

Table SI. Linear mixed model used to estimate mean Psoriasis Area and Severity Index (PASI) score outcomes during the first year of treatment with etanercept, adalimumab, ustekinumab, secukinumab, ixekizumab of guselkumab, corrected for baseline PASI, body weight and biologic naivety (as treated analysis)

Variable	p-value type III tests of fixed effect	Estimate	p-value fixed effect	95% CI Lower limit	95% CI Upper limit
Intercept	0.000	-4.427702	0.000	-6.329307	-2.526097
Treatments	0.000				
Etanercept		3.757929	0.000	2.049523	5.466335
Adalimumab		2.272193	0.009	0.573177	3.971208
Ustekinumab		1.620188	0.062	-0.082394	3.322769
Secukinumab		2.121536	0.035	0.154272	4.088800
Ixezumab		0.112474	0.916	-1.976219	2.201168
Guselkumab		0 ^a	.	.	.
Time from baseline, weeks	0.000				
6		3.498057	0.000	1.577841	5.418272
12		1.671940	0.096	-0.296819	3.640699
26		0.692337	0.492	-1.284600	2.669275
39		0.071865	0.945	-1.982074	2.125803
52		0 ^a	.	.	.
Baseline PASI	0.000	0.202064	0.000	0.180517	0.223612
Time * Treatment	0.030				
[Time=6weeks] * [Treatment=etanercept]		0.016469	0.987	-2.010184	2.043122
[Time=6weeks] * [Treatment=adalimumab]		0.138079	0.894	-1.884142	2.160300
[Time=6weeks] * [Treatment=ustekinumab]		0.531318	0.610	-1.508508	2.571144
[Time=6weeks] * [Treatment=secukinumab]		-1.988554	0.099	-4.349678	0.372571
[Time=6weeks] * [Treatment=ixekizumab]		-1.648522	0.195	-4.143202	0.846158
[Time=6weeks] * [Treatment=guselkumab]		0 ^a	.	.	.
[Time=12weeks] * [Treatment=etanercept]		-0.781220	0.460	-2.856062	1.293622
[Time=12weeks] * [Treatment=adalimumab]		0.245040	0.817	-1.825234	2.315315
[Time=12weeks] * [Treatment=ustekinumab]		0.127144	0.905	-1.960168	2.214455
[Time=12weeks] * [Treatment=secukinumab]		-1.800126	0.143	-4.210777	0.610524
[Time=12weeks] * [Treatment=ixekizumab]		-1.080056	0.407	-3.632595	1.472483
[Time=12weeks] * [Treatment=guselkumab]		0 ^a	.	.	.
[Time=26weeks] * [Treatment=etanercept]		-0.617080	0.563	-2.706653	1.472494
[Time=26weeks] * [Treatment=adalimumab]		0.118864	0.911	-1.964123	2.201852
[Time=26weeks] * [Treatment=ustekinumab]		-0.395975	0.712	-2.496744	1.704794
[Time=26weeks] * [Treatment=secukinumab]		-0.856608	0.494	-3.310399	1.597183
[Time=26weeks] * [Treatment=ixekizumab]		-0.589748	0.654	-3.171611	1.992116
[Time=26weeks] * [Treatment=guselkumab]		0 ^a	.	.	.
[Time=39weeks] * [Treatment=etanercept]		-0.088340	0.936	-2.258320	2.081640
[Time=39weeks] * [Treatment=adalimumab]		0.176639	0.873	-1.987114	2.340392
[Time=39weeks] * [Treatment=ustekinumab]		-0.039461	0.972	-2.214888	2.135967
[Time=39weeks] * [Treatment=secukinumab]		-0.384529	0.765	-2.904127	2.135069
[Time=39weeks] * [Treatment=ixekizumab]		0.030054	0.983	-2.667935	2.728043
[Time=39weeks] * [Treatment=guselkumab]		0 ^a	.	.	.
[Time=52weeks] * [Treatment=etanercept]		0 ^a	.	.	.
[Time=52weeks] * [Treatment=adalimumab]		0 ^a	.	.	.
[Time=52weeks] * [Treatment=ustekinumab]		0 ^a	.	.	.
[Time=52weeks] * [Treatment=secukinumab]		0 ^a	.	.	.
[Time=52weeks] * [Treatment=ixekizumab]		0 ^a	.	.	.
[Time=52weeks] * [Treatment=guselkumab]		0 ^a	.	.	.
Body weight	0.000	0.039295	0.000	0.028475	0.050114
Experience with prior biologics	0.000				
Inexperienced (biologic-naive)		-0.637151	0.000	-0.967776	-0.306526
Experienced (biologic non-naive)		0 ^a	.	.	.

^aThis parameter is set to zero because it is redundant.

Correction for multiple testing was not necessary, as type III tests showed a significant effect on treatment, time and the interaction between treatment and time. 95% CI: 95% confidence interval.

Table SII. p-values of all pairwise comparisons according to the linear mixed model, corrected for baseline Psoriasis Area and Severity Index (PASI), body weight, and biologic naivety

Biologic	Compared with	6 weeks	12 weeks	26 weeks	39 weeks	52 weeks
Etanercept	Adalimumab	<0.001	0.145	0.027	0.001	<0.001
	Ustekinumab	<0.001	<0.001	<0.001	<0.001	<0.001
	Secukinumab	<0.001	<0.001	0.001	0.001	0.013
	Ixekizumab	<0.001	<0.001	<0.001	<0.001	<0.001
	Guselkumab	<0.001	<0.001	<0.001	<0.001	<0.001
Adalimumab	Ustekinumab	0.411	0.017	0.001	0.017	0.101
	Secukinumab	<0.001	<0.001	0.048	0.227	0.818
	Ixekizumab	<0.001	<0.001	<0.001	0.001	0.004
	Guselkumab	<0.001	<0.001	0.001	0.002	0.009
	Ustekinumab	<0.001	0.007	0.944	0.792	0.448
Ustekinumab	Ixekizumab	<0.001	<0.001	0.007	0.041	0.043
	Guselkumab	0.002	0.016	0.094	0.047	0.062
	Secukinumab	0.014	0.070	0.023	0.055	0.026
Secukinumab	Ixekizumab	0.864	0.695	0.138	0.057	0.035
	Guselkumab	0.059	0.262	0.591	0.885	0.916

All statistically significant p-values in italics.

Table SIII. Mixed logistic regression model used to estimate the percentage of patients that reached PASI90 during the first year of treatment with etanercept, adalimumab, ustekinumab, secukinumab, ixekizumab of guselkumab, corrected for baseline Psoriasis Area and Severity Index (PASI), body weight and biologic naivety (as treated analysis)

Parameter	p-value type III test	Estimate	p-value fixed effect	95% CI Lower bound	95% CI Upper bound
Intercept		0.3831	0.4074	-0.52281	1.289012
Treatment	<0.0001				
Adalimumab		-0.2631	0.1391	-0.61159	0.085388
Etanercept		-1.4239	<0.0001	-1.83942	-1.00838
Guselkumab		1.1350	0.0011	0.456252	1.813748
Ixekizumab		1.5852	<0.0001	1.015428	2.154972
Secukinumab		0.2496	0.3962	-0.32684	0.826036
Ustekinumab		0	.		
Baseline PASI	<0.0001	0.05119	<0.0001	0.032137	0.07024316
Experience with biologics	<0.0001				
Biologic non-naive		-0.8403	<0.0001	-1.151156	-0.529444
Biologic-naive		0	.		
Body weight	<0.0001	-0.01908	<0.0001	-0.02806856	-0.01009144
Time, weeks	<0.0001				
6		-2.6652	<0.0001	-3.121684	-2.208716
12		-1.2924	<0.0001	-1.634812	-0.949988
26		-0.1049	0.4990	-0.408896	0.199096
39		0.1876	0.2290	-0.117964	0.493164
52		0	.		

Correction for multiple testing was not necessary as type III tests showed significant p-values for treatment and time. 95% CI: 95% confidence interval.