Supplementary Files

Supplementary Table 1. Baseline demographic and disease characteristics: FUTURE 2–5 pooled

| Characteristic                        | Secukinumab 300 mg (N=404) | Secukinumab 150 mg (N=812) | Placebo (N=591) |
|---------------------------------------|-----------------------------|-----------------------------|-----------------|
| Age (years), mean (SD)                | 47.7 (12.4)                 | 48.2 (12.0)                 | 48.5 (11.9)     |
| Female                                | 202 (50.0)                  | 410 (50.5)                  | 326 (55.2)      |
| BMI, (kg/m²), mean (SD)               | 29.34 (6.0)                 | 29.63 (6.4)                 | 29.28 (6.2)     |
| Presence of enthesitis                | 254 (62.9)                  | 505 (62.2)                  | 375 (63.5)      |
| Presence of dactylitis                | 149 (36.9)                  | 300 (36.9)                  | 200 (33.8)      |
| Adjusted TJC score                    | 19·13 (13·6)                | 21·45 (16·9)                | 21·38 (16·3)    |
| Adjusted SJC score                    | 9·82(7·6)                   | 11·45(10·0)                 | 11·01 (9·57)    |
| Baseline CRP (mg/L)                   |                             |                             |                 |
| ≤5                                    | 210 (52·0)                  | 450 (55·4)                  | 315 (53·3)      |
| >5                                    | 194 (48·0)                  | 362 (44·6)                  | 276 (46·7)      |
| Baseline BSA (%)                      |                             |                             |                 |
| <3                                    | 157 (38·9)                  | 342 (42·1)                  | 251 (42·5)      |
| ≥3–<10                                | 69 (17·1)                   | 147 (18·1)                  | 123 (20·8)      |
| ≥10                                   | 89 (22·0)                   | 232 (28·6)                  | 132 (22·3)      |
| Patients with PsO≥3% of BSA           | 159 (39·4)                  | 381 (46·9)                  | 257 (43·5)      |
| Patients with nail PsO                | 254 (62·9)                  | 535 (65·9)                  | 394 (66·7)      |

Values are n (%) unless otherwise specified.

BMI, body mass index; BSA, body surface area; CRP, C-reactive protein; N, number of randomized patients; n, number of evaluable patients; PsA, psoriatic arthritis; PsO, psoriasis; SD, standard deviation; SJC, swollen joint count; SD, standard deviation; TJC, tender joint count.
Supplementary Table 2. Endpoints with statistically significant differential response in clusters at different time points

| Cluster          | Endpoint | Visit Week | Relative Delta | Relative Lower | Relative Upper |
|------------------|----------|------------|----------------|----------------|----------------|
| 2. H-TEN (251)   | LEISCO   | 16         | -0.428         | -0.792         | -0.065         |
| 2. H-TEN (251)   | LEISCO   | 32         | -0.337         | -0.649         | -0.035         |
| 4. L-Nails-Skin (209) | DACTCNT | 3          | -0.538         | -0.995         | -0.024         |
| 4. L-Nails-Skin (209) | LEISCO   | 24         | -0.314         | -0.587         | -0.033         |
| 4. L-Nails-Skin (209) | PASI_PSTSCO | 2 | -0.192 | -0.364 | -0.004 |
| 4. L-Nails-Skin (209) | PASI_PSTSCO | 3 | -0.304 | -0.521 | -0.062 |
| 4. L-Nails-Skin (209) | PASI_PSTSCO | 4 | -0.245 | -0.431 | -0.034 |
| 4. L-Nails-Skin (209) | PASI_PSTSCO | 8 | -0.271 | -0.439 | -0.06 |
| 4. L-Nails-Skin (209) | PASI_PSTSCO | 12 | -0.231 | -0.383 | -0.058 |
| 4. L-Nails-Skin (209) | PASI_PSTSCO | 16 | -0.225 | -0.381 | -0.069 |
| 4. L-Nails-Skin (209) | PASI_PSTSCO | 24 | -0.174 | -0.328 | -0.028 |
| 4. L-Nails-Skin (209) | PASI_PSTSCO | 40 | -0.138 | -0.279 | -0.005 |
| 4. L-Nails-Skin (209) | PASI_PSTSCO | 52 | -0.145 | -0.282 | -0.021 |
| 5. L-Skin (283)   | SWJT76   | 3          | -0.213         | -0.405         | -0.021         |
| 6. L-Nails (294)  | PASI_PSTSCO | 12 | -0.327 | -0.579 | -0.061 |
| 6. L-Nails (294)  | PASI_PSTSCO | 16 | -0.352 | -0.63  | -0.076         |

This table shows which endpoints demonstrated a statistically significant differential response (and in which clusters and at which time points). The relative delta column shows the difference between relative mean of 300 mg and relative mean of 150 mg. The following two columns “relative lower” and “relative upper” show the lower and upper limits of the corresponding 95% bootstrap confidence intervals, which have been Bonferroni adjusted to correct for multiple comparisons (i.e. by dividing the significance level alpha=0.05 by the number of comparisons, which is 42 = (# of clusters) * (# of endpoints)).
Supplementary Figure S1. Number of clusters determined with BIC

The BIC is a method for model selection among a finite set of models; the model with the lowest BIC is preferred. In the figure above, the BIC is plotted as a function of number of clusters. The minimum is achieved at K=7 and hence that was considered the optimal choice for the number of clusters.

BIC, Bayesian Information Criteria