

Clinical photography in skin of colour: tips and best practices

DOI: 10.1111/bjd.19811

High-quality photos are critical to dermatology, for both clinical care and education. Although best practices for capturing skin photos have been outlined,¹ these omit specific challenges of taking photos of dark skin. Bias against accurate capture of dark skin in photographic technology is a long-standing issue.³ Colour balance with film photography relied on reference cards portraying white models,² and digital photography still has issues capturing detailed photos of darker skin.^{3,4} Thus, proper photography techniques are important to take the highest-quality photos in patients with dark skin.

A recent summary of tips for photography in dermatology¹ makes several important points about capturing high-quality clinical photos. It emphasizes the importance of using a background that provides contrast to the subject while minimizing background distractions, and highlights camera techniques that prevent distortion of the subject. We agree with these suggestions and think they should apply to all photos. In addition, we believe it is important to present the nuanced approach that, based on our clinical experience, is necessary when taking photos in patients with skin of colour.

Appropriate photography begins with obtaining consent. The history and current presence of racism in medicine requires that members of the medical team pay attention to patient comfort in the clinical setting, particularly when the patient is from a historically marginalized group. The clinician

should make clear the purpose of the photo and how it will be used, and ask for explicit permission for the intended use: research, publication, education or social media. The clinician should always consider appropriate draping, particularly when photographing sensitive areas of the body, only exposing the areas needed for accurate clinical representation. Allowing the patient to maintain necessary dignity signals respect for the patient in a situation when they are vulnerable.

Clinicians should take the following steps to ensure the best possible outcome when taking photos of patients with dark skin (see Infographic).

- 1 Natural light.** Natural light is the best option for highlighting the natural appearance of dark skin (Figure 1a). In practice, this could mean taking a photo in front of a window or outside. In contrast to the recommendation made by Muraco¹ for patients with light skin, flash and direct lighting should be avoided in patients with dark skin because of flash artefact. Flash artifact, a shine that can obscure details on the skin, can be seen in Figure 1(b). Room light (Figure 1c) is the next best option but can cause distortions in colour.⁴
- 2 Indirect light.** In an ideal scenario, lighting is reflected onto the subject and is not direct. It should come from behind and on both sides of the subject, as well as on the camera side. One could hold a white muslin cloth or white sheet on either side of the subject to provide a reflective



Figure 1 Photography in skin of colour. (a) Natural light, (b) flash photography, (c) room light, (d) overhead light for photos focusing on hair.

© 2021 British Association of Dermatologists

British Journal of Dermatology (2021) 184, pp1177–1179

1177

1178 Perspectives

light source to achieve this effect. This is in contrast to light skin, which can be lit from the camera side only.

- 3 Avoid brightly coloured or patterned backgrounds** as they can cause colour contamination of the subject. Colour contamination occurs when adjacent objects affect the tone of the photographed subject. A background that provides the highest contrast to the subject is ideal. Clinical photography of light skin often relies on a standard royal blue background; however, white or light backgrounds can also be useful for photographing dark skin because of the contrast and additional light reflection onto the subject (item 2).

- 4 Use separate light for hair.** When taking photos of a patient of colour who has dark hair, a separate light, such as an overhead exam light, can be helpful to highlight detail that otherwise would be missed (Figure 1d), like at the hairline.

- 5 Parallel light polarization** can enhance the appearance of epidermal processes, and may be particularly useful for a subset of images designed for publication or teaching.⁵ For lesions that primarily have erythema or pigimentary changes, using cross-polarization can aid in decreasing light reflectance and glare, which can be particularly useful in darker skin types.^{5,6} This can be accomplished in an inexpensive way using a plastic linear polarizer sheet taped over the camera lens and flash of a camera phone.⁶

Dermatologists must understand ways to achieve the best photographic representation of all patients in order to opti-

and understanding of the aforementioned principles it is possible to achieve accurate representation. Having inclusive guidelines that consider the ideal conditions for all skin types is necessary for equitable care.

J.C. Lester¹, L. Clark Jr,¹ E. Linos^{1,2} and R. Daneshjou^{1,2}

¹Department of Dermatology, University of California San Francisco, San Francisco, CA, USA; and ²Stanford University School of Medicine, Stanford, CA, USA

Conflicts of interest: The authors declare they have no conflicts of interest.

References

- Muraco L. Improved medical photography: key tips for creating images of lasting value. *JAMA Dermatol* 2020; **156**:121–3.
- Roth L. Looking at Shirley, the ultimate norm: colour balance, image technologies, and cognitive equity. *Can J Commun* 2009; **34**:111–36.
- Lewis S. The racial bias built into photography. *The New York Times* 2019; 25 April. Available at: <https://www.nytimes.com/2019/04/25/arts/sarah-lewis-racial-bias-photography.html> (last accessed 3 February 2021).
- Scheinfeld N. Film photography's limitations in imaging skin of color underlies racial imaging disparities; new digital photography features facilitate the imaging of skin of color. *J Am Acad Dermatol* 2008; **59**:351–2.
- Hanlon KL. Cross-polarised and parallel-polarised light: viewing and photography for examination and documentation of biological