Efficacy and safety of long-term tildrakizumab for plaque psoriasis: 4-year results from reSURFACE 1 and reSURFACE 2

Richard G. Langley,† 1 Jeffrey Crowley,*,1 Melinda Goodherman,1 Kim Papp,2 Neil J Korman,1 Lynda Spelman,1 Atsuyuki Igarashi,† Mamihiro Ohkuchi,† Aditya K Gupta,2 Paul Yamauchi,3 Alan M Mendelsohn,3,4 Stephen J Rizzo,5 Kimberly Eatts,6 Scott Guenther,† and M Alan Menter1

BACKGROUND

Tildrakizumab is an anti-TNF-α monoclonal antibody approved in the US, Europe, and Australia, and is currently under evaluation for the treatment of psoriasis vulgaris. Tildrakizumab targets IL-23, a cytokine that has a role in Th17 cell activation and differentiation. Two phase 3, 12-week, controlled trials (reSURFACE 1, NCT01972321; and reSURFACE 2, NCT01972330) in patients with moderate to severe plaque psoriasis who achieved PASI 75 after 12 weeks of treatment with tildrakizumab 100 mg, were conducted with randomized, double-blind, placebo-controlled, extension periods. Across reSURFACE 1 and reSURFACE 2, tildrakizumab significantly improved psoriasis clinical index responses vs. placebo, with a rapid onset of action and a sustained response through the end of the 12-week treatment period.1-6

METHODS

Base study

Patients 18 years of age with moderate to severe chronic plaque psoriasis, disease duration of at least 2 years, a baseline PASI score of ≥10, and a PGA score of ≥3 were enrolled in reSURFACE 1 and reSURFACE 2. Patients requiring systemic immunosuppressants or antipsoriatic biologics within 12 weeks of randomization were excluded. Patients randomized to tildrakizumab 100 mg or placebo in the base study were eligible to enroll in the extension study. Patients were treated with tildrakizumab 100 mg or placebo every 12 weeks throughout the 4-year extension study.

Patients were monitored for adverse events (AEs) throughout the extension study. The study protocol included standard clinical laboratory assessments (e.g., complete blood count, chemistry profile, and urinalysis), and physical examinations at each visit. Quality of life (QoL) scores were assessed in reSURFACE 1 and reSURFACE 2 using the Dermatology Life Quality Index (DLQI) and the Dermatology Quality of Life Index (DLQI).

The extension study was funded by Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA. Analyses, including statistical support from Jeff Parno, were funded by Merck & Co., Inc. Reich K, et al.

RESULTS

Figure 1. Patient flow

The patient flow from randomization through the extension study for reSURFACE 1 and reSURFACE 2 is shown in Figure 1. Patients who completed the base study with PASI ≥50 and received tildrakizumab within 12 weeks of randomization were eligible for enrollment in the extension study. The efficacy analysis was concluded at week 208 for reSURFACE 1 (extension week 144; 2210.8 total patient years), and week 202 for reSURFACE 2 (extension week 134; 2016.5 total patient years).

Figure 2. Baseline PASI score, mean ± SD

Figure 2. Baseline PASI score, mean ± SD

Table 1. Baseline demographics for patients entering extension study

<table>
<thead>
<tr>
<th></th>
<th>reSURFACE 1</th>
<th>reSURFACE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (y), mean ± SD</td>
<td>108 (55.3)</td>
<td>107 (54.4)</td>
</tr>
<tr>
<td>Sex, male, n (%)</td>
<td>96 (46.9)</td>
<td>95 (45.7)</td>
</tr>
<tr>
<td>Race, white, n (%)</td>
<td>92 (43.6)</td>
<td>91 (44.1)</td>
</tr>
<tr>
<td>Weight, kg, mean ± SD</td>
<td>87.1 ± 22.2</td>
<td>87.6 ± 22.2</td>
</tr>
<tr>
<td>Height, cm, mean ± SD</td>
<td>175.5 ± 7.7</td>
<td>176.3 ± 7.7</td>
</tr>
</tbody>
</table>

The efficacy analysis was conducted at week 208 for reSURFACE 1 (extension week 144; 2210.8 total patient years) and week 202 for reSURFACE 2 (extension week 134; 2016.5 total patient years). Patients previously receiving tildrakizumab or placebo in the 12-week extension period were eligible for enrollment in the 4-year extension study. Patients were monitored for adverse events (AEs). The study protocol included standard clinical laboratory assessments (e.g., complete blood count, chemistry profile, and urinalysis), and physical examinations at each visit. Quality of life (QoL) scores were assessed in reSURFACE 1 and reSURFACE 2 using the Dermatology Life Quality Index (DLQI) and the Dermatology Quality of Life Index (DLQI).

CONCLUSIONS

Efficacy

Patients who completed the base study with PASI 75 and received tildrakizumab within 12 weeks of base study and who entered the extension study (n = 267 for both reSURFACE 1 and reSURFACE 2) were eligible for enrollment in the extension study. The efficacy analysis was concluded at week 208 for reSURFACE 1 (extension week 144; 2210.8 total patient years) and week 202 for reSURFACE 2 (extension week 134; 2016.5 total patient years).

Figure 3. PASI 75/100109 responses during the extension study period in patients receiving tildrakizumab dose in AJ reSURFACE 1 and B reSURFACE 2

The proportions of patients who achieved PASI 75 and PASI 100 responses (‘ever’ or ‘final’ with ≥3 year treatment) during the extension study period at week 48 of tildrakizumab AJ reSURFACE 1 and B reSURFACE 2 are shown in Figure 3.

DISCLOSURES

We thank the patients for their participation. The study was funded by Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA. Analyses, including statistical support from Jeff Parno, were funded by Merck & Co., Inc. Reich K, et al.

Eli Lilly and Co.; Encore Dermatology; Genentech; Janssen; LEO Pharma; Pfizer; Sun Pharmaceutical Industries, Inc.; Vanda. Japan K.K., Janssen Pharmaceutical K.K., Maruho Co Ltd., Novartis Pharma K.K., and Sun Pharma Japan Ltd. Sun Pharmaceutical Industries, Inc.; and Trius; and has received sponsored travel from Abbott Labs, Janssen-Cilag, and Novartis.

Astellas; Australian Wool Innovation Limited; Blaze Bioscience; BMS; Celgene; Dermira; Eli Lilly and Co.; Galderma; Genentech; GlaxoSmithKline; Janssen; Kythera; LEO Pharma; Merck; Novartis; Phosphagenics; Regeneron; Roche; Sanofi-Aventis/Genzyme, Takeda, UCB, and Valeant/Bausch Health; and as scientific officer for Akros, Anacor, and Kyowa Hakko Kirin.

Celgene, Dow Pharma, Eli Lilly and Co., Galderma, Janssen, Kyowa Hakko Kirin, Merck Sharp & Dohme, Merck-Serono, Novartis, Pfizer, Regeneron, Sanofi-Aventis/Genzyme, UCB, and Valeant/Bausch Health; and as scientific researcher for AbbVie, Amgen, Astellas, Baxter, Boehringer Ingelheim, Bristol-Myers Squibb, Genzyme, Janssen Biotech, Inc., Janssen Scientific Affairs, LLC, Janssen Research & Development, LLC, Merck, Mitsubishi Tanabe Pharma, MSD, Mylan, Novartis, Pfizer, Rare Disease Research, Regeneron, Roche, Sanofi-Aventis/Genzyme, Takeda, UCB, and Valeant/Bausch Health; on a steering committee and/or advisory board for AbbVie, Amgen, Astellas, Baxter, Boehringer Ingelheim, Bristol-Myers Squibb, Celgene, Dermira, Eli Lilly and Co.; Galderma; Glenmark; GlaxoSmithKline; Janssen; LEO Pharma; MedImmune; Merck & Co; Novartis; Pfizer; Regeneron; Sanofi-Aventis/Genzyme, UCB, and Valeant/Bausch Health; and as scientific consultant for AbbVie, Amgen, Astellas, Baxter, Boehringer Ingelheim, Bristol-Myers Squibb, Celgene, Dermira, Eli Lilly and Co.; Genentech; Galderma; Genzyme; Janssen Biotech, Inc.; Janssen Scientific Affairs, LLC; Janssen Research & Development, LLC; Merck; Mitsubishi Tanabe Pharma; MSD; Mylan; Novartis; Pfizer; Rare Disease Research, Regeneron, Roche, Sanofi-Aventis/Genzyme, Takeda, UCB, and Valeant/Bausch Health; and as scientific officer for Akros, Anacor, and Kyowa Hakko Kirin.

We thank the patients for their participation. The study was funded by Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA. Analyses, including statistical support from Jeff Parno, were funded by Merck & Co., Inc. Reich K, et al.

Presented at 2020 San Diego Dermatology Symposium, September 11–13, 2020