

SUPPLEMENTARY MATERIAL

Real-World Discontinuation and Switching Patterns for Interleukin-Inhibitor Treatments in Patients with Moderate to Severe Psoriasis in Japan

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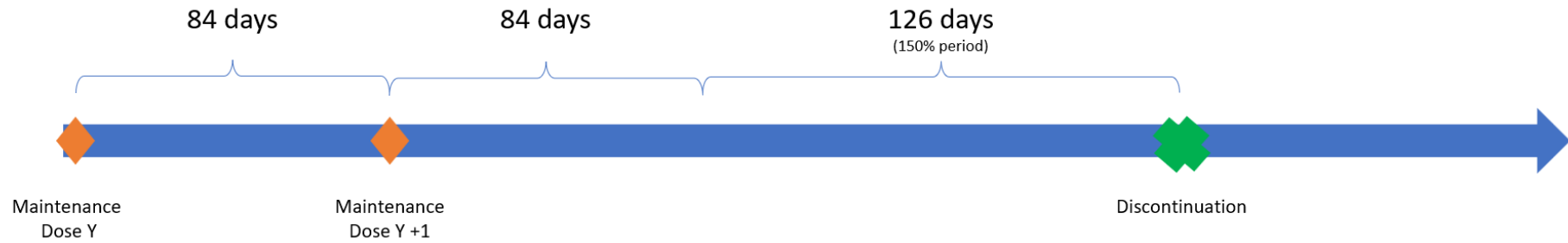
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Supplemental Figure S1: Discontinuation definition

Drug X with 28-day treatment period



Drug Y with 84-day treatment period



Supplemental Table S1: Descriptive frequency of treatment switches by treatment¹

| Index Treatment | IL-17 | | IL-23 | |
|-------------------|-------|------|-------|------|
| | N | % | N | % |
| Switchers | 93 | 100% | 54 | 100% |
| Switch to: | | | | |
| IL-17 | 26 | 28% | 25 | 46% |
| IL-23 | 26 | 28% | 10 | 19% |
| IL-12/23 | 9 | 10% | 4 | 7% |
| TNF | 32 | 34% | 15 | 28% |

Notes:

[1] Limited to patients who switch treatment within 12 months following treatment initiation.

IL = Interleukin; TNF = Tumor necrosis factor;

Supplemental Table S2: Sensitivities on permissible gap used to define discontinuation

| Cohort | | 12m Discontinuation 60-day Sensitivity ¹ | | 12m Discontinuation 180-day Sensitivity ¹ | | 12m Discontinuation 365-day Sensitivity ¹ | |
|--------------|----------------|--|-----|---|-----|---|-----|
| Drug | N ² | n | % | n | % | n | % |
| brodalumab | 126 | 49 | 39% | 31 | 25% | 28 | 22% |
| guselkumab | 233 | 78 | 33% | 62 | 27% | 53 | 23% |
| ixekizumab | 211 | 68 | 32% | 55 | 26% | 43 | 20% |
| risankizumab | 196 | 31 | 16% | 23 | 12% | 17 | 9% |
| secukinumab | 269 | 96 | 36% | 73 | 27% | 63 | 23% |
| ustekinumab | 225 | 44 | 20% | 36 | 16% | 29 | 13% |

Notes:

[1] Discontinuation defined as no claims for specified number of days following the days supply of the last prescription.

[2] Limited to patients with 12 months of eligibility following treatment initiation.

Supplemental Table S3: Covariate estimates from adjusted models¹

| Variable | Discontinuation | | Switching | |
|--|-----------------|---------|--------------|---------|
| | Hazard Ratio | P-Value | Hazard Ratio | P-Value |
| Demographics | | | | |
| Gender (reference: Female) | | | | |
| Male | 0.72 | 0.000 | 0.72 | 0.003 |
| Age (reference 65+) | | | | |
| 0 - 17, n (%) | 1.94 | 0.126 | 1.25 | 0.732 |
| 18 - 39, n (%) | 1.19 | 0.443 | 1.11 | 0.736 |
| 40 - 64, n (%) | 1.08 | 0.704 | 1.18 | 0.544 |
| Biologic treatment history (reference: Experienced) | | | | |
| Interleukin-inhibitor naïve | 1.12 | 0.293 | 0.99 | 0.954 |
| Baseline Health | | | | |
| Comorbidities | | | | |
| Asthma | 1.34 | 0.025 | 1.03 | 0.853 |
| Chronic obstructive pulmonary disease | 1.79 | 0.170 | 1.82 | 0.246 |
| All cancers | 1.26 | 0.047 | 1.18 | 0.272 |
| Chronic liver disease and cirrhosis | 0.52 | 0.204 | 0.68 | 0.520 |
| Liver disease | 0.92 | 0.479 | 0.88 | 0.387 |
| Chronic renal disease | 1.07 | 0.804 | 0.72 | 0.430 |
| Acute myocardial infarction | 0.47 | 0.219 | 0.47 | 0.312 |
| Other ischemic heart disease | 1.07 | 0.692 | 0.84 | 0.461 |
| Cerebrovascular disease | 1.12 | 0.641 | 0.49 | 0.052 |
| Congestive heart failure | 0.81 | 0.437 | 1.53 | 0.184 |
| Hyperlipidemia | 0.97 | 0.763 | 1.05 | 0.714 |
| Hypertension | 1.04 | 0.682 | 1.22 | 0.112 |

| | | | | |
|---------------------------------------|------|-------|------|--------|
| Peripheral vascular disease | 0.86 | 0.671 | 0.17 | 0.075 |
| Atherosclerosis | 1.11 | 0.818 | 7.60 | 0.052 |
| Sinusitis | 0.76 | 0.229 | 0.90 | 0.699 |
| Tuberculosis | 0.92 | 0.620 | 1.43 | 0.056 |
| Diabetes mellitus, type 2 | 1.13 | 0.383 | 0.90 | 0.579 |
| Depression | 1.12 | 0.479 | 0.97 | 0.871 |
| <i>Baseline healthcare use</i> | | | | |
| Baseline charges | | | | |
| Outpatient | 1.00 | 0.531 | 1.00 | 0.016 |
| Inpatient | 1.00 | 0.335 | 1.00 | 0.493 |
| Pharmacy | 1.00 | 0.021 | 1.00 | <.0001 |

Notes:

[1] Values based on Cox multivariable regression model adjusting for variables shown.

Supplemental Table S4: Population sensitivity requiring PsO diagnosis codes L40.0 or L40.9

| Cohort | | 12m Discontinuation ¹ | |
|--------------|----------------|----------------------------------|-----|
| Drug | N ² | n | % |
| brodalumab | 118 | 41 | 35% |
| guselkumab | 182 | 57 | 31% |
| ixekizumab | 190 | 52 | 27% |
| risankizumab | 187 | 21 | 11% |
| secukinumab | 227 | 78 | 34% |
| ustekinumab | 212 | 34 | 16% |

Notes:

[1] Discontinuation is defined as not having a prescription for a period equal to 150% of the assumed days supply of the last prescription.

[2] Limited to patients with 12 months of eligibility following treatment initiation.