



“Stretching Dermoscopy” to Delineate the Margins of Basal Cell Carcinoma on Photodamaged Telangiectatic Skin

Felipe B. Cerci¹⁻³, Mara Lynda Zehnder⁴, Aimilios Lallas⁵, Betina Werner^{2,6,7}, Stanislav Nickolaevich Tolkachjov⁸⁻¹¹

- 1 Mohs Curitiba, Clínica Cepelle. Curitiba, Brazil
2 Post-graduate Program – Internal Medicine and Health Sciences, Universidade Federal do Paraná, Curitiba, Brazil
3 Dermatology Service, Hospital Universitário Evangélico Mackenzie, Curitiba, Brazil
4 Department of Dermatology, University Hospital Basel, Basel, Switzerland
5 First Department of Dermatology, School of Medicine, Faculty of Health Sciences, Aristotle University, Thessaloniki, Greece
6 Dermatology Service, Hospital de Clínicas da Universidade Federal do Paraná, Curitiba, Brazil
7 Department of Pathology, Hospital de Clínicas da Universidade Federal do Paraná, Curitiba, Brazil
8 Epiphany Dermatology, Dallas, Texas, USA
9 Texas A&M College of Medicine, Dallas, Texas, USA
10 Department of Dermatology, The University of Texas at Southwestern Medical Center, Dallas, Texas, USA
11 Division of Dermatology, Baylor Scott & White, Dallas, Texas, USA

Key words: dermoscopy, basal cell carcinoma, Mohs micrographic surgery, skin cancer, surgical margins

Citation: Cerci FB, Zehnder ML, Lallas A, Werner B, Tolkachjov SN. “Stretching Dermoscopy” to Delineate the Margins of Basal Cell Carcinoma on Photodamaged Telangiectatic Skin. *Dermatol Pract Concept*. 2023;13(2):e2023148. DOI: <https://doi.org/10.5826/dpc.1302a148>

Accepted: November 4, 2022; **Published:** April 2023

Copyright: ©2023 Cerci et al. This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial License (BY-NC-4.0), <https://creativecommons.org/licenses/by-nc/4.0/>, which permits unrestricted noncommercial use, distribution, and reproduction in any medium, provided the original authors and source are credited.

Funding: None.

Competing Interests: None.

Authorship: All authors have contributed significantly to this publication.

Corresponding Author: Stanislav N. Tolkachjov, MD, 1640 FM 544. Suite 100 The Colony, TX 75056 Phone: 972-961-7869
E-mail: stan.tolkachjov@gmail.com

Introduction

Dermoscopy is widely used in clinical practice for basal cell carcinoma (BCC) diagnosis and has been shown to accurately predict the tumor subtype [1]. Furthermore, dermoscopy was shown to enhance the clinical preoperative assessment of peripheral margins, especially for pigmented BCCs [2]. In non-pigmented, the topographic evaluation of the vessels may be an important way to assess the tumor margins. Commonly, dermoscopy of non-superficial BCC reveals large

linear ramified (arborizing) vessels that are usually well-focused and bright red, and superficial BCC displays thinner and shorter vessels, the so-called superficial fine telangiectasias [1]. In contrast, telangiectatic vessels from chronic sun damage are smaller, less focused and dull-red. However, when BCC develops on severely sun-damaged skin with numerous telangiectasias, it might be challenging to discriminate them from tumoral vessels and delineate the tumor [3].

Stretching the skin around the tumor has been proposed to improve the assessment of its margins by enhancing the

macroscopic visualization of the opalescent color that corresponds to the stromal alterations of BCC (Figure 1) [4].

Although it can be reasonably hypothesized that combining skin stretching with dermoscopy might offer additional information and further improve the assessment of BCC margins, this is not supported by evidence up to date.

Case Presentation

We present a case that aims to suggest that combining both techniques might be superior to using each technique alone to delineate BCC margins prior to surgical removal in areas with a telangiectatic background. Figure 1A shows an ill-defined infiltrative BCC on the upper cutaneous lip of a 63-year-old female patient and Figure 1B depicts the same lesion after skin stretching.

In the standard non-contact polarized dermoscopic evaluation, tumor is evaluated without stretching the surrounding skin (Figure 2A). In “stretching dermoscopy,” the skin adjacent to the tumor is stretched during dermoscopic examination (Figure 2B). With this maneuver, the opalescent white structureless area of the BCC becomes more evident. In addition, the blood flow of the smaller vessels surrounding the tumor is reduced without compromising the larger arborizing vessels of the tumor, enhancing, thus, the discrimination between them (Figure 2). The pressure applied with contact

dermoscopy can also achieve compression of UV-induced telangiectasias, but it may also compress the tumoral vessels, which are important for the diagnosis.

Dermoscopy alone has been used for preoperative margin delineation of BCC during classic surgery and also to reduce the number of stages in Mohs micrographic surgery (MMS), but data on the latter are controversial [5,6]. Similarly, skin traction by itself has been described as an important preoperative step to maximize the contrast between BCC and surrounding normal skin during naked eye examination [4]. In the present case, the tumor was cleared after one stage of MMS.

Conclusions

We suggest that combining both techniques might be a simple and inexpensive way to enhance the preoperative examination in classic surgery or the first stage of MMS. However, our hypothesis needs to be evaluated by further studies assessing whether stretching dermoscopy allows for less incomplete excisions during classic surgery or reduced number of stages in MMS.

Acknowledgment: The patient has given written informed consent to the publication of her case details.

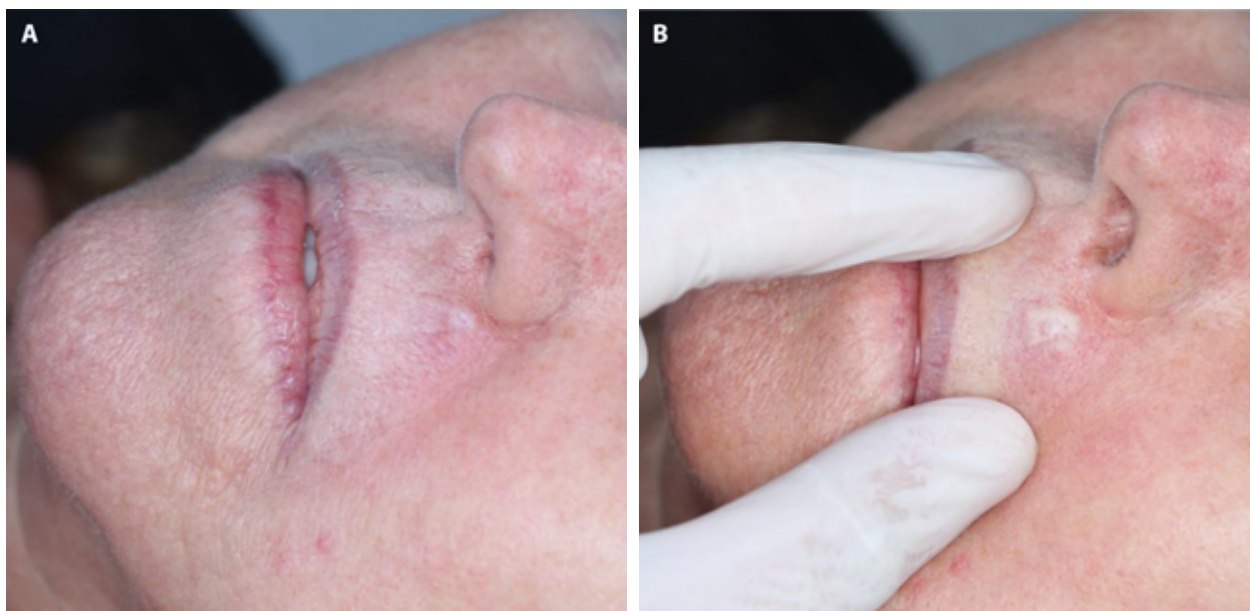


Figure 1. Clinical presentation. (A) 63-year-old female patient, presenting with an ill-defined plaque on the upper cutaneous lip and signs of photodamaged skin as lentiginosities and telangiectasias in all sun-exposed areas of the face. (B) View when stretching the surrounding skin.

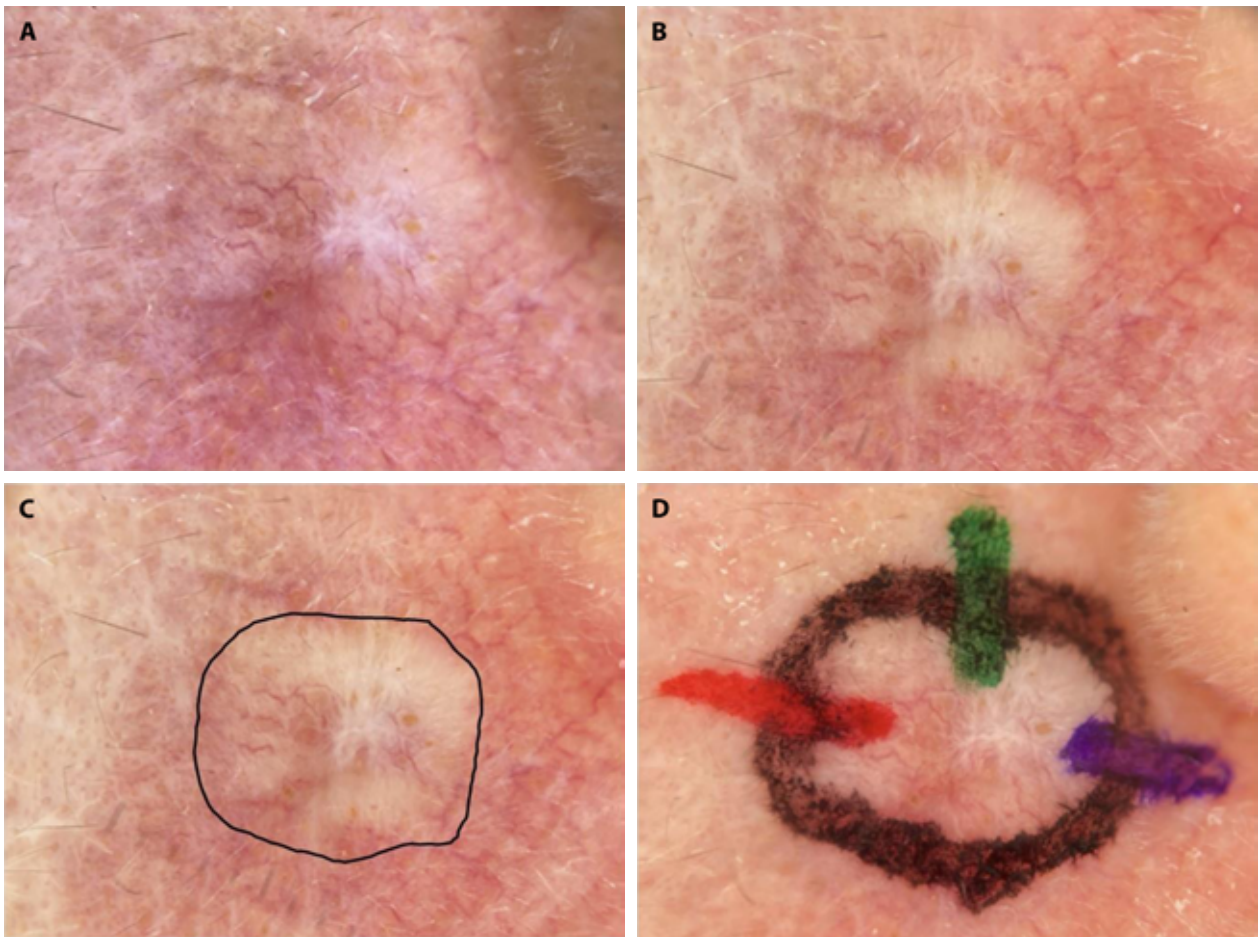


Figure 2. Stretching Dermoscopy. (A) Non-contact polarized dermoscopy of a basal cell carcinoma on the upper cutaneous lip, with a telangiectatic background. (B) Dermoscopy after stretching the surrounding tissue. Note how the basal cell carcinoma is better visualized contrasting with the surrounding telangiectatic background. (C) The tumor margins as assessed after stretching dermoscopy. (D) Demarcation of the tumor boundary before excision. The excision was performed at the outer margin of the black ink.

References

1. Reiter O, Mimouni I, Dusza S, Halpern AC, Leshem YA, Marghoob AA. Dermoscopic features of basal cell carcinoma and its subtypes: A systematic review. *J Am Acad Dermatol.* 2021;85(3):653-664. DOI: 10.1016/j.jaad.2019.11.008. PMID: 31706938. PMCID: PMC9366765.
2. Hurley AR, Totty JP, Pinder RM. Dermoscopy as an adjunct to surgical excision of nonmelanoma Skin lesions: a systematic review and Meta-analysis. *J Clin Aesthet Dermatol.* 2022;15(9):45-49. PMID: 36213603. PMCID: PMC9529075.
3. Cerci FB, Kubo EM, Werner B, Tolkachjov SN. Dermoscopy accuracy for lateral margin assessment of distinct basal cell carcinoma subtypes treated by Mohs micrographic surgery in 368 cases. *Int J Dermatol.* 2022;61(4):e139-e141. DOI: 10.1111/ijd.15655. PMID: 34013989.
4. Shalom A, Westreich M, Schein O, Hadad E. Stretch test: effectiveness in identifying basal cell carcinoma borders. *Ann Plast Surg.* 2012;68(1):72-73. DOI: 10.1097/SAP.0b013e3182119126. PMID: 21629104.
5. Yeom SD, Lee SH, Ko HS, et al. Effectiveness of dermoscopy in Mohs micrographic surgery (MMS) for nonmelanoma skin cancer (NMSC). *Int J Dermatol.* 2017;56(6):e136-e139. DOI: 10.1111/ijd.13501. PMID: 28247925.
6. Jayasekera PSA, Dodd J, Oliphant T, Langtry JAA, Lawrence CM. Dermoscopy prior to Mohs micrographic surgery does not improve tumour margin assessment and leads to fewer Mohs stages. *Br J Dermatol.* 2018;178(2):565-566. DOI: 10.1111/bjd.15903. PMID: 28851098.