

Supplementary tables 1 and 2

The Course of Multiple Sclerosis Rewritten: A Norwegian Population Based Study on Disease Demographics and Progression

*Cecilia Smith Simonsen^{1,3,4}, Heidi Øyen Flemmen^{2,5}, Line Broch^{1,3,4}, Cathrine Brunborg⁶, Pål Berg-Hansen³,
Stine Marit Moen⁷, Elisabeth Gulowsen Celius^{3,4}*

¹*Department of Neurology, Vestre Viken Hospital Trust, Drammen, Norway*

²*Department of Neurology, Hospital Telemark HF, Skien, Norway*

³*Department of Neurology, Oslo University Hospital, Norway*

⁴*Institute of Clinical Medicine, University of Oslo, Norway*

⁵*Institute of Health and Society, University of Oslo, Norway*

⁶*Oslo Centre for Biostatistics and Epidemiology, Research Support Services, Oslo University Hospital, Norway*

⁷*MS-Centre Hakadal, Norway*

Corresponding author:

Cecilia Smith Simonsen (MD):

Department of Neurology, Vestre Viken Hospital Trust, Dronninggaten, 3004 Drammen, Norway

Email: cecsim@vestreviken.no

Phone number: +47 98 67 32 56

Group	Year of diagnosis	Unadjusted						Adjusted					
		BT			Non-BT			BT			Non-BT		
		(n=7991 EDSS)		(n=5084 EDSS)		(n=7782 EDSS)		(n=4931 EDSS)					
		Coef.	95% CI	p	Coef.	95% CI	p	Coef.	95% CI	p	Coef.	95% CI	p
Age at EDSS		0.128 0.157 0.176	- <0.001 0.124	0.101 <0.001 0.146	0.141 0.161 0.180	- <0.001 0.127	0.104 - 0.150						<0.001
G2	1998-2002	Reference						Reference					
Diagnostic group													
G1	<1998	0.841 1.966 3.090	0.001 - 2.864	0.401 1.632 2.864	0.009	0.593 1.709 2.826	- 0.003 1.527	0.309 - 2.745	0.01				
G3	2003-2007	-0.445 0.821 2.088	0.20 - 1.536	-1.145 0.195 0.78		-0.472 0.766 2.004	- 0.23 0.161	-1.156 - 0.81					
G4	2008-2012	2.068 3.305 4.542	- <0.001 -	0.056 1.380 2.704	0.04	1.934 3.153 4.372	- <0.001 1.107	-0.198 - 0.10					
G5	2013-2017	2.414 3.948 5.481	- <0.001 -	1.170 2.707 4.245	0.001	1.098 2.628 4.158	- 0.001 2.029	0.506 - 0.009					
Diagnostic group by age of EDSS (interaction term)													
G1	<1998	-0.038 -0.014 0.010	- 0.20 -0.022	-0.049 0.12		-0.040 -0.016 0.008	- 0.20 -0.025	-0.052 - 0.003					
G3	2003-2007	-0.052 -0.025 0.002	- 0.07 -0.009	-0.400 0.54		-0.050 -0.023 0.003	- 0.09 -0.006	-0.036 - 0.71					
G4	2008-2012	-0.116 -0.089 -0.063	- <0.001 -	-0.078 -0.048 -0.017		-0.110 -0.084 0.057	- <0.001 -0.036	-0.066 - 0.02					
G5	2013-2017	-0.143 -0.110 -0.076	- <0.001 -	-0.118 0.082 -0.046		-0.111 -0.076 0.042	- <0.001 -0.057	-0.093 - 0.002					
Intercept		-4.94 -4.039 -3.135	- <0.001 -	3.635 -2.621 1.608		-2.739 -1.655 -0.570	- 0.003 -1.095	-2.271 - 0.07					

Supplementary table 1: Results from linear mixed-effects regression analyses (unadjusted and adjusted) of EDSS progression over time by diagnostic groups stratified on cohort. Adjusted for months spent on all disease modifying treatment, progressive MS at onset, age at onset and gender. Non-BT: everyone in BOT-1 who does not reside in Buskerud or Telemark. Coef.: regression coefficient, EDSS: expanded disability status scale

Group	Year of diagnosis	Unadjusted						Adjusted					
		Progressive at onset (n=1317)			Relapsing at onset (n=10 949)			Progressive at onset (n=1256)			Relapsing at onset (n=10 751)		
		Coef.	95% CI	p									
Age at EDSS		0.145 0.188 0.231	- - -	<0.001	0.121 0.137 0.153	- - -	<0.001	0.157 0.198 0.240	- - -	<0.001	0.123 0.140 0.156	- - -	<0.001
G2	1998-2002	Reference						Reference					
Diagnostic group													
G1	<1998	0.274 3.399 6.524	- - -	0.033	0.447 1.351 2.256	- - -	0.003	0.103 3.077 6.051	- - -	0.043	0.395 1.291 2.186	- - -	0.005
G3	2003-2007	-6.145 -2.628 0.890	- - -	0.143	-0.086 0.887 1.860	- - -	0.074	-5.310 -2.019 1.271	- - -	0.229	-0.219 0.737 1.693	- - -	0.131
G4	2008-2012	-6.145 -2.572 1.002	- - -	0.158	2.121 3.073 4.025	- - -	<0.001	-5.319 -1.907 1.506	- - -	0.273	1.719 2.659 3.599	- - -	<0.001
G5	2013-2017	-3.767 1.482 6.730	- - -	0.580	2.597 3.730 4.864	- - -	<0.001	-6.813 -2.000 2.812	- - -	0.415	1.512 2.657 3.782	- - -	<0.001
Diagnostic group by age of EDSS (interaction term)													
G1	<1998	-0.107 -0.054 -0.0004	- - -	0.048	-0.029 -0.009 0.012	- - -	0.40	-0.109 -0.057 -0.005	- - -	0.031	-0.031 -0.010 0.010	- - -	0.325
G3	2003-2007	-0.036 0.024 0.084	- - -	0.437	-0.045 -0.023 -0.001	- - -	0.038	-0.036 0.022 0.080	- - -	0.456	0.042 -0.020 0.002	- - -	0.082
G4	2008-2012	-0.046 0.015 0.077	- - -	0.628	-0.106 -0.084 -0.063	- - -	<0.001	-0.046 0.014 0.074	- - -	0.654	-0.095 -0.073 0.051	- - -	<0.001
G5	2013-2017	-0.159 -0.070 -0.019	- - -	0.124	0.131 -0.105 -0.078	- - -	<0.001	-0.076 0.008 0.091	- - -	0.855	-0.101 -0.075 -0.047	- - -	<0.001
Intercept		-7.189 -4.679 -2.168	- - -	<0.001	-3.998 -3.278 -2.557	- - -	<0.001	-1.782 0.920 3.622	- - -	0.505	-2.311 -1.460 -0.608	- - -	0.001

Supplementary table 2: Results from linear mixed-effects regression analyses (unadjusted and adjusted) of EDSS progression over time by diagnostic groups stratified on cohort in progressive and relapsing patients Adjusted for months spent on all disease modifying treatment, age at onset and gender, Coef.: regression coefficient, EDSS: expanded disability status scale.