Disease Modifying Treatments (DMTs) in Germany – Changes in treatment patterns

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for the German Multiple Sclerosis Register of the German National MS Society

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Background

The German MS-Register, initiated in 2001 by the German MS society (DMSG), has undergone a major technical revision between 2014 and 2016. Detailed information on disease-modifying drug treatment for multiple periods per patient is now collected.

Objectives:

To provide insights how the availability of new treatment options changed treatment patterns.

Methods and Material:

For a subset of patients (relapsing-remitting MS, receiving DMT treatment detailed information on DMT available, N=4,954) historical and current DMTs where exported from the database. Patients were attributed to one of the following three groups according to DMT starting date: 1) before 2006 [N=951], 2) after 2006 but before 2011 [N=1,698] and 3) beginning in 2011 [N=2,305]. The dates were chosen based on the emergence of major new treatment options after market authorization. For clearer graphs all treatment options with low percentages were grouped to "*others*".

Results:

For the 1st group the most frequently used initial DMTs were interferons (IFN) (75.9%), followed by glatirameracetate (GLAT) (16.1%), azathioprine (AZA) (4.3%) and others (3.5%). Secondary treatment option were mostly (other) IFN (27,9%) followed by GLAT (12,51%), natalizumab (NAT) (11,98%), fingolimod (FYD) (8,2%) and others. 23,8% patients with initial DMT before 2006 are either still on the initial DMT or have discontinued the treatment.

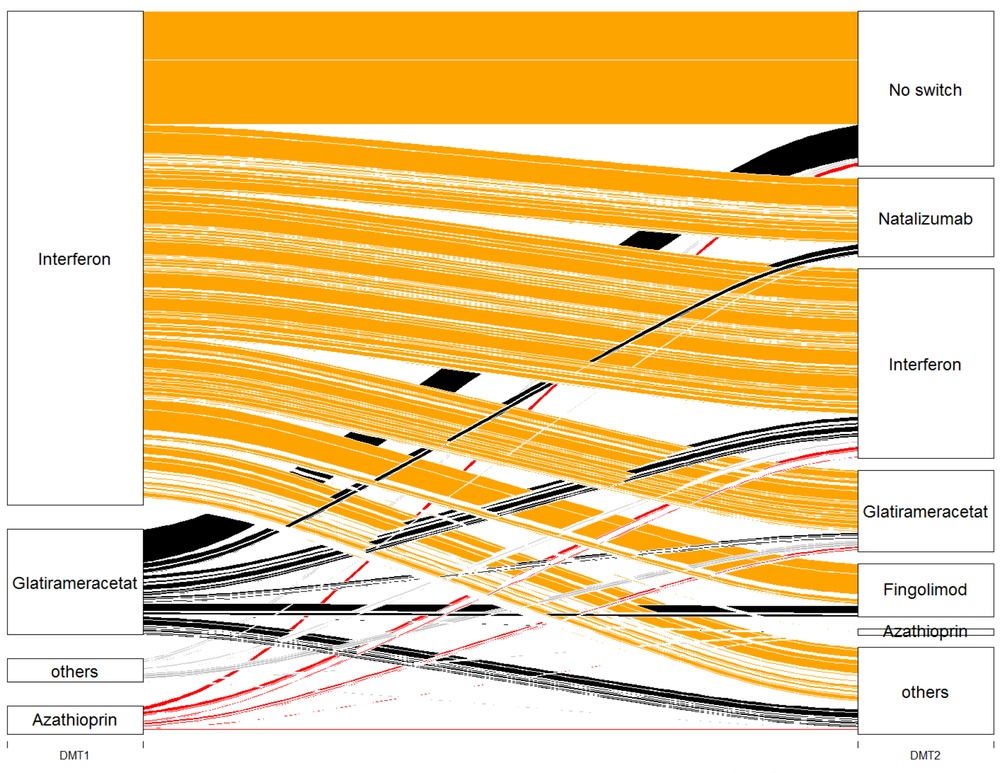

Figure 1: group 1 RRMS patients – DMT starting date before 2006 (n=951)

In the 2nd group initial DMTs were still primarily IFN (66.9%) and GLAT (23.6%). NAT was used as first line treatment in 5% of patients. Secondary treatments for the 2nd group were mostly (other) IFNs (25.5%) followed by NAT (12.6%), FYD (12%) and GLAT (11.7%). 23.3% are either still on the initial DMT or have discontinued the treatment.

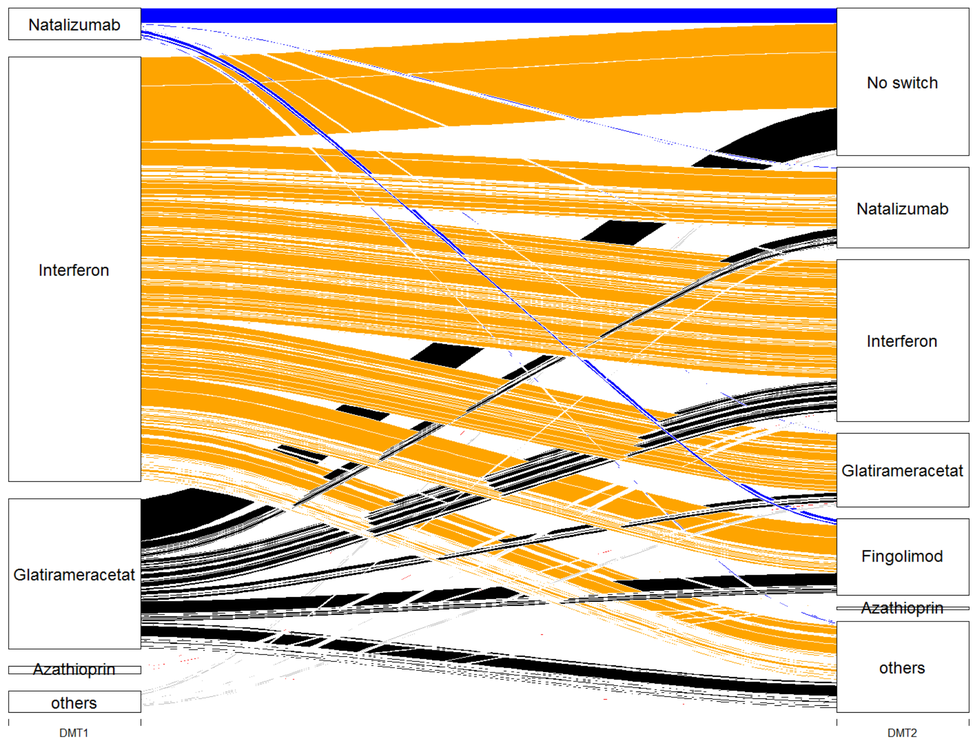

Figure 2: group 2 RRMS patients – DMT starting date after 2006 but before 2011 (n=1,698)

In the 3rd group initial DMTs were again mostly IFNs (68.5%) followed by GLAT (22.5%) and NAT (3.8%). Secondary treatment option were in the majority of cases (other) IFNs (21.8%) followed by FYD (11.8%), NAT (11.1%), GLAT (10.5%) and dimethyl fumarate (DMF) (6.6%). 27.3% of the patients in this group are either still on the initial DMT or have discontinued the treatment.

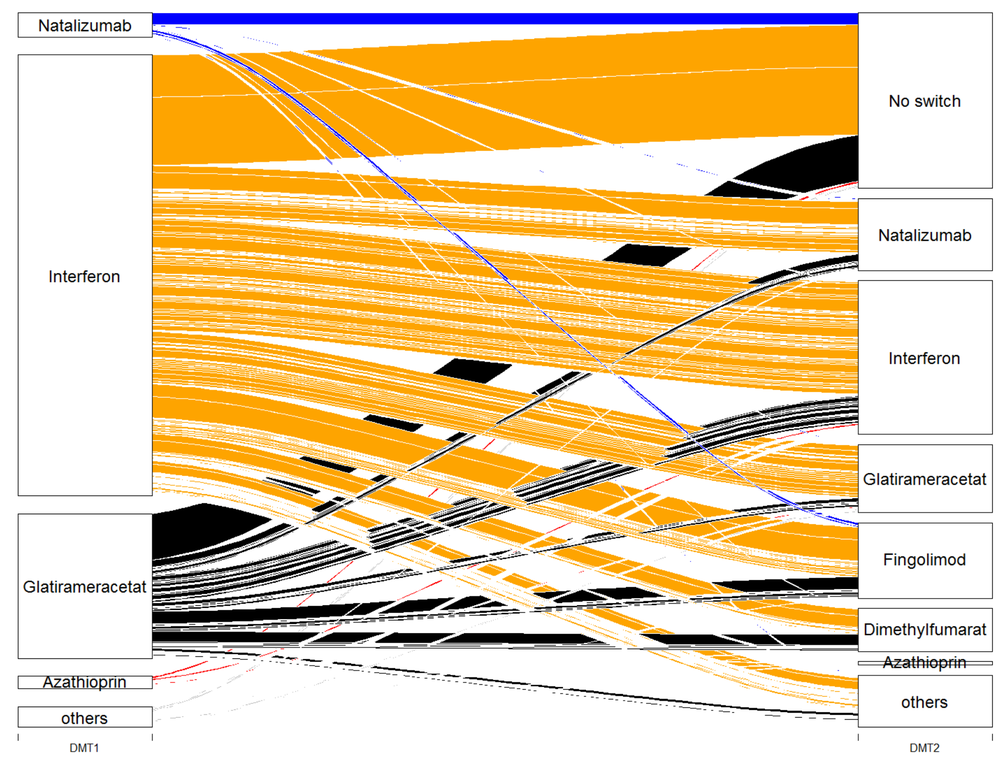

Figure 3: group 3 RRMS patients – DMT starting date after 2011 (n=2,305)

Conclusions:

The availability of new treatment options significantly changed the prescription patterns in Germany. Our analysis showed that in line with the guidelines most patients are initially treated with IFN or GLAT. Depending on the duration since initial DMT start secondary DMTs differed quite a lot. Interestingly, throughout all three groups, a substantial proportion of patients (approximately 25%) did not switch treatment.

Disclosure – Declaration of Interest

Peter Flachenecker has received speaker's fees and honoraria for advisory boards from Almirall, Bayer, Biogen, Genzyme, Merck-Serono, Novartis, Roche and Teva. He has participated in pharmaceutical company sponsored trials by Almirall, Biogen Idec and Novartis. None resulted in a conflict of interest.
Tim Friede has received personal fees for consultancies (including data monitoring committees) in the past three years from Bayer, Boehringer Ingelheim, DaiichiSankyo, Feldmann Patent Attorneys, Galapagos, Grünenthal, Janssen, Mediconomics, Novartis, Penumbra, Pharmalog, Roche, SGS, UCB; all outside the submitted work.
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Christoph Kleinschnitz has received personal compensations for giving lectures and attending advisory boards from Biogen, Merck Serono, Bayer, Teva, Novartis, Medday, Mylan, Genzyme, Almirall, and Roche.
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Kerstin Eichstädt, Firas Fneish, Otto Rienhoff and Alexander Stahmann have nothing to disclose.