

Web-only supplementary material: Alemtuzumab treatment of multiple sclerosis: long-term safety and efficacy, Tuohy et al.

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Lymphocyte subset reconstitution after successive alemtuzumab treatment cycles.

Supplementary table 1: Predicting disability outcome after alemtuzumab: univariate analysis of baseline variables between patients with unfavourable and favourable disability outcomes.

	SAD/SRD		
	6-month SAD (n=28)	6-month SRD and unchanged (n=59)	p value (statistical test)
Median baseline EDSS	3.25 (IQR 1.5-6.0)	3.5 (IQR 2.0-5.5)	0.517 (Mann-Whitney U test)
Mean Number of relapses in the 2 years pre-treatment	4.11 (SD 1.729)	3.31 (SD 1.534)	<0.001 (Poisson test)
Mean disease duration at first treatment (months)	Mean 49.4 (SD 27.9) Median 32 (IQR 25.3-63)	Mean 39.9 (SD 25.8) Median 36 (IQR 19-54 months)	0.239 (t-test) 0.501 (Mann Whitney U test)
Mean age at first treatment	35.6 years (SD 7.6 years)	31.7 years (SD 8 years)	0.034 (t-test)
Prior DMT use	Yes = 11 No = 17	Yes =23 No =36	0.978 (chi-squared test)
	AUC analysis		
	AUC net worse (n=35)	AUC net better or unchanged (n=52)	p value (statistical test)
Median baseline EDSS	3.0 (IQR 1.5-5.75)	3.5 (IQR 2.5-5.625)	0.204 (Mann-Whitney U test)
Mean Number of relapses in the 2 years pre-treatment	4.00 (SD 1.715)	3.27 (SD 1.523)	<0.001 (Poisson test)
Mean disease duration at first treatment (months)	52 (SD 35.45)	36.9 (SD 24.82)	0.033 (t-test)
Mean age at first treatment	33.6 years (SD 8.7 years)	32.5 years (SD 7.6 years)	0.534 (t-test)
Prior DMT use	Yes 16 No 19	Yes 18 No 34	0.298 (chi-squared test)

Supplementary table 2: Predicting disability outcome after alemtuzumab: binary logistic regression with SAD and AUC 'net worse' as dependent variable.

Predictor 6-month Sustained Accumulation of Disability	β (SE of β)	p-value	Odds Ratio	95% CI for Odds Ratio
Age at treatment (years)	0.111 (0.038)	0.004	1.117	1.036-1.204
Disease duration (years)	0.241 (0.119)	0.042	1.272	1.008-1.605
Number of relapses in the 2 years pre-treatment	0.627 (0.200)	0.002	1.872	1.265-2.769
Baseline EDSS	-0.120 (0.140)	0.393	0.887	0.674-1.168
Prior DMT use	-0.628 (0.617)	0.308	0.533	0.159-1.788
Predictor Worse net change in Area Under the Curve	β (SE of β)	p-value	Odds Ratio	95% CI for Odds Ratio
Age at treatment (years)	0.044 (0.033)	0.178	1.045	0.980-1.114
Disease duration (years)	0.283 (0.1116)	0.014	1.327	1.058-1.665
Number of relapses in the two years pre-treatment	0.460 (0.173)	0.008	1.584	1.128-2.225
Baseline EDSS	-1.93 (0.133)	0.146	0.824	0.635-1.069
Prior DMT use	-0.052 (0.559)	0.926	0.950	0.317-2.842

Supplementary figure 1: Reconstitution of CD4+ and CD8+ T lymphocytes after successive cycles of alemtuzumab. Mean CD4+ and CD8+ counts ($\times 10^9$ cells/L) are shown, censored at time of next cycle. Error bars indicate standard deviation.

