

## Applied Dermatoscopia

### Authors:

Flavia Vieira Brandão<sup>1</sup>  
Gisele Gargantini Rezze<sup>2</sup>  
Juliana Machado Canosa<sup>3</sup>

<sup>1</sup> MSc in Adult Health Sciences, Universidade Federal de Minas Gerais (UFMG) – Belo Horizonte (MG), Brazil; Dermatologist Physician at the Tumor Outpatient Clinic of the University Hospital of the Universidade de Brasília (UNB) – Brasília (DF), Brazil.

<sup>2</sup> Dermatologist Physician, Center for Skin Cancer and Dermatology, Hospital AC Camargo da Fundação Antonio Prudente – São Paulo (SP), Brazil; PhD in Oncology from the Fundação Antonio Prudente; Coordinator, Cutaneous Oncology Graduate Program, Hospital AC Camargo of the Fundação Antonio Prudente

<sup>3</sup> Dermatologist Physician, Center for Skin Cancer and Dermatology, Hospital AC Camargo of the Fundação Antonio Prudente; Dermatology Post Graduate Degree Candidate, Department of Cutaneous Oncology, Hospital AC Camargo of the Fundação Antonio Prudente

### Correspondence:

Flávia Vieira Brandão  
CCSW 3 LOTE 05 205 A Sudoeste  
Cep: 70680-350 Brasília – DF, Brazil  
E-mail: flaviavieirabrandao@yahoo.com.br

Received on: 09/09/2012  
Approved on: 24/11/2012

This study was carried out at Hospital AC Camargo of the Fundação Antonio Prudente – São Paulo (SP), Brazil.

Financial support: none  
Conflicts of interest: none

# Contribuição do mapeamento corporal total e dermatoscopia digital para o diagnóstico precoce do melanoma

*The contribution of total body mapping and digital dermoscopy for the early diagnosis of melanoma*

## ABSTRACT

The prognosis of cutaneous melanomas depends mainly on the lesions' thickness; early detection is of paramount importance for patient longer survival rates. An accuracy of approximately 90% can be achieved using dermoscopic assessment. Since early melanomas might not present specific dermoscopic features, they can only be diagnosed by observing alterations over time through total body mapping and serial digital dermoscopy. Patients with atypical nevus syndrome and multiple familial melanoma presented a higher sensitivity for the detection of melanoma using that technique.

**Keywords:** melanoma; dermoscopy; dysplastic nevus syndrome.

## RESUMO

O prognóstico do melanoma cutâneo depende principalmente de sua espessura, sendo a detecção precoce do melanoma extremamente importante para a maior sobrevida dos pacientes. Com a utilização do exame dermatoscópico, pode-se alcançar acurácia de aproximadamente 90%. Melanomas iniciais podem não apresentar características dermatoscópicas específicas, sendo apenas diagnosticados pela mudança ao longo do tempo, observada pelo mapeamento corporal total e dermatoscopia digital serializados. Os grupos que apresentam maior sensibilidade para detecção do melanoma com esse exame são os de portadores de síndrome do nevo atípico e melanoma múltiplo familiar.

**Palavras-chave:** melanoma; dermatoscopia; síndrome do nevo displásico.

## INTRODUCTION

The incidence of melanoma has been increasing considerably in recent decades. Although it is the least common of the skin cancers, it is responsible for most deaths. The best treatment is still early diagnosis, with the surgical removal of the primary lesion.<sup>1,2</sup> Dermoscopy is a noninvasive method that can aid in the diagnosis of melanoma in early stages.<sup>1,3</sup>

Some melanomas do not show typical characteristics under dermoscopy, with the diagnosis being carried out only by the analysis of the alterations observed over time through serial digital dermoscopy.

## CASE REPORT

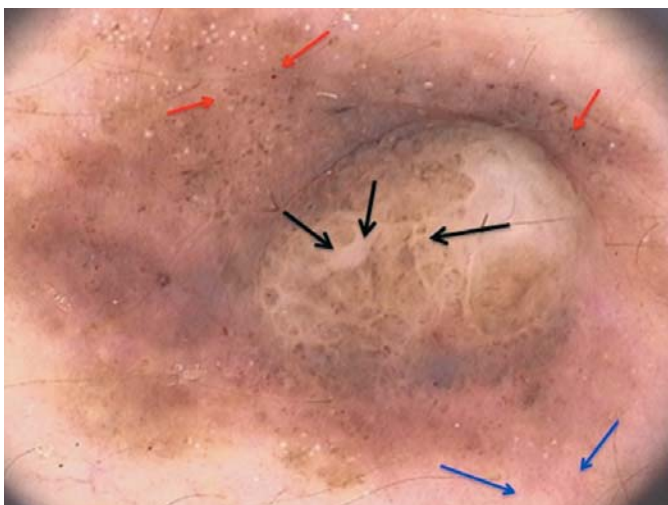
The present paper reports the case of 35-year-old, white male patient living in São Paulo, Brazil. The patient's family history included a mother with a history of skin melanoma.

The patient sought care at the Hospital A.C. Camargo in São Paulo (SP), Brazil, to undergo total body mapping and digital dermoscopy in January 2011, due to the family history of melanoma and the presence of multiple common and atypical nevi. In the first examination, 117 lesions were observed, four of them with removal indication (Figure 1). The histologic analysis suggested the presence of three atypical nevi and one melanoma of the superficial spreading type. The latter was located in the posterior cervical region, having been identified as number 76 of the body mapping, with a 0.85 mm Breslow index thickness, a mitotic index of 0/10 high-power fields (HPF), 0mm2, absence of ulceration or regression, and association with compound melanocytic nevus (Figure 2).

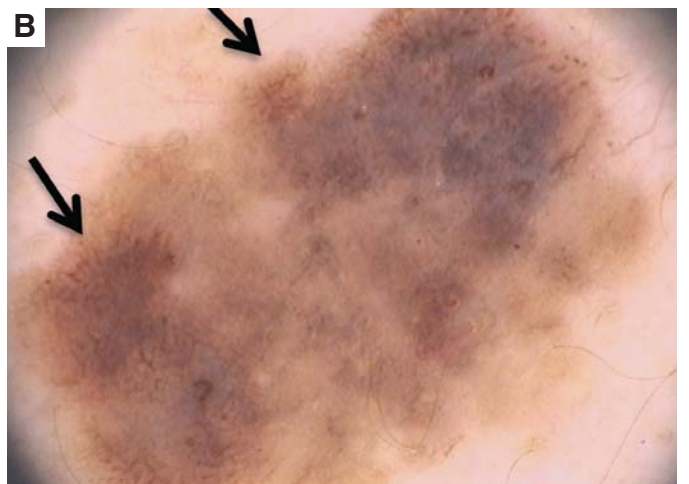
The patient did not return for follow-up treatment, three months later, as instructed. In October 2011, in the second digi-



**Figure 1:** Macroscopic view of the dorsum of the patient, with multiple atypical nevi and melanomas in the posterior cervical region (number 76) and interscapular (number 89) (red arrows).



**Figure 2:** Posterior cervical melanoma's dermoscopy: multiple colors, inverted network (black arrows), and heterogeneous peripheral brownish spots (red arrows), in addition to the atypical vascular pattern, with pinpoint vessels (blue arrows).



**Figure 3:** A. Photograph in January 2011; B. Photograph in October 2011; growth and significant darkening of the lesion, as well as the emergence of a heterogeneous pigmented network (black arrows) were observed.

tal dermoscopy – nine months after the first examination – growth and alterations in the pigmentation and pigmented network of three additional lesions were observed, with removal indication. The histopathological results suggested two atypical nevi and one additional melanoma of the extensive superficial type, the latter identified as number 89 of the body mapping, being located in the interscapular region, with a Breslow thickness of 0.4 mm, mitotic index of 0/10 HPF, 0mm<sup>2</sup>, absence of ulceration or regression, and association with pre-existent melanocytic nevus (Figures 3A and 3B).

## DISCUSSION

Dermoscopy offers an increase of 10 to 27% in the accuracy in melanoma diagnosis as compared to the naked eye examination, allowing the detection of lesions in early stages and improving patient survival rates.<sup>4,5</sup>

Nevertheless, early melanomas can be uncharacteristic under dermoscopy in the first examination, only being recognizable through alterations over time.<sup>5</sup> The first follow-up visit in digital dermoscopy, three months after the first examination, is of paramount importance for the detection of fast growing melanomas, with any alteration in the size, shape, dermoscopic structures or color that might occur in that monitoring interval being indicative for exeresis.<sup>4</sup>

The body mapping and digital dermoscopy allow the detection of thinner and incipient melanomas, 3,5 with patients at the most risk of developing melanoma (such as those with atypical nevus syndrome and multiple familial melanoma, similar (to the patient described) benefitting most from that type of examination.<sup>3</sup>

At the time this article went to press, the patient studied was being followed up, clinically and dermoscopically, at the outpatient clinic of the Núcleo de Câncer de Pele e Dermatologia do Hospital A.C. Camargo (Center for Dermatology and Skin Cancer of the Hospital A.C. Camargo). ●

## REFERENCES

1. Braun RP, Rabinovitz HS, Oliviero M, Kopf AW, Saurat JH. Dermoscopy of pigmented skin lesions. *J Am Acad Dermatol.* 2005; 52(1): 109-21.
2. Shoo BA, Kashani-Sabet M. Melanoma arising in African-, Asian-, Latino- and Native-American populations. *Semin Cutan Med Surg.* 2009; 28(2):96-102.
3. Haenssle HA, Korpas B, Hansen-Hagge C, Buhl T, Kaune KM, Johnsen S, et al. Selection of patients for long-term surveillance with digital dermoscopy by assessment of melanoma risk factors. *Arch Dermatol.* 2010;146(3):257-64.
4. Menzies SW, Gutenev A, Avramidis M, Batrac A, McCarthy WH. Short-term digital surface microscopic monitoring of atypical or changing melanocytic lesions. *Arch Dermatol.* 2001;137(12):1583-9.
5. Neila J, Soyer HP. Key points in dermoscopy for diagnosis of melanomas, including difficult to diagnose melanomas, on the trunk and extremities. *J Dermatol.* 2011; 38 (1): 3-9.