Comparison of On-Label Treatment Persistence in Real-World Patients With Psoriatic Arthritis Receiving Guselkumab versus Subcutaneous IL-17A Inhibitors

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Supplemental Table 1. On-label persistence through 12 months in weighted guselkumab and SC IL-17Ai cohorts[a]: sensitivity analysis 1 (gap of longest duration of time between administrations per US FDA-approved label)

Cox proportional hazards model[b]	3 months	6 months	9 months	12 months
Patients at risk, n (%)[c]				
Guselkumab (N=910)	610	433	297	180
SC IL-17Ai (N=2740)	944	652	454	248
Hazard ratios (95% CI)	1.64 (1.36, 1.99)	1.72 (1.48, 2.01)	1.65 (1.44 1.90)	1.70 (1.49 1.94)
Chi-square p-value	< 0.001	< 0.001	< 0.001	< 0.001
KM persistence, % (95% CI)				
Guselkumab	83.0 (80.5, 85.6)	70.8 (67.6, 74.1)	60.4 (56.6, 64.1)	55.5 (51.5, 59.5)
SC IL-17Ai	72.2 (68.9, 75.6)	54.2 (50.4, 58.0)	43.3 (39.5, 47.2)	35.0 (31.1, 38.9)
Log-rank test p-value	< 0.001	< 0.001	< 0.001	< 0.001

[a]Propensity score weighting based on the standardized mortality ratio weighting approach was used to adjust for differences in baseline characteristics between the guselkumab and SC IL-17Ai cohorts. Weights were estimated using a multivariable logistic regression model. Baseline covariates were age at index date; sex; region; insurance plan type; index year and half; relationship to primary beneficiary (e.g., self, spouse, child); presence of psoriasis (ICD-10:L40.x, excluding L40.5), other autoimmune diseases (inflammatory bowel disease[d]), and comorbidities;[e] Quan-Charlson comorbidity index; and prior use of non-narcotic analgesics, corticosteroids, opioids, and other PsA treatments.[f,g,h]

[b]Cox proportional hazard models were used to compare risk of discontinuation between the weighted guselkumab and SC IL-17Ai cohorts.

[c]Patients at risk of having the event are patients who have not had the event and have not been lost to follow-up at that point in time.

[d]Includes unclassified inflammatory bowel disease, Crohn's disease, and ulcerative colitis.

[e]Cardiovascular disease (i.e., hypertension, hyperlipidemia, coronary artery disease, cerebrovascular disease, peripheral vascular disease), diabetes, smoking, and osteoarthritis.

[f]Interleukin-12/23 inhibitor (ustekinumab), anti-cytotoxic T lymphocyte-associated antigen-4 agent (abatacept), interleukin-23p19-subunit inhibitor (risankizumab), subcutaneous tumor necrosis factor inhibitors (adalimumab, certolizumab pegol, etanercept, and golimumab), and intravenous tumor necrosis factor inhibitors (infliximab, infliximab biosimilars, and golimumab). The proportions of patients with 1 and ≥2 bDMARDs are reported among those with any bDMARD use.

[g]Methotrexate, leflunomide, cyclosporine, mycophenolate, azathioprine, sulfasalazine, and hydroxychloroquine.

[h]Apremilast, deucravacitinib, and Janus kinase inhibitors (upadacitinib, baricitinib, and tofacitinib).

bDMARD, biologic disease-modifying antirheumatic drug; CI, confidence interval; ICD-10, International Classification of Diseases, Tenth Revision; KM, Kaplan Meier; PsA, psoriatic arthritis; SC IL-17Ai, subcutaneous interleukin-17A inhibitor; US FDA, United States Food and Drug Administration

Supplemental Table 2. On-label persistence through 12 months in weighted guselkumab and SC IL-17Ai cohorts[a]: sensitivity analysis 2 (fixed gap of 84 days)

Cox proportional hazards model[b]	3 months	6 months	9 months	12 months
Patients at risk, n (%)[c]				
Guselkumab **(N=910)**	647	466	320	195
SC IL-17Ai **(N=2740)**	1,084	844	640	396
Hazard ratios (95% CI)	1.38 (1.09, 1.74)	1.29 (1.08, 1.54)	1.21 (1.04, 1.42)	1.22 (1.05, 1.42)
Chi-square p-value	0.007	0.005	0.017	0.009
KM persistence, % (95% CI)				
Guselkumab	88.0 (85.8, 90.2)	76.7 (73.6, 79.8)	67.1 (63.4, 70.7)	62.9 (59.0, 66.8)
SC IL-17Ai	83.2 (80.5, 86.0)	71.2 (67.8, 74.7)	62.6 (58.8, 66.4)	57.0 (53.0, 61.0)
Log-rank test p-value	0.017	0.018	0.042	0.027

[a]Propensity score weighting based on the standardized mortality ratio weighting approach was used to adjust for differences in baseline characteristics between the guselkumab and SC IL-17Ai cohorts. Weights were estimated using a multivariable logistic regression model. Baseline covariates were age at index date; sex; region; insurance plan type; index year and half; relationship to primary beneficiary (e.g., self, spouse, child); presence of psoriasis (ICD-10:L40.x, excluding L40.5), other autoimmune diseases (inflammatory bowel disease[d]), and comorbidities;[e] Quan-Charlson comorbidity index; and prior use of non-narcotic analgesics, corticosteroids, opioids, and other PsA treatments.[f,g,h]

[b]Cox proportional hazard models were used to compare risk of discontinuation between the weighted guselkumab and SC IL-17Ai cohorts.

[c]Patients at risk of having the event are patients who have not had the event and have not been lost to follow-up at that point in time.

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[e]Cardiovascular disease (i.e., hypertension, hyperlipidemia, coronary artery disease, cerebrovascular disease, peripheral vascular disease), diabetes, smoking, and osteoarthritis.

[f]Interleukin-12/23 inhibitor (ustekinumab), anti-cytotoxic T lymphocyte-associated antigen-4 agent (abatacept), interleukin-23p19-subunit inhibitor (risankizumab), subcutaneous tumor necrosis factor inhibitors (adalimumab, certolizumab pegol, etanercept, and golimumab), and intravenous tumor necrosis factor inhibitors (infliximab, infliximab biosimilars, and golimumab). The proportions of patients with 1 and ≥2 bDMARDs are reported among those with any bDMARD use.

[g]Methotrexate, leflunomide, cyclosporine, mycophenolate, azathioprine, sulfasalazine, and hydroxychloroquine.

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Supplemental Figure 1. Kaplan-Meier analysis of on-label persistence in weighted guselkumab and SC IL-17Ai cohorts[a]: sensitivity analysis 1 (gap of longest duration of time between administrations per FDA-approved label)

[a]Propensity score (standardized mortality ratio) weighting was used to obtain a balanced sample. Weights were estimated using a multivariable logistic regression model. Baseline covariates were age at index date; sex; region; insurance plan type; index year and half; relationship to primary beneficiary (e.g., self, spouse, child); presence of psoriasis (ICD-10:L40.x, excluding L40.5), other autoimmune diseases (inflammatory bowel disease[c]), and comorbidities;[d] Quan-Charlson comorbidity index; and prior use of non-narcotic analgesics, corticosteroids, opioids, and other PsA treatments.[e,f,g]

[b]Weighted Cox proportional hazard model was used to compare risk of discontinuation between the GUS and SC IL-17Ai cohorts.

[c]Includes unclassified inflammatory bowel disease, Crohn's disease, and ulcerative colitis.

[d]Cardiovascular disease (i.e., hypertension, hyperlipidemia, coronary artery disease, cerebrovascular disease, peripheral vascular disease), diabetes, smoking, and osteoarthritis.

[e]Interleukin-12/23 inhibitor (ustekinumab), anti-cytotoxic T lymphocyte-associated antigen-4 agent (abatacept), interleukin-23p19-subunit inhibitor (risankizumab), subcutaneous tumor necrosis factor inhibitors (adalimumab, certolizumab pegol, etanercept, and golimumab), and intravenous tumor necrosis factor inhibitors (infliximab, infliximab biosimilars, and golimumab). The proportions of patients with 1 and ≥2 bDMARDs are reported among those with any bDMARD use.

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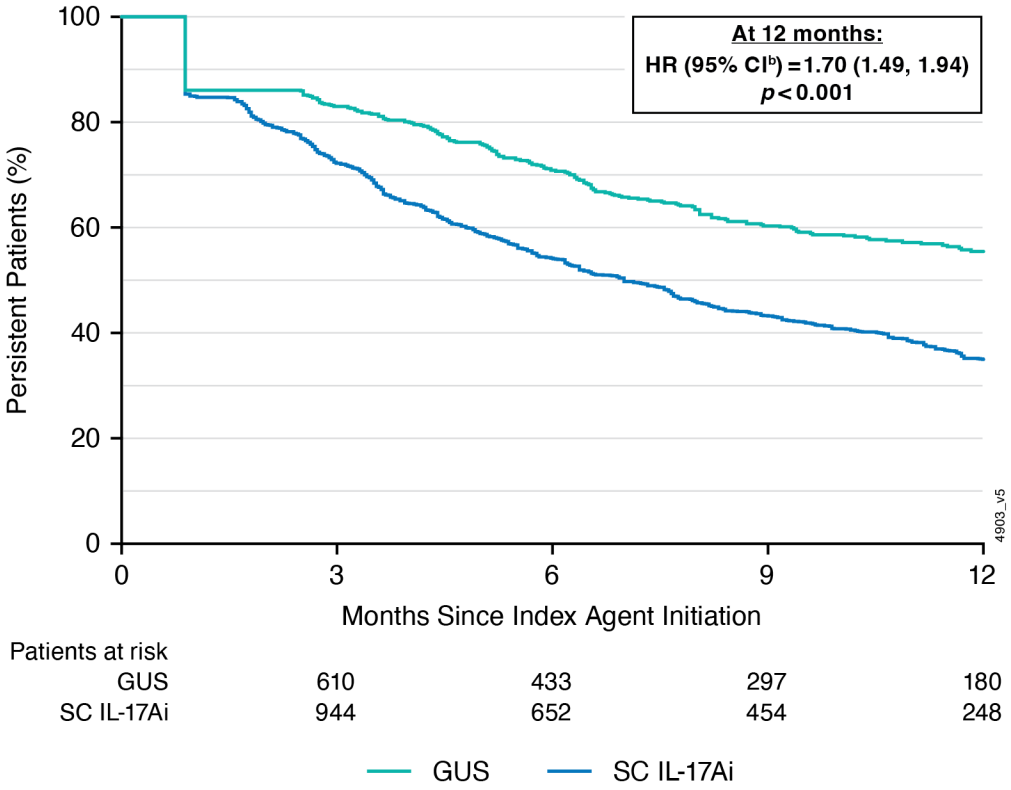

Supplemental Figure 2. Kaplan-Meier analysis of on-label persistence in weighted guselkumab and SC IL-17Ai cohorts[a]: primary analysis (sensitivity analysis 2 (fixed gap of 84 days).

[a]Propensity score (standardized mortality ratio) weighting was used to obtain a balanced sample. Weights were estimated using a multivariable logistic regression model. Baseline covariates were age at index date; sex; region; insurance plan type; index year and half; relationship to primary beneficiary (e.g., self, spouse, child); presence of psoriasis (ICD-10:L40.x, excluding L40.5), other autoimmune diseases (inflammatory bowel disease[c]), and comorbidities;[d] Quan-Charlson comorbidity index; and prior use of non-narcotic analgesics, corticosteroids, opioids, and other PsA treatments.[e,f,g]

[b]Weighted Cox proportional hazard model was used to compare risk of discontinuation between the GUS and SC IL-17Ai cohorts.

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