Common Chief Concerns in Skin of Color Populations and Advancements in Diagnostics and Therapeutics

Noelle Desir, BA; Iain Noel Encarnacion, MS; Susan C. Taylor, MD

The umbrella term *skin of color* (SOC) includes individuals identifying as Black/African, Hispanic, Asian, Native American, Middle Eastern, and Mediterranean as well as multiracial groups. While the Fitzpatrick skin typing system is not an accurate proxy for describing skin tone, SOC populations typically correspond to Fitzpatrick skin types IV to VI, and clinical researchers often report the Fitzpatrick skin type of their study populations.[1]

Over the past several decades, the underrepresentation of diverse skin tones in educational resources has limited clinical training.[2] For example, only 10.3% of conditions featured in contemporary dermatology textbooks are shown in darker skin tones.[3] This educational resource gap has spurred a transformative movement toward inclusivity in dermatologic education, research, and clinical practice. Notable examples include VisualDx[4] and *Dermatology for Skin of Color*.[5] In addition, *Cutis* began publishing the Dx Across the Skin Color Spectrum fact sheet series in 2022 to highlight differences in how cutaneous conditions manifest in various skin tones (https://www.mdedge.com/cutis/dx-across-skin-color-spectrum).

These resources play a critical role in advancing dermatologic knowledge, ensuring that dermatologists and other health care professionals are well equipped to diagnose and treat dermatologic conditions in SOC populations with accuracy and cultural humility. These innovations also have enhanced our understanding of how common dermatologic conditions manifest and respond to treatment in SOC populations. Herein, we highlight advances in diagnostic and therapeutic approaches for the most common concerns among SOC populations in the United States, including acne vulgaris, atopic dermatitis (AD), seborrheic dermatitis (SD), melasma, postinflammatory hyperpigmentation, psoriasis, and seborrheic keratosis.

Chief Concerns Common Among SOC Populations in the United States

Acne Vulgaris—In patients with SOC, acne frequently results in pigmentary changes and scarring that can manifest as both hypertrophic and keloidal scars.[6] Clinical evidence from randomized controlled studies supports the use of topical dapsone gel as a safe and effective frontline treatment for acne in patients with SOC.[7,8] Notably, the US Food and Drug Administration–approved 1726-nm laser with a contact-cooling sapphire window has demonstrated safety and efficacy in the management of acne across Fitzpatrick skin types II to VI.[9-11] To manage atrophic acne scars, cutting-edge laser and radiofrequency devices including erbium-doped yttrium aluminum garnet, fractional CO_2, and picosecond lasers have been effectively employed in SOC populations. When these energy-based treatments are combined with cooling systems, they substantially reduce the risk for thermal damage in darker skin tones.[12,13]

Noelle Desir is from Weill Cornell Medical College, New York, New York. Iain Noel Encarnacion is from Eastern Virginia Medical School, Norfolk. Dr. Taylor is from the Department of Dermatology, Perelman School of Medicine, University of Pennsylvania, Philadelphia.

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Correspondence: Susan C. Taylor, MD, Department of Dermatology, Perelman School of Medicine at the University of Pennsylvania, 3400 Civic Center Blvd, Philadelphia, PA 19104 (susan.taylor@pennmedicine.upenn.edu).

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Atopic Dermatitis—While epidemiologic data indicate that Black patients experience a higher prevalence (19.3%) of AD than Asian (17.8%), White (16.1%), or Hispanic (7.8%) groups in the United States, this disparity may be influenced by factors such as access to care and environmental stressors, which require further study.[14-16] The pathogenesis of AD involves a complex interaction between skin barrier dysfunction, immune dysregulation, and environmental triggers, with patients with SOC exhibiting distinct endotypes.[14,17] For example, East Asian individuals have elevated T_H17-related cytokines and a blended T_H17/T_H2 AD-psoriasis endotype,[14,18] while Black individuals have greater T_H2 skewing and filaggrin variations and higher serum IgE levels.[17] Diagnostic advancements, including a modified Eczema Area and Severity Index using grayscale rather than erythema-based assessments for patients with SOC as well as a novel SOC dermatology atlas that includes AD have increased equity in disease evaluation.[19,20] Recent clinical trials support the efficacy of topical crisaborole, topical ruxolitinib, and biologics such as dupilumab, tralokinumab, lebrikizumab, and fezakinumab for AD in SOC populations, with dupilumab also improving postinflammatory hyperpigmentation.[20-22]

Seborrheic Dermatitis—Seborrheic dermatitis is common in patients with SOC, though its manifestations vary by racial/ethnic background.[23] In Black patients, petaloid SD is more prevalent and can resemble secondary syphilis, making accurate diagnosis essential to rule out potential mimickers.[24] Effective treatments remain limited, as current therapies often fail to address both the underlying yeast-driven inflammation and the resulting pigmentary changes that commonly affect SOC populations.[25] Roflumilast foam 0.3%, a phosphodiesterase 4 inhibitor, has emerged as a promising option, offering both anti-inflammatory benefits and improvements in pigmentary alterations—making it particularly valuable for treatment of SD in patients with SOC.[26]

Melasma—Melasma is more prevalent in women with darker skin types, particularly those of African descent and those from East and Southeast Asia or Latin America.[27,28] Standard treatments including hydroquinone, retinoids, azelaic acid, kojic acid, ascorbic acid, arbutin, alpha hydroxy acids, niacinamide, and the Kligman formula (5% hydroquinone, 0.1% tretinoin, and 0.1% dexamethasone) remain therapeutic foundations in patients with SOC.[29] Newer alternatives that are effective in SOC populations include topical metformin 30%[30]; topical isobutylamido thiazolyl resorcinol or thiamidol[31]; and tranexamic acid cream 5%, which has comparable efficacy to hydroquinone 4% with fewer adverse effects.[32] Laser therapies such as the 675-nm and 1064-nm Q-switched neodymium-doped yttrium aluminum garnet lasers, offer effective pigment reduction and are safe in darker skin tones.[33,34]

Postinflammatory Hyperpigmentation—Postinflammatory hyperpigmentation, often triggered by acne in SOC populations,[23] manifests as brown, tan, or gray discoloration and is managed using similar topical agents as melasma, with the 1927-nm laser providing an additional treatment option for patients with SOC.[27,35,36]

Psoriasis—In patients with SOC, psoriasis often manifests with thicker plaques, increased scaling, and greater body surface area involvement, leading to considerable quality-of-life implications.[37] Although prevalence is highest in White populations (3.6%), Asian (2.5%) and Hispanic/Latino (1.9%) patients experience increased disease severity, potentially explaining why psoriasis is among the top chief complaints for these racial/ethnic groups in the United States.[23,38] Greater diversity in clinical trials has improved our understanding of the efficacy of biologics for psoriasis in SOC populations. The VISIBLE trial—the first SOC-exclusive psoriasis trial—demonstrated a Psoriasis Area and Severity Index 90 response in 57.1% (44/77) of participants receiving guselkumab vs 3.8% (1/26) of participants receiving placebo by week 16 ($P<.001$).[39] Other biologics such as risankizumab, secukinumab, and brodalumab also have shown efficacy in SOC populations.[40-42] Additionally, topical therapies such as calcipotriene-betamethasone dipropionate cream/aerosol foam and halobetasol propionate-tazarotene lotion have proven effective, with minimal adverse effects and low discontinuation rates in patients with SOC.[43-46]

Seborrheic Keratosis—In SOC, seborrheic keratosis (SK) often appears as a variant known as dermatosis papulosa nigra (DPN), manifesting as small, benign, hyperpigmented papules, particularly on the face and neck.[47] Dermatosis papulosa nigra is common in Black, Hispanic, and some Asian populations, with variations in color and distribution among different racial/ethnic groups.[48] For example, in Korean populations, SKs commonly affect males, and in contrast to the dark brown color common in White populations, SKs in Korean patients often appear lighter brown or sometimes pink.[49] In contrast to the verrucous and stuck-on appearance often seen in White populations, South Asian populations more often have variants including pedunculated SKs, flat SKs, and stucco keratoses.[50] High-resolution dermoscopy improves differentiation from malignant lesions; however, a sudden SK eruption in any population warrants evaluation for underlying malignancy. Cryotherapy, though effective for removal of SKs, can cause pigmentary changes in SOC populations, making laser therapy and electrosurgery preferable for these patients due to the lower risk for pigmentary sequela. If hyperpigmentation occurs, topical treatments such as hydroquinone, tretinoin, or azelaic acid can help. New laser technologies and hydrogen-peroxide–based therapies offer safer and more effective removal options while minimizing pigmentary risks in SOC populations.[47,50] While DPNs are common in patients with darker skin tones, there are limited data on optimal treatment frequency, insurance coverage, and efficacy. This literature gap hinders our understanding

of treatment accessibility and economic impact on our patients.[51]

Final Thoughts

Innovations such as standardized scoring systems and customized therapeutic strategies for conditions including acne, pigmentary disorders, and atopic dermatitis have markedly enhanced patient care and outcomes for the most common chief concerns in SOC populations. In addition, population-specific advancements have addressed unique diagnostic and therapeutic developments in Black, Asian/Pacific Islander, and Hispanic groups, from the nuanced presentations of atopic and seborrheic dermatitis in Black patients, to those of psoriasis in Asian/Pacific Islander and Hispanic populations. Finally, updated epidemiologic studies are essential to capture the current and evolving dermatologic concerns pertinent to patients with SOC, ensuring that future clinical and research efforts align with the unique needs of these populations.

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