Appendix S1

Supplementary Materials and Methods

Source data

Individual patient data were obtained from the following four calcipotriol 50 µg/g plus betamethasone dipropionate 0.5 mg/g (Cal/BD) foam trials: (1) the EU and US phase 3 randomized controlled trial (RCT) PSO-ABLE (NCT02132936), which compared Cal/BD foam with Cal/BD gel and had individual foam and gel vehicle arms (1); (2) the US phase 2 RCT LEO90100-07 (NCT01536938) that compared Cal/BD foam with separate foam formulations of Cal and BD (2); (3) the US phase 3 RCT LP0053-1001 (NCT01866163) comparing Cal/BD foam with foam vehicle; and (4) the open-label phase of the EU and US phase 3 RCT PSO-LONG (NCT02899962), which included open-label, once-daily Cal/BD foam treatment for 4 weeks followed by randomization to Cal/BD foam or foam vehicle for the long-term management phase (3) (**Figure S1**).

Cal/BD cream aggregated data were obtained from the published EU and US trials comparing Cal/BD cream to cream vehicle and Cal/BD gel, and from their corresponding clinicaltrials.gov records (NCT03308799 and NCT03802344) (4,5) (**Figure S1**).

Quality of life outcome: DLQI 0/1 response

Patient QoL was assessed by comparing Dermatology Life Quality Index (DLQI) response of the approved treatments of 4 weeks of Cal/BD foam and 8 weeks of Cal/BD cream. Outcomes of interest were the proportion of patients with a DLQI score of 0 or 1 (DLQI 0/1 response), indicating no impact of psoriasis on daily quality of life (QoL) (6,7).

MAIC methods

Anchored and unanchored matching-adjusted indirect comparisons (MAICs) were conducted using individual patient data from patients treated with Cal/BD foam in three RCT arms and one open-label phase, as previously described (8,9). Anchored MAICs are preferred over unanchored MAICs since they compare data from RCTs that share a common arm (i.e., comparator or placebo/vehicle) to partially adjust for the difference in prognostic factors between the trials, which improves the precision of the comparison (8,10). The anchored MAIC here used individual patient data from the EU and US phase 3 RCT PSO-ABLE (1), which included a Cal/BD gel arm that served as an anchor for matching with the aggregated results from the EU and US Cal/BD cream trials (**Figure S1**). The unanchored MAICs used individual patient data from all four Cal/BD foam trials described above and were matched with the Cal/BD cream trials (**Figure S1**). To make a firm conclusion across all trials,

an additional unanchored MAIC was conducted with pooled individual patient data from the four Cal/BD foam trials and the Cal/BD cream trials.

Matching trial populations

Individual patient data from the Cal/BD foam trials were selected by applying the inclusion criteria from the Cal/BD cream trials (4,5). Individual patient data of patients with severe psoriasis were excluded from the foam trials to match the Cal/BD cream population and to make the comparison of the DLQI 0/1 responses more appropriate. Individual patient data from the Cal/BD foam trials were weighted to match the mean baseline characteristics of patients from the Cal/BD cream trials.

The baseline characteristics matched were age, sex, percentage Body Surface Area (BSA) affected, modified Psoriasis Area and Severity Index (mPASI), Investigator's Global Assessment (IGA), and Fitzpatrick skin type. There is a sample size decrease "penalty" that arises from weighting data, but size of the matched sample is sufficient to make indirect comparisons.

Limitations

The results of the analyses in this study have some limitations. As with all indirect comparisons, there may be some bias due to unobserved differences across the trials, for which it was not possible to adjust. Further, the LEO90100-07 trial MAIC is limited by the small sample size and resulting lack of statistical power.

References

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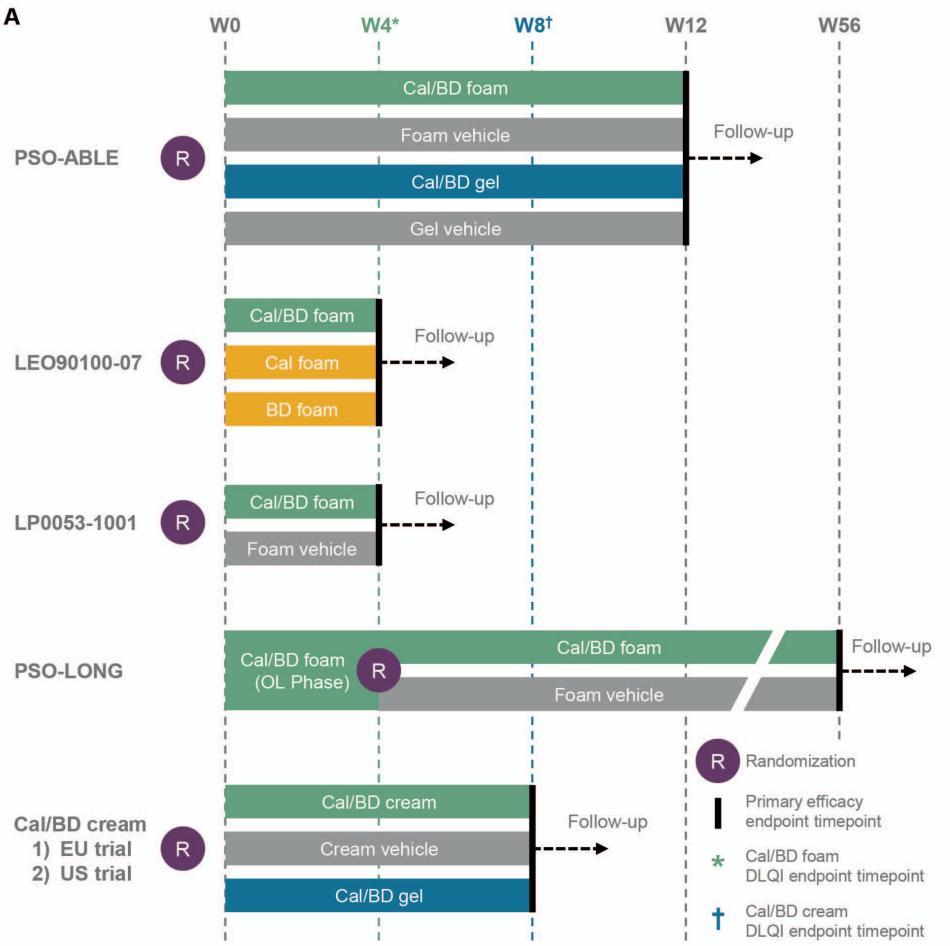
Figure S1. Cal/BD foam trials as source data for anchored and unanchored MAICs vs pooled Cal/BD cream trials. (A) Comparison of included trials. (B) Summary of available data for MAIC analyses.

A



B

Trial	Phase	Type of MAIC vs pooled Cal/BD cream trials	Trial arm	Trial region		
				EU	US	Combined
PSO-ABLE	III	Anchored & Unanchored	RCT	✓	✓	✓
LEO90100-07	II	Unanchored	RCT	–	✓	–
LP0053-1001	III		RCT	–	✓	–
PSO-LONG	III		OL Phase	✓	✓	✓

✓ = DLQI data available for indirect comparison

Follow-up occurred 2 weeks after the patient's last study visit, or until the final outcome was established, whichever occurred first. BD, betamethasone dipropionate; Cal, calcipotriol; MAIC, matching-adjusted indirect comparison; OL, open-label phase; RCT, randomized controlled trial arm.