower (51.4 vs. 84.0%), and the proportion of PwMS>55 labeled progressive higher (46.3 vs. 12.7%). DMTs were registered for only 56.2% of the PwMS>55, while this was noted for 77.2% of the younger population. Early retirement due to MS was seen in 38.8% of PwMS between 55 and 65 years of age, while it was only 17.4% in PwMS<55.

A majority of PwMS>55 suffered from gait disorder (77 vs. 43%), fatigue (59 vs. 53%), bladder dysfunction (51 vs. 29%), and spasticity (50.0 vs. 27%). 28% of the PwMS>55 needed a wheelchair, compared with 10% for the younger cohort.

Symptoms reported untreated in most individuals, irrespective of age, included sexual dysfunction, cognitive impairment, and fatigue.



	<b>PwMS ≤ 55</b>		<b>PwMS &gt; 55</b>
Mean age (y)	41	«	62
EDSS	2.7	«	4.5
MRI worsening %	9.8	»	4.8
Gait disorder %	43	«	77
Spasticity %	27	«	50
Bladder dysfunction %	29*	«	51*
Wheelchair %	10	«	28

\*reported untreated in 45% of patients

### Conclusions and Overall Goal:

The study exposes the unmet needs for an aging MS population, going beyond the prescription of appropriate DMTs, and not sufficiently covered by the German public health system. This was one of the reasons to initiate the “Communication, Coordination, and Security of People with Multiple Sclerosis (COCOS-MS) study in the administrative district of Cologne, a randomized phase II clinical trial exploring the efficiency of a cross-sectoral coordination of services provided by a care and case management funded by GBA-Innovationsfonds (FKZ 01VSF19029). The study recently completed recruitment. In a next step, we will use the data from GMSR to compare it with findings obtained in the COCOS-MS study, which will assist us in the design of a multicentric study that aims at improving the cross-sectoral care for vulnerable subpopulations of PwMS, including PwMS>55.

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