

Impact of Age or Sex on Efficacy and Safety of a Fixed-Dose Clindamycin Phosphate 1.2%/Benzoyl Peroxide 3.1%/Adapalene 0.15% Gel in Participants With Moderate-to-Severe Acne

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BACKGROUND AND RATIONALE

- Patient age or sex may impact the efficacy and tolerability of topical acne treatments¹⁻³
 - Managing acne in younger patients is complicated by low rates of treatment adherence⁴ and the potential for more irritation with topical treatments than in adults⁵
 - Among adults, females may be more susceptible to dry skin, making irritation with topical treatment a significant concern⁶
- IDP-126 fixed-dose polymeric mesh gel (clindamycin phosphate 1.2%/benzoyl peroxide [BPO] 3.1%/adapalene 0.15%) is the first triple-combination, fixed-dose, topical acne treatment in development
- IDP-126 demonstrated superior efficacy to vehicle and component dyads, with good safety and tolerability, in a phase 2⁷ and two phase 3 studies of participants with moderate-to-severe acne

OBJECTIVE

- To assess the impact of age or sex on efficacy and safety/tolerability of IDP-126 gel

METHODS

- In two phase 3, double-blind, randomized studies (NCT04214639, NCT04214652), eligible participants aged ≥9 years with moderate-to-severe acne were randomized 2:1 to receive IDP-126 or vehicle gel once daily for 12 weeks
 - CeraVe[®] hydrating cleanser and CeraVe[®] moisturizing lotion (L'Oreal, NY) were provided as needed for optimal skin moisturization/cleaning
- Data from these studies were pooled and analyzed post hoc by participant age (pediatric, <18 years; adult, ≥18 years) or sex
- Endpoints included treatment success (≥2-grade reduction from baseline in Evaluator's Global Severity Score [EGSS] and a score of 0 [clear] or 1 [almost clear]) and least-squares mean percent change from baseline in inflammatory and noninflammatory lesion counts
 - Acne severity was assessed via EGSS, which was scored as: 0 (clear) = Normal, clear skin/no evidence of acne; 1 (almost clear) = Rare noninflammatory lesions, with rare noninflamed papules; 2 (mild) = Some noninflammatory lesions, with few inflammatory lesions; 3 (moderate) = Noninflammatory lesions predominate, with multiple inflammatory lesions: several/many comedones and papules/pustules, ≤1 nodulocystic lesion; 4 (severe) = Inflammatory lesions more apparent, many comedones/papules/pustules, ≤2 nodulocystic lesions
- Treatment-emergent adverse events (TEAEs) and cutaneous safety/tolerability were also assessed

RESULTS

Participants

- The 363 participants in the overall pooled population were evenly divided between pediatric and adult participants (n=178 and 185, respectively); overall, almost 60% were female (n=212)
- Across all subgroups, most participants were White (68.6%-78.7%) and non-Hispanic (76.9%-79.5%), with baseline EGSS score of 3 (moderate; 87.4%-93.9%)

Efficacy

- At week 12, over half of pediatric and almost half of adult IDP-126-treated participants achieved treatment success, versus one-fourth with vehicle; results by sex were similar (Figure 1)
- At week 12, IDP-126 provided >70% reductions in inflammatory/noninflammatory lesions in all subgroups; reductions were significantly greater versus vehicle (Figure 2)
- Differences in rates of treatment success and percent reductions from baseline in inflammatory and non-inflammatory lesions were not statistically significant between IDP-126-treated age or sex subgroups
- Images of representative IDP-126-treated participants from each subgroup are shown in Figure 3

Safety and Tolerability

- TEAE rates/severity/relationship to study drug, and the most common TEAEs, were similar across age and sex subgroups (Table 1)
 - Most TEAEs were of mild-to-moderate severity (data not shown)
- Rates of IDP-126 discontinuations due to TEAEs were low (<4%) in all subgroups
- Mean scores for cutaneous safety and tolerability assessments (erythema, scaling, hyperpigmentation, hypopigmentation, itching, burning, and stinging) were <1 (mild) at all study visits (data not shown)

FIGURE 1. Treatment Success^a at Week 12 (ITT Population)

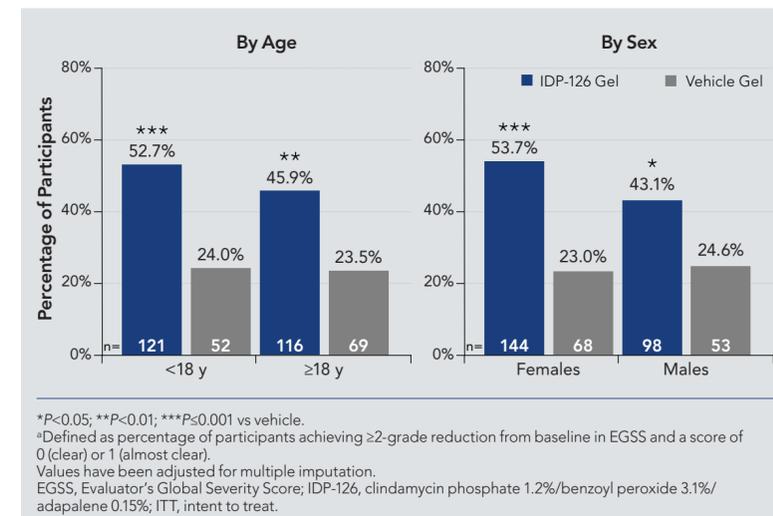


FIGURE 2. Lesion Reductions From Baseline to Week 12 (ITT Population)

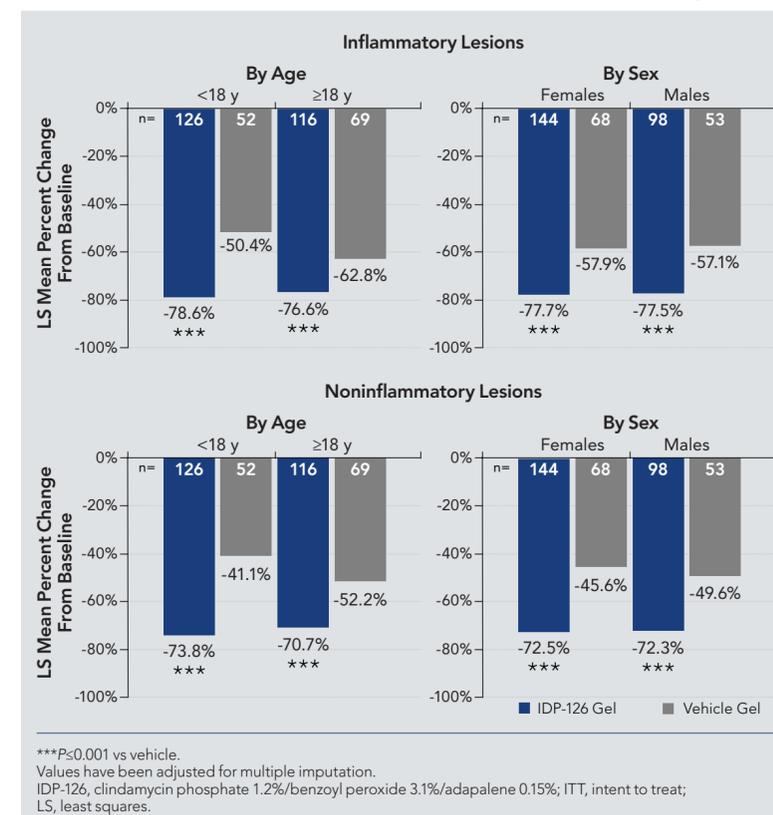


FIGURE 3. Acne Improvements with IDP-126 Gel

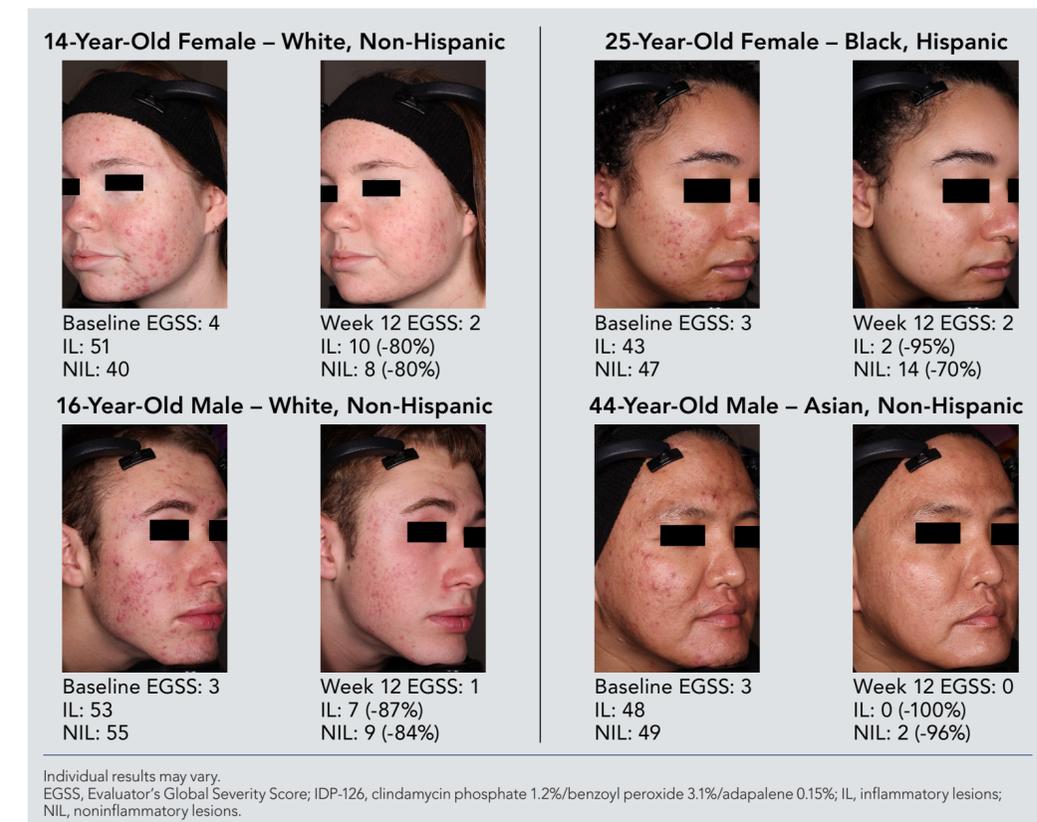


TABLE 1. Summary of Adverse Events Through Week 12 (Safety Population)

n (%)	<18 years		≥18 years		Females		Males	
	IDP-126 (n=126)	VEH (n=52)	IDP-126 (n=116)	VEH (n=69)	IDP-126 (n=144)	VEH (n=68)	IDP-126 (n=98)	VEH (n=53)
TEAEs	32 (25.4)	3 (5.8)	34 (29.3)	7 (10.1)	39 (27.1)	6 (8.8)	27 (27.6)	4 (7.5)
Related	23 (18.3)	0	25 (21.6)	2 (2.9)	28 (19.4)	2 (2.9)	20 (20.4)	0
Not related	9 (7.1)	3 (5.8)	9 (7.8)	5 (7.2)	11 (7.6)	4 (5.9)	7 (7.1)	4 (7.5)
Serious AEs	0	0	0	0	0	0	0	0
Discontinued drug/study due to TEAE	3 (2.4)	0	4 (3.4)	0	4 (2.8)	0	3 (3.1)	0
Most common treatment-related TEAEs (≥2% participants in any treatment)								
AS pain	16 (12.7)	0	15 (12.9)	1 (1.4)	16 (11.1)	1 (1.5)	15 (15.3)	0
AS dryness	3 (2.4)	0	4 (3.4)	0	3 (2.1)	0	4 (4.1)	0
Erythema	3 (2.4)	0	3 (2.6)	0	2 (1.4)	0	4 (4.1)	0
AS irritation	1 (0.8)	0	4 (3.4)	0	4 (2.8)	0	1 (1.0)	0
Xerosis	0	0	3 (2.6)	1 (1.4)	3 (2.1)	1 (1.5)	0	0
AS exfoliation	2 (1.6)	0	2 (1.7)	0	3 (2.1)	0	1 (1.0)	0

AS, application site; IDP-126, clindamycin phosphate 1.2%/benzoyl peroxide 3.1%/adapalene 0.15% gel; TEAE, treatment-emergent adverse event; VEH, vehicle gel.

CONCLUSIONS

- The innovative fixed-dose, triple-combination IDP-126 gel (clindamycin phosphate 1.2%/benzoyl peroxide 3.1%/adapalene 0.15%) was efficacious and well tolerated, regardless of age or sex, in participants with moderate-to-severe acne
 - At week 12, approximately half of participants achieved treatment success with IDP-126 gel versus less than one fourth with vehicle
 - In all subgroups, IDP-126 provided over 70% reductions from baseline in inflammatory and noninflammatory lesions
- The efficacy and favorable safety profile of IDP-126 gel in children, adults, females and males demonstrate its potential as a topical treatment option for acne in a variety of patient populations

REFERENCES

- Tanghetti E. *J Drugs Dermatol*. 2012;11(12):1417-1421.
- Stein Gold L. *J Drugs Dermatol*. 2019;18(12):1218-1225.
- Cook-Bolden F. *J Drugs Dermatol*. 2020;19(1):78-85.
- Hester C, et al. *Pediatr Dermatol*. 2020;33(1):49-55.
- Kraft J and Freeman A. *CMAJ*. 2011; 183(7):E430-435.
- Zeichner JA, et al. *J Clin Aesthet Dermatol*. 2017;10(1):37-46.
- Stein Gold L, et al. *Am J Clin Dermatol*. 2022;23(1):93-104.

AUTHOR DISCLOSURES

LSG has served as investigator/consultant or speaker for Ortho Dermatologics, LEO Pharma, Dermavant, Incyte, Novartis, AbbVie, Pfizer, Sun Pharma, UCB, Arcutis, and Lilly. LK has acted as an investigator, advisor, speaker, and consultant for Ortho Dermatologics. WPP has served as an investigator for Ortho Dermatologics. HB has served as advisor, investigator, and on speakers' bureaus for Almirall, Cassiopea, Foamix, Galderma, Ortho Dermatologics, Sol Gel, and Sun Pharma. VC has served as an investigator, consultant, or speaker for AbbVie, Galderma, L'Oréal, Ortho Dermatologics, and Vyne. LG has served as investigator, consultant, or speaker for Almirall, Cassiopea, Galderma, Ortho Dermatologics, Sol Gel, Sun Pharma, and Vyne. NS has served on advisory boards, as a consultant, investigator, speaker, and/or other and has received honoraria and/or grants/research funding from Almirall, Actavis, Allergan, Anacor Pharmaceuticals, Auxilium Pharmaceuticals, Bausch Health, Bayer, Bioran, BTG, Carma Laboratories, Cassiopea, Celgene Corporation, Cutera, Cynosure, DUSA Pharmaceuticals, Eclipse Medical, Eli Lilly and Company, Endo International, EndyMed Medical, Ferndale Laboratories, Galderma, Gerson Lehman Group, Hydropeptide, Mez Aesthetics, Neostira, Novartis, Nutraceutical Wellness, Palomar Medical Technologies, Prescriber's Choice, Regeneron, Roche Laboratories, Samumed, Solta Medical, Storz Medical AG, Suneva Medical, Vanda Pharmaceuticals, and Venus Concept. JLS is a consultant for Ortho Dermatologics, Bausch Health, Regeneron, Sanofi, Verica, and Pfizer. ZDD has received funding from Ortho Dermatologics. EAT has served as speaker for Novartis, Ortho Dermatologics, Sun Pharma, Lilly, Galderma, AbbVie, and Dermira; served as a consultant/clinical studies for Hologic, Ortho Dermatologics, and Galderma; and is a stockholder for Accure. NB has served as advisor, consultant, and investigator for AbbVie, Almirall, Biofrontera, BI, Brickell, BMS, EPI Health, Ferndale, Galderma, Incyte, ISDIN, J&J, LabRoche-Posay, LEO Pharma, Ortho Dermatologics, Regeneron, Sanofi, SunPharma, Verica, and Vyne.