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PA-01: A dose-finding trial with ingenol disoxate (LEO 43204) for field treatment of actinic keratosis on the scalp

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BACKGROUND: Ingenol disoxate (IngDsx; LEO 43204) is a novel ingenol derivative developed for improved chemical and biologic properties compared to ingenol mebutate.
OBJECTIVE: This Phase 1/2 trial investigated the efficacy and safety of IngDsx gel in patients with actinic keratosis (AK) on the scalp.
METHODS: This was a randomized, double-blind, parallel group, vehicle-controlled 8-week dose-finding trial evaluating 0.037% and 0.05% IngDsx gel once daily for 2 consecutive days on the balding scalp (25–250 cm^2) with 5–20 clinically typical actinic keratoses (AKs) in the treatment area. Six individual components of local skin responses (LSRs) were assessed on a scale from 0–4, yielding a maximum composite score of 24. Efficacy was assessed by AK count on days 29 and 57. LSRs and adverse events were assessed on days 1, 3, 8, 15, 29 and 57. Patients completed a Treatment Satisfaction Questionnaire (TSQM) on day 57.
RESULTS: A total of 163 patients were randomized and received treatment. In each treatment group at least 96% of patients completed all treatments. The median age was 72 years; all were male, white, with Fitzpatrick skin type I-III. The median duration of AK was 9 years. At baseline, the median number of AKs in the treatment area was 13. For both doses the reduction in AK count at week 8 compared to baseline was significantly greater than with vehicle (73% (0.037%); 79% (0.05%) vs 13% (vehicle); $P < .001$) and most (91%-97%) of this effect was observed by week 4. For both active doses the composite LSR score peaked at day 3, rapidly declined, and reached mild levels at week 2. The peak composite LSR score for the active treatments was higher than for vehicle (8.6; 8.7 vs 1.5). Both active treatments were well-tolerated with the most common adverse drug reactions being application site pain (including burning) (48%; 57% vs 6%) and application site pruritus (25%; 27% vs 3%). There were no treatment-related serious adverse events. Global treatment satisfaction score was high for both active treatments and higher than vehicle (75%; 76% vs 36%; $P < .001$).
LIMITATIONS: Phase 2/3 trial with limited sample size, restricting the generalizability of findings.
CONCLUSION: Both doses of IngDsx gel were effective as field treatment of AK on the balding scalp and statistically significantly superior to vehicle, were well-tolerated based on the adverse event profile and LSRs, and were associated with high global treatment satisfaction.
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PA-02: A phase 2, multicenter, double-blind, randomized, vehicle-controlled clinical study to assess the safety and efficacy of a halobetasol/tazarotene fixed combination in the treatment of plaque psoriasis

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BACKGROUND: Psoriasis is a chronic, immune-mediated disease that varies widely in its clinical expression. Treatment options focus on relieving symptoms, reducing inflammation, induration, and scaling, and controlling the extent of the disease. The mainstay of psoriasis treatment is a topical corticosteroid; however, long-term safety remains a concern, particularly with the more potent formulations. Combination therapy with a corticosteroid and tazarotene may afford relief from inflammation, and a reduction in adverse events, such as skin atrophy.
OBJECTIVE: To investigate the efficacy and safety of a once daily application of a fixed combination halobetasol propionate 0.01% and tazarotene 0.045% (HP/TAZ) Lotion in comparison with its monads and vehicle in subjects with moderate or severe plaque psoriasis.
METHODS: Multicenter, randomized, double-blind, vehicle-controlled Phase 2 study in moderate or severe psoriasis (N = 212). Subjects randomized (2:2:2:1 ratio) to receive HP/TAZ, individual monads, or vehicle, once-daily for 8 weeks. Efficacy assessments included treatment success (defined as at least a 2-grade improvement from baseline in the IGA score and a score of 'clear' or 'almost clear'), and impact on individual signs of psoriasis at the target lesion. Safety and treatment emergent adverse events (TEAEs) was evaluated throughout.
RESULTS: HP/TAZ lotion demonstrated statistically significant superiority over vehicle as early as 2 weeks. At Week 8, 52.5% of subjects had treatment success compared with 33.3%, 18.6% and 9.7% in the HP ($P = .033$), TAZ ($P < .001$), and vehicle ($P < .001$) groups respectively. HP/TAZ lotion was superior to its monads and vehicle in reducing the psoriasis signs of erythema, plaque elevation, and scaling. At Week 8, treatment success was achieved by 54.2% of subjects for erythema, 67.8% for plaque elevation, and 64.4% for scaling. Most frequently reported TEAEs were application site reactions, and were more likely associated with the tazarotene component. Side effects such as skin atrophy were rare.
CONCLUSION: HP/TAZ lotion was consistently more effective than its monads or vehicle in achieving treatment success and reducing psoriasis signs of erythema, plaque elevation, and scaling at the target lesion. Safety data were consistent with the known safety profile of halobetasol propionate and tazarotene, and did not reveal any new safety concerns with the combination product.
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DISCLOSURES: L Stein Gold is an investigator, advisor and speaker for Valeant and Leo. J Sugarman is a Consultant and Principle investigator in research studies sponsored by Promius and Valeant Pharmaceuticals. Principle investigator in research studies sponsored by Leo Pharmaceuticals. D Pariser is a consultant for Bickel Biotechnology, consultant for Biofrotera AG, consultant for Celgene, consultant for Dermira, consultant for DUSA Pharmaceuticals, consultant/principal investigator for Leo Pharma, consultant for Novartis, advisor for Pfizer,consultant for Promius Pharmaceuticals, consultant for Regeneron, Consultant for TheraVida, consultant for Valeant, principle investigator for Abbott laboratories, Amgen, Bickel, Celgene, Eli Lilly, Leo, Novartis, Novo Nordisk, Ortho Dermatologics, Peplin, Pfizer, and received grants/research funding from Photocure ASA, Promius, Regeneron, Stiefel, and Valeant. R Pillai, is an employee of Valeant Pharmaceuticals.

PA 03: A randomized, double-blind, active- and placebo-controlled phase 3 study of efficacy and safety of ixekizumab, adalimumab, and placebo therapy in patients naïve to biologic disease-modifying antirheumatic drugs with active psoriatic arthritis

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BACKGROUND: Psoriatic arthritis (PsA) is a chronic immune-mediated inflammatory disease associated with psoriasis which includes peripheral arthritis, enthesitis, dactylitis, and spondylitis manifestations. Ixekizumab is a high-affinity monoclonal antibody that selectively targets interleukin (IL)-17A .
OBJECTIVE: The primary objective was to evaluate the proportion of biologic disease-modifying antirheumatic drug (bDMARD)-naïve patients with active PsA achieving the American College of Rheumatology Response Criteria (ACR20) at Week 24 (ixekizumab vs placebo).
METHODS: In a Phase 3 trial, 417 bDMARD-naïve patients with active PsA were randomized to up to 24 weeks of placebo (N = 106); adalimumab 40 mg (N = 101) once every 2 weeks (Q2W; active control); or ixekizumab 80 mg Q2W (N = 103) or Q4W (N = 107) following a 160 mg initial dose at Week 0. Endpoints included ACR20 at Week 24 (primary), ACR50, ACR70, a 75/90/100% improvement in Psoriasis Area and Severity Index (PASI 75/PASI 90/PASI 100), Disease Activity Score (28 joint

count) based on C-reactive protein (DAS28-CRP), Leeds Dactylitis Index (LDI-B) and Enthesitis Index (LEI), Health Assessment Questionnaire – Disability Index (HAQ-DI), and Van der Heijde modified Total Sharp (mTSS) score at 12 and 24 weeks. Efficacy variables were evaluated using the intent to treat population. Continuous data were evaluated using mixed-effects model for repeated measures. Categorical data were compared using a logistic regression model with missing values imputed by nonresponder imputation, which treats inadequate responders as nonresponders.

RESULTS: A total of 382 patients completed 24 weeks of the study. A significantly greater percentage of patients treated with ixekizumab 80 mg Q2W or Q4W achieved ACR 20, ACR50, ACR70, and PASI 75/90/100 responses than with placebo at 12 and 24 weeks ($P < .01$). Both ixekizumab groups experienced significantly greater reductions than placebo for measures of dactylitis (LDI-B) at 12 and 24 weeks but not for enthesitis (LEI). Disease activity (DAS28-CRP) and functional disability (HAQ-DI) improved, and inhibition of radiographic progression of joint structural damage (mTSS) was demonstrated with both ixekizumab doses compared to placebo ($P < .025$). Efficacy results with adalimumab versus placebo were significant on most measures, thus validating the study design. At 24 weeks, the incidence of treatment-emergent adverse events (TEAEs) was greater ($P < .05$) and the rate of serious adverse events was higher ($P > .27$) with ixekizumab and adalimumab compared to placebo. Discontinuation due to a TEAE was similar across groups. No deaths occurred.

LIMITATIONS: The trial population was limited to bDMARD-naïve patients.

CONCLUSION: In bDMARD-naïve patients with active PsA, ixekizumab showed significant, clinically meaningful improvements of disease activity and physical function, reduction in dactylitis, greater skin clearance of plaque psoriasis, and inhibition of structural progression. There were no unexpected safety findings with ixekizumab treatment.

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PA-04: A systematic review of real-world effectiveness of biologic switching in psoriasis

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BACKGROUND: Switching between biologics is common among patients with moderate to severe psoriasis (PsO), especially among those with a long PsO history.

OBJECTIVE: To evaluate the real-world effectiveness of switching between biologics in PsO by conducting a systematic review.

METHODS: MEDLINE-indexed publications in English were searched from January 2006-May 2016 for studies assessing real-world effectiveness of biologic switching in adult PsO patients.

RESULTS: Among 643 citations, 33 were retrieved, and 15 studies were included. Overall, 6 studies compared results only to baseline, 4 compared between lines of treatment, and 5 compared biologic-naïve patients to those previously treated. In 9 studies, at least 60% of the patients switched from etanercept. Evaluated outcomes included PASI in 14 studies and drug survival in 3 studies. Of the 15 studies, 2 clearly evaluated 2nd line treatment. The rest were unclear or involved a mix of patients. Four studies were from North America, and the remaining studies were European. All 15 studies concluded that later line treatments provided relief to patients with PsO. Four studies found significant improvements in patients with later-line treatments. Biologic-naïve patients responded to anti-TNFs better than patients previously treated with a biologic in 4 of the 5 studies examining this population. Two of 3 studies measuring drug survival reported a significantly higher drug survival for biologic-naïve patients, while the 3rd found that loss of response to adalimumab was associated with the number of previous biologic treatments (Hazard Ratio: 1.63, 95% confidence interval [CI]: 1.11-2.40, $P = .010$, n = 113). In the largest study identified, analysis of 1,277 patients from the DERMBIO registry found biologic-naïve patients were more likely to experience longer drug survival than those previously treated with a biologic (Odds Ratio: 1.24, 95% CI: 1.05-1.46, $P = .011$). Among studies with PASI outcomes, 3 reported more biologic-naïve patients achieved treatment success, including 1 study reporting significance at 1 year for both PASI 75 ($P = .009$) and PASI 90 ($P = .010$).

CONCLUSION: Only a few real-world studies of PsO patients examined comparative effectiveness of biologics used in 2nd- and later-line treatment. The available evidence suggests that later line treatment with biologics can be effective; however, biologic-naïve patients may experience a significantly better response than those with prior biologic treatment.
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PA-05: Adalimumab for nail psoriasis: efficacy and safety from the first 26 weeks of a phase 3, randomized, placebo-controlled trial

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BACKGROUND: Quality of life and pain are worse for patients (pts) with psoriasis (Ps) and concomitant fingernail Ps compared with pts with Ps alone.
OBJECTIVE: We evaluated the safety and efficacy of the approved adalimumab (ADA) Ps dose for the treatment of fingernail Ps.
METHODS: This was a multicentre, parallel-arm trial. In 26-week (wk) Period A, pts were randomized 1:1 to 40 mg ADA every-other-wk (eow) after initial 80 mg dose, or matching placebo (PBO). Starting from wk 16, if body surface area (BSA) of Ps increased by ≥25% from baseline, pts could early escape to 26-wk open-label Period B. Period A results are reported. Pts were enrolled if they had 1) chronic, moderate to severe plaque Ps and fingernail Ps; 2) BSA ≥10% with total modified Nail Ps Severity Index (mNAPSI) score ≥8, or BSA ≥5% with total mNAPSI score ≥20; 3) target fingernail mNAPSI score ≥8; 4) at least moderate Physician's Global Assessment of fingernail Ps (PGA-F); 5) at least moderate PGA of Ps; 6) Nail Ps Physical Functioning Severity (NPPFS) score >3 (0=no impact on function, 10=severe impact) or Nail Ps Pain score >3 (0=no pain, 10=severe pain). Missing data were handled by multiple imputation. Primary endpoints included the proportion of pts achieving ≥75% improvement from baseline in mNAPSI (mNAPSI 75) and the proportion achieving PGA-F of 0 (clear) or 1 (minimal) with ≥2-grades improvement from baseline.
RESULTS: Of the 217 randomized pts (108 PBO, 109 ADA), 84.3% were male; mean age was 46.7 years; 188 (86.6%) completed 26 wks of treatment or early escaped to Period B according to protocol. Both primary endpoints were met. 3.4% PBO vs 46.6% ADA achieved total fingernail mNAPSI 75 (P < .001) and 6.9% vs 48.9% (P < .001) achieved PGA-F 0 or 1 with ≥2 grades improvement. Ranked secondary endpoints results were percent change from baseline at wk 26 (Period A) in total fingernail NAPSI (–11.5% PBO vs –56.2% ADA; P < .001), proportion achieving total fingernail mNAPSI 0 (0% PBO vs 6.6% ADA; P = .008), change from baseline in nail pain (–1.1 PBO vs –3.7 ADA; P < .001), change from baseline in NPPFS (–0.8 PBO vs –3.7 ADA; P < .001), and proportion achieving ≥50% reduction in Brigham Scalp Nail Inverse Palmo-Plantar Ps Index (scalp portion only) among pts for whom the baseline scalp assessment was obtained with a score ≥6 (0.4% PBO [n = 12] vs 58.3% ADA [n = 18], P = .002). Adverse events (AEs) in Period A were reported by 55.6% PBO vs 56.9% ADA; serious AEs by 4.6% PBO vs 7.3% ADA; serious infections by 1.9% PBO vs 3.7% ADA; and AEs leading to study-drug discontinuation by 2.8% PBO vs 5.5% ADA.
CONCLUSION: The primary results demonstrated that in this population, ADA was more effective than PBO for the treatment of fingernail and scalp Ps and significantly improved signs and symptoms of both; no new safety risks were identified with ADA eow treatment for 26 wks.
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PA-06: Association of skin clearance with improved QoL in patients with psoriasis treated with calcipotriol plus betamethasone dipropionate aerosol foam

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BACKGROUND: Psoriasis impairs quality of life (QoL) to a similar extent to that experienced by patients with other chronic diseases, such as diabetes. Fixed combination calcipotriol 50 µg/g (Cal) and betamethasone 0.5 mg/g (BD) aerosol foam has been shown to be efficacious and also improve QoL in patients with psoriasis. The Phase III, 12-week PSO-ABLE study in patients with mild to severe psoriasis demonstrated superior efficacy of Cal/BD foam at week 4 versus Cal/BD gel at week 8, with similar tolerability (NCT02132936).

OBJECTIVE: In this post-hoc analysis from PSO-ABLE, we explore whether greater skin clearance with Cal/BD aerosol foam is associated with improved QoL.

METHODS: PSO-ABLE was an investigator-blinded study in which patients aged ≥18 years were randomized 4:4:1:1 to once-daily Cal/BD foam (n = 185), Cal/BD gel (n = 188), foam vehicle (n = 47) or gel vehicle (n = 43); data are presented from the active treatment groups only. As a measure of skin clearance, the proportion of patients achieving a reduction in modified Psoriasis Area and Severity Index (excluding the head, which was not treated; mPASI) of 50–<75%, 75–<90% or 90% was assessed at week 4. QoL was measured using the Dermatology Life Quality Index (DLQI; range, 0–30), where a score of 0 or 1 indicates no impact on the patient's life.

RESULTS: The proportion of patients with a DLQI score of 0/1 generally increased with greater improvements in mPASI at week 4, in both Cal/BD foam and Cal/BD gel groups (Table). The proportion was greater with Cal/BD foam than gel at mPASI50 to <75 and mPASI90 levels, and similar at mPASI75 to <90.

Table. Proportion of patients achieving DLQI score of 0/1 at week 4

	mPASI50 to <75	mPASI75 to <90	mPASI90
Cal/BD foam, %	47.2	48.0	65.0
	(n = 25/53)	(n = 24/50)	(n = 26/40)
Cal/BD gel, %	40.3	50.0	50.0
	(n = 27/67)	(n = 16/32)	(n = 6/12)

CONCLUSION: This analysis shows that an increase in percentage reduction in mPASI at week 4 was associated with an increase in the proportion of patients achieving a DLQI score of 0/1 (ie no impact) in both the Cal/BD foam and Cal/BD gel groups; this suggests that patient QoL improves with greater clearance of psoriasis. The fact that mPASI90 (ie almost complete skin clearance) did not result in a similar proportion (ie 90%) of patients achieving DLQI 0/1 may suggest that the impact of psoriasis on QoL is driven by factors beyond treatment efficacy (eg anxiety about relapse). Alternatively, DLQI items may have limited relevance for some patients with long-standing psoriasis. Indeed, we have previously shown that the impact of psoriasis on QoL (based on EQ-5D utility score) was primarily driven by anxiety/depression and pain/discomfort (Leonardi et al. EADV 2015). Overall, Cal/BD aerosol foam was highly effective and led to an improvement in patient QoL.

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PA-07: BPX-01 minocycline 1% topical gel for the treatment of acne vulgaris

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BACKGROUND: Minocycline has proven efficacy in the treatment of acne vulgaris, which is often associated with significant colonization of *Propionibacterium acnes* (*P acnes*). Oral minocycline has been used successfully for the treatment of acne since it was first synthesized by Lederle Laboratories in 1966 and is now available from a number of manufacturers in a range of dosage strengths. Although minocycline remains one of the most commonly used treatments for acne, oral administration results in broad systemic exposure, often leading to undesireable side effects such as upset stomach, diarrhea, dizziness, and headache. There is currently no commercially available topical formulation of minocycline that delivers drug directly to the source of acne lesions while minimizing systemic exposure; BPX-01 is a newly developed topical gel minocycline product that will address this gap. We report here data from the first two studies in the clinical development program for this new product.

OBJECTIVE: The efficacy objectives of the first study (Study 1) were to evaluate the effect of daily application of BPX-01 on facial *P acnes* bacteria and to compare the effect of BPX-01 with that of the vehicle control. Safety objectives included assessment of cutaneous toxicity by the subject and investigator, hematologic and blood chemistry parameters, incidence of adverse events and plasma levels of minocycline. The objectives of the second study (Study 2) were to provide benchmark data for plasma and skin levels of minocycline following oral administration of the commercially available extended release minocycline.

METHODS: Study 1 was a 4-week double blind, vehicle-controlled single center study in 33 normal volunteers randomized 2:1 to once daily application of BPX-01 1% minocycline gel or matched vehicle control. Subjects had ≥10,000 cfu/cm^2 *P acnes* at baseline and did not use any oral or topical antibiotics or other acne medications for the course of the study. *P acnes* counts were measured at baseline, after 1, 2, and 4 weeks of treatment and again at 6 weeks (2 weeks after cessation of treatment). Cutaneous effects were assessed at the same intervals; hematology and chemistry values and minocycline levels were assessed at baseline, 2 and 4 weeks. Study 2 was a 4-week open label single arm, single center study in 12 subjects with moderate to severe acne vulgaris treated according to the commercial label with 1-2mg/kg/day oral extended release minocycline. Lesion counts, cutaneous effects, hematology, serum chemistry and plasma minocycline levels were assessed at baseline, after 2 and 4 weeks of treatment and again after 2 weeks of no treatment. Skin minocycline levels were also assessed using periauricular biopsy tissue.

RESULTS: Safety outcomes including plasma levels of minocycline for both studies were evaluated for the entire study population; efficacy analyses for Study 1 were performed in the per protocol population (subjects with no exclusions and having evaluable assessments). Daily application of BPX-01 resulted in a statistically significant reduction of *P acnes* at 4 weeks compared to baseline ($P < .001$). The >1 log reduction at 4-weeks was also statistically significant between BPX-01 and the vehicle control ($P = .020$). No adverse cutaneous effects were observed in either study and no clinically significant or hematologic or chemistry alterations occurred. No minocycline was detected in the plasma at any timepoint in Study 1 subjects; the plasma levels of minocycline in Study 2 subjects were consistent with those reported in the literature. Study 2 subjects had the expected reduction in lesion counts but no detectable minocycline in the tissue biopsy samples.

Outcome summary: Study 1 vs Study 2

Parameter	Study 1 BPX-01,topical 1% minocycline	Study 2 Oral minocycline
Daily minocycline dose	10 mg	1-2 mg/kg (mean 1.25)
Adverse cutaneous effects	None	None
Hematologic and chem panel alterations	None	None
Plasma minocycline (ng/ml)	None detected	Mean 524 Range 309-997
Tissue minocycline	Not evaluated	None detected
Reduction of *P acnes*	Mean 91%	Not evaluated
Reduction of lesions	Not evaluated	Mean 88%

LIMITATIONS: Although often used as a clinical study measure, efficacy in terms of *P acnes* reduction in this 4-week study may not translate to effective acne lesion reduction in a longer study or clinical use. Other limitations include small sample size and short study duration.

CONCLUSION: Daily application of BPX-01 1% topical mi-

nocycline gel for 4 weeks was well tolerated and resulted in a statistically significant reduction in *P acnes* bacteria with no detectable minocycline in the plasma. Prior observations indicate that BPX-01 was effectively delivered into the pilosebaceous units and this was confirmed by the reduction in *P acnes* counts without evidence of systemic exposure. Conversely, daily administration of oral minocycline for the same period of time resulted in high circulating levels of minocycline but none detectable in tissue. Based on these two foundational studies, we have initiated a 12-week multi-center, randomized, double blind, vehicle-controlled dose finding study with BPX-01 for acne where the efficacy endpoints will include reduction in lesion counts and IGA score.

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DISCLOSURES: AM Daniels is an employee and owns stock in BioPharmX, Inc.

FUNDING/SUPPORT: The study was funded by BioPharmX, Inc.

PA-08: Calcipotriol plus betamethasone dipropionate aerosol foam is effective in patients with moderate to severe psoriasis: post-hoc analysis of the PSO-ABLE study

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BACKGROUND: Aerosol foam fixed combination calcipotriol 50 µg/g (Cal) plus betamethasone 0.5 mg/g (BD) is a new topical treatment for psoriasis. Most treatment guidelines consider topicals alone to be ineffective for patients with severe psoriasis, although they can be used in combination with systemic treatment. The PSO-ABLE study in patients with mild to severe psoriasis demonstrated superior efficacy of Cal/BD foam vs Cal/BD gel, with similar tolerability (NCT02132936).

OBJECTIVE: The objective of this post-hoc analysis was to assess Cal/BD foam and gel in patients with moderate to severe psoriasis.

METHODS: PSO-ABLE was a Phase III, 12-week study in which patients aged ≥18 years and with 2–30% body surface area (ie trunk and/or limbs; BSA) affected by psoriasis were randomized 4:4:1:1 to once-daily Cal/BD foam (n = 185), gel (n = 188), foam vehicle (n = 47) or gel vehicle (n = 43). For this analysis, moderate to severe psoriasis was defined based on the 'Rule of Tens' (Finlay. Br J Dermatol 2005): BSA ≥10% or modified psoriasis area and severity index (excluding the head; mPASI) score >10 or Dermatology Life-Quality Index (DLQI) score >10. Endpoints included: proportion of patients achieving ≥75% or ≥90% reduction in mPASI; amount of product used; change in BSA; proportion of patients who were clear/almost clear with a ≥2 grade improvement according to the physician's global assessment of disease severity (ie 'treatment success'); change in DLQI; time to achieve a DLQI of 0/1 (ie no impact on the patient's life). No imputation of missing values was performed.

RESULTS: 77 Cal/BD foam patients and 82 Cal/BD gel patients had moderate to severe psoriasis; baseline demographics and disease characteristics were comparable. A greater proportion of patients achieved mPASI75 and mPASI90 with Cal/BD foam than gel at weeks 4, 8 and 12 (Table). The overall reduction in mPASI from baseline to week 12 was 67% with Cal/BD foam and 58% with gel. The mean amount of Cal/BD foam used over the 12-week study was 28g, compared with 23g of gel; most of the greater usage occurred in the first 6 weeks. The overall reduction from baseline to week 12 in BSA was 50% with Cal/BD foam and 39% with gel. Treatment success rates were higher with Cal/BD foam than gel and a greater proportion achieved DLQI 0/1 at weeks 4, 8 and 12 (Table). Median time to DLQI 0/1 was 8 weeks with Cal/BD foam, but could not be determined for gel.

Table. Proportion of patients achieving efficacy endpoints

		Week 4, %	Week 8, %	Week 12, %
mPASI75	Cal/BD foam	40	53	59
	Cal/BD gel	18	23	38
mPASI90	Cal/BD foam	12	27	17
	Cal/BD gel	3	9	13
Treatment success	Cal/BD foam	32	36	38
	Cal/BD gel	19	17	32
DLQI 0/1	Cal/BD foam	34	43	56
	Cal/BD gel	14	28	29

CONCLUSION: Cal/BD foam has shown effectiveness in patients with moderate to severe psoriasis and may provide an alternative treatment option in these patients. The superior efficacy of Cal/BD foam over Cal/BD gel is maintained for up to 12 weeks in this patient population.

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DISCLOSURES: C Paul: AbbVie (consultant), Amgen (investigator, consultant), Celgene (consultant), Eli Lilly (consultant), GSK (advisory board), Janssen (consultant), LEO Pharma (consultant), Novartis (consultant), Pfizer (consultant), Pierre

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PA-09: Crisaborole topical ointment, 2%, demonstrates improvement in the quality of life of patients with mild to moderate atopic dermatitis

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BACKGROUND: Atopic dermatitis (AD) is a chronic inflammatory skin disease affecting children and adults that presents with eczematous lesions and intense pruritus. The chronic and visible nature of AD often results in psychological comorbidities and psychosocial difficulties and has substantial impact on the quality of life (QoL) and finances of families and caregivers of patients with AD. Crisaborole Topical Ointment, 2%, an investigational, nonsteroidal, anti-inflammatory, phosphodiesterase 4 inhibitor, is being evaluated for the treatment of mild to moderate AD.

OBJECTIVE: Evaluate the impact of crisaborole on QoL in 2 identically designed, multicenter, double-blind, vehicle-controlled Phase 3 studies (AD-301, AD-302) in AD patients ≥2 years old.

METHODS: Patients ≥2 years old with mild to moderate AD were randomly assigned 2:1 to receive crisaborole:vehicle ointment twice daily, with QoL evaluations at baseline and end of treatment (day 29). The QoL of patients 2-15 years old was assessed using the validated Children's Dermatology Life Quality Index (CDLQI), and the Dermatology Life Quality Index (DLQI) was used to assess patients ≥16 years old. The validated Dermatitis Family Impact Questionnaire (DFI) was used to assess the QoL of parents/caregivers and family of patients 2-17 years old. Each questionnaire consists of 10 questions graded from 0/"not at all" to 3/"very much," with a maximum possible score of 30 and higher scores representing worse QoL.

RESULTS: Significantly greater mean improvement in QoL was observed in crisaborole-treated children at day 29 than in vehicle-treated children (mean change from baseline, crisaborole vs vehicle: –4.6 vs –3.0; $P < .001$). Patients ≥16 years old treated with crisaborole showed significantly greater reduction in mean score at day 29 (mean change from baseline, crisaborole vs vehicle: –5.2 vs –3.5; $P = .016$). The QoL of family/parents/caregivers also showed greater improvement from baseline for crisaborole-treated than vehicle-treated patients 2-17 years old (mean change from baseline, crisaborole vs vehicle: –3.7 vs –2.7; $P = .003$).

LIMITATIONS: QoL measures were predefined additional endpoints; therefore, the study was not powered to detect a difference in these measures.

CONCLUSION: Crisaborole treatment resulted in greater improvement in the QoL of children and adults with AD and in improvement in QoL for their parents/caregivers and families. These findings, based on predefined additional endpoints, suggest that crisaborole may be a promising novel topical AD treatment that can reduce burden of disease and improve QoL of patients with mild to moderate AD.

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DISCLOSURES: E Simpson reports grants, personal fees and non-financial support from Anacor, during the conduct of the study; grants from Chugai, grants and personal fees from Galderma, grants and personal fees from Regeneron, personal fees from Asubio, grants and personal fees from Celgene, grants and personal fees from Genentech, personal fees from Medicis, grants and personal fees from Merck, grants and personal fees from Dermira, personal fees from Pfizer, personal fees from Glaxo Smith Kline, grants from Tioga, grants from Eli Lily, grants from AbbVie, grants and personal fees from MedImmune, grants from Novartis, outside the submitted work. A Paller is an investigaotor and consultant with honorarium for Anacor/Pfizer. M Boguniewicz reports grants from Anacor, during the conduct of the study. S Feldman reports grants from Anacor, during the conduct of the study; personal fees from Anacor, outside the submitted work. JI Silverberg is a consultant and advisory board member of Anaco; has received personal fees from Abbvie, Eli Lilly, Medimmune, P&G, Puricore, Regeneron-Sanofi and Pfizer. L Eichenfeld is a consultant and Investigator for Anacor Pharmaceuticals. SL Chamlin reports other from Anacor Pharmaceuticals, outside the submitted work. LT Zane is an employee of, and stock holder in, Anacor Pharmaceuticals. Anacor was acquired by Pfizer in June of 2016.

PA-10: Early relief of pruritus in atopic dermatitis with crisaborole, a nonsteroidal, topical, phosphodiesterase 4 inhibitor

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BACKGROUND: Atopic dermatitis (AD), a chronic inflammatory skin disease, commonly presents with eczematous lesions and intense pruritus. Control of pruritus is an important part of treatment to reduce disease exacerbation and improve quality of life. Crisaborole Topical Ointment, 2%, a novel, nonsteroidal, topical, phosphodiesterase 4 inhibitor, is being investigated for the treatment of mild to moderate AD. In two Phase 3 studies, patients ≥2 years old treated with crisaborole ointment met the primary endpoint of improvement of global AD severity.
OBJECTIVE: Analyze the impact of crisaborole on early relief of pruritus in the two Phase 3 studies.
METHODS: Patients were randomly assigned 2:1 to receive crisaborole:vehicle ointment twice daily for 28 days. Success in the Investigator's Static Global Assessment (ISGA), the primary endpoint, was defined as clear (0) or almost clear (1), with a ≥2-grade improvement from baseline (BL). Exploratory endpoints, pruritus and other signs and symptoms of AD, were analyzed on separate 4-point scales of none (0) to severe (3), with improvement defined as none (0) or mild (1), with a ≥1-grade improvement from BL. Early improvement in pruritus was defined as achievement of improvement by day 6.
RESULTS: Compared with vehicle-treated patients, significantly more crisaborole-treated patients experienced early improvement in pruritus (56.6% vs 39.5%; $P < .001$), with significant improvement seen at first analysis (48 hours, 34.3% vs 27.3%; $P = .013$). Crisaborole treatment increased the likelihood of early improvement in pruritus, regardless of pruritus severity at BL (odds ratio [OR], mild: 2.038, $P = .008$; moderate: 1.926, $P = .002$; severe: 2.045, $P = .001$). Early improvement in pruritus with crisaborole treatment was significantly associated with achievement of improvement in global disease severity by day 29, assessed as success in ISGA (OR, 1.821; $P = .016$), and with an ISGA score of clear or almost clear (OR, 1.960; $P < .001$). Crisaborole-treated patients who had early improvement in pruritus were also significantly more likely to experience improvement in all signs and symptoms of AD by day 29 (OR, erythema: 1.766, $P = .002$; exudation: 1.868, $P = .004$; excoriation: 1.434, $P = .038$; induration/papulation: 1.669, $P = .004$; lichenification: 1.836, $P = .001$).
LIMITATIONS: The results are derived from a post hoc pooled analysis.
CONCLUSION: Regardless of BL pruritus severity, a greater proportion of crisaborole-treated patients experienced early relief of pruritus, which was associated with improvement in global disease severity and in all signs and symptoms of AD. These findings indicate that crisaborole can provide rapid relief of pruritus, the primary symptom of AD, and that it may be a promising, novel, topical AD treatment.
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DISCLOSURES: G Yosipovitch reports personal fees from Anacor, during the conduct of the study; grants from GSK, grants from Pfizer, grants from LEO Foundation, grants from Allergan, grants from Trevi, grants from Tioga, grants from Roche, personal fees from Trevi, personal fees from Creabilis, personal fees from Velocity, personal fees from Celgene, personal fees from Eli Lilly, personal fees from Cara, personal fees from Demira, personal fees from Johnson & Johnson, outside the submitted work; In addition, G Yosipovitch has a patent Up to Date Medical with royalties paid. L Stein Gold reports grants from Anacor, during the conduct of the study; grants from Otsuka, grants from GSK, outside the submitted work. MG Lebwohl is an employee of the Mount Sinai Medical Center which receives research funds from AbGenomics, Amgen, Anacor, Boehringer Ingleheim, Celgene, Ferndale, Lilly, Janssen Biotech, Kadmon, LEO Pharmaceuticals, Medimmune, Novartis, Pfizer, Sun Pharmaceuticals, and Valeant. JI Silverberg is a consultant and advisory board member of Anaco; has received personal fees from Abbvie, Eli Lilly, Medimmune, P&G, Puricore, Regeneron-Sanofi and Pfizer. LT Zane is an employee of, and stock holder in, Anacor Pharmaceuticals. Anacor was acquired by Pfizer in June of 2016.

PA-11: Ease of use and confidence with auto-injector to administer ixekizumab in a phase 3 trial evaluated with subcutaneous administration assessment questionnaire (SQAAQ)

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BACKGROUND: Many biologic agents are available as self-administered subcutaneous injections. In order for patients/caregivers to feel confident in their ability to administer therapy, an injection device should be easy to use. Ixekizumab (IXE) is a high-affinity monoclonal antibody that selectively targets interleukin (IL)-17A and is approved for the treatment of psoriasis.
OBJECTIVE: The objective of this study was to report the usability, and patient-reported experience of IXE delivered via auto-injector.
METHODS: This was an analysis of the 12-week, open-label period of a phase 3 trial in patients with moderate to severe psoriasis who were randomly assigned to an injection device (auto-injector or prefilled syringe). Presented here are analyses of the patients in the auto-injector group. The starting dose of IXE was 160 mg at Week 0, followed by 80 mg every 2 weeks. Patients or caregivers reported their experiences injecting with the auto-injector at weeks 0, 4, and 8 using the Subcutaneous Administration Assessment Questionnaire (SQAAQ), a 12-item questionnaire that provides an assessment of ease of use and confidence using a device to administer a subcutaneous injection of drug using a 7-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree." Observed data are reported.
RESULTS: Of the 102 patients in the auto-injector group, 94 completed the 12-week period. At Week 0 over 90% of patients/caregivers agreed/strongly agreed with each of the items on the SQAAQ and at Week 8 over 95% agreed or strongly agreed with each item. Among the items, over 90% of patients/caregivers reported that they agreed/strongly agreed that the auto-injector was "overall, easy to use," "easy to learn how to use," and that they were "confident my dose is complete" based on SQAAQ responses at Weeks 0, 4, and 8. Overall the safety and efficacy profile was consistent with what has previously been reported. There were no serious adverse events or discontinuations associated with using the device. Mean percent improvement in PASI at Week 12 was 88% (LOCF).
LIMITATIONS: This was a small study.
CONCLUSION: The vast majority of patients and caregivers who used the auto-injector reported on the SQAAQ questionnaire that the device was overall easy to use and that they were confident in using the device when using it for the first time at Week 0. IXE delivered via an auto-injector had similar efficacy and safety findings as observed in the clinical trials for ixekizumab.
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DISCLOSURES: J Bagel is a speaker and/or conducts research and receives honoraria from Jannsen, AbbVie, Novartis, Celgene, Leo Pharma, and Boehringer Ingelheim. KC Duffin receives grant/research support from Amgen, Eli Lilly and Company, Janssen, Stiefel, AbbVie, Bristol-Myers Squibb, Celgene, Novartis, and Xenopart; is a consultant and receives honoraria from Amgen, Eli Lilly and Company, Janssen, Stiefel, AbbVie, Bristol-Myers Squibb, Celgene, Pfizer, Novartis, and Xenoport; and is a member of Scientific Advisory Board and receives honoraria from Novartis, Eli Lilly and Company, Janssen, Celgene, Pfizer, and Xenoport. M Bukhalo and M Bobonich are consultants for Eli Lilly and Company and miscellaneous pharma. A Gill, F Zhao, BA Pangallo, C Shuler, D Shrom, KC Solotkin, and M Vincent are employees and minor stockholders of Eli Lilly and Company.
FUNDING SUPPORT: The study was supported by Eli Lilly and Company.

PA-12: Efficacy and safety of continuous ixekizumab treatment for 60 weeks in moderate to severe plaque psoriasis: results from the UNCOVER-3 trial

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BACKGROUND: Ixekizumab is a high-affinity monoclonal antibody that selectively targets interleukin (IL)-17A.1
OBJECTIVE: To describe the 60-week efficacy and safety of continuous ixekizumab treatment in patients with moderate to severe plaque psoriasis.
METHODS: UNCOVER-3 is a Phase 3, placebo- and active-controlled trial in which patients were randomized in an induc-

tion period to placebo (n = 193), etanercept 50 mg twice weekly (n = 382), or 80 mg ixekizumab every 4 weeks (n = 386) or 2 weeks (n = 385) after an initial 160 mg starting dose. After 12 weeks, all patients entered into open-label treatment with ixekizumab Q4W. Disease severity was assessed using the static Physician Global Assessment (sPGA) and Psoriasis Area Severity Index (PASI). Data from patients continuously treated with ixekizumab from Week 0 to Week 60 were summarized using descriptive statistics with nonresponder imputation for missing data.

RESULTS: At Week 12, 722 ixekizumab-treated patients continued with open-label Q4W treatment. At Week 60, the PASI 75, 90, and 100 response rates were 87%, 78%, and 57%, respectively, and the sPGA 0,1 (complete clearance or minimal severity) response rate was 79%. The long-term safety and tolerability profile was similar to the induction period.1

LIMITATIONS: These data are from a single study relatively short in duration. Additional data are required to establish long-term efficacy and safety.

CONCLUSION: Continuous ixekizumab therapy over 60 weeks was highly efficacious and well tolerated in treating plaque psoriasis.

REFERENCES:

1. Griffiths CE, Reich K, Lebwohl M, et al. Comparison of ixekizumab with etanercept or placebo in moderate to severe psoriasis (UNCOVER-2 and UNCOVER-3): results from two phase 3 randomised trials. *Lancet.* 2015;386(9993):541-551. doi: 10.1016/S0140-6736(15)60125-8.

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DISCLOSURES: A Blauvelt has served as a scientific adviser and clinical study investigator for AbbVie, Amgen, AstraZeneca, Boehringer Ingelheim, Celgene, Dermira, Genentech, GSK, Janssen, Eli Lilly and Company, MedImmune, Merck, Novartis, Pfizer, Regeneron, Sandoz, Sanofi, UCB, and Vaneant, and as a paid speaker for Eli Lilly and Company. KA Papp has received grant/research support from Abbott, Amgen, Anacor, Astellas, Celgene, Celtic, Dow Pharma, Eli Lilly and Company, and Galderma; has been a consultant for Abbott, 3M, Akesis, Allergan, Alza, Amgen, Astellas, Baxter, Boehringer Ingelheim, Celgene, Centocor, Cipher, Eli Lilly and Company, Forward Pharma, and Funxional therapeutics; and has served on speaker's bureaus for Abbott, Akesis, Amgen, and Astellas. RG Langley has been a consultant for AbbVie, Eli Lilly and Company, and Amgen, and has served on speaker's bureaus for AbbVie, and Eli Lilly and Company. T Luger has received grant/research support from Novartis, Abbvie, Astellas, Galderma, La Roche Posay, MEDA Pharma, Janssen- Cilag, Biogen Idec, Janssen-Cilag, MEDA Pharma, Pfizer, and Wolff, and has been a consultant for AbbVie, Amgen, CERIES, Celgene, Clinuvel, La Roche Posay, Janssen, Pfizer, MEDA Pharma, Galderma, Symrise, Sandoz, Mundipharma; and Eli Lilly and Company. M Ohtsuki has been a consultant for miscellaneous pharma. CL Leonardi has received grant/research support from AbbVie, Amgen, Anacor, Celgene, Coherus, Dermira, Eli Lilly and Company, Galderma, Janssen, Maruho, Merck, and Pfizer; has been a consultant for Abbvie, Amgen, Dermira, Janssen, Eli Lilly and Company, Leo, Sandoz, UCB, and Pfizer; and has served on the speaker's bureau for AbbVie. K Reich has served on the advisory board for AbbVie, Amgen, Biogen, Boehringer Ingelheim Pharma, Celgene, Forward Pharma, Janssen-Cilag, Leo, Eli Lilly and Company, Novartis, Pfizer, Regernon, Takeda, UCB Pharma, and Zenoport; has been a speaker and served as an author for AbbVie, Celgene, Janssen-Cilag, Leo, Eli Lilly and Company, Medac, and Novartis; has conducted clinical studies for AbbVie, Amgen, Boehringer Ingelheim Pharma, Celgene, Covagen, Forward Pharma, GlaxoSmithKline, Janssen-Cilag, Leo, Eli Lilly and Company, Medac, Merck Sharp & Dohme Corp, Novartis, Regeneron, Takeda, and UCB Pharma; and is a consultant for AbbVie, Boehringer Ingelheim Phrama, Covagen, Forward Pharma, Janssen-Cilag, Leo, Eli Lilly and Company, UCB Pharma, and Xenoport. KB Gordon has received grant/research support from Eli Lilly and Company, Abbvie, Amgen, and Novartis, and has been a consultant for Eli Lilly and Company, Abbvie, Amgen, Celgene, Novartis, and Pfizer. L Zhang, S Ball, and KC Solotkin are employees and minor stockholders of Eli Lilly and Company.

FUNDING/SUPPORT: The study was supported by Eli Lilly and Company.

PA-13: Efficacy and safety of guselkumab, an anti-interleukin-23 monoclonal antibody, compared with adalimumab for the continuous treatment of moderate to severe psoriasis in the phase 3 VOYAGE 1 trial

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BACKGROUND: Guselkumab (GUS) is an IL-23 blocker being developed for the treatment of moderate to severe psoriasis.

OBJECTIVE: To compare the efficacy and safety of GUS with adalimumab (ADA) and placebo (PBO) in patients treated through one year.

METHODS: VOYAGE 1 is a phase 3, randomized, double-blind, PBO- and active comparator-controlled trial. Eligible patients (age ≥18 years) had plaque psoriasis for ≥6 months, an IGA score ≥3, a PASI score ≥12, and BSA involvement ≥10%, and were candidates for systemic therapy or phototherapy. At baseline, 837 patients were randomized to either PBO at weeks 0/4/12 then GUS 100 mg at weeks 16/20, and q8 week through week 44 (n = 174); GUS 100 mg at weeks 0/4/12, and q8wk through wk44 (n = 329); or ADA 80 mg at week 0, 40 mg at week 1, and 40 mg q2 week through week 47 (n = 334). The coprimary endpoints were the proportions of GUS vs PBO patients achieving cleared/minimal disease (IGA 0/1) and 90% improvement in PASI score (PASI 90) at week 16. Other endpoints

included the proportions of GUS vs ADA patients achieving IGA 0/1, IGA 0, PASI 90, and PASI 100 at weeks 16/24/48, and a DLQI score of 0/1, indicating no impact of psoriasis on HRQoL at weeks 24/48. Safety was monitored through week 48.

RESULTS: Significantly higher ($P < .001$) proportions of patients in GUS vs PBO group achieved IGA 0/1 (85.1% vs 6.9%) and PASI90 (73.3% vs 2.9%) at week 16. GUS was also superior to ADA based on the proportions of patients achieving IGA 0/1 (85.1% vs 65.9%) and PASI90 (73.3%vs49.7%) at week16 ($P < .001$). Likewise, significantly higher ($P < .001$) proportions of patients achieved responses to GUS vs ADA, respectively, at wk24: IGA 0 (52.6% vs 29.3%), IGA 0/1 (84.2% vs 61.7%), PASI100 (44.4% vs 24.9%), and PASI90 (80.2% vs 53.0%). Corresponding response rates at week 48 were: IGA 0 (50.5% vs 25.7%), IGA 0/1 (80.5% vs 55.4%), PASI100 (47.4% vs 23.4%), and PASI90 (76.3% vs 47.9%), all, $P < .001$. The proportion of patients with a DLQI score of 0/1 among GUS vs ADA patients was 60.9% vs 39.5% at week 24 and 62.5% vs 38.9% at week 48 (both, $P < .001$). Through week 48, adverse events occurred in 73.9% and 74.5% of GUS and ADA patients, respectively; serious adverse event rates were also similar for the GUS and ADA groups (4.9% vs 4.5%). Serious infections occurred in 2 GUS patients and 3 ADA patients. Two malignancies (prostate and breast) occurred in the GUS group. One myocardial infarction occurred in each active treatment group.

CONCLUSION: GUS was superior to ADA in treating moderate to severe psoriasis, and was well tolerated, through one year of treatment.

CORRESPONDENCE: Andrew Blauvelt; ABlauvelt@oregonmedicalresearch.com.

DISCLOSURES: A Blauvelt has received honoraria for consulting and infome for performing clinical studies for AbbVie, Amgen, AstraZeneca, Boehringer Ingelheim, Celgene, Dermira, Genentech, GSK, Janssen, Lilly, MedImmune, Merck, Novartis, Pfizer, Regeneron, Sandoz Genzyme, Sanofi, Sun, UCB and Valient; and has received honoraria for speaking from Lilly. K Papp and CEM Griffiths served as investigators for and have received grants from Janssen Research & Development, LLC. Bruce Randazzo, Y Wasfi, YK Shen, and S Li are salaried employees of Janssen Research & Development, LLC . AB Kimball served as an investigator for and have received grants from Janssen Research & Development, LLC.

PA-14: Efficacy of "interferon alpha-2a combined with PUVA" compared with "PUVA monotherapy" in various stages of mycosis fungoides (MF)

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BACKGROUND: Mycosis fungoides (MF) is the most common form of cutaneous T-cell lymphoma (CTCL). Various types of skin directed therapy, immunotherapy, and systemic treatments have been used to induce remission of MF. Even though phototherapy has been recognized as one of the most effective treatment methods during the early phases of MF, it does not seem to as effective for long-term remission when used solely. The use of interferon as an effective immunotherapy in the treatment of MF could be considered as an adjunctive therapy.

OBJECTIVE: To determine and compare the efficacy of the two treatment methods, one being PUVA monotherapy and the other being PUVA combined with Interferon alpha-2a.

METHODS: This study examined 150 patients diagnosed with Mycosis Fungoides by the means of biopsy, who were either treated with PUVA alone or PUVA and Interfron 2A at Razi Dermatology Hospital during the years of September 2005 to August 2015. Data related to the number of treatment courses, response to treatment, and side effects were all collected. Patients from both treatment groups were followed-up every two to three weeks during phototherapy for a period fo 24 months; and the treatment results of each follow were compared between the two groups starting from the first treatment period.

RESULTS: From the 150 patients with T-cell lymphoma, 56% of them were in the PUVA alone treatment group and 44% were in PUVA+INF group. Most of the patients were at primary stages of the disease (stage IA (28%) and stage IB (28%)). In PUVA alone treatment group, all patients at stage IA had complete or partial remission. However, patients at stages III or IVA did not respond to treatment. In PUVA+INF group, all patients at stage IA had complete or partial remission but similar to PUVA alone group, patients at stages III or IVA did not respond to treatment. Complete remission was found in 78.6% of patients at stage IA, 57.1% of stage IB, and 75% of stage IIA. Partial remission was documented in 21.4% of patients at stage IA, 28.6% of stage IB, and 25% of stage IIA. 66.7% of patients at stage III and 75% of individuals at stage IVA did not respond to treatment ($P = .007$). Complete and overall remissions showed no significant difference based on the type of treatment in Kaplan-Meier method and log rank test.

CONCLUSION: This study found that PUVA alone and the combination of PUVA with Interferon are both effective in patients with MF, especially at the early stages of the disease. Also, there is no statistical significant difference between these two types of treatment at early stages of MF.

DISCLOSURES: P Khan Mohammad Beigi and SS Niyyati have nothing to disclose.

PA-15: Fixed combination calcipotriene/betamethasone dipropionate aerosol foam has greater efficacy and similar tolerability versus topical suspension in patients with psoriasis vulgaris (phase 3 PSO-ABLE study)

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BACKGROUND: An innovative aerosol foam formulation of fixed-combination calcipotriene 0.005% (Cal)/betamethasone dipropionate 0.064% (BD) has been developed to improve topical psoriasis treatment. In the PSO-ABLE study, efficacy and safety of Cal/BD aerosol foam were compared vs Cal/BD topical suspension (susp) and vehicle formulations.
OBJECTIVE: Patient preferences and treatment convenience were also evaluated. Here we present the efficacy and safety data.
METHODS: PSO-ABLE was a phase 3, investigator-blinded study (NCT02132936). Patients (pts) aged ≥18 years with mild-severe psoriasis vulgaris (trunk and/or limbs) were randomized 4:4:1:1 to once-daily Cal/BD foam, Cal/BD susp, foam vehicle, or susp vehicle for up to 12 weeks (wks). The primary efficacy end point was treatment success (defined as the proportion of pts who achieved clear/almost clear with a ≥2-step improvement, according to the Physician's Global Assessment of disease severity) at wk 4 for Cal/BD foam vs wk 8 for Cal/BD susp, as per proposed and approved FDA labels, respectively. Other end points were the proportion of pts achieving ≥75% reduction in the Psoriasis Area and Severity Index (PASI-75) and the time to treatment success (TTTS). Safety was monitored throughout.
RESULTS: In total, 463 pts were randomized to treatments: Cal/BD foam (n = 185), Cal/BD susp (n = 188), foam vehicle (n = 47), or susp vehicle (n = 43). Mean age was 54.1 years. Significantly more Cal/BD foam-treated pts achieved treatment success at wk 4 vs Cal/BD susp-treated pts at wk 8 (38% vs 23%; odds ratio [OR] = 2.6; 95% CI: 1.5, 4.5; $P < .001$). 52% of Cal/BO foam-treated pts achieved PASI-75 at wk 4 vs 35% of Cal/BD susp-treated pts at wk 8 (OR = 2.2; 95% CI: 1.4, 3.5; $P < .001$; vehicles: 0% foam; 8% susp). Median TTTS with Cal/BD foam was 6 wks; this could not be determined for Cal/BD susp, as 50% treatment success was not achieved within 12 wks. Adverse event (AE) frequency at 12 wks was similar for Cal/BD foam (42%) and Cal/BD susp (45%); most common was upper respiratory tract infection (n = 5; 2.7% and n = 9; 4.8%, respectively). For both active treatments, 2% of pts withdrew because of AEs. Adverse drug reactions (ie, described as causally related to treatment) were reported in 14 pts (8%) using Cal/BD foam and 7 pts (4%) using Cal/BD susp; all were single events except itch (Cal/BD foam, n = 5; 3%) and worsening psoriasis (Cal/BD susp, n = 3; 2%).
LIMITATIONS: Psoriasis was limited to the trunk and/or limbs in this study
CONCLUSION: Treatment with 4 weeks of Cal/BD aerosol foam showed superior efficacy compared with 8 wks of Cal/BD susp, with a similar tolerability profile.
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DISCLOSURES: C Paul: AbbVie (consultant), Amgen (investigator, consultant), Celgene (consultant), Eli Lilly (consultant), GSK (advisory board), Janssen (consultant), LEO Pharma (consultant), Novartis (consultant), Pfizer (consultant), Pierre Fabre (consultant). L Stein Gold: Eli Lilly (advisory board), LEO Pharma (advisory board, research support), Novartis (research support), Pfizer (advisory board), Taro (advisory board), Valeant (advisory board, research support). F Cambazard: Astellas (investigator), AbbVie (investigator, speaker), Celgene (investigator), GSKStiefel (advisory board, investigator, speaker), Janssen (investigator, speaker), LEO Pharma (investigator, speaker), Novartis (advisory board, investigator, speaker), Pfizer (investigator), Pierre Fabre (investigator). RE Kalb: AbbVie (consultant, research support), Amgen (research support), Celgene (consultant), Janssen (consultant, research support), LEO Pharma (consultant, research support), Merck & Co (research support), Novartis (consultant), Pfizer (consultant). D Lowson: LEO Pharma (employee). B Bang: LEO Pharma (employee). CEM Griffiths: Abbott (investigator, consultant, speaker), AbbVie (consultant), Actelion (consultant), Biotest (consultant), Celgene (investigator, consultant, speaker), Eli Lilly (investigator, consultant, speaker), GSK-Stiefel (consultant), Incyte (consultant), Janssen (investigator, consultant, speaker), LEO Pharma (investigator, consultant, speaker), Merck Sharp & Dohme (consultant), Novartis (investigator, consultant, speaker), Pfizer (investigator, consultant, speaker), Trident (consultant), UCB (consultant).

PA-16: Improvements in patient-reported outcomes (PROs) among moderate to severe plaque psoriasis patients treated with brodalumab: results from AMAGINE-1

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BACKGROUND: Brodalumab, an IL-17RA monoclonal antibody, was efficacious in phase 2 and phase 3 trials in patients with moderate to severe plaque psoriasis as determined by sPGA and PASI results.
OBJECTIVE: To evaluate the effect of brodalumab on the Psoriasis Symptom Inventory [PSI, an 8-item patient-reported outcome instrument measuring itch, redness, scaling, burning, stinging, cracking, flaking, and pain (PSI total scores range from 0 to 32)]; the Dermatology Life Quality Index (DLQI); and treatment satisfaction.
METHODS: Data from a double-blind, placebo-controlled, randomized trial in moderate to severe plaque psoriasis patients were analyzed (AMAGINE-1). Patients were randomized in the induction phase to receive brodalumab 210 mg or 140 mg or placebo q2w. Outcomes at week 12 included the percentages of patients achieving PSI responder definition (total score ≤8 with no item score >1); PSI total score=0 (not at all severe on all signs and symptoms); improvement of ≥5 on DLQI from baseline; DLQI score of 0/1; different degrees of satisfaction with treatment. For DLQI and PSI, percentages were compared using Cochran-Mantel-Haenszel model, adjusting for baseline stratifi-

cation factors and dichotomized baseline values. Nonresponder imputation was used for the binary outcomes. Treatment satisfaction was compared using ordinal logistic regression adjusting for the baseline stratification factors, and worst-case imputation was used. Outcomes, including PSI and DLQI, were also examined among the 4 brodalumab maintenance regimens in the withdrawal/retreatment phase. At week 12, patients receiving brodalumab who achieved sPGA 0 or 1 were rerandomized to placebo or induction dose; patients randomized to brodalumab with sPGA ≥2 or placebo received brodalumab 210 mg. Patients with return of disease (sPGA ≥3 at or after week 16) qualified for retreatment with their induction dose of brodalumab.

RESULTS: Baseline PSI and DLQI scores were similar across groups. At week 12, significantly greater percentages of patients treated with brodalumab achieved improvements ≥5 on DLQI; DLQI=0/1; PSI responder definition; and PSI=0, compared with placebo (all, $P < .001$). A significantly greater percentage of patients on brodalumab dosages had better treatment satisfaction compared with placebo ($P < .001$). At week 12, the following proportions of patients in placebo (n = 220), brodalumab 140 mg (n = 219), and 210 mg (n = 222) treatment groups were PSI responders: 4.1%, 53.0%, and 60.8%, respectively; 0.5%, 17.4%, and 21.6% had PSI total score=0; 5.0%, 42.9%, and 55.9% had DLQI 0/1; 21.6%, 73.8%, and 83.6% had DLQI improvement ≥5 (all, $P < .001$ vs placebo). The maintenance of PSI and DLQI responses were evaluated during the withdrawal phase. The proportions of PSI responders at week 52 by induction/withdrawal phase treatment assignment, respectively, were: brodalumab 140 mg/placebo (n = 59): 3.4%; 140 mg/140 mg (n = 57): 54.4%; brodalumab 210 mg/placebo (n = 84): 0%; 210 mg/210 mg (n = 83): 69.9%. The proportion of patients with DLQI 0/1 at week 52 was: brodalumab 140 mg/placebo (n = 59): 1.7%; 140 mg/140 mg (n = 57): 59.6%; brodalumab 210 mg/placebo (n = 84): 0%; 210 mg/210 mg (n = 83): 74.7%.

LIMITATIONS: Results of these analyses were based on a controlled clinical study population and may not be generalizable to the broader populations of patients with psoriasis.

CONCLUSION: Results indicate that brodalumab significantly improved patient-reported outcomes in patients with moderate to severe plaque psoriasis.

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PA-17: Integrated safety of ixekizumab in patients with moderate to severe psoriasis: results from a pooled analysis of 7 clinical trials

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BACKGROUND: In moderate to severe psoriasis, long-term treatment is usually required to achieve adequate control of disease activity.

OBJECTIVE: This publication analyzes the safety of ixekizumab (IXE), a high-affinity monoclonal antibody that selectively targets interleukin (IL)-17A and is approved for treatment of patients with psoriasis.

METHODS: Treatment-emergent adverse event (TEAE) and serious adverse event (SAE) data were integrated from the induction period of 3 randomized, controlled trials [RCTs] (0-12 weeks), the maintenance period of 2 of the 3 RCTs with a randomized withdrawal design (12-60 weeks), and all patients exposed to IXE from all 7 psoriasis trials (controlled and uncontrolled). For the induction period, patients with moderate to severe psoriasis were randomized to IXE every 2 (IXE Q2W; N = 1167) or 4 weeks (IXE Q4W; N = 1161) after a 160 mg starting dose, etanercept (ETN) (50 mg biweekly; n = 739), or placebo (PBO) (n = 791). The maintenance period included IXE-treated patients who had an sPGA 0,1 at Week 12 (responders) who then were re-randomized to IXE Q4W (n = 416), IXE every 12 weeks (IXE Q12W, n = 408), or PBO/withdrawal group (N = 402). The group of all patients exposed to IXE (N = 4209) accounted for 6480 patient-years (PY) of exposure. Comparison of induction and maintenance periods was descriptive.

RESULTS: During the induction period, the frequency of any TEAE was higher in Total IXE (58.6%), IXE Q2W (58.4%), IXE

Q4W (58.8%), and ETN (54.0%) compared to PBO (46.8%). Most TEAEs were mild or moderate. The frequency of AEs reported as severe, SAEs, and discontinuations due to AEs did not differ among treatment groups. During the maintenance period, the exposure-adjusted incidence rate (IR – per hundred patient-years) of TEAEs was lower for IXE Q4W patients than for the PBO/withdrawal group (IR: PBO, 123.8; IXE Q12W, 106.2; IXE Q4W, 95.6), with no significant difference observed between the IXE Q12W and IXE Q4W groups. The IR of TEAEs was lower during the maintenance phase than during the induction phase among patients who received continued dosing on IXE Q4W (99.3 and 256.8, respectively). Among all patients exposed to IXE, the exposure adjusted IR of TEAEs was 54.4. Most TEAEs were mild or moderate.

LIMITATIONS: Comparison to ETN was only for 12 weeks.

CONCLUSION: IXE had a safety profile that was similar to ETN during the induction period. The overall incidence of AEs in the Q2W and Q4W dosing regimens were similar. The IR for AEs decreased over time with continued IXE treatment.

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DISCLOSURES: B Strober has served on speaker's bureaus for AbbVie (honoraria); has been a consultant for AbbVie, Amgen, Celgene, Dermira, Forward Pharma, Janssen, Leo, Eli Lilly and Company, Maruho, Medac, Novartis, Pfizer, Stiefel/GlaxoSmithKline, UCB, and Boehringer Ingelheim (honoraria for all); has been an investigator for AbbVie, Amgen, Novartis, Eli Lilly and Company, Janssen, Merck, XenoPort, Xoma, and Celgene (payments to the University of Connecticut); has been a scientific director for CORRONA Psoriasis Registry (consulting fee); and has received grant support to the University of Connecticut for Fellowship Program from AbbVie and Janssen (payments to the University of Connecticut). KA Papp has received grant/research support from Abbott, Amgen, Anacor, Astellas, Celgene, Celtic, Dow Pharma, Eli Lilly and Company, and Galderma; has been a consultant for Abbott, 3M, Akesis, Allergan, Alza, Amgen, Astellas, Baxter, Boehringer Ingelheim, Celgene, Centocor, Cipher, Eli Lilly and Company, Forward Pharma, and Funxional therapeutics; and has served on speaker's bureaus for Abbott, Akesis, Amgen, and Astellas. C Leonardi has received grant/research support from AbbVie, Amgen, Anacor, Celgene, Coherus, Dermira, Eli Lilly and Company, Galderma, Janssen, Maruho, Merck, and Pfizer; has been a consultant for Abbvie, Amgen, Dermira, Janssen, Eli Lilly and Company, Leo, Sandoz, UCB, and Pfizer; has served on the speaker's bureau for AbbVie. R Bissonette, L Ferris, and U Mrowietz are consultants for Eli Lilly and Company and miscellaneous pharma. M Lebwohl is an employee of the Mount Sinai Medical Center, which receives research funds from AbGenomics, Amgen, Anacor, Boehringer Ingleheim, Celgene, Ferndale, Eli Lilly and Company, Janssen Biotech, Kadmon, Leo Pharmaceuticals, Medimmune, Novartis, Pfizer, Sun Pharmaceuticals, and Valeant. DK Braun was an employee of Eli Lilly and Company at the time of the study. N Acharya, O. Goldblum, and W. Xu are employees and minor stockholders of Eli Lilly and Company. K Reich has served on advisory boards for AbbVie, Amgen, Biogen, Beohringer Ingelheim Pharma, Celgene, Forward Pharma, Janssen-Cilag, Leo, Eli Lilly and Company, Novartis, Pfizer, Regernon, Takeda, UCB Pharma, and Zenoport; has been a speaker and served as an author for AbbVie, Celgene, Janssen-Cilag, Leo, Eli Lilly and Company, Medac, and Novartis; has conducted clinical studies for AbbVie, Amgen, Boehringer Ingelheim Pharma, Celgene, Covagen, Forward Pharma, GlaxoSmithKline, Janssen-Cilag, Leo, Eli Lilly and Company, Medac, Merck Sharp & Dohme Corp, Novartis, Regeneron, Takeda, and UCB Pharma; and is a consultant for AbbVie, Boehringer Ingelheim Phrama, Covagen, Forward Pharma, Janssen-Cilag, Leo, Eli Lilly and Company, UCB Pharma, and Xenoport.

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PA-18: Ixekizumab in patients with moderate to severe psoriasis who have or have not received prior biologix therapies: an integrated analysis of 2 phase 3 studies

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BACKGROUND: There is evidence that response rates to a biologic therapy may be lower in patients who have had previous exposure to other biologic therapies.1 Ixekizumab (IXE) is a high-affinity monoclonal antibody that selectively targets interleukin (IL)-17A and is approved for treating patients with moderate to severe psoriasis.

OBJECTIVE: In this integrated analysis, we evaluated the efficacy of IXE compared to etanercept (ETN) in patients who have or have not had previous exposure to biologic therapy.

METHODS: Data were integrated from the 12-week induction phase of 2 Phase 3 trials. Patients were randomized to one of the following treatment groups: IXE 80 mg every 2 weeks (IXE Q2W; N = 736) or 4 weeks (IXE Q4W; N = 733) following a 160 mg starting dose, ETN 50 mg twice weekly (N = 740), or placebo (PBO; N = 361). Psoriasis Area and Severity Index (PASI) 75, 90, and 100 response rates and Itch Numeric Rating Scale (NRS) were evaluated at Week 12 in subgroups of patients with or without previous exposure to biologic therapy. Treatment effects within each subgroup were assessed using the Cochran-

Mantel-Haenszel test stratified by study; missing values were imputed as nonresponse.
RESULTS: In this analysis, 497 (19.3%) patients had prior exposure to biologic therapy and 2073 (80.7%) were naïve to biologic therapy. PASI 75 was achieved by 91.5% (biologic-experienced) and 87.7% (biologic-naïve) of patients treated with IXE Q2W, 76.2% and 82.2% treated with IXE Q4W compared to 34.6% and 50.7% treated with ETN, respectively. PASI 90 was achieved by 76.1% (biologic-experienced) and 67.7% (biologic-naïve) of patients treated with IXE Q2W, 55.2% and 64.4% treated with IXE Q4W, and 13.2% and 24.3% treated with ETN. PASI 100 was achieved by 47.2% (biologic-experienced) and 37.0% (biologic-naïve) of patients treated with IXE Q2W, 25.2% and 34.9% treated with IXE Q4W, and 3.7% and 7.0% treated with ETN ($P < .001$ for all comparison between IXE and ETN). At least 4 points of reduction in Itch NRS were achieved by 82.4% (biologic-experienced) and 84.1% (biologic-naïve) of patients from the IXE Q2W arm, 80.3% and 77.9% from the IXE Q4W arm, and 55.0% and 62.4% from the ETN arm.
LIMITATIONS: Reasons for discontinuation of prior biologic therapy were not systematic.
CONCLUSION: In this integrated analysis across 2 phase 3 trials, both doses of IXE were significantly superior to ETN for biologic-naïve and biologic-experienced patients. The IXE Q2W dosing regimen consistently provided greater efficacy relative to the IXE Q4W dosing regimen.
REFERENCES:

1. Ruiz Salas V, Puig L, Alomar A. Ustekinumab in clinical practice: response depends on dose and previous treatment. *J Eur Acad Dermatol Venereol.* 2012;26(4):508-513. doi: 10.1111/j.1468-3083.2011.04325.x

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PA-19: Long-term safety of crisaborole, a novel, anti-inflammatory phosphodiesterase 4 inhibitor, in children and adults with mild to moderate atopic dermatitis

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BACKGROUND: Long-term topical treatment is often required for atopic dermatitis (AD), a chronic inflammatory skin disease. Topical therapeutic options in the United States have advanced little in the past 15 years and are associated with potential safety concerns. Crisaborole, a novel topical, nonsteroidal, anti-inflammatory phosphodiesterase 4 (PDE4) inhibitor, is being investigated for the treatment of mild to moderate AD to address the need for a safe and targeted long-term treatment.
OBJECTIVE: To evaluate the long-term safety results of an open-label extension study of crisaborole in patients ≥2 years of age with mild to moderate AD.
METHODS: Patients who opted to continue treatment after completing a 28-day Phase 3 pivotal study (AD-301, AD-302) were enrolled in an open-label, multicenter, 48-week safety study (AD-303, N = 517). Every 4 weeks, patients were assessed for global AD severity and treated as needed (Investigator's Static Global Assessment ≥2 [mild]) with 4-week cycles of crisaborole. Safety measures included assessment of adverse events (AEs), serious adverse events (SAEs), physical examination, vital signs, and clinical laboratory results.
RESULTS: During the pivotal studies and the open-label extension study, 65% of patients reported at least 1 treatment-emergent adverse event (TEAE); most were considered unrelated to treatment (93.1%) and were mild (51.2%) or moderate (44.6%). Analysis of TEAEs across four 12-week periods showed that the frequency and the severity of TEAEs were well balanced over time, demon-

strating a favorable safety profile for long-term treatment of crisaborole. Overall, 10.2% of patients reported treatment-related AEs; the most frequently reported events were atopic dermatitis (3.1%), application site pain (2.3%), and application site infection (1.2%). In the extension study, none of the 7 reported treatment-emergent SAEs were considered related to treatment. Only 9 patients (1.7%) discontinued the extension study because of TEAEs. There were no reports of cutaneous adverse reactions such as telangiectasia or application site atrophy.
LIMITATIONS: Long-term efficacy was not analyzed.
CONCLUSION: A favorable safety profile was demonstrated for long-term use of crisaborole for treatment of patients with AD.
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DISCLOSURES: L Eichenfield is a consultant and investigator for Anacor Pharmaceuticals. R Call is an investigator for Clinical Research Partners. He has no additional conflicts of interest to disclose. D Forsha and E Tschen have nothing to disclose. J Fowler reports grants from Anacor, during the conduct of the study. AA Hebert reports all research funds are paid to the UTHealth McGovern Medical School where she is employed. M Spellman reports personal fees from Anacor Pharmaceuticals, outside the submitted work. L Stein Gold reports grants from Anacor, during the conduct of the study; grants from Otsuka, grants from GSK, outside the submitted work. M Van Syoc reports other from Anacor, outside the submitted work. L Zane is an employee of, and stock holder in, Anacor Pharmaceuticals. Anacor was acquired by Pfizer in June of 2016.

PA-20: Maintenance of clinical efficacy in moderate to severe plaque psoriasis: a 52-week evaluation of brodalumab in three multicenter, double-blind studies of 4363 subjects.

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BACKGROUND: Psoriasis is a chronic, immune-mediated disease characterized by thick, scaly plaques. It has a debilitating effect on quality of life with higher risk for anxiety and depression. The interkeukin-17 (IL-17) pathway plays an important role in the disease pathogenesis. Brodalumab, a fully human interleukin-17 receptor A (IL-17RA) monoclonal antibody, has demonstrated efficacy in phase 2 and phase 3 trials in patients with moderate to severe plaque psoriasis.
OBJECTIVE: To investigate the maintenance of efficacy of brodalumab in subjects with moderate or severe plaque psoriasis.
METHODS: Three multicenter, randomized, double-blind studies in moderate to severe psoriasis (N = 4632, safety population); two were ustekinumab-controlled. AMAGINE-1: Following a 12-week brodalumab or placebo induction phase subjects were rerandomized to brodalumab (210mg Q2W, 140mg Q2W) or placebo. AMAGINE-2 and -3: Following a 12-week brodalumab, ustekinumab or placebo induction phase subjects were rerandomized to brodalumab (210mg Q2W, 140mg Q2W, 140mg Q4W, 140mg Q8W) or remained on ustekinumab for a further 40 weeks. Maintenance of efficacy was assessed by the proportion of subjects who achieved static Physician's Global Assessment (sPGA) success (0 or 1), and those with Psoriasis Area and Severity Index (PASI) response (PASI 100) at week 52.
RESULTS: AMAGINE-1: 75.7% and 53.9% of subjects achieved sPGA success (clear or almost clear) at week 12 with brodalumab 210mg Q2W and 140mg Q2W, respectively. 83.1% and 70.2% of subjects rerandomized to continue with brodalumab 210mg Q2W or 140mg Q2W respectively achieved sPGA success at week 52, compared with 0% and 5% of subjects respectively who were rerandomized to placebo (both, $P < .001$). AMAGINE-2 and AMAGINE-3: At week 12, 79.9% of subjects treated with brodalumab 210mg Q2W achieved sPGA success compared with 61.2% on ustekinumab, and 41.6% achieved PASI 100 compared with 20.7% on ustekinumab. At week 52, 64.9% of subjects on constant dose brodalumab 210mg Q2W achieved sPGA success compared with 45.3% on ustekinumab, and 51.0% achieved PASI 100 compared with 28.1% on ustekinumab (both $P < .001$).
CONCLUSION: The significant improvements in clinical outcomes seen with brodalumab treatment were maintained through week 52 with continued treatment. Results with brodalumab 210mg Q2W were significantly superior compared to ustekinumab.
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PA-21: More rapid improvement in quality of life with fixed-combination calcipotriene plus betamethasone dipropionate aerosol foam versus topical suspension (PSO-ABLE study in patients with psoriasis vulgaris)

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BACKGROUND: The Phase 3 PSO-ABLE study (NCT02132936) demonstrated superior efficacy with fixed-combination calcipotriene 0.005% (Cal)/betamethasone dipropionate 0.064% (BD) aerosol foam at wk 4 vs Cal/BD topical suspension (susp) at wk 8, with comparable safety up to wk 12, in patients (pts) with mild to severe psoriasis of the body.
OBJECTIVE: Changes in health-related quality of life (HRQoL) are presented here.
METHODS: Pts assessed HRQoL using the Dermatology Life-Quality Index (DLQI) and generic EQ-5D questionnaires at baseline and at wks 4, 8, and 12. A DLQI score of 0 (range, 0 to 30) and an EQ-5D utility score of 1 (weighted range, –0.594 to 1) indicated perfect health. The proportion of pts who achieved a DLQI score of 0/1 (no/low impairment) was also determined.
RESULTS: In total, 463 pts were randomized (4:4:1:1) to treatment: once-daily Cal/BD foam (n = 185), Cal/BD susp (n = 188), foam vehicle (n = 47), or susp vehicle (n = 43). Mean baseline DLQI scores were 7.0 (Cal/BD foam), 7.9 (Cal/BD susp), 7.0 (foam vehicle), and 9.3 (susp vehicle), indicating moderate impact on HRQoL. DLQI scores improved by wk 12 in all groups; the mean change in DLQI score at wk 4 was significantly greater with Cal/BD foam than with Cal/BD susp (–4.3 vs –3.8; adj diff, –1.0; P = .005); differences were not significant at wk 8 (–4.5 vs –4.4; adj diff, –0.7; P = .075) or wk 12 (–4.6 vs –4.3; adj diff, –0.8; P = .069). DLQI score improvements were significantly greater with both active treatments vs their respective vehicles at each time point (P < .05). Significantly more pts using Cal/BD foam than Cal/BD susp achieved DLQI scores of 0/1 at wk 4 (46% vs 32%; P = .013) and wk 12 (61% vs 44%; P =.003), with a nonsignificant difference at wk 8 (54% vs 43%; P = .060). Mean baseline EQ-5D utility scores were 0.80 (Cal/BD foam), 0.82 (Cal/BD susp), 0.82 (foam vehicle), and 0.77 (susp vehicle). At wk 4, a significantly greater improvement in mean EQ-5D utility score was seen with Cal/BD foam vs Cal/BD susp (0.09 vs 0.03; adj diff, 0.05; P < .001). From weekk 8, improvements in utility scores for both Cal/BD formulations were comparable (wk 8: 0.08 vs 0.05; adj diff, 0.03; P = .06; wk 12: 0.07 vs 0.05; adj diff, 0.02; P = .2). Both active treatments produced significantly greater week 4 improvements in EQ-5D utility scores vs their respective vehicles (P < .05).
LIMITATIONS: Studies evaluating patient-reported outcomes in routine clinical practice may yield different results from those in clinical trials where patient populations are generally more homogenous.
CONCLUSION: In PSO-ABLE, Cal/BD aerosol foam improved HRQoL more rapidly than Cal/BD topical suspension in pts with psoriasis vulgaris.
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PA-22: No increased risk of inflammatory bowel disease among secukinumab-treated patients with moderate to severe psoriasis, psoriatic arthritis, or ankylosing spondylitis: data from 14 Phase 2 and Phase 3 clinical studies

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BACKGROUND: Secukinumab, a fully human anti–interleukin (IL)-17A inhibitor, has been evaluated and approved for the treatment of moderate to severe psoriasis, active psoriatic arthritis (PsA), and active ankylosing spondylitis (AS). Inflammatory bowel disease, including Crohn's disease (CD) and ulcerative colitis (UC), is commonly associated with psoriasis, PsA, and AS.1,2 The risk of CD in psoriasis is approximately 2–4-fold higher than that in the general population,1,3,4 occurring at a rate of up to 0.25 cases per 100 patient-years.4 CD has been reported at a rate of 0.06 cases per 100 patient-years among patients with PsA,3 and 0.7 cases per 100 patient-years among placebo-treated patients in AS trials.5 Endoscopic subclinical inflammation occurs in up to 50% of patients with AS.2
OBJECTIVE: This pooled analysis was conducted to assess the incidence of CD and UC among secukinumab-treated patients in the psoriasis, PsA, and AS clinical trial programs.
METHODS: This analysis included data from 10 Phase 2 and Phase 3 studies in moderate to severe psoriasis, two Phase 3 studies in active PsA, and two Phase 3 studies in active AS, pooled by indication. Most studies included short-term placebo-treatment arms. One psoriasis study included an etanercept active-comparator arm. Patients with prior history of, but not active, inflammatory bowel disease could be enrolled. Study durations varied; data from all patients receiving ≥1 secukinumab dose up to the Week (Wk) 52 (psoriasis studies) or Wk 112 visit were included. Data are reported as crude frequency rates (%) in the short-term (Wk 12 in psoriasis studies and Wk 16 in the PsA/AS studies) and as exposure-adjusted incidence rates (per 100 patient-years) over the entire treatment period.
RESULTS: Overall, 3430, 974, and 571 patients received ≥1 secukinumab dose in the psoriasis, PsA, and AS studies, respectively. Adverse events of CD or UC were reported infrequently amongst secukinumab-treated patients in both the short-term (CD: 0%-0.5%; UC: 0%-0.3%) and long-term (CD: 0.07-0.77 cases per 100 patient-years; UC: 0.14-0.29 cases per 100 patient-years) treatment periods. Rates of CD and UC were similar across the psoriasis (CD: 0.11 cases per 100 patient-years; UC: 0.15 cases per 100 patient-years) and PsA (CD: 0.07 cases per 100 patient-years; UC: 0.14 cases per 100 patient-years) cohorts. Rates with secukinumab were also similar to those seen with etanercept in patients with psoriasis: CD: 0.11 versus 0 cases per 100 patient-years; UC: 0.15 versus 0.34 cases per 100 patient-years. Across all indications, there was no dose dependency with respect to the incidence of CD or UC with secukinumab treatment, and no pattern in time to onset.
CONCLUSION: Events of CD and UC in the 14 clinical studies were reported infrequently in secukinumab-treated patients with psoriasis, PsA, or AS; rates were similar across the psoriasis and PsA cohorts. Exposure-adjusted incidence rates of CD and UC observed in secukinumab-treated patients are consistent with those reported in the literature for patients with psoriasis, PsA, and AS.

REFERENCES:

1. Li WQ, Han JL, Chan AT, Qureshi AA. Psoriasis, psoriatic arthritis and increased risk of incident Crohn's disease in US women. *Ann Rheum Dis*. 2013;72(7):1200-1205. doi:10.1136/annrheumdis-2012-202143.
2. Rudwaleit M, Baeten D. Ankylosing spondylitis and bowel disease. *Best Pract Res Clin Rheumatol*. 2006;20(3):451-471. doi:10.1016/j.berh.2006.03.010.
3. Egeberg A, Mallbris L, Warren RB, et al. Association between psoriasis and inflammatory bowel disease: a Danish nationwide cohort study. *Br J Dermatol*. 2016;175(3):487-492. doi:10.1111/bjd.14528.
4. Scosyrev & Primatesta. Poster P068, 5th Congress of the Psoriasis International Network; 7–9 July 2016; Paris, France.
5. Braun J, Baraliakos X, Listing J, et al. Differences in the incidence of flares or new onset of inflammatory bowel diseases in patients with ankylosing spondylitis exposed to therapy with anti-tumor necrosis factor alpha agents. *Arthritis Rheum*. 2007;57(4):639-647. doi: 10.1002/art.22669.

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PA-23: Patient subgroups; pooled analysis from the phase 3, PIONEER studies of adalimumab treatment in patients with moderate to severe hidradenitis suppurativa

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BACKGROUND & OBJECTIVE: The aim of this analysis from the 2 phase 3 PIONEER trials in patients (pts) with hidradenitis suppurativa (HS) was to determine if various pt demographic and baseline characteristics had an impact on the efficacy and the overall safety profile of originator adalimumab weekly dosing (ADAew).

METHODS: The 2 PIONEER studies had similar designs: a randomized, double-blind period comparing the safety and efficacy of ADAew vs placebo (PBO) at 12 weeks (Period A), followed by a randomized, double-blind period evaluating safety and efficacy over 24-weeks (Period B). This analysis reports results from select, pre-specified pt subgroups that were identified from baseline demographics and pt characteristics. The primary efficacy variable, Hidradenitis Suppurativa Clincal Response (HiSCR) at week 12 and treatment-emergent adverse events (AEs) in Period A were analyzed from pooled data of the 2 studies for each subgroup. HiSCR was defined as ≥50% reduction in the total abscess and inflammatory nodule (AN) count with no increase in abscess count and no increase in draining fistula count relative to baseline.

RESULTS: 317 (PBO) and 316 (ADAew) pts were included in the integrated efficacy analysis. Baseline characteristics were balanced among subgroups, except that the majority of pts were <40 years of age (65.4%) and female (65.9%). A significantly higher HiSCR rate for ADAew vs PBO was observed in every subgroup, except in the BMI >40 kg/m2 and the history of prior HS surgery subgroups, where subgroup sizes were very small.

CONCLUSION: In each patient subgroup except the BMI >40 kg/m2 and the prior history of HS surgery subgroups, a significantly higher percentage of pts receiving ADAew vs PBO achieved HiSCR after 12 weeks of treatment. No safety signals were identified following ADAew treatment for 12 weeks.

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Table. Achievement of HiSCR at week 12 (Period A) by patient subgroups

Sub-groups	PBO		ADAew	
	N	%	N	%
Hurley Stage				
II	171	57 (33.3)	168	90 (53.6)**
III	146	28 (19.2)	148	70 (47.3)**
Age, years				
<40	197	54 (27.4)	217	106 (48.8)**
≥40	120	31 (25.8)	99	54(54.5)**
Sex				
Male	99	21 (21.2)	117	56 (47.9)**
Female	218	64 (29.4)	199	104 (52.3)**
BMI, kg/m2 (median)				
<25	39	16 (41.0)	60	37 (61.7)*
25 to <30	74	20 (27.0)	73	35 (47.9)*
30 to <40	139	33 (23.7)	138	71 (51.4)**
≥40	63	15 (23.8)	44	17 (38.6)
Duration of HS, years (median)				
<9.18	153	47 (30.7)	163	81 (49.7)**
≥9.18	164	38 (23.2)	153	79 (51.6)**
Prior surgery				
No	286	74 (25.9)	268	134 (50.0)**
Yes	31	11 (35.5)	48	26 (54.2)
High-sensitivity C-reactive protein,[a] mg/L (median)				
<8.40	150	50 (33.3)	158	98 (62.0)**
≥8.40	164	34 (20.7)	157	61 (38.9)**
AN count (median)				
<9	142	47 (33.1)	141	73 (51.8)**
≥9	175	38 (21.7)	175	87 (49.7)**

[a]Missing data: 3 PBO, 1 ADAew. ***P* < .001; **P* < .05. Non-responder imputation.

315 PBO and 316 ADAew pts were included in the integrated safety analysis (2 pts randomized to PBO but not dosed, were excluded). AEs reported by pts receiving PBO vs ADAew were: 64.4% vs 55.4% (any AE; significantly fewer in ADAew vs PBO, *P* < .05); 3.5% vs 1.9% (serious AEs), and 0.6% vs 0.6% (serious infections).

PA-24: Rapid onset of efficacy in patients with psoriasis treated with ixekizumab: a pooled analysis of data from 2 phase 3 randomized clinical trials (UNCOVER-2 AND UNCOVER-3)

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BACKGROUND: For patients with psoriasis, rapid onset of clinical improvement is one of the most important attributes of treatment success.1 In addition, it has been demonstrated that clinical improvement observed early during treatment has predictive value for subsequent clinical response at later time points.[2]
OBJECTIVE: In this analysis, we evaluated the speed of onset of clinical improvement in psoriasis patients treated with ixekizumab (IXE), a high-affinity monoclonal antibody that selectively targets interleukin (IL)-17A, compared with placebo and the active comparator, etanercept (ETN).
METHODS: Combining data from the 12-week Induction Phase of UNCOVER-2 and UNCOVER-3, 2570 patients with moderate to severe plaque psoriasis were randomized to receive placebo (PBO, n = 361), high-dose ETN (50 mg bi-weekly, n = 740), or a single 80 mg subcutaneous injection of IXE once every 2 weeks (IXE Q2W, n = 736) or every 4 weeks (IXE Q4W, n = 733) after receiving a 160 mg initial dose at Week 0. Mean percentage improvement was analyzed by MMRM and response rates by Cochran-Mantel-Haenszel test, where missing data were imputed using nonresponse. Time to PASI 75 was estimated using the Kaplan-Meier product limit methodology.
RESULTS: Significant differences in mean percent change from baseline (improvement) in the PASI were observed between the IXE treatment groups compared with PBO and ETN as early as Week 1 ($P < .001$) with mean (SE) % improvements of 32.7 (0.76) in IXE Q2W, 33.6 (0.76) in IXE Q4W, 5.31 (1.08) in PBO, and 10.3 (0.76) in ETN. At Week 2, the mean percent improvement was 53.7 (0.86) in IXE Q2W, 53.3 (0.86) in IXE Q4W, 9.25 (1.23) in PBO, and 23.3 (0.86) in ETN. At Week 1, the PASI 50 response rate was 22.8% in the IXE Q2W and 26.6% in IXE Q4W compared with 1.4% in PBO ($P < .001$) and 3.9% in ETN ($P < .001$), and at Week 2, the PASI 50 response rate was 58.8% in the IXE Q2W and 57.6% in IXE Q4W compared to 4.2% in PBO ($P < .001$), and 14.6% in ETN ($P < .001$). Median time (95% CI) to PASI 75 was 31 (30,55) days in the IXE Q4W group, 30 (29,43) days in the IXE Q2W group, and 85 (85,87) days for the ETN group.
LIMITATIONS: This analysis was performed using 2 clinical trials and results may not be generalizable to a larger population or other active comparators.
CONCLUSION: IXE treatment resulted in clinically meaningful improvements (PASI 50) observed as early as Week 1, which were statistically significantly different compared with ETN and PBO. At least 50% of patients had a PASI 75 after approximately 4 weeks of IXE treatment.

REFERENCES:

1. Seston EM1, Ashcroft DM, Griffiths CE. Balancing the benefits and risks of drug treatment: a stated-preference, discrete choice experiment with patients with psoriasis. *Arch Dermatol*. 2007;143(9):1175-1179. doi: 10.1001/archderm.143.9.1175.
2. Zhu B, Edson-Heredia E, Cameron GS, et al. Early clinical response as a predictor of subsequent response to ixekizumab treatment: results from a phase II study of patients with moderate to severe plaque psoriasis. *Br J Dermatol*. 2013;169(6):1337-1341. doi: 10.1111/bjd.12610.

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PA-25: Safety and efficacy of ingenol disoxate as 3-day field treatment of actinic keratosis on face, chest or balding scalp

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BACKGROUND: Ingenol disoxate (IngDsx, LEO 43204) is a novel ingenol derivative selected for improved biologic and thermostability properties compared with ingenol mebutate.
OBJECTIVE: This Phase II trial investigated the safety and efficacy of a 3-day field treatment with IngDsx in patients with actinic keratosis (AK) on face/chest (F/C), scalp (S) and trunk/extremities. Here we report on the F/C and S treatment groups.
METHODS: Open label, parallel group, 8-week trial evaluating IngDsx gel applied once daily for 3 consecutive days to full face/approximately 250 cm^2 on the chest (IngDsx 0.018%, F/C) or 25–250 cm^2 on the scalp (IngDsx 0.037%, S). Local Skin Responses (LSRs) (6 components: erythema, flaking/scaling, crusting, swelling, pustulation/vesiculation and erosion/ulceration) were assessed on a scale from 0 to 4, yielding a max composite score of 24. LSRs and adverse events (AEs) were assessed on Day 1, 4, 8, Week 2, 4 and 8. Efficacy (by AK Count) and photo-damage outcome were assessed at Week 8. Patients completed a Cosmetic Outcome questionnaire and Treatment Satisfaction Questionnaire for Medication at Week 8.
RESULTS: 63 patients were included in each treatment group: 95% (F/C) and 98% (S) completed the 3-day treatment. The median age was 64 (F/C) and 68 (S) years; 63% (F/C) and 98% (S) were men, 98% were white; 95% had Fitzpatrick skin type I-III; the median history of AK was 7 (F/C) and 10 (S) years. At baseline, the median number of clinically typical AKs in the treatment area was 10 (F/C) and 11 (S). Mean composite LSR score peaked at Day 4 (10.5 (F/C) and 10.4 (S)), rapidly declined and reached mild levels at Week 2. The treatments were well tolerated; the most common AEs were application site pain (including burning) (44% [F/C] / 54% [S]) and pruritus (29% (F/C) / 37% [S]). There were no treatment-related serious adverse events. The reduction in AK count at week 8 was 79% (F/C) and 76% (S). Complete clearance was achieved in 37% (F/C) and 40% (S) of patients. Global photo-damage outcome Investigator assessment showed improvement for 66% (F/C) and 69% (S) of patients. More than 2/3 of patients reported "Much improved" cosmetic outcomes. Global treatment satisfaction was high overall.
LIMITATIONS: open-label, non-randomized trial.
CONCLUSION: A 3-day field therapy of AK with 0.018% IngDsx on full face or a large area on the chest and 0.037% ingenol disoxate on the balding scalp was considered well tolerated based on LSRs and the AE profile. The treatments demonstrated clinically relevant efficacy and were associated with a good cosmetic outcome and high global treatment satisfaction.
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DISCLOSURES: DM Siegel reports personal fees from LEO Pharma, Biofrontera AG, Castle Biosciences, Inc, Clearpath Solutions Group, DUSA Pharmaceuticals, Ferndale Laboratories, Foamix, Galderma Laboratories, Genentech, Gerson Lehrman Group, Leerink Swann, MakuCell, Inc, Meda Pharmaceuticals, MelaSciences, MIM labs, Novartis, Sanova Works, and Smith & Nephew, stock or stock option from Caliber Imaging and Diagnostics, Inc, Kamedis Limited, Klara/Goderma, Inc, Logical Images, Modernizing Medicine, Photomedex, Quinnova, Remote Derm and Surgical Media, intellectual property rights from Dantech Systems and Elsevier, Inc, grants from Actavis, Amgen, Michelson Diagnostics, Regeneron, equipment from Michelson Diagnostics, other financial benefit from Surgical Media and Valeant Pharmaceuticals International, no compensation from Clearpath Solutions Group, Tetros Group, and Vivacare for advisory boards, outside the submitted work. S Tyring reports grants from LEO Pharma, outside the submitted work. ML Østerdal is an employee of LEO Pharma A/S. AH Petersen was formerly an employee of LEO Pharma A/S. B Berman reports personal fees from LEO Pharma, Aclaris Therapeutics, Inc, Allos, Almirall, Amira Pharmaceuticals, Anacor Pharmaceuticals, Inc, Bayer Pharmaceuticals, Berg Pharma, LLC, Biofrontera AG, C & H Scientific, LLC, Capstone Therapeutics Corp, Centocor Ortho Biotech Inc, Clark Pharmaceuticals, Crescita Therapeutics Inc, Dermira, Doak, Dr Tattoff, DUSA Pharmaceutical, Inc, Excaliard Pharmaceuticals, Inc, Exeltis, Ferndale Laboratories, Inc Foamix, Galderma Laboroatories, LP, GlaxoSmithKline, Graceway Pharmaceuticals, LLC, Halscion, LEO Pharma, US, Liquidia Tehchnologies, Inc, Medicis Pharmaceutical Corporation, Medimetriks Pharmaceuticals, Inc, Merz Pharmaceuticals, LLC, Novan, Novartis Pharmaceuticals Corp, Onset Therapeutics, Peplin Inc, Pharmaderm, Sanofi-aventis, Sensus Healthcare, Smith & Nephew, Sol-Gel Technologies, Stiefel a GSK company, and Valeant Pharmaceuticals International, grants/research funding from Actavis, Allergan, Inc, Anacor Pharmaceuticals, Inc, Dusa Pharmaceuticals, Inc, Exeltis, Galderma Laboratories, LP, LEO Pharma A/S, Tigercat Pharma, Inc, stock or stock options from Berg Pharma, LLC, CHS Pharma, Dermira, Dr Tattoff, Klara/Goderma, Inc, Oculus Innovative Sciences, Inc, and TopMD, No compensation from RXi Pharmaceuticals, outside the submitted work. Patrick Griffin, MSc, of iMed Comms, an Ashfield Company, part of UDG Healthcare plc, provided medical writing support that was funded by LEO Pharma
FUNDING/SUPPORT: The trial was sponsored by LEO Pharma A/S.

PA-26: Safety and pharmacokinetics of ingenol disoxate gel administered under maximum use conditions to patients with actinic keratosis

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BACKGROUND: Ingenol disoxate (IngDsx, LEO 43204) is a novel ingenol derivative in phase III development for the field treatment of actinic keratosis (AK) in areas up to 250 cm^2.

OBJECTIVE: This Phase 1 trial investigated the pharmacokinetics of IngDsx under maximum use conditions in patients with AK on the face, arm and scalp.
METHODS: This was an open-label, uncontrolled, non-randomized multi-center trial of IngDsx applied to patients with AK in the upper end of disease severity, defined as ≥15 clinically typical, visible discrete actinic keratoses in the treatment areas. The trial included three treatment groups: IngDsx gel 0.018% on the full face, IngDsx gel 0.1% on approximately 250 cm^2 of the arm, and IngDsx gel 0.037% on approximately 250 cm^2 of the balding scalp. Treatment was applied at the investigator clinics once daily for 3 consecutive days. Patients were followed for 2 weeks. Adverse events (AEs) and serious adverse events (SAEs) were recorded. Six components of local skin responses (LSRs; erythema, flaking/scaling, crusting, swelling, pustulation/vesiculation, and erosion/ulceration) were scored 0–4, yielding a maximum composite LSR score of 24. Pharmacokinetics were evaluated using standard non-compartmental analysis.
RESULTS: Systemic exposure of IngDsx was low overall and within the subnanomolar range for all treatment groups; 12/15 patients in the face group, 10/15 patients in scalp group and 10/20 patients in the arm group had quantifiable IngDsx levels. The highest Cmax and AUC values were found in the arm group (0.33 nM and 3.12 h*nM, respectively). Time to reach maximal plasma concentrations (Tmax) was between 2 h and 24 h post-dose (average approximately 10 hours). The most common treatment-related AEs were application site pain, (reported by 100%, 89%, and 57% of patients in the scalp, face, and arm groups respectively), and application site pruritus, (reported by 42%, 50%, and 52%, respectively). Two AEs in the face group and one in the arm group were rated as severe (application site pain and pruritus). There were no SAEs or AEs leading to withdrawal, and no clinically significant systemic adverse drug reactions. The mean composite LSR score peaked at Day 4 (scalp, 9.9; face, 9.6; arms, 9.5), rapidly declined, and returned to baseline values at Day 15 post-dose. One patient in the face group experienced grade 4 erosion/ulceration.
LIMITATIONS: Phase 1 trial with limited sample size, restricting the generalizability of findings.
CONCLUSION: IngDsx was well tolerated and only present in the systemic circulation at subnanomolar levels when given to patients with AK under maximal use conditions (areas up to 250 cm^2).
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DISCLOSURES: E Lain reports other from LEO Pharma, outside the submitted work. A Hall and T Skov are both employees of LEO Pharma A/S. Patrick Griffin, MSc, of iMed Comms, an Ashfield Company, part of UDG Healthcare plc, provided medical writing support that was funded by LEO Pharma.
FUNDING/SUPPORT: The trial was sponsored by LEO Pharma A/S.

PA-27: Safety of adalimumab in pediatric patients with polyarticular juvenile idiopathic arthritis, enthesitis-related arthritis, psoriasis, and Crohn's disease

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BACKGROUND: Adalimumab (ADA) is a tumor necrosis factor (TNF) inhibitor used for treatment of chronic immune diseases. The safety of ADA treatment in pediatric patients (pts) is particularly important since prolonged treatment for these conditions is often required. The objective of this study is to evaluate the safety of ADA, alone or in combination with concomitant therapy, in pediatric pts with polyarticular juvenile idiopathic arthritis (pJIA), enthesitis-related arthritis (ERA), psoriasis (Ps), and Crohn's disease (CD).
METHODS: Safety data from 6 clinical trials and their open-label extension studies were analyzed. Pts treated for pJIA (NCT00048542, NCT00775437, and NCT00690573) and ERA (NCT01166282 [interim week-52 data]) received ADA 24 mg/m2 body surface area every other week (eow) or 20 mg eow (<30 kg) to 40 mg eow (≥30 kg). Pediatric pts treated for Ps (NCT01251614) received ADA 0.4 mg/kg (up to 20 mg) or 0.8 mg/kg (up to 40 mg) at week 0, then eow from week 1. Pediatric pts treated for CD (NCT00409682) received open-label ADA induction therapy (160 mg and 80 mg at weeks 0 and 2, respectively, if ≥40 kg; 80 mg and 40 mg if <40 kg), followed by double-blind maintenance dosing (high dose: 40 mg eow if ≥40 kg or 20 mg eow if <40 kg at week 4; low dose: 20 mg eow if ≥40 kg or 10 mg eow if <40 kg at week 4); weekly dosing was allowed for disease flare at week 12 or later; pts received high-dose eow or weekly ADA during an open-label extension (NCT00686374). Events (E) per 100 pt-years (PY) were calculated using adverse events (AEs) reported after the first ADA study dose through 70 days after the last study dose.
RESULTS: The analysis included 577 pediatric pts, representing 1440.7 PY of ADA exposure (Table). Over 90% of pts across indications reported treatment-emergent AEs. Common AEs were headache (13.6, 46.9, and 23.4 E/100 PY for pJIA and ERA, Ps, and CD, respectively), nasopharyngitis (12.4, 58.4, and 15.2 E/100 PY, respectively), and upper respiratory tract infection (30.2, 24.7, and 14.8 E/100 PY, respectively). The rates of serious AEs (E/100 PY) were 13.5 for pts with pJIA and ERA, 7.4 for pts with Ps, and 32.2 for pts with CD. One death was reported from an accidental fall (pt with Ps). There were no reports of malignancies, demyelinating disorders, pulmonary embolism, reactivation of hepatitis B, Stevens-Johnson syndrome, or erythema multiforme.
CONCLUSION: The safety profile of ADA in pediatric pts with pJIA, ERA, Ps, or CD was similar across indications, and no new safety signals specific to the pediatric population were identified.

Table. Treatment-emergent adverse events occurring in ≥1% of patients in pediatric adalimumab clinical trials

Treatment-Emergent Event	pJIA and ERA N = 274 Exposure, PYs=806.9	Pediatric Ps N = 111 Exposure, PYs=121.5	Pediatric CD N = 192 Exposure, PYs=512.3			
	N (%)	Events (Events/100 PY)	N (%)	Events (Events/100 PY)	N (%)	Events (Events/100 PY)
Any AE	267 (97.4)	4239 (525.3)	100 (90.1)	630 (518.5)	189 (98.4)	2902 (566.5)
Serious AE	67 (24.5)	109 (13.5)	8 (7.2)	9 (7.4)	92 (47.9)	165 (32.2)
AE leading to discontinuation of ADA	24 (8.8)	31 (3.8)	3 (2.7)	3 (2.5)	61 (31.8)	77 (15.0)
Severe AE	45 (16.4)	67 (8.3)	17 (15.3)	24 (19.8)	67 (34.9)	114 (22.3)
Drug-related† AE	200 (73.0)	1536 (190.4)	48 (43.2)	176 (144.9)	115 (59.9)	621 (121.2)
Infection	224 (81.8)	1216 (150.7)	82 (73.9)	205 (168.7)	145 (75.5)	676 (132.0)
Serious infection	21 (7.7)	22 (2.7)	1 (0.9)	1 (0.8)	25 (13.0)	34 (6.6)
Opportunistic infection (excluding tuberculosis and oral candidiasis)	0	0	0	0	4 (2.1)	4 (0.8)
Oral candidiasis	2 (0.7)	2 (0.2)	0	0	4 (2.1)	7 (1.4)
Tuberculosis	3 (1.1)	3 (0.4)	2 (1.8)	2 (1.6)	1 (0.5)	1 (0.2)
Active	1 (0.4)	1 (0.1)	0	0	0	0
Latent	2 (0.7)	2 (0.2)	2 (1.8)	2 (1.6)	1 (0.5)	1 (0.2)
Parasitic infection	3 (1.1)	5 (0.6)	0	0	1 (0.5)	1 (0.2)
Allergic reaction‡,§	41 (15.0)	62 (7.7)	7 (6.3)	9 (7.4)	19 (9.9)	25 (4.9)
Intestinal perforation	0	0	0	0	3 (1.6)	3 (0.6)
Intestinal stricture	-	-	-	-	6 (3.1)	6 (1.2)
Worsening/new onset of psoriasis‡	5 (1.8)	6 (0.7)	10 (9.0)	11 (9.1)	6 (3.1)	7 (1.4)
Hematologic disorders‖	10 (3.6)	16 (2.0)	2 (1.8)	3 (2.5)	27 (14.1)	36 (7.0)
Liver event¶	5 (1.8)	5 (0.6)	0	0	1 (0.5)	1 (0.2)
Injection site reaction‡	101 (36.9)	844 (104.6)	11 (9.9)	17 (14.0)	42 (21.9)	104 (20.3)

-, analyzed only in the CD population; ADA, adalimumab; AE, adverse event; CD, Crohn's disease; ERA, enthesitis-related arthritis; pJIA, polyarticular juvenile idiopathic arthritis; Ps, psoriasis; PYs, patient-years.
*The ERA study includes interim week-52 data.
†Investigator assessed as possibly or probably related to study drug.
‡None were serious.
§Events included hypersensitivity (n = 36), urticaria (n = 27), asthma (n = 16), eye pruritus (n = 3), rash (n = 3), bronchospasm (n = 2), generalized pruritus (n = 2), injection site urticaria (n = 2), drug hypersensitivity (n = 1), eyelid edema (n = 1), generalized rash (n = 1), and wheezing (n = 1). One event of anaphylactic reaction was reported as an immune system disorder.
‖Events included anemia (n = 24), leukopenia (n = 17), neutropenia (n = 10), lymphopenia (n = 1), macrocytic anemia (n = 1), microcytic anemia (n = 1), and pancytopenia (n = 1); 10 events were serious (leukopenia, n = 2 and neutropenia, n = 2 [JIA]; anemia, n = 6 [CD]).
¶Events included liver disorder (n = 3), hepatotoxicity (n = 1), and hepatocellular injury (n = 1) in the pJIA and ERA group, and 1 serious event of hepatitis in the CD group.

CORRESPONDENCE: Gerd Horneff (Emily Chastain on behalf of G. Horneff); emily.chastain@abbvie.com.
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Hyams J has served on an Advisory Board for Abbvie and has received research support.
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PA-28: Safety profile of brodalumab in patients with moderate to severe plaque psoriasis: a 52-week evaluation of three Phase 3 studies.

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BACKGROUND: Psoriasis is a chronic, immune-mediated disease characterized by thick, scaly plaques. The interkeukin-17 (IL-17) pathway plays an important role in the disease pathogenesis. Brodalumab, a fully human interleukin-17 receptor A (IL-17RA) monoclonal antibody, has demonstrated efficacy in phase 2 and phase 3 trials in patients with moderate to severe plaque psoriasis.
OBJECTIVE: To investigate the safety profile of brodalumab in patients with moderate to severe plaque psoriasis.
METHODS: Three multicenter, randomized, double-blind studies in moderate to severe psoriasis (N = 4632, safety population); two were ustekinumab-controlled. AMAGINE-1: Following a 12-week brodalumab or placebo induction phase subjects were rerandomized to brodalumab (210mg Q2W, 140mg Q2W) or placebo. AMAGINE-2 and -3: Following a 12-week brodalumab, ustekinumab or placebo induction phase subjects were rerandomized to brodalumab (210mg Q2W, 140mg Q2W, 140mg Q4W, 140mg Q8W) or remained on ustekinumab for a further 40 weeks. Adverse events (AEs) were monitored and evaluated throughout, with a particular focus on potential risks and AEs of interest given brodalumab's mechanism of action (MOA).
RESULTS: The AE profile for weeks 12-52 was similar to the induction phase, with no apparent brodalumab dose effect; nasopharyngitis, upper respiratory tract infection, arthralgia, and headache being the most common. Exposure-adjusted AE and SAE rates (per 100 patient years) were comparable for brodalumab and ustekinumab (401.3; 8.3 and 394.6; 8.5) Follow-up adjusted rates of fatal events were 0.4 for both treatments. Rates of AEs of special interest were very low, serious infections with brodalumab and ustekinumab were 1.3 and 1.0 respectively. Fungal infections were more frequent for brodalumab than ustekinumab (7.5 versus 4.2) and were primarily composed of superficial skin or mucocutaneous candidiasis. Rates for neutropenia were 2.3 and 2.4 respectively, transient in nature, and not temporally associated with serious infections. Suicidal ideation and behavior (SIB) events were observed with both brodalumab and ustekinumab (0.2 and 0.6 respectively), with one completed and one indeterminate suicides with brodalumab. The rates of cardiovascular AEs with both brodalumab and ustekinumab were equivalent. The exposure-adjusted rates for adjudicated Major Adverse Cardiovascular Events (MACE) with brodalumab and ustekinumab were 0.6 and 0.4 respectively, showed no temporal association or evidence of brodalumab dose response, and were comparable to that reported in other trials.
CONCLUSION: Brodalumab has an acceptable safety profile comparable to that of ustekinumab through 52 weeks of treatment. SIB remains an important potential risk in any psoriasis patient population; the data from these studies does not support a causal association with brodalumab.
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DISCLOSURES: KA Papp has served as a consultant, scientific officer, member of a speaker's bureau, advisory board or steering committee, or received research grants or honoraria from AbbVie, Inc, Akesis Pharmaceuticals, Inc, Akros, Inc, Allergan, Plc, Alza Corporation, Amgen Inc, Anacor Pharmaceuticals, Artax Biopharma, Inc,, Astellas Pharma, Inc, AstraZeneca, Baxter, Baxalta, Boehringer Ingelheim, Bristol-Myers Squibb, Can-Fite BioPharma, Celgene Corporation, Celtic Pharma, Cipher Pharmaceuticals, Inc, Dermira, Inc, Dow Pharma, Eli Lilly & Co, Ferring Pharmaceuticals, Inc, Formycon AG, Forward Pharma A/S, Fujisawa Pharmaceuticals Co, Inc, Fuxional Therapeutics, Ltd, Galderma SA, Genentech, Inc, Genexion SA, Genzyme Corporation, Gilead Sciences, GlaxoSmithKline, Plc, Janssen Pharmaceutica, Kyowa Hakko Kirin Co, Ltd, LEO Pharma, MedImmune, Inc, Meiji Seika Pharma Co, Merck & Co,

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PA-29: Secukinumab compared to placebo on aortic vascular inflammation and cardiometabolic biomarkers in patients with moderate to severe plaque psoriasis

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BACKGROUND: Secukinumab, a human monoclonal antibody (mAb) that selectively targets Interleukin (IL)-17A, is efficacious in the treatment of moderate to severe psoriasis (PSO), with a sustained effect and favorable safety profile. Research suggests that mediators of inflammation such as IL-17 may contribute to inflammatory processes not only in the skin, but in adipose tissue, blood vessels, and other organs, and that PSO severity directly relates to vascular inflammation (Naik et al. Arterioscler Thromb Vasc Biol. 2015;35:2667–76).
OBJECTIVE: To assess the effect of secukinumab on aortic vascular inflammation in patients with moderate to severe plaque-type PSO. This abstract presents the study design and objectives.
METHODS: In this randomized, double-blind, placebo-controlled, parallel-group study, approximately 84 adult patients with moderate to severe chronic plaque-type PSO (≥10% Body Surface Area involvement, Psoriasis Area and Severity Index [PASI] score of ≥12 and Investigator's Global Assessment modified 2011 [IGA mod 2011] 0/1 score of ≥3), will be enrolled from approximately 10 centers in the United States. Key exclusion criteria include forms of diagnosed PSO other than chronic plaque PSO and previous exposure to an anti–IL-17A biologic. Patients will be randomized (1:1) to receive either secukinumab 300 mg (two self-administered 150 mg s.c. injections via prefilled syringe) or placebo at Baseline, Weeks (Wks) 1, 2, 3, 4 and 8. All patients will receive secukinumab 300 mg every 4 weeks from Wks 12–48, with weekly doses from Wks 13-15 for those switching from placebo. The primary objective is to examine the effect of secukinumab compared to placebo on aortic vascular inflammation with respect to the change at Wk 12 from Baseline in the target (arterial vascular uptake) to background (venous blood pool) ratio from the aorta as measured by [18F]-fluorodeoxyglucose positron emission tomography/computer tomography. Secondary objectives include change at Wk 12 from Baseline in cardiometabolic biomarkers (lipoprotein function/composition, measures of inflammation, adiposity and insulin resistance), PASI 75/90/100 and IGA mod 2011 0/1 response rates and Dermatology Life Quality Index scores. Exploratory objectives include the equivalent analyses up to Wk 52.
CONCLUSION: This study will assess the effect of secukinumab on aortic vascular inflammation and cardiometabolic biomarkers in patients with moderate to severe chronic plaque-type PSO.
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DISCLOSURES: JM Gelfand has received grants and/or honoraria for consultancy from AbbVie, AstraZeneca, Celgene, Coherus, Eli Lilly, Endo, Janssen, Merck, Novartis Corporation, Pfizer Inc, and Sanofi. Research grants (to the Trustees of the Univ. Pennsylvania) from AbbVie, Amgen, Eli Lilly, Janssen, Novartis Corporation, Regeneron, and Pfizer Inc. He was an investigator for AbbVie, Amgen Inc, Janssen, Novartis Corporation, Pfizer Inc, and Regeneron. He is a patent holder for resiquimod (for T cell lymphoma). J Nyirady and K Siu are employees of Novartis Pharmaceuticals Corporation. A Alavi has nothing to disclose. NN Mehta is a full-time government employee with NHLBI; he has nothing to disclose.
FUNDING/SUPPORT: This research was sponsored by Novartis Pharmaceuticals Corporation.
PREVIOUS PRESENTATION: These results were originally presented at the 35th Annual Fall Clinical Dermatology Conference, Las Vegas, Nevada, USA, October 20–23, 2016.

PA-30: Secukinumab demonstrates sustained high efficacy and a favorable safety profile in moderate to severe psoriasis patients through 4 years of treatment (extension of SCULPTURE study)

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BACKGROUND: Secukinumab, a fully human monoclonal antibody that selectively neutralizes interleukin (IL)-17A, has been shown to have significant efficacy in the treatment of moderate to severe psoriasis and psoriatic arthritis, demonstrating a rapid onset of action and sustained responses, with a favorable safety profile.
OBJECTIVE: This secukinumab analysis is the first phase 3 study of an IL-17A inhibitor evaluating efficacy and safety up to four years of treatment at the approved dose.
METHODS: In the core SCULPTURE study, Psoriasis Area and Severity Index (PASI) 75 responders at Week 12 were randomized to a double-blind maintenance treatment of subcutaneous secukinumab 300 mg or 150 mg, administered either at a 4-week fixed-interval (FI) or in a retreatment-as-needed regimen. Patients who completed 52 weeks of treatment continued into the extension and received the same blinded maintenance treatment regimen and dose up to end of Year 3. In the fourth year, the study was open label and the treatment was mainly self-injected by patients at home; patients attended site visits every 12–16 weeks. In this analysis we report PASI 90/100 responses, absolute PASI ≤1/≤2/≤3 responses, dermatology life quality index (DLQI) 0/1 response, and safety/tolerability over four years focusing on the 300-mg FI treatment arm. Efficacy data are reported as observed. Safety was analyzed per year.
RESULTS: Secukinumab 300 mg demonstrated sustained efficacy over four years of treatment in patients (Baseline [n = 168], Year 1 [n = 165], and Year 4 [n = 131]) with moderate to severe psoriasis (mean Baseline PASI 23.5 ± 8.8, mean Baseline BSA 33.1% ± 18.9). Approximately two-thirds of patients had clear or almost clear skin (PASI 90) at Year 1 (68.5%), a response which was sustained to Year 4 (66.4%). Clear skin (PASI 100) at Year 1 (43.8%) was also sustained to Year 4 (43.5%). The median percentage change in PASI from Baseline to Year 1 (98.4%) was maintained to Year 4 (97.8%). PASI ≤1/≤2/≤3 responses at Year 1 were 58.6%, 67.9%, and 74.1%, respectively, and were 58.8%, 71%, and 77.1%, respectively, at Year 4. DLQI 0/1 response (representing no impact of skin problems on patients' lives) was sustained over four years (72.7% at Year 1 and 70.8% at Year 4). The safety profile of secukinumab remained favorable year-on-year up to four years, with no cumulative or unexpected safety concerns identified. The most common adverse events were nasopharyngitis and upper respiratory tract infection, similar to the pivotal 1-year clinical studies.
CONCLUSION: Secukinumab 300 mg delivered high and sustained levels of skin clearance up to four years in patients with moderate to severe psoriasis. Secukinumab also led to high and sustained relief from the burden of psoriasis on patients' lives (DLQI 0/1). Favorable safety established in a large phase 3 program was maintained up to four years, with no increase of adverse events year-on-year and no new or unexpected safety signals observed.
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DISCLOSURES: R Bissonnette: has served as a consultant, investigator, or speaker for, or received grants from, AbbVie, Amgen, Apopharma, Astellas, Boehringer Ingelheim, Celgene, Dermira, Eli-Lilly, Galderma, GSK-Stiefel, Incyte, Jansen, Leo, Novartis, Pharma, Merck, Pfizer, and Tribute. T Luger: has received honoraria as an advisory board member from AbbVie, Amgen, CERIES, Celgene, Clinuvel, La Roche Posay, Janssen-Cilag, Pfizer, MEDA Pharma, Galderma, Symrise, Sandoz, Mundipharma, Lilly; grants as an investigator from Biogen Idec, Janssen-Cilag, MEDA Pharma, Pfizer, Wolff; honoraria as a speaker/consultant from Novartis, AbbVie, Astellas, Galderma, La Roche Posay, MEDA Pharma, Janssen-Cilag; and honoraria as a clinical trial investigator from Novartis, Lilly, Pfizer, and Janssen-Cilag. D Thaçi: received honoraria as investigator from: Abbvie, Almiral, Amgen, Astellas, Biogen-Idec, Boehringer-Ingelheim, Celgene, Dignity, Elli-Lilly, Forward-Pharma, GlaxoSmithKline, Leo, Janssen-Cilag, Maruho, MSD, Mitsubishi Pharma, Novartis, Pfizer, Roche, Sandoz. Received honoraria as a consultant from: Abbvie, Biogen-Idec, Celgene, Dignity, Maruho, Mitsubishi, Novartis, Pfizer, Xenoport. Received honoraria as a Scientific Advisory Board member from: AbbVie, Amgen, Biogen-Idec, Celgene, Eli-Lilly, GSK, Pfizer, Novartis, Janssen, Mundipharma, and Sandoz. D Toth: received honoraria as an advisory board member, investigator and/or speaker from: AbbVie, Amgen Inc, Celgene, Eli Lilly and Company, Galderma, Genentech, Janssen, LEO, Novartis, Pharma, Merck, Pfizer, and Regeneron. K Letzelter, S Xia, R Mazur, and M Milutinovic: are all employees of Novartis. C Leonardi: has served as consultant and/or investigator and/or participated in a speakers' bureau for AbbVie, Amgen, Celgene, Dermira, Eli Lilly, Galderma, Janssen, Leo Pharma, Merck, Novartis, Pfizer, Sandoz, Stiefel, and UCB.
FUNDING/SUPPORT: This research was sponsored by Novartis Pharma AG, Basel, Switzerland.
PREVIOUS PRESENTATION: These results were originally presented at the 25th Annual Congress of the European Academy of Dermatology and Venereology, Austria, Vienna, September 28–October 2, 2016.

PA-31: Secukinumab exhibits a favorable safety profile during 104 weeks of treatment in subjects with moderate to severe plaque psoriasis

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BACKGROUND: Secukinumab, a fully human monoclonal antibody that selectively targets interleukin-17A, is highly efficacious in the treatment of moderate to severe psoriasis, starting at early time points, with a sustained effect and a favorable safety profile.
OBJECTIVE: This study is an extension of two secukinumab phase 3 studies (ERASURE and FIXTURE) in moderate to severe psoriasis. Here, we evaluated overall safety of secukinumab from Week 52 to Week 104.
METHODS: Subjects were eligible for inclusion in the extension on completion of either core study with at least a partial response (Psoriasis Area and Severity Index [PASI] ≥50) to secukinumab at Week 52. PASI 75 responders in each secukinumab dose group were randomized 2:1 to continue the same doses of secukinumab (300 mg or 150 mg) or receive placebo (300 mg to placebo or 150 mg to placebo) every 4 weeks. Adverse events (AEs) and AEs of special interest (serious infections, candidiasis, neutropenia, inflammatory bowel disease [IBD], malignancy, major adverse cardiovascular events [MACE]) were analyzed from Week 52 to Week 104.
RESULTS: At Week 104, AEs were reported in 76.6% and 70.1% of subjects who received any secukinumab 300-mg treatment (300 mg and 300 mg to placebo groups; n = 552) or any secukinumab 150-mg treatment (150 mg and 150 mg to placebo groups; n = 522), respectively. Infections were the most frequent AEs, in both the any secukinumab 300-mg (53.1%) and any secukinumab 150-mg (41.6%) treatment groups, with nasopharyngitis being the most common infection (24.1% and 17.0%, respectively). Serious AEs were reported for 5.6% and 6.3% of subjects receiving any secukinumab 300-mg or 150-mg dose, respectively. Rates for AEs of special interest at Week 104 were as follows for any secukinumab 300-mg and 150-mg dose, respectively: candidiasis (2.5%, 1.5%), neutropenia grade ≥2 (3.1%, 2.8%), serious infections (1.3%, 1.1%), IBD (0.2%, 0.2%), malignancy (0.4%, 0.8%), and MACE (0.2%, 0.4%). Treatment-emergent antidrug antibodies (TE-ADA) and neutralizing antibodies (NA) were rare (6 [0.5%] subjects had TE-ADAs, of whom 2 [0.2%] tested positive for NA) and were not associated with loss of secukinumab efficacy or issues of clinical concern. No deaths and no cases of reactivation of latent tuberculosis were reported.
CONCLUSION: Secukinumab was not associated with new or unexpected safety findings to Week 104. This analysis of safety data supports a favorable safety profile of secukinumab up to 104 weeks in subjects with moderate to severe psoriasis.
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DISCLOSURES: CEM Griffiths has received honoraria and/or research grants from AbbVie, Amgen, Bristol-Myers Squibb, Celgene, Eli Lilly, GSK, Janssen-Cilag, Leo, MSD, Novartis, Pfizer, Sandoz, Trident, and UCB. A Blauvelt has served as a scientific consultant and clinical study investigator for AbbVie, Amgen, AstraZeneca, Boehringer Ingelheim, Celgene, Dermira, Genentech, GSK, Janssen, Lilly, MedImmune, Merck, Novartis, Pfizer, Regeneron, Sandoz, Sanofi, UCB, and Valeant, and as a paid speaker for Lilly. C Leonardi has served as consultant and/or investigator and/or participated in a speakers' bureau for AbbVie, Amgen, Celgene, Dermira, Eli Lilly, Galderma, Janssen, Leo Pharma, Merck, Novartis, Pfizer, Sandoz, Stiefel, and UCB. TF Tsai has carried out clinical trials and/or provided consultancies and/or acted as a speaker for AbbVie, Allergan, Celgene, Eli Lilly, Galderma, Janssen-Cilag, Leo Pharma, Novartis, and Pfizer. R You, J Safi, and T Fox are employees of Novartis. K Reich has served as a consultant and/or paid speaker for, and/or participated in clinical trials sponsored by AbbVie, Amgen, Biogen-Idec, Celgene, Centocor, Covagen, Eli Lilly, Forward Pharma, GSK, Janssen-Cilag, Leo Pharma, Medac, MSD, Novartis, Pfizer, Vertex, Takeda, and Xenoport.
FUNDING/SUPPORT: This research was sponsored by Novartis Pharma AG, Basel, Switzerland.
PREVIOUS PRESENTATION: These results were originally presented at the 74th Annual Meeting of the American Academy of Dermatology, March 4-8, 2016, Washington, DC, USA.

PA-32: Secukinumab improves minimal disease activity response rates in patients with active psoriatic arthritis: data from the randomized Phase 3 study, FUTURE 2

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BACKGROUND: Minimal disease activity (MDA), a validated composite measure in psoriatic arthritis (PsA), is gaining acceptance as a target for achieving substantial disease control. Secukinumab, a fully human interleukin (IL)-17A inhibitor, significantly improved the signs and symptoms of PsA over 52 weeks in FUTURE 2.
OBJECTIVE: This post hoc exploratory analysis assessed MDA response rates through 52 weeks.
METHODS: 397 Patients with active PsA were randomized to subcutaneous (s.c.) secukinumab (300-mg, 150-mg, or 75-mg) treatment or placebo at Baseline, Weeks (Wks) 1, 2, and 3, and every 4 weeks (q4wk) from Wk 4. Placebo-treated patients were re-randomized to secukinumab 300-mg or 150-mg

s.c. treatment q4wk from Wk 16 or 24, depending upon clinical response. Patients were considered in MDA when they met ≥5 of the following seven criteria: 1) tender joint count ≤1; 2) swollen joint count ≤1; 3) Psoriasis Activity and Severity Index score ≤1 or psoriasis affecting <3% body surface area at Baseline; 4) patient pain (Visual Analog Scale for Pain [VAS]) score ≤15; 5) Patient global disease activity VAS score ≤20; 6) Health Assessment Questionnaire-Disability Index score ≤0.5; or 7) tender entheseal points ≤1. MDA was assessed in the overall population and in patients stratified by prior anti–tumor necrosis factor (TNF) therapy use (anti–TNF-naïve and inadequate response/intolerance to these agents [anti–TNF-IR]) and disease duration (≤2 years vs >2 years since diagnosis).

RESULTS: In the overall population, 23/100 (23%) and 27/97 (28%) patients achieved MDA at Wk 16 with secukinumab 150-mg and 300-mg treatment, respectively, versus 9/88 (10%) patients with placebo; these response rates were sustained through Wk 52 (150 mg: 29/88 [33%]; 300 mg: 33/93 [35%]). In the anti–TNF-naïve cohort, a higher proportion of patients achieved MDA at Wk 16 with secukinumab 150 mg (20/63 [32%]) or 300 mg (22/65 [34%]) versus placebo (8/58 [14%]), with response rates sustained through Wk 52 (150 mg: 23/59 [39%]; 300 mg: 26/63 [41%]). Lower rates were observed in anti–TNF-IR patients (secukinumab vs placebo at Wk 16: 150 mg, 3/37 [8%]; 300 mg, 5/32 [16%]; placebo, 1/30 [3%]; Wk 52: 150 mg, 6/29 [21%]; 300 mg, 7/30 [23%]). The proportion of patients achieving MDA at Wk 16 and Wk 52 in the overall population was greater for those ≤2 years since diagnosis versus those >2 years since diagnosis for both secukinumab 150-mg and 300-mg treatment. The proportion of patients achieving MDA with secukinumab at Wk 16 was higher in anti–TNF-naïve patients with low disease duration versus patients with longer disease duration, and higher in the anti–TNF-naïve cohort than the anti–TNF-IR cohort at all times.

CONCLUSION: Secukinumab-treated patients had higher MDA response rates versus placebo-treated patients at Wk 16, with response rates sustained through Wk 52. Response rates were consistent with those previously reported with anti–TNF therapies in comparable patient populations.1 This study is the first to report MDA in anti–TNF-IR patients. The finding that greater MDA can be achieved in early anti–TNF- naïve patients with PsA warrants further research.

REFERENCES:

1. Mease PJ, Heckaman M, Kary S, Kupper H. Application and modifications of minimal disease activity measures for patients with psoriatic arthritis treated with adalimumab: subanalyses of ADEPT. *J Rheumatol*. 2013;40(5):647–652. doi:10.3899/jrheum.120970.

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DISCLOSURES: LC Coates has received grant/research support from Abbvie, Pfizer, and Janssen and has served as a consultant for Abbvie, Celgene, Pfizer, UCB, MSD, Boehringer Ingelheim, Novartis, and Lilly. P Mease has received grant/research support, served as an investigator and served on the speakers' bureau for Abbvie, Amgen, BMS, Celgene, Crescendo Bioscience, Genentech, Janssen, Lilly, Merck, Novartis, Pfizer, and UCB. B Kirkham has received grant/research support from Abbvie, Novartis and Roche severed as a consultant for Abbott, BMS, Chugai, MSD, Novartis, Pfizer, Roche and UCB and the speakers' bureau for Abbott, MS, Chugai, MSD, Novartis, Pfizer, Roche and UCB. LD McLeod serves as a consultant for Novartis through employment at RTI Health Solutions. S Mpofu, C Karyekar, and K Gandhi are employees and shareholders of Novartis.

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PREVIOUS PRESENTATION: These results were originally presented at the 17th Annual Congress of the European League Against Rheumatism, London, UK, June 8–11, 2016.

PA-33: Secukinumab improves scalp pain, itching, scaling and quality of life in moderate to severe scalp psoriasis

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BACKGROUND: Scalp psoriasis is a frustrating condition, often resistant to treatment, and has a significant effect on patients' lives.

OBJECTIVE: We evaluated the effect of secukinumab, a fully human anti-IL-17A monoclonal antibody, on scalp pain, itching, and scaling and scalp dermatitis–related quality of life (QOL) in patients with moderate to severe scalp psoriasis during the first 12 weeks of a 24 week study.

METHODS: A randomized, double-blind, placebo-controlled, parallel-group, multicenter study was conducted in 102 patients with moderate to severe scalp psoriasis defined as a Psoriasis Scalp Severity Index (PSSI) score ≥12, an Investigator's Global Assessment modified 2011 scalp score ≥3, along with ≥30% of the scalp surface area affected. Patients aged ≥18 years were randomized 1:1 to either secukinumab 300 mg or placebo, and followed up at Weeks 1, 2, 3, and 4 and then every 4 weeks for 12 weeks. At Week 12, patients on placebo who did not achieve PSSI 90 were switched in a blinded manner to secukinumab 300 mg until study completion. Patients rated their scalp-related pain, itching, and scaling over the last 24 hours using a 0-10 numeric rating scale (higher scores indicative of greater severity). Scalp dermatitis–related QOL was assessed at baseline and then every 4 weeks using the patient-reported Scalpdex, a 23-item measure of symptoms, functioning, and emotion scored from 0 to 100; higher scores indicate worse QOL. Treatment effect was evaluated using analysis of covariance (ANCOVA) models with treatment, body weight (<90

kg, ≥90 kg), previous systemic therapy (yes, no), previous biologic therapy (yes, no), previous tumor necrosis factor alpha-inhibitor therapy (yes, no), and baseline score as explanatory variables. Missing data were imputed using the last-observation-carried-forward method.

RESULTS: The mean (standard deviation) values for scalp-related pain, itching, and scaling at baseline were 3.1 (3.00), 6.7 (2.60), and 7.3 (2.02) and similar for both secukinumab and placebo groups. At week 12, patients treated with secukinumab 300 mg reported greater reduction in scalp-related pain (–1.98 vs 0.61), itching (–4.07 vs –0.04), and scaling (–5.76 vs –0.95) than those treated with placebo (all, $P < .001$ from ANCOVA). Mean baseline Scalpdex scores were similar for both treatment groups (64.56. vs 64.47). At week 12, patients treated with secukinumab 300 mg reported greater improvements in Scalpdex total scores compared with placebo (–39.62 vs –7.91; $P < .001$).

LIMITATIONS: The analysis population comprised patients who participated in clinical trials and may not be representative of this patient population as a whole.

CONCLUSION: Treatment with secukinumab significantly reduced scalp pain, itching, and scaling and improved QOL in patients with moderate to severe scalp psoriasis.

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DISCLOSURES: S Feldman has been a consultant, advisor and/or received speaking fees and/or grants and/or royalties from the following companies: Abbvie, Advance Medical, Amgen, Anacor Pharmaceuticals, Inc, Baxter, Boehringer Ingelheim, Caremark, Celgene, Cosmederm, Informa, Galderma, Gerson Lehrman Group, GSK, Guidepoint Global, Hanall Pharmaceutical Co Ltd, Informa Healtcare, Janssen, Kikaku, Leo Pharma Inc, Lilly, Merck & Co, Merz Pharmaceuticals, Mylan, Novartis Pharmaceuticals Corporation, Pfizer Inc, Qurient, Stiefel/GSK, Suncare Research, Taro, UpToDate, Xenoport, Xlibris. He is also a stock holder for Causa Technologies and Medical Quality Enhancement Corporation. L Green has been a consultant, speaker, and/or investigator for Amgen, Abbvie, Merck, Novartis, and Valeant. A Kimball has been a consultant and received honoraria and/or served as an investigator and received grants/research funding for the following companies: Abbvie, Amgen, Dermira, Janssen Pharmaceuticals Inc, Lilly ICOS LLC, Merck & Co, Novartis Pharmaceuticals Corporation, Procter & Gamble Company, Sanofi/Regeneron, Unilever Home & Personal Care USA. K Siu, Y Zhao, V Herrara and J Nyirady are employees of Novartis Pharmaceuticals Corporation. A Alexis has been a consultant, advisor and/or received speaking fees and/or grants and/or equipment from and/or served as an investigator for the following companies: Aclaris Therapeutics Inc, Allergan Inc, Amgen, Anacor Pharmaceuticals Inc, Derma Instruments USA LP, Ferndale Laboratories Inc, Galderma Laboratories LP, Leo Pharma Inc, L'Oreal USA Inc, Mitsubishi Pharma, Novan, Novartis Pharmaceuticals Corporation, Roche Laboratories, Sandoz, Sanova Works, Solta Medical, Springer Science & Business Media, Suneva Medical Inc, Trevi Therapeutics, Unilever, Valeant Pharmaceuticals North America LLC, Wiley-Blackwell.

FUNDING/SUPPORT: Novartis Pharmaceuticals Corporation, East Hanover, NJ, United States

PA-34: Secukinumab is efficacious in clearing moderate to severe scalp psoriasis: 12-week results of a randomized Phase 3b study

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BACKGROUND: The scalp is one of the most commonly affected areas in patients with psoriasis and the presence of psoriatic lesions on the scalp is associated with significant quality-of-life impairment. Secukinumab, a fully human monoclonal antibody that selectively neutralizes interleukin-17A, has been shown to have significant efficacy in the treatment of moderate to severe psoriasis and psoriatic arthritis, demonstrating a rapid onset of action and sustained responses, with a favorable safety profile. In this phase 3b study of patients with moderate to severe scalp psoriasis, the efficacy and safety of secukinumab was assessed over 24 weeks.

OBJECTIVE: Here we report the primary objective: to evaluate the superiority of secukinumab over placebo at Week 12 with respect to the proportion of patients achieving a Psoriasis Scalp Severity Index (PSSI) 90 response rate.

METHODS: One hundred and two patients with moderate to severe scalp psoriasis were randomized in this double-blind, placebo-controlled study. Moderate to severe scalp psoriasis was defined as a PSSI score ≥12, an Investigator's Global Assessment, modified 2011 (IGA mod 2011) scalp score ≥3, along with ≥30% of the scalp surface area affected. Randomized patients (1:1) were administered subcutaneous injection of secukinumab 300 mg or placebo at Baseline, Weeks 1, 2, 3, and 4, and then every 4 weeks for 12 weeks. At Week 12, patients on placebo who did not achieve PSSI 90 were switched in a blinded manner to secukinumab 300 mg until study completion.

RESULTS: The mean baseline PSSI score was 34.1 in the secukinumab 300-mg group (n = 51) and 33.9 in the placebo group (n = 51). At Week 12, PSSI 90 responses were achieved by a significantly greater percentage of patients receiving secukinumab 300 mg (27/51 [52.9%]) than placebo (1/51 [2.0%])—a difference of 51% (95% confidence interval [CI]: 37% to 65%; $P < .001$). Additionally, IGA mod 2011 responses of 0/1 for the scalp at Week 12 were achieved by a significantly greater percentage of patients receiving secukinumab 300 mg (29/51 [56.9%]) than placebo (3/51 [5.9%])—a difference of 51% (95% CI: 36% to 66%; $P < .001$). Adverse events (AE)

were reported in 52.9% of patients receiving secukinumab 300 mg and 49.0% of patients receiving placebo. No serious AEs were reported with secukinumab.

CONCLUSION: Secukinumab demonstrated a superior ability for clearing moderate to severe scalp psoriasis at 12 weeks compared with placebo. No new or unexpected safety signals were observed with secukinumab, and the favorable safety profile was consistent with the pivotal phase 3 trials.

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DISCLOSURES: J Bagel has served as an investigator and consultant for AbbVie, Amgen, Janssen, Novartis, Celgene and Eli Lilly, served on the speaker's bureau for AbbVie, Elli Lilly, Janssen, and Novartis, and served as an investigator for Janssen. K Callis-Duffin has served as an investigator and consultant for AbbVie, Amgen, Janssen, Novartis, Eli Lilly, Celgene, Pfizer, Bristol-Myers Squibb, and Stiefel. A Moore has served on advisory boards for AbbVie, Aqua, DUSA, Janssen, Merz, and Novartis, served as a speaker for AbbVie, Allergan, Aqua, Leo, Merz, and Prestium, served as a consultant for Novartis, and served as an investigator for AbbVie, Allergan, Amgen, Anacor, Astellas, Centocor, Coherus, Eli Lilly, Galderma, Janssen, Novan, Novartis, Parexel, Pfizer, Regeneron, and Therapeutics. L Ferris has served as an investigator for Abbott, AbbVie, Amgen, Boehringer, Cain, Celgene, Centocor, Eli Lilly, GlaxoSmithKline, Janssen, Novartis, Pfizer, and Sandoz. K Siu, A Guana, F Kianifard, and J Nyirady are employees of Novartis. M Lebwohl is an employee of Mount Sinai which receives research funds from Amgen, Anacor, Boehringer Ingelheim, Celgene, Lilly, Janssen Biotech, Kadmon, LEO Pharmaceuticals, Medimmune, Novartis, Pfizer, Sun Pharmaceuticals, and Valeant.

FUNDING/SUPPORT: This research was sponsored by Novartis Pharmaceuticals Corporation, East Hanover, NJ, USA.

PREVIOUS PRESENTATION: These results were originally presented at the 25th Annual Congress of the European Academy of Dermatology and Venereology, Austria, Vienna, September 28–October 2, 2016.

PA-35: Secukinumab maintains reductions in PASI through second year of treatment: a randomized extension of the ERASURE and FIXTURE studies in plaque psoriasis

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BACKGROUND: Secukinumab, a fully human anti–interleukin-17A monoclonal antibody, has been demonstrated to be highly efficacious in the treatment of moderate to severe plaque psoriasis, starting at early time points, with a sustained effect and favorable safety profile. This trial is an extension of 2 secukinumab phase 3 studies in moderate to severe psoriasis (ERASURE and FIXTURE).

OBJECTIVE: This abstract focuses on absolute changes in Psoriasis Area and Severity Index (PASI) scores at Week 104 in subjects who were PASI 75 responders at Week 52 of the core studies.

METHODS: PASI 75 responders from the secukinumab treatment arms of both trials were randomized 2:1 to continue the same doses of secukinumab (300-mg or 150-mg continuous-treatment) or receive placebo (300 mg to placebo or 150 mg to placebo [treatment-withdrawal]) every 4 weeks up to Week 104, or until relapse (defined as a reduction in maximal PASI improvement from Baseline by >50%). At core study Baseline, all subjects had a PASI ≥12. Absolute change from core study Baseline PASI was calculated. Multiple imputation was used for missing data. Safety and tolerability of secukinumab up to Week 104 were also evaluated.

RESULTS: A majority of subjects in the 300-mg (87.1%) and 150-mg (72.8%) continuous-treatment arms reached Week 104 without relapse versus 16.0% and 12.7% in the 300-mg and 150-mg treatment-withdrawal arms, respectively. In the continuous-treatment arms, mean (median; range) PASI was reduced from 22.1 (19.8; 11.2–72.0) at core study Baseline to 1.6 (0.6; 0.0–23.4) over 104 weeks with secukinumab 300 mg (n = 335 at Week 104), and from 22.4 (19.2; 12.0–72.0) to 2.6 with 150-mg treatment (n = 239 at Week 104). Reductions in mean PASI at Week 52 from 22.1 to 1.0 (n = 363) and from 22.9 to 1.8 (n = 297) with 300-mg and 150-mg treatment, respectively, were sustained to Week 104. In the 300-mg treatment-withdrawal arm (n = 136), mean PASI was reduced in 27 subjects who experienced relapse from 13.0 one week following relapse to 1.7 twelve weeks after retreatment (from Week 4 after relapse). In the 150-mg treatment-withdrawal arm (n = 123), mean PASI was reduced from 13.1 following relapse to 2.9 twelve weeks after relapse and retreatment (n = 50). No new or unexpected safety findings were identified. Immunogenicity was low and consistent with the core studies.

CONCLUSION: Continuous treatment with either secukinumab 300 mg or 150 mg achieved strong and sustained reductions in PASI over 2 years, with no new or unexpected safety findings. Patients who relapsed following treatment withdrawal at Week 52 regained response upon retreatment.

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DISCLOSURES: A Blauvelt has served as a scientific consultant and clinical study investigator for AbbVie, Amgen, AstraZeneca, Boehringer Ingelheim, Celgene, Dermira, Genentech, GlaxoSmithKline, Janssen, Lilly, MedImmune, Merck, Novartis, Pfizer, Regeneron, Sandoz, Sanofi, UCB, and Valeant, and as a paid speaker for Lilly. JC Szepietowski has served as a consultant and investigator for Abbott/AbbVie, Actavis, Amgen BASF, Astellas, Berlin-Chemie/Menarini, Pierre-Fabre, and Novartis. B Sigurgeirsson has served as a consultant, speaker, and investigator for Novartis, Galderma, Amgen, and Viamet. S Tyring has served as an investigator for Novartis. I Messina, J Löffler, T Fox, and C Papavassilis are employees of Novartis. RGB

Langley has served on the scientific advisory board, as a principal investigator, or speaker for AbbVie, Amgen, Boehringer-Ingelheim, Celgene Corporation, Centocor Ortho Biotech, Lilly, Novartis, and Pfizer.

FUNDING/SUPPORT: This research was sponsored by Novartis Pharma AG, Basel, Switzerland.

PREVIOUS PRESENTATION: These results were originally presented at the 74th Annual Meeting of the American Academy of Dermatology, March 4-8, 2016, Washington, DC, USA.

PA-36: Secukinumab provides better relief from psoriasis impact on personal relationships than etanercept

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BACKGROUND: Secukinumab is highly efficacious in the treatment of moderate to severe plaque psoriasis, with fast onset, a sustained effect, and a favorable safety profile.

OBJECTIVE: The objective of the current pooled analysis is to evaluate its impact on personal relationships and clothes worn as measured by the Dermatology Life Quality Index (DLQI).

METHODS: Patients aged ≥ 18 years were randomized 1:1:1 in ERASURE to subcutaneous treatment groups (secukinumab 300 mg, secukinumab 150 mg, & placebo) and 1:1:1:1 in FIXTURE (including an etanercept 50 mg twice-weekly group). The DLQI was administered at baseline, Weeks 4, 8, 12, 24, 36, and 52, with total, subscale, and item scores computed at all visits. This analysis used data for secukinumab 300 mg and etanercept from baseline to Week 52, placebo data up to Week 12, and focused on the personal relationship subscale (q8 & q9) and items assessing the influence on clothes worn (q4), impact on relationships with partners/close friends/relatives (q8), and sexual difficulties (q9). Treatment differences in mean scores were evaluated using van Elteren and proportions of DLQI subscale and item responders (score=0, indicating no impact) using Chi-square statistics.

RESULTS: Subjects on secukinumab (n = 572) achieved greater mean improvement in the personal relationship subscale and q4, q8, and q9 than subjects on placebo (n = 572; all, $P < .0001$) and etanercept (n = 319; personal relationships: $P < .05$ at Weeks 8 & 12; q4: all, $P < .0001$; q8: $P < .05$ at Weeks 8 & 12; q9: all, $P < .01$). The response rates were higher for secukinumab 300 mg than for placebo (all, $P < .0001$; personal relationships Week 12 response rates: 48% vs 16%; q4: 58% vs 12%; q8: 45% vs 16%; q9: 37% vs 10%) and etanercept (personal relationships: all, $P < .05$ except for Weeks 4 & 36; q4: all, $P < .05$; q8: all, $P < .05$ except for Weeks 4 & 36; q9: numerically higher starting at Week 8; personal relationships Week 12 response rates: 48% vs 38%, Week 52: 55% vs 47%; q4 Week 12: 58% vs 37%, Week 52: 66% vs 47%; q8 Week 12: 45% vs 37%, Week 52: 52% vs 45%; q9 Week 12: 37% vs 34%, Week 52: 40% vs 36%).

LIMITATIONS: The analysis population comprised patients who participated in clinical trials and may not be representative of this patient population as a whole.

CONCLUSION: Secukinumab 300 mg provides greater improvements and more effective relief from psoriasis impact on personal relationships and clothing worn than etanercept and placebo.

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DISCLOSURES: N Korman has been a consultant, advisor and/or received speaking fees and/or grants and/or served as an investigator in clinical trials for the following companies: Abbott/AbbVie, Amgen, Biogen Idec, Celgene, Chugai, Dermira, Eli Lilly, Immune Tolerance Network, Janssen, Kyowa Hakko Kirin, Leo Pharma, National Psoriasis Foundation, Merck, Novartis, Pfizer, Regeneron, and Trevi Pharmaceuticals. H Sofen is an advisor, speaker and investigator for the following companies: Abbvie, Novartis, Janssen, Pfizer, Boehringer-Ingelheim, Janssen, Merck, UCB, Dermira, Amgen and Biogen. P Rich has been working as a principal investigator in clinical studies for the following companies: Abbvie, Boehringer Ingelheim, Eli Lilly and Company, Janssen-Ortho Inc, Kadmon, Merck & Co, Inc, Novartis, Pfizer, and Sandoz. She has also served as consultant for Polichem. None of these relationships are relevant to the current presentation content. S Fretzin has been a principle investigator and consultant/speaker for Abbvie, Celgene, Eli Lilly, Janssen, Novartis. Y Zhao is an employee of Novartis Pharmaceuticals Corporation. V Herrera is an employee of Novartis Pharmaceuticals Corporation. M Mordin is an employee of RTI Health Solutions. N Williams is an employee of RTI Health Solutions. J Nyirady is an employee of Novartis Pharmaceuticals Corporation. S Tyring has received grants from Novartis Pharmaceuticals Corporation.

FUNDING/SUPPORT: Novartis Pharmaceuticals Corporation, East Hanover, New Jersey, USA.

PA-37: Secukinumab provides better relief from psoriasis-related pain, itching, and scaling than ustekinumab

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BACKGROUND: Secukinumab, a fully human monoclonal antibody (mAb) that selectively targets IL-17A, is highly efficacious in the treatment of moderate to severe plaque psoriasis, starting at early time points, with a sustained effect and a favorable safety profile. CLEAR is a phase 3b study comparing the efficacy/safety of secukinumab versus ustekinumab, an anti-IL-12/23 mAb, in adults with moderate to severe plaque psoriasis.
OBJECTIVE: This analysis examined the treatment effect as measured by patient-reported assessments of psoriasis-related pain, itching, and scaling severity.
METHODS: Data from baseline to week 16 for patients aged ≥ 18 years randomized 1:1 to subcutaneous treatment groups (secukinumab 300 mg and ustekinumab 45 mg or 90 mg according to body weight at baseline) were used for this analysis. Psoriasis-related pain, itching, and scaling over the last 24 hours were assessed using a 0-10 numerical rating scale with higher scores indicating greater severity. The mean treatment difference at week 16 for pain, itching, and scaling was examined via analysis of covariance adjusting for geographical region, body weight stratum, and baseline score. The percentage of subjects reporting complete relief of symptoms (score = 0) was compared between treatment arms. Time to complete relief was computed as the period from randomization to the week when a symptom score of 0 occurred. Median time to complete symptom relief was compared between treatment arms using Kaplan-Meier methods with a log-rank test.
RESULTS: The full analysis set included 336 subjects randomized to secukinumab 300 mg and 339 subjects to ustekinumab. Mean baseline scores were similar for both treatment groups: secukinumab/ustekinumab: pain 4.0/3.8; itching: 6.3/6.3, scaling: 6.5/6.5. Mean changes from baseline to week 16 for pain, itching, and scaling were significantly greater for secukinumab (-3.3, -5.0, and -5.7) than for ustekinumab (-2.8, -4.6, and -5.2; all, $P < .05$). Significantly more secukinumab-treated subjects achieved complete pain (80.3% vs 69.7%), itching (64.0% vs 52.2%), and scaling (74.4% vs 56.1%) relief by week 16 than ustekinumab-treated subjects (all, $P < .05$). The median time to complete itching (12 vs 16 weeks) and scaling relief (8 vs 16 weeks) was significantly faster for secukinumab than for ustekinumab (both $P < .001$). The median time to pain relief was 8 weeks for both treatment arms, but the Kaplan-Meier curves were statistically different, and the log rank test favored secukinumab ($P = .0056$).
LIMITATIONS: The analysis population comprised patients who participated in clinical trials and may not be representative of this patient population as a whole.
CONCLUSION: Secukinumab 300 mg alleviates patient-reported psoriasis-related pain, itching, and scaling significantly faster and better than ustekinumab.

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DISCLOSURES: B Strober has served on advisory boards for AbbVie, Amgen Inc, Celgene, Janssen, Novartis, Pfizer, and UCB Pharma. He has also been a consultant for AbbVie, Amgen Inc, Celgene, Eli Lilly, Janssen, Maruho, Novartis, and Pfizer, and a paid speaker for AbbVie. A Blauvelt reports personal fees and other from Novartis, during the conduct of the study; personal fees and other from Lilly, personal fees and other from Valeant, personal fees and other from Merck, personal fees and other from Janssen, personal fees and other from Boehringer Ingelheim, outside the submitted work. Roles included scientific consultant and clinical study investigator. Y Zhao is an employee of Novartis Pharmaceuticals Corporation. M Milutinovic, P Mollon R You and T Fox are employees of Novartis Pharmaceuticals Corporation. B Sherif and N Williams are employees of RTI Health Solutions. M Augustin has served as consultant to or paid speaker for clinical trials sponsored by companies that manufacture drugs used for the treatment of psoriasis, including Abbvie, Almirall, Amgen, Biogen, Boehringer Ingelheim, Celgene, Centocor, Eli-Lilly, GSK, Janssen-Cilag, Leo, Medac, Merck, MSD, Novartis, Pfizer, UCB and Xenoport. M Lebwohl is an employee of the Mount Sinai Medical Center, which receives research funds from AbbVie, AbGenomics, Amgen, Anacor, Aqua, Canfite Biopharma, Celgene, Clinuvel, Coronado Biosciences, Eli Lilly, Ferndale, Janssen Biotech, LEO Pharmaceuticals, Merz, Novartis, Pfizer, Sandoz, Sun Pharmaceuticals, Valeant.
FUNDING/SUPPORT: Novartis Pharmaceuticals Corporation, East Hanover, New Jersey, USA.

PA-38: Secukinumab provides better relief from quality-of-life impact than etanercept in moderate to severe psoriasis

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BACKGROUND: Secukinumab is highly efficacious in the treatment of moderate to severe plaque psoriasis, with early onset, a sustained effect, and a favorable safety profile.
OBJECTIVE: This pooled analysis focuses on evaluating the impact of secukinumab treatment versus etanercept on skin-

related quality of life as measured by the Dermatology Life Quality Index (DLQI).
METHODS: Patients aged ≥ 18 years were randomized 1:1:1 in ERASURE to subcutaneous treatment groups (secukinumab 300 mg, secukinumab 150 mg, and placebo) and 1:1:1:1 in FIXTURE (including an etanercept 50 mg twice-weekly group). The DLQI was administered at baseline and Weeks 4, 8, 12, 24, 36, and 52 with total, subscale, and item scores computed at all visits. This analysis used secukinumab 300 mg and etanercept data from baseline to Week 52. DLQI response was defined as no effect of skin problems on health-related quality of life (total score of 0 or 1, subscale of 0, and item score of 0). The effects of treatment on DLQI total scores, subscale scores (symptoms/feelings, daily activities, leisure, work/school, personal relationships, and treatment), and item scores were evaluated using the van Elteren and proportions of DLQI responders using Chi-square statistics.
RESULTS: Subjects treated with secukinumab 300 mg (n = 572) achieved greater mean improvement in DLQI total, 4 out of 6 subscales (all, $P < .05$; symptoms/feelings, daily activities, work/school [except at Week 24], and treatment), and 8 out of 10 item scores (all, $P < .05$; q1: itchy, sore, painful, stinging; q2: embarrassed; q3: shopping, home, garden; q4: clothing worn; q5: social or leisure activities; q7: work or studying (except at Week 24); q9: sexual difficulties; q10: treatment problems) than subjects treated with etanercept (n = 326) from Week 4 through Week 52. Secukinumab 300 mg achieved higher DLQI response rates for DLQI total and 5 subscales (except personal relationships) than etanercept starting at Week 4 through Week 52 (all, $P < .05$ except personal relationships). Item-level response rates were numerically higher for secukinumab 300 mg versus etanercept for all items ($P < .05$ Week 8-52 for q1, q2, q3, q4, q5, q7, q10).
LIMITATIONS: The analysis population comprised patients who participated in clinical trials and may not be representative of this patient population as a whole.
CONCLUSION: Overall, secukinumab provides greater improvements and relief from skin-related quality-of-life impact than etanercept in psoriasis.
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DISCLOSURES: S Tyring has received grants from Novartis Pharmaceuticals Corporation. H Sofen is an advisor, speaker and investigator for the following companies: Abbvie, Novartis, Janssen, Pfizer, Boehringer-Ingelheim, Janssen, Merck, UCB, Dermira, Amgen and Biogen. S Fretzin has been a principle investigator and consultant/speaker for Abbvie, Celgene, Eli Lilly, Janssen, Novartis. P Rich has been working as a principal investigator in clinical studies for the following companies: Abbvie, Boehringer Ingelheim, Eli Lilly and Company, Janssen-Ortho Inc, Kadmon, Merck & Co, Inc, Novartis, Pfizer, and Sandoz. She has also served as consultant for Polichem. Y Zhao, V Herrera, and J Nyirady are employees of Novartis Pharmaceuticals Corporation. B Sherif and N Williams are employees of RTI Health Solutions. N Korman has been a consultant, advisor and/or received speaking fees and/or grants and/or served as an investigator in clinical trials for the following companies: Abbott/AbbVie, Amgen, Biogen Idec, Celgene, Chugai, Dermira, Eli Lilly, Immune Tolerance Network, Janssen, Kyowa Hakko Kirin, Leo Pharma, National Psoriasis Foundation, Merck, Novartis, Pfizer, Regeneron, and Trevi Pharmaceuticals.
FUNDING/SUPPORT: Novartis Pharmaceuticals Corporation, East Hanover, New Jersey, USA.

PA-39: Secukinumab provides better relief from quality-of-life impact than placebo in moderate to severe psoriasis

Sofen H,[1] Korman N,[2] Rich P,[3] Fretzin S,[4] Zhao Y,[5] Herrera V,[5] Sherif B,[6] McLeod L,[6] Nyirady J,[5] Tyring S[7]

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BACKGROUND: Secukinumab is highly efficacious in the treatment of moderate to severe plaque psoriasis, starting at early time points, with a sustained effect and a favorable safety profile.
OBJECTIVE: This pooled analysis focuses on evaluating the impact of secukinumab treatment versus placebo on skin-related quality of life as measured by the Dermatology Life Quality Index (DLQI).
METHODS: Patients aged ≥ 18 years were randomized 1:1:1 in ERASURE to subcutaneous treatment groups (secukinumab 300 mg, secukinumab 150 mg, and placebo) and 1:1:1:1 in FIXTURE (including an etanercept 50 mg twice-weekly group). The DLQI was administered at baseline and Weeks 4, 8, 12, 24, 36, and 52 with total, subscale, and item scores computed at all visits. This analysis used secukinumab 300 mg and placebo data from baseline to Week 12. DLQI response was defined as no effect of skin problems on health-related quality of life (total score of 0 or 1, subscale of 0, and item score of 0). The treatment effects on DLQI total scores, subscale scores (symptoms/feelings, daily activities, leisure, work/school, personal relationships, and treatment), and item scores were evaluated. Proportions of DLQI responders were also compared.
RESULTS: Subjects treated with secukinumab 300 mg (n = 572) achieved greater mean improvement in DLQI total, subscale, and item scores than subjects treated with placebo (n = 572) from Week 4 through Week 12 (all, $P < .001$). Secukinumab 300 mg achieved higher DLQI response rates for total, subscales, and items than placebo at all visits through Week 12 (all, $P < .001$; Week 12 DLQI 0/1: 58% vs 8%; symptoms/feel-

ings: 48% vs 4%; daily activities: 59% vs 12%; leisure: 56% vs 17%; work/school: 52% vs 21%; personal relationships: 48% vs 16%; treatment: 53% vs 18%; q1–itchy, sore, painful, stinging: 56% vs 5%; q2–embarrassed: 58% vs 10%; q3–shopping, home, garden: 54% vs 21%; q4–clothing worn: 58% vs 12%; q5–social or leisure activities: 57% vs 18%; q6–sports: 43% vs 17%; q7–work or studying: 52% vs 21%; q8–partner/friend/relative: 45% vs 16%; q9–sexual difficulties: 37% vs 10%; q10–treatment problems: 53% vs 18%).

LIMITATIONS: The analysis population comprised patients who participated in clinical trials and may not be representative of this patient population as a whole.

CONCLUSION: Secukinumab provides greater improvements and relief from skin-related quality-of-life impact than placebo in moderate to severe psoriasis.

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DISCLOSURES: H Sofen is an advisor, speaker and investigator for the following companies: Abbvie, Novartis, Janssen, Pfizer, Boehringer-Ingelheim, Janssen, Merck, UCB, Dermira, Amgen and Biogen.N Korman has been a consultant, advisor and/or received speaking fees and/or grants and/or served as an investigator in clinical trials for the following companies: Abbott/AbbVie, Amgen, Biogen Idec, Celgene, Chugai, Dermira, Eli Lilly, Immune Tolerance Network, Janssen, Kyowa Hakko Kirin, Leo Pharma, National Psoriasis Foundation, Merck, Novartis, Pfizer, Regeneron, and Trevi Pharmaceuticals. P Rich has been working as a principal investigator in clinical studies for the following companies: Abbvie, Boehringer Ingelheim, Eli Lilly and Company, Janssen-Ortho Inc, Kadmon, Merck & Co, Inc, Novartis, Pfizer, and Sandoz. She has also served as consultant for Polichem. None of these relationships are relevant to the current presentation content. S Fretzin has been a principle investigator and consultant/speaker for Abbvie, Celgene, Eli Lilly, Janssen, Novartis. Y Zhao, V Herrera, and J Nyirady are employees of Novartis Pharmaceuticals Corporation. V Herrera is an employee of Novartis Pharmaceuticals Corporation. B Sherif B and L McLeod are employees of RTI Health Solutions. S Tyring has received grants from Novartis Pharmaceuticals Corporation.

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PA-40: Secukinumab provides faster and better quality of life impact than ustekinumab in psoriasis

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BACKGROUND: Secukinumab, a fully human monoclonal antibody (mAb) that selectively targets IL-17A, is highly efficacious in the treatment of moderate to severe plaque psoriasis, starting at early time points, with a sustained effect and a favorable safety profile. CLEAR is a phase 3b study comparing the efficacy and safety of secukinumab versus ustekinumab, an anti-IL-12/23 mAb, in adults with moderate to severe plaque psoriasis.

OBJECTIVE: This analysis focused on the treatment effect on skin-related quality of life as measured by the Dermatology Life Quality Index (DLQI) as well as its association with skin clearance as measured by the Psoriasis Area and Severity Index (PASI).

METHODS: Data from baseline to week 16 for patients aged ≥ 18 years randomized 1:1 to subcutaneous treatment groups (secukinumab 300 mg and ustekinumab 45 mg or 90 mg according to body weight at baseline) were used for this analysis. The DLQI was administered at baseline, weeks 4, 8, 12, and 16, with total and subscale scores computed at all visits. DLQI response was defined as no effect of skin problems on health-related quality of life (DLQI total score of 0 or 1).Time to response was computed as the period from the randomization date to the time when DLQI 0/1 response had occurred. Median time to response was compared between treatment groups using Kaplan-Meier methods with a log-rank test.

RESULTS: Mean (SD) baseline DLQI total scores were similar for both treatment arms: secukinumab 13.4 (7.63); ustekinumab 13.2 (7.57). The mean DLQI total score as well as all subscale scores (symptoms and feelings, daily activities, leisure, work and school, personal relationships and treatment scores) improved (decreased) continuously over the treatment period in both treatment groups, with more pronounced improvements in the secukinumab arm than the ustekinumab arm at all visits (weeks 4, 8, 12, 16) ($P < .001$ on DLQI total score). Up to week 16, 80.7% of subjects treated with secukinumab achieved DLQI response (0/1) versus 69.3% treated with ustekinumab ($P < .0001$). The median time to DLQI response (0/1) was significantly shorter for secukinumab compared to ustekinumab (8 weeks vs 12 weeks, $P < .0001$).

LIMITATIONS: The analysis population comprised patients who participated in clinical trials and may not be representative of this patient population as a whole.

CONCLUSION: Secukinumab treatment provides stronger and faster relief from patient-reported quality of life than ustekinumab in patients with moderate to severe plaque psoriasis.

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DISCLOSURES: S Feldman has been a consultant, advisor and/or received speaking fees and/or grants and/or royalties from the following companies: Abbvie, Advance Medical, Amgen, Anacor Pharmaceuticals, Inc, Baxter, Boehringer Ingelheim, Caremark, Celgene, Cosmederm, Informa, Galderma, Gerson Lehrman Group, GSK, Guidepoint Global, Hanall Pharmaceutical Co Ltd, Informa Healtcare, Janssen, Kikaku, Leo Pharma Inc, Lilly, Merck & Co, Merz Pharmaceuticals, Mylan,

Novartis Pharmaceuticals Corporation, Pfizer Inc, Qurient, Stiefel/GSK, Suncare Research, Taro, UpToDate, Xenoport, Xlibris. He is also a stock holder for Causa Technologies and Medical Quality Enhancement Corporation. L Green has been a consultant, speaker, and/or investigator for Amgen, Abbvie, Merck, Novartis, and Valeant. A Kimball has been a consultant and received honoraria and/or served as an investigator and received grants/research funding for the following companies: Abbvie, Amgen, Dermira, Janssen Pharmaceuticals Inc, Lilly ICOS LLC, Merck & Co, Novartis Pharmaceuticals Corporation, Procter & Gamble Company, Sanofi/Regeneron, Unilever Home & Personal Care USA. K Siu, Y zhao, V Herrera and J Nyirady are employees of Novartis Pharmaceuticals Corporation. A Alexis has been a consultant, advisor and/or received speaking fees and/or grants and/or equipment from and/or served as an investigator for the following companies: Aclaris Therapeutics Inc, Allergan Inc, Amgen, Anacor Pharmaceuticals Inc, Derma Instruments USA LP, Ferndale Laboratories Inc, Galderma Laboratories LP, Leo Pharma Inc, L'Oreal USA Inc, Mitsubishi Pharma, Novan, Novartis Pharmaceuticals Corporation, Roche Laboratories, Sandoz, Sanova Works, Solta Medical, Springer Science & Business Media, Suneva Medical Inc, Trevi Therapeutics, Unilever, Valeant Pharmaceuticals North America LLC, Wiley-Blackwell.

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PA-41: Secukinumab provides rapid and sustained reductions in dactylitis and enthesitis in patients with psoriatic arthritis: analysis of data from the Phase 3 randomized, multicenter, double-blind, placebo-controlled FUTURE 2 study

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BACKGROUND: Dactylitis and enthesitis are common debilitating manifestations of psoriatic arthritis (PsA).1 Secukinumab has previously been reported to reduce the number of dactylitic digits and enthesitis sites in patients with PsA, with a greater proportion of patients achieving complete resolution of dactylitis and enthesitis compared with placebo at Week 24.2,3
OBJECTIVE: To evaluate the effects of secukinumab on dactylitis and enthesitis through Week 52 in FUTURE 2 (NCT01752634).
METHODS: The study design from FUTURE 2 has been reported previously.2 The proportions of patients with resolution of dactylitis and enthesitis at Week 24 and Week 52 were secondary and exploratory endpoints, respectively. Additional measures were decrease in dactylitic digit and enthesitis counts using the mixed-effect model repeated measure. Post hoc analyses included Kaplan-Meier analysis to achieve resolution of enthesitis and dactylitis and proportion of patients with resolution of dactylitis and enthesitis by Baseline severity.
RESULTS: Of the 397 patients randomized, 138 (35%) and 253 (64%) had dactylitis and enthesitis, respectively, at Baseline. Kaplan-Meier curves indicated that median time to resolution in dactylitis and enthesitis was Week 4 for secukinumab 300-mg and 150-mg. At Week 24, a greater proportion of secukinumab-treated patients achieved complete resolution of dactylitis and enthesitis compared with placebo ($P < .05$), and more secukinumab-treated patients had complete resolution of symptoms at Week 52 than Week 24. Improvements at Weeks 24 and 52 were observed regardless of Baseline severity. A sustained decrease in mean changes from Baseline to Weeks 24 and 52 in dactylitis (Week 24, secukinumab 300 mg: –2.56, secukinumab 150 mg: –2.53; Week 52, secukinumab 300 mg: –3.08, secukinumab 150 mg: –3.11) and enthesitis (Week 24, secukinumab 300 mg: –1.68, secukinumab 150 mg: –1.83; Week 52, secukinumab 300 mg: –1.68, secukinumab 150 mg: –1.91) counts were shown in those patients who had symptoms at Baseline, with improvements versus PBO observed by Week 4 for enthesitis ($P < .05$).
CONCLUSION: Secukinumab demonstrated a rapid resolution of dactylitis and enthesitis as early as Week 4 and this was sustained up to Week 52. A higher proportion of patients achieved complete resolution and reduced mean counts of dactylitis and enthesitis at Week 52 compared with Week 24.

REFERENCES:

1. Gladman DD1, Antoni C, Mease P, Clegg DO, Nash P. Psoriatic arthritis: epidemiology, clinical features, course, and outcome. *Ann Rheum Dis*. 2005;64(Suppl 2):ii14-ii17
2. McInnes IB, Mease PJ, Kirkham B, et al. Secukinumab, a human anti-interleukin-17A monoclonal antibody, in patients with psoriatic arthritis (FUTURE 2): a randomised, double-blind, placebo-controlled, phase 3 trial. *Lancet*. 2015;386(9999):1137-1146. doi: 10.1016/S0140-6736(15)61134-5.

Kirkham BW, Kavanaugh A, Reich K. Interleukin-17A: a unique pathway in immune-mediated diseases: psoriasis, psoriatic arthritis and rheumatoid arthritis. Ann Rheum Dis. 2014;73(1):133-142. doi:10.1111/imm.12142. **CORRESPONDENCE:** Bruce W. Kirkham, MD; bruce.kirkham@gstt.nhs.uk.

DISCLOSURES: B Kirkham has received grant/research support, served as a consultant, and served on the speakers' bureau for Abbvie, BMS, Celgene, Janssen, Lilly, MSD, Novartis, Roche, and UCB. P Mease PM has received grant/research support, served as a consultant and served on the speakers' bureau for Abbvie, Amgen, BMS, Celgene, Crescendo Bioscience, Genentech, Janssen, Lilly, Merck, Novartis, Pfizer, and UCB. I McInnes has received grant/research support and served as a consultant for Abbvie, Amgen, BMS, Celgne, Janssen, Lilly, Novartis, Pfizer, and UCB. V Bhosekar, S Mpofu, K Gandhi, and C Gaillez are employees of Novartis.
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PREVIOUS PRESENTATION: These results were originally presented at the 17th Annual Congress of the European League Against Rheumatism, London, UK, June 8–11, 2016.

PA-42: Secukinumab retreatment shows rapid regain of treatment responses: a pooled analysis of two phase 3 trials in psoriasis

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BACKGROUND: Secukinumab, a fully human anti–interleukin-17A monoclonal antibody, has been demonstrated to be rapidly efficacious in the treatment of moderate to severe psoriasis, with a sustained effect and a favorable safety profile.
OBJECTIVE: Here, we assessed the rates of regain of clinical responses following retreatment of subjects with moderate to severe psoriasis who had relapsed following per-protocol withdrawal of secukinumab during the extension of the ERASURE and FIXTURE studies. This abstract focuses on data up to two years (104 weeks).
METHODS: In this analysis, subjects who had Psoriasis Area and Severity Index (PASI) 75 responses at the end of the core studies (Week [Wk] 52) were randomized in the extension study 2:1 to continue on the same dose of secukinumab or to receive placebo every four weeks. Subjects who relapsed in the two placebo arms (300-mg placebo and 150-mg placebo) were retreated with secukinumab upon relapse. Relapse was defined as a loss of >50% of the maximum PASI gain compared with Baseline in the core studies.
RESULTS: In total, 995 subjects entered this part of the extension study; the treatment groups were comparable with respect to Wk 52 Baseline characteristics. The percentage of subjects in the continuous-treatment groups who reached Week 104 without relapse was 87.1% (secukinumab 300 mg, n = 363) and 72.8% (secukinumab 150 mg, n = 301). In the treatment-withdrawal groups, 16.0% (secukinumab 300 mg / placebo, n = 181) and 12.7% (secukinumab 150 mg / placebo, n = 150) of subjects reached Week 104 without relapse. In subjects in the 300-mg withdrawal group who did relapse and were retreated, 94.8% of subjects recaptured PASI 75, 70.3% recaptured PASI 90, and 38.4% recaptured PASI 100 responses after 12 weeks of retreatment with secukinumab 300 mg. There were no new or unexpected safety findings in the extension study.
CONCLUSION: Secukinumab provided strong and sustained efficacy over 104 weeks, clearing psoriasis while maintaining a favorable safety profile. In subjects relapsing after being withdrawn from therapy, retreatment with secukinumab restored efficacy in the vast majority of subjects by 12 weeks post-restart of treatment.
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DISCLOSURES: A Blauvelt has served as a scientific consultant and clinical study investigator for AbbVie, Amgen, AstraZeneca, Boehringer Ingelheim, Celgene, Dermira, Genentech, GSK, Janssen, Lilly, MedImmune, Merck, Novartis, Pfizer, Regeneron, Sandoz, Sanofi, UCB, and Valeant, and as a paid speaker for Lilly. RGB Langley has served on the scientific advisory board, as a principal investigator, or speaker for AbbVie, Amgen, Boehringer-Ingelheim, Celgene Corporation, Centocor Ortho Biotech, Lilly, Novartis, and Pfizer. JC Szepietowski has served as a consultant and investigator for Abbott/AbbVie, Actavis, Amgen BASF, Astellas, Berlin-Chemie/Menarini, Pierre-Fabre, and Novartis. B Sigurgeirsson has served as a consultant, speaker, and investigator for Novartis, Galderma, Amgen, and Viamet. S Tyring has served as an investigator for Novartis. I Messina, J Löffler, TK Fox, and C Papavassilis are employees of Novartis.
FUNDING/SUPPORT: This research was sponsored by Novartis Pharma AG, Basel, Switzerland.
PREVIOUS PRESENTATION: These results were originally presented at the 24th European Academy of Dermatology and Venereology Congress, October 7–11, 2015, Copenhagen, Denmark.

PA-43: Secukinumab-treated subjects experience low rates of candida and recurrent candida infections: a pooled analysis from 10 Phase 2 and 3 clinical studies in psoriasis

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BACKGROUND: Interleukin (IL)-17 signaling is important for mucocutaneous defense against Candida albicans, and genetic deficiency of IL-17 results in compromised Candida immunity. Therefore, subjects receiving anti–IL-17A therapies may be at increased risk of Candida infections. Clinical trials have shown that secukinumab, a fully human monoclonal antibody that selectively targets IL-17A, is highly efficacious in the treatment of moderate to severe psoriasis.
OBJECTIVE: To compare rates of candida and recurrent candida infections between patients with moderate to severe psoriasis receiving secukinumab (300 mg and 150 mg), etanercept, or placebo.
METHODS: We conducted a pooled analysis of Candida infections from 10 randomized phase 2 and 3 psoriasis studies in 3430 subjects, including 1410 subjects treated with secukinumab 300 mg, 1395 with secukinumab 150 mg, 323

with etanercept (ETN), and 793 with placebo.
RESULTS: During the first year of treatment, 41/1410 (2.9%) subjects on secukinumab 300 mg, 21/1395 (1.5%) on secukinumab 150 mg, 4/323 (1.2%) on ETN, and 2/793 (0.3%) on placebo experienced Candida infections. Of these subjects, some experienced more than one episode of recurrent Candida infection: 14/41 (34%) on secukinumab 300 mg, 1/21 (5%) on secukinumab 150 mg, 2/4 (50%) on ETN, and 0/2 (0%) on placebo. The number of Candida infections in the first year was mostly 1 or 2 (3 episodes occurred in one subject on secukinumab 300-mg and in one subject on ETN), and mostly recurred within the same location (oral, vulvovaginal, intertrigo). In about 75% of subjects with recurrent Candida infections, there were confounding factors, including antibiotic use, but there was no concomitant diabetes mellitus reported. All infections were nonserious, resolved spontaneously, or responded to standard treatment, and none led to treatment discontinuation. Eight subjects with recurrent Candida infections in the first year on secukinumab 300 mg were enrolled into a long-term extension study to continue receiving 300-mg therapy; the majority of these subjects (5) did not experience any Candida infections in the second year of treatment.
CONCLUSION: Candida infections were uncommon in subjects with moderate to severe psoriasis treated with secukinumab, and recurrent infections were even less common. Both were more likely to happen in the first year of treatment and may have been dependent on confounding factors. The data further suggest that such infections are easily managed and do not impact the course of secukinumab therapy.
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DISCLOSURES: C Conrad has served as a consultant and/or paid speaker and/or principal investigator in clinical trials for AbbVie, Actelion, Amgen, Celgene, Eli Lilly, Janssen-Cilag, Leo Pharma, MSD, Novartis, and Pfizer. K Reich has served as a consultant and/or paid speaker for, and/or participated in clinical trials sponsored by, AbbVie, Amgen, Biogen-Idec, Celgene, Centocor, Covagen, Eli Lilly, Forward Pharma, GSK, Janssen-Cilag, Leo Pharma, Medac, MSD, Novartis, Pfizer, Vertex, Takeda, and Xenoport. A Blauvelt has served as a scientific consultant and clinical study investigator for AbbVie, Amgen, AstraZeneca, Boehringer-Ingelheim, Celgene, Dermira, Genentech, GSK, Janssen, Lilly, MedImmune, Merck, Novartis, Pfizer, Regeneron, Sandoz, Sanofi, UCB, and Valeant, and as a paid speaker for Lilly. AW Armstrong has served as an investigator and/or has consulted for AbbVie, Amgen, Celgene, Janssen, Merck, Eli Lilly, Celgene, Novartis, and Pfizer. J Krueger reports grants paid to his institution from Novartis, Pfizer, Janssen, Lilly, Kadmon, Dermira, Boehringer, BMS, Paraxel, Kineta, Leo Pharma, Regeneron, Amgen, Innovaderm, Vitae, Provectus, and Kyowa. He has received personal fees from Novartis, Pfizer, Janssen, Lilly, Kadmon, Dermira, Boehringer, BMS, Kineta, Merck, Serono, Biogenidec, Delenex, AbbVie, Sanofi, Baxter, and Xenoport. Y Gong and M Milutinovic are employees of Novartis. RGB Langley has served on the scientific advisory board, as a principal investigator or speaker for AbbVie, Amgen, Boehringer-Ingelheim, Celgene Corporation, Centocor Ortho Biotech, Lilly, Novartis, and Pfizer.
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PREVIOUS PRESENTATION: These results were originally presented at the 74th Annual Meeting of the American Academy of Dermatology, March 4–8, 2016, Washington, DC, USA.

PA-44: Seven-year interim results from the ESPRIT 10-year postmarketing surveillance registry of adalimumab for moderate to severe psoriasis

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BACKGROUND: ESPRIT is a 10-year international prospective observational registry evaluating the long-term safety and effectiveness of originator adalimumab (ADA) in adult patients (pts) with moderate to severe chronic plaque psoriasis (NCT00799877).
OBJECTIVE: Herein, we report the interim analysis over the initial 7 years (yrs) of the registry.
METHODS: ESPRIT enrolled pts who were continuing ADA treatment from a current prescription or previous study participation, or initiating ADA ≤4 weeks of entering the registry (New Prescription Population [New-Rx]). The All-Treated Population (All-Rx) were pts who received at least 1 ADA dose in this registry. Pts were evaluated at 3 and 6 months post enrollment, and thereafter every 6 months for up to 10 yrs. This 7-yr interim analysis included data collected from 26 September 2008 through 30 November 2015. Incidence rates (IR) for all treatment-emergent adverse events (All-TEAEs) are reported as events per 100 pt yrs of total exposure (E/100PY), occurring from the initial through 70 days after the last ADA dose and excluding AEs during treatment interruptions. Physician's Global Assessment (PGA) was used to evaluate effectiveness in as-observed population.
RESULTS: 6051 pts (All-Rx) were enrolled and dosed in ESPRIT, including 2557 (42.3%) New-Rx pts. Total median duration of ADA exposure was 1398 days (range 14-4798) and 714 days (range 14-2581) for All-Rx and New-Rx, respectively. 1809 (29.9%) All-Rx and 905 (35.4%) New-Rx pts discontinued from the registry; the most frequent reason for discontinuing was being lost to follow up (14.4% and 19.2%, respectively). For All-Rx at baseline, 57.7% were male; median age was 47 yrs (range 18-94 yrs) and median weight was 87 kg (range 41-252 kg). The IR (E/100PY) for All-TEAEs (All-Rx) was: overall 21.8; serious TEAEs 4.4; malignancies 1.0, non-melanoma skin cancer 0.6; serious infections 1.0, active TB <0.1; congestive heart failure <0.1; lupus-like reactions and systemic lupus <0.1; and demyelinating disorder <0.1. The IR for All-TEAEs (All-Rx) lead-

ing to death was 0.1 E/100PY. Standardized mortality ratio was 0.27 (95% CI, 0.18-0.38), indicating that the observed number of deaths was below expected in an age-, sex- and country-matched population. Pts achieving PGA 'clear' or 'minimal' at 12, 24, 36, 48, 60, 72, and 84 months in the registry were 2630/4622 (56.9%), 2352/4015 (58.6%), 2044/3454 (59.2%), 1608/2569 (62.6%), 1150/1814 (63.4%), 428/680 (62.9%), and 18/22 (81.8%), respectively.

CONCLUSION: No new safety signals were observed with ADA treatment during this 7-year interim analysis and safety was consistent with the known safety profile of ADA. The number of TE deaths in the registry was below the expected rate. As-observed effectiveness of ADA remained stable through 84 months.

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