

**Table 1. IPD AUC of PASI, Itch NRS, and DLQI responses at Weeks 12, 24, and 52 using sensitivity analysis.**

|                      | Week 12               |                        | Week 24               |                        | Week 52               |                        |
|----------------------|-----------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|
|                      | Ixekizumab<br>(N=136) | Ustekinumab<br>(N=166) | Ixekizumab<br>(N=136) | Ustekinumab<br>(N=166) | Ixekizumab<br>(N=136) | Ustekinumab<br>(N=166) |
| PASI 75              | 695.9**               | 393.8                  | 1788.3**              | 1308.3                 | 4320.2**              | 3513.9                 |
| PASI 90              | 436.4**               | 186.1                  | 1396.3**              | 779.1                  | 3582.1**              | 2418.3                 |
| PASI 100             | 168.5**               | 47.6                   | 701.0**               | 295.4                  | 2136.8**              | 1215.5                 |
| PASI improvement     | 170.3**               | 124.5                  | 393.5**               | 322.5                  | 915.7**               | 790.0                  |
| Itch NRS=0           | 303.3**               | 170.8                  | 802.9**               | 532.6                  | 2099.7*               | 1604.5                 |
| Itch NRS improvement | 45.8**                | 34.9                   | 105.6**               | 88.8                   | 250.5*                | 221.2                  |
| DLQI 0/1             | 538.3**               | 302.0                  | 1302.8**              | 891.8                  | 3232.0**              | 2421.3                 |
| DLQI improvement     | 87.2**                | 69.5                   | 195.8**               | 174.8                  | 450.8**               | 430.9                  |

Abbreviations: ANCOVA, analysis of covariance; AUC, area under the curve; DLQI, Dermatology Life Quality Index; IPD, individual patient-level data; NRS, numeric rating scale; PASI, Psoriasis Area and Severity Index.

\* Significant at  $p < 0.01$  level compared with the same measure for ustekinumab with treatment and baseline score in the ANCOVA model.

\*\* Significant at  $p < 0.001$  level compared with the same measure for ustekinumab with treatment and baseline score in the ANCOVA model.

**Suppl Table 1. SUM AUC of PASI, Itch NRS, and DLQI Response at Weeks 12, 24, and 52 Using Trapezoidal Rule.**

|                                   | Week 12               |                        | Week 24               |                        | Week 52               |                        |
|-----------------------------------|-----------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|
|                                   | Ixekizumab<br>(N=136) | Ustekinumab<br>(N=166) | Ixekizumab<br>(N=136) | Ustekinumab<br>(N=166) | Ixekizumab<br>(N=136) | Ustekinumab<br>(N=166) |
| PASI 75 <sup>a</sup>              | 698.5                 | 394.6                  | 1783.8                | 1303.0                 | 4307.4                | 3510.2                 |
| PASI 90 <sup>a</sup>              | 440.4                 | 186.7                  | 1393.4                | 774.7                  | 3571.3                | 2418.1                 |
| PASI 100 <sup>a</sup>             | 169.9                 | 48.2                   | 696.3                 | 292.8                  | 2128.7                | 1215.7                 |
| PASI improvement <sup>b</sup>     | 171.2                 | 124.7                  | 396.1                 | 320.4                  | 924.2                 | 790.1                  |
| Itch NRS=0 <sup>a</sup>           | 303.7                 | 171.1                  | 803.7                 | 530.1                  | 2096.3                | 1608.4                 |
| Itch NRS improvement <sup>b</sup> | 45.9                  | 34.7                   | 104.8                 | 87.2                   | 249.0                 | 220.2                  |
| DLQI 0/1 <sup>a</sup>             | 539.0                 | 302.4                  | 1302.2                | 888.0                  | 3227.2                | 2422.9                 |
| DLQI improvement <sup>b</sup>     | 87.5                  | 69.4                   | 196.2                 | 174.2                  | 452.5                 | 430.8                  |

Abbreviations: AUC, area under the curve; DLQI, Dermatology Life Quality Index; NRS, numeric rating scale; PASI, Psoriasis Area and Severity Index; SUM AUC, area under the curve based on the summary data calculated based on the trapezoidal rule.

<sup>a</sup>Max AUC = 1200, 2400, and 5200 at Weeks 12, 24, and 52, respectively.

<sup>b</sup>PASI/Itch NRS/DLQI improvement = negative change in PASI/Itch NRS/DLQI from baseline.

Trapezoidal rule is based on the article by Armstrong et al. [12] and is based on mean improvement at each visit and the time interval between visits. AUC is the sum of all visits during the period.

**Suppl Table 2. Drug Price Calculations.**

| <b>Intervention</b> | <b>Unit (mg)</b> | <b>WAC per Unit/Dose (\$)</b> | <b>Discount Rate %</b> | <b>Net Price Per Unit (\$)</b> | <b>Cost of First Year (\$)</b> | <b>Annual Cost of Year 2+ (\$)</b> |
|---------------------|------------------|-------------------------------|------------------------|--------------------------------|--------------------------------|------------------------------------|
| <b>Ixekizumab</b>   | 80               | 5,161.60                      | 44%                    | 2,888.74                       | 51,374.18                      | 37,685.68                          |
| <b>Ustekinumab</b>  | 45/90            | 10,292.15/<br>20,584.30       | 27%                    | 7,532.84/<br>15,063.47         | 58,620.92                      | 42,584.22                          |

Abbreviation: WAC, Wholesale Acquisition Cost.

**Suppl Table 3. Annual AUC-Adjusted Cost and Per Responder Cost for Ixekizumab and Ustekinumab.**

|                     |   | <b>Per Responder Cost</b> |                |                 | <b>Per Normalized AUC Cost</b> |                |                 |
|---------------------|---|---------------------------|----------------|-----------------|--------------------------------|----------------|-----------------|
|                     |   | <b>PASI 75</b>            | <b>PASI 90</b> | <b>PASI 100</b> | <b>PASI 75</b>                 | <b>PASI 90</b> | <b>PASI 100</b> |
| <b>Intervention</b> |   |                           |                |                 |                                |                |                 |
| <b>Ixekizumab</b>   | Rate                                    | 88.2%                     | 76.5%          | 52.2%           | 82.8%                          | 68.7%          | 40.9%           |
| <b>Ustekinumab</b>  | Rate                                    | 75.9%                     | 59.0%          | 35.5%           | 67.5%                          | 46.5%          | 23.4%           |
| <b>Ixekizumab</b>   | <b>Annual Cost, 1st Year (\$)</b>       | <b>58,247</b>             | <b>67,156</b>  | <b>98,418</b>   | <b>62,046</b>                  | <b>74,780</b>  | <b>125,609</b>  |
| <b>Ustekinumab</b>  | <b>Annual Cost, 1st Year (\$)</b>       | <b>77,234</b>             | <b>99,357</b>  | <b>165,129</b>  | <b>86,846</b>                  | <b>126,066</b> | <b>250,517</b>  |
| <b>Ixekizumab</b>   | <b>Annual Cost, after 1st Year (\$)</b> | <b>42,728</b>             | <b>49,262</b>  | <b>72,195</b>   | <b>45,514</b>                  | <b>54,855</b>  | <b>92,141</b>   |
| <b>Ustekinumab</b>  | <b>Annual Cost, after 1st Year (\$)</b> | <b>56,106</b>             | <b>72,177</b>  | <b>119,956</b>  | <b>63,088</b>                  | <b>91,579</b>  | <b>181,984</b>  |

Abbreviations: AUC, area under the curve; PASI, Psoriasis Area and Severity Index.

Max AUC = 1200, 2400, and 5200 at Weeks 12, 24, and 52, respectively.



## **SUPPLEMENTARY TABLES**