Table SI. Logistic regression coefficients for PASI 75 at week 12

Variable	OR	β Coefficient	SE	P.value
(Intercept)	248.075	5.514	1.604	0.001
Age	0.979	-0.022	0.019	0.252
Sex	1.743	0.556	0.548	0.311
Body Weight	0.968	-0.033	0.016	0.036
Baseline PASI	0.991	-0.009	0.050	0.853
Baseline BSA	1.001	0.001	0.022	0.953
PGA = 4	1.166	0.154	0.601	0.798

β coefficients represent the contribution of each covariate to the weighting function. SE = standard error; OR = odds ratio. *Variables with $p<0.05$* indicate significant contribution PASI 75 at week 12.

Table SII. Comparative safety outcomes between Xeligekimab and Secukinumab 300mg

Adverse_Event	Xeligekimab_300mg	Secukinumab_300mg	RD (95CI %)	P_Value
Any AE	258 (91.8)	199 (90.1)	1.7 (-2.6, 6.0)	0.508
Serious AE	1 (0.4)	5 (2.1)	-1.7 (-3.8, 0.4)	0.090

TEAE = treatment-emergent adverse event; SAE = serious adverse event.

Table SIII. Safety profile comparison between Xeligekimab and Ixekizumab dosing regimens through MAIC analysis

Period	Adverse Event	Xeligekimab	IXE	RD (95CI %)	P-value
Induction with IXE Q2W	TEAE	65.0%	72.2%	-7.2 (-16.4, 2)	0.125
	SAE	0.5%	0.6%	-0.1 (-1.6, 1.4)	0.922
	Upper Respiratory Tract Infection	15.9%	15.9%	0.0 (-7.3, 7.3)	0.998
	Injection Site Reaction	11.0%	10.8%	0.2 (-6, 6.5)	0.942
	Hyperuricemia	8.6%	1.7%	6.9 (2.7, 11.1)	0.001
	Tinea Pedis	2.3%	5.1%	-2.8 (-6.7, 1)	0.145
	Cough	1.3%	1.7%	-0.4 (-2.8, 2.1)	0.759
	Eczema	2.6%	2.3%	0.3 (-2.7, 3.4)	0.824
	Infection	7.9%	34.7%	-26.8 (-34.7, -18.9)	<0.001
Maintenance with IXE Q4W/Q4W	TEAE	83.4%	87%	-3.6 (-12.2, 5)	0.411
	SAE	2.5%	5.4%	-2.9 (-8, 2.2)	0.264
	Upper Respiratory Tract Infection	16.5%	27.2%	-10.7 (-21.1, -0.2)	0.046
	Injection Site Reaction	7.3%	18.5%	-11.2 (-19.9, -2.5)	0.012
	Hyperuricemia	9.6%	5.4%	4.2 (-2, 10.4)	0.181
	Tinea Pedis	5.4%	12.0%	-6.6 (-13.9, 0.7)	0.078
	Cough	2.0%	8.7%	-6.7 (-12.8, -0.6)	0.031
	Eczema	8.5%	8.7%	-0.2 (-7.1, 6.8)	0.964
	Infection	22.4%	56.5%	-34.1 (-45.8, -22.5)	<0.001

TEAE = treatment-emergent adverse event; SAE = serious adverse event. Safety population includes all patients receiving ≥1 dose of study medication. Risk differences <0 favor Xeligekimab safety profile.

Table SIV. Sensitivity analysis of weight truncation thresholds on effective sample size and primary outcome estimates

	Analysis	ESS	ESS Retention (%)	PASI 75 at W12 (%)	Max Weight
VS Secukinumab	Base Case (99th percentile)	132.0	47.6	93.0	4.66
	90th percentile truncation	154.9	55.9	92.9	2.75
	95th percentile truncation	139.9	50.5	92.8	3.56
	99th percentile truncation	132.0	47.6	93.0	4.66
	100th percentile truncation	129.1	46.6	93.0	6.00
VS IXE Q2W	Base Case (99th percentile)	213.2	75.9	91.5	2.80
	90th percentile truncation	230.1	81.9	91.9	1.95
	95th percentile truncation	220.1	78.3	91.7	2.30
	99th percentile truncation	213.2	75.9	91.5	2.80
	100th percentile truncation	210.2	74.8	91.6	3.63

Base case analysis used 99th percentile truncation. W12 = week 12. Convergence achieved for all specifications with gradient norm $< 1e\text{-}6$.