Supplementary Table 1: Baseline characteristics of the dataset used to determine disability progression.

Variable	**Unmatched**			**Matched**		
	Fingolimod	**Dimethyl fumarate**	**SMD**	**Fingolimod**	**Dimethyl fumarate**	**SMD**
n	625	597		516 (83%[†])	516 (86%[†])	
Age, mean, years (SD)	39.2 (10.9)	41.6 (11.4)	0.21	40.3 (11.0)	41.0 (11.3)	0.07
Gender (female, %)	424 (68%)	431 (72%)	0.10	361 (70%)	365 (71%)	0.02
Disease duration, mean, years (SD)	7.9 (8.2)	8.9 (8.0)	0.13	8.4 (8.5)	8.5 (7.7)	0.02
EDSS, median (IQR)	2.0 (1.5-3.0)	2.0 (1.5-3.0)	0.005	2.0 (1.5-3.0)	2.0 (1.5-3.0)	0.02
Preceding treatment, n (%)						
Naïve	280 (45%)	196 (32%)		199 (39%)	189 (37%)	
IFN beta 1a i.m.	62 (10%)	97 (16%)		59 (11%)	72 (14%)	
IFN beta 1a s.c.	72 (12%)	92 (15%)		71 (14%)	72 (14%)	
IFN beta 1b s.c.	55 (9%)	68 (11%)		53 (10%)	57 (11%)	
Glatiramer acetate	56 (9%)	59 (10%)		52 (10%)	49 (10%)	
Teriflunomide	14 (2%)	21 (4%)		14 (3%)	15 (3%)	
Natalizumab	83 (13%)	62 (10%)		66 (13%)	60 (12%)	

Number of relapses in the year before baseline, mean (SD)	0.6 (0.8)	0.5 (0.7)	0.11	0.6 (0.8)	0.5 (0.8)	0.06

[†]proportion of retained patients after matching

SMD = standardized mean difference; SD = standard deviation; EDSS = expanded disability status scale; IQR = interquartile range; IFN = interferon; DMT = disease modifying treatment

Supplementary table 2: Logistic model used to determine the propensity scores

Independent variable	**Estimate (SE)**	**p-value**
Gender, male	-0.0044 (0.1809)	0.9805
Age	0.0053 (0.0088)	0.5420
Disease duration	0.0001 (0.0138)	0.9966
EDSS	0.0157 (0.1291)	0.9033
EDSS increase in last year	-0.1836 (0.2166)	0.3968
Preceding relapse rate	-0.1715 (0.0762)	0.0245
Visual FSS	-0.0129 (0.1159)	0.9112
Brainstem FSS	0.1111(0.1381)	0.4209
Pyramidal FSS	-0.0404 (0.1136)	0.7220
Cerebellar FSS	-0.1762 (0.1282)	0.1692
Sensory FSS	0.0833 (0.1014)	0.4117
Bowel and bladder FSS	0.1254 (0.1257)	0.3186
Cerebral FSS	-0.1821 (0.1021)	0.0746
Time on previous DMT	-0.0330 (0.0233)	0.1568
Number of previous DMT	0.4208 (0.1966)	0.0350
Time since last relapse	0.0269 (0.0271)	0.3204
North-Western region[†]	0.4307 (0.3344)	0.1977
Northern region[†]	-0.0088 (0.3314)	0.9789
Central region[†]	0.2626 (0.3512)	0.4546
Eastern region[†]	0.8625 (0.3067)	0.0050

Southern region†	0.0732 (0.4798)	0.8788

Propensity for treatment with dimethyl fumarate vs. fingolimod (reference) at baseline.

SE = Standard error, EDSS = Expanded disability status scale, FS = Functional System Score,

DMT = Disease modifying treatment

†The South-Western region is used as a reference.

Supplementary Table 3: Sensitivity analyses

1) Matching with a calliper of 0.1		
	†HR (95% CI) **‡IRR (95% CI)**	**p-value**
Free from relapses†	1.1 (0.9-1.4)	0.53
ARR‡	1.1 (0.9-1.4)	0.32
Free from disability worsening†	1.0 (0.6-1.7)	0.99
Disability improvement†	0.9 (0.6-1.3)	0.80
1) No pairwise censoring		
Free from relapses†	1.1 (0.9-1.4)	0.37
ARR‡	1.1 (0.9-1.3)	0.37
Free from disability worsening†	0.8 (0.5-1.2)	0.22
Disability improvement†	0.8 (0.6-1.2)	0.26
3) Including patients irrespective of treatment start		
Free from relapses†	0.9 (0.7-1.1)	0.24
ARR‡	1.2 (1.0-1.4)	0.11
Free from disability worsening†	1.0 (0.6-1.5)	0.93
Disability improvement†	0.9 (0.6-1.2)	0.29

Comparison of dimethyl fumarate vs. fingolimod (reference).

†For the proportions of patients without relapse, without disability progression and with disability improvement, Cox marginal proportional hazards models are used.

‡ARRs are compared with negative binomial models.

HR = hazard ratio, IRR = incident rate ratio; CI = confidence interval; ARR = annualised relapse rate

Supplementary figure. Distribution of propensity scores before and after matching