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### Authors

Agostini, P  
Rivero, A  
Parra Martin, JA  
et al.

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**Photo vignette**

**Pedunculated polypoid melanoma. A case report of a rare spindle-cell variant of melanoma**

Agostini P<sup>1</sup>, Rivero A<sup>1</sup>, Parra Martín JA<sup>1</sup>, Soares-de-Almeida L<sup>2</sup>

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<sup>1</sup>Centro Hospitalar do Algarve Faro - Portimão, Portugal

<sup>2</sup>Clinica Universitária de Dermatologia de Lisboa - Hospital de Santa Maria, Centro Hospitalar Lisboa Norte, Portugal

**Correspondence:**

Patrick Agostini  
Consultant in Pathology and Dermatopathology  
Centro Hospitalar do Algarve Faro  
Portimão, Portugal  
(+351) 282 450 300 (ext. 35374)  
pagost2000@gmail.com

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**Abstract**

We report an 89-year-old man who presented with a slowly growing pigmented pedunculated tumor. The nodule was diagnosed as a spindle cell pedunculated malignant melanoma (PMM), a rare variant of spindle-cell malignant melanoma. The clinical presentation of this tumor and its histological and immunohistological features are discussed.

**Keywords: polypoid melanoma; spindle-cell melanoma variant.**

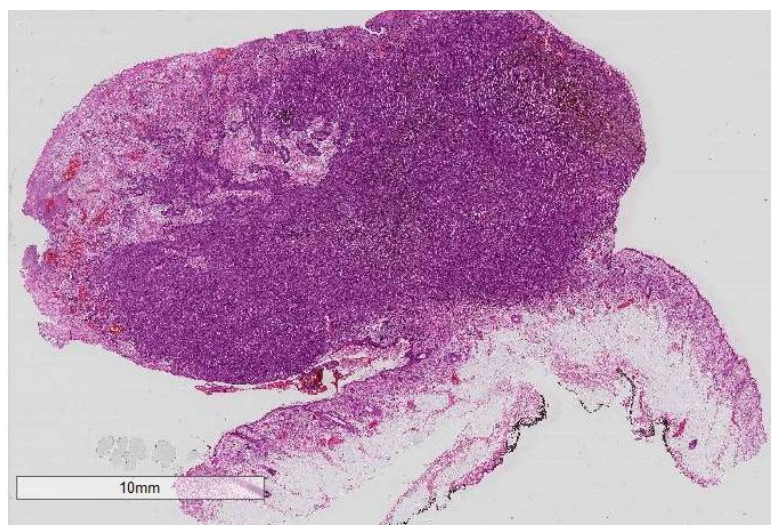
**Introduction**

Cutaneous polypoid malignant melanoma is a rare form of melanoma. We found scarce publications on this subject. Distinction between pedunculated and sessile polypoid melanoma is made and the spindle-cell variant is very rarely described for this type of melanoma. We report a case of a spindle-cell variant of pedunculated polypoid melanoma.

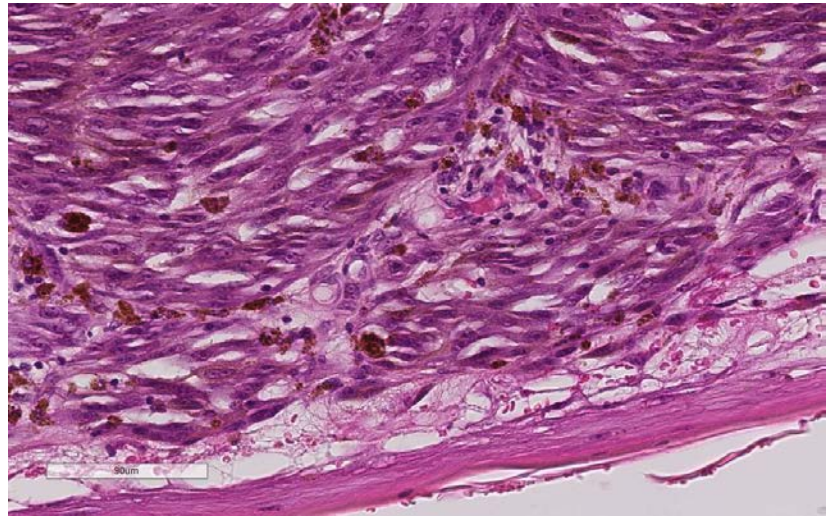
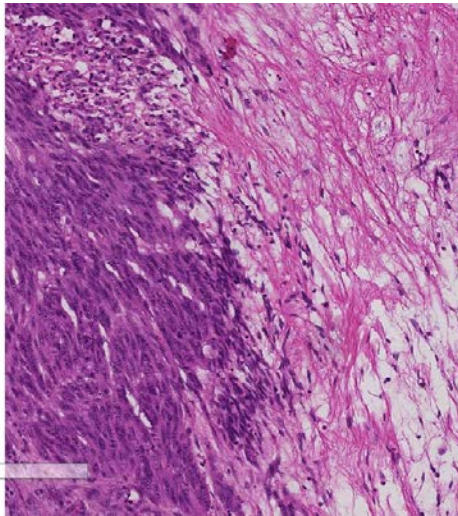
**Case synopsis**

An 89-year-old man presented with a pedunculated polypoid tumor on the left pre-auricular region that had appeared several months prior. Physical exam revealed a 3.5 x 2 cm pedunculated polypoid grey yellowish tumor on otherwise normal skin (Figure 1a). An excisional biopsy was performed and sent for histopathologic examination and the surgical defect was closed by a skin graft.

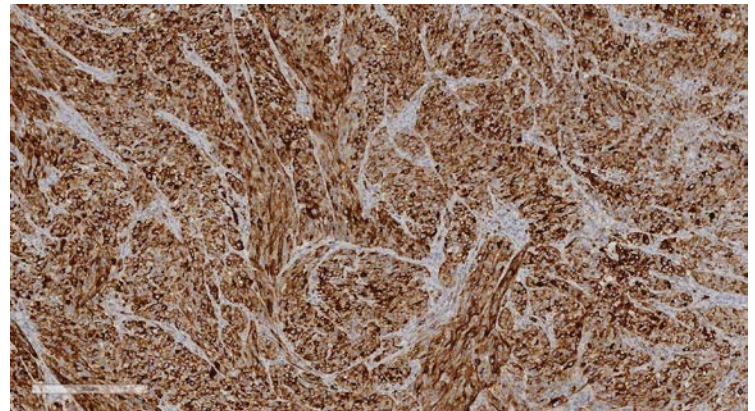
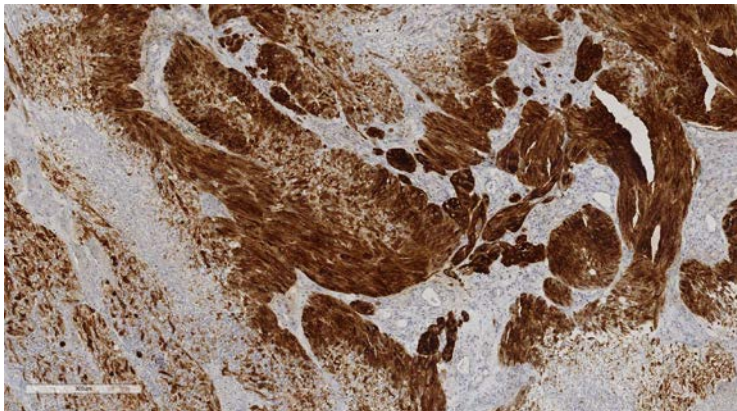
Hematoxylin-eosin revealed a large polypoid nodule covered by an ulcerated epidermis (Figure 1b), composed of a diffuse malignant melanocytic proliferation involving the entire dermis and the superficial subcutaneous tissue. This nodular proliferation had a fasciculate pattern of spindle-cells and large areas of necrosis en masse (Figure 2a, 2b). No neurotropism or desmoplastic pattern was found. The histological type was nodular and the Breslow thickness was 15 mm. The melanocytic mitotic rate was high (6/mm<sup>2</sup>). Regression, vascular invasion, and microsattellites were absent. The nodule was completely excised with 7 mm lateral free margin. Immunohistochemistry showed diffuse and strong positivity for HMB45 and Melan-A (MART-1) (Figure 3a, 3b). Evaluation of sentinel lymph node biopsy was not performed because the patient refused because of his advanced age.



**Figure 1 (a,b).** Clinical picture: a greyish pre-auricular nodule (a); Microscopic view at scanning magnification: ulcerated pedunculated polypoid tumor (HE x4) (b).



**Fig. 2 (a,b).** Microscopic aspects with spindle cell proliferation and necrose en masse (HE x100) (a). Pigmented spindle-cell pattern of the tumor (HE x200) (b)



**Fig. 3 (a,b).** Immunohistochemistry with Melan-A (x20) (a) and HMB45 (x20) (b).

## Discussion

In the last 20 years less than 10 publications were found in the English literature about this topic. Clinically, because of its unusual presentation, polypoid pedunculated melanoma (PPM) can be mistaken for many skin tumors such as seborrheic keratosis, pyogenic granuloma, nevus, neurofibroma, and squamous-cell carcinoma, as it was in our case. Polypoid cutaneous melanoma is reported with different names in the literature depending upon the author. The word, polypoid, has been used for nodular, sessile, or pedunculated lesions of the skin. The first case of PPM was described in 1958 by Vogler et al [1] as an exophytic tumor predominantly above the epidermal structures and defined it as a nodular melanoma (by definition with fewer than three rete ridges in lateral extent of the main tumor). Confusion can be made using the term polypoid or nodular to define a cutaneous lesion. The general definition of a polypoid melanoma is simply a polyp with a stalk or peduncle. A skin lesion can be clinically defined as nodular, but if it is a melanoma, it is not necessary a nodular histological type. Mc Govern et al [2]

argue that most polypoid melanomas are of the nodular type, histologically, and divide these into pedunculated and sessile. The tumor is called sessile when more than half of the tumor thickness is above the surrounding skin surface. Knezevic [3] claims that PCM can have all the most frequent morphological forms of histological melanoma types (ALM, LMM, SSM and NM). Reed et al [7] classify PPM into superficially spreading (SSM) and nodular histological type. Nowadays it is clear that a polypoid melanoma is nothing more than a clinical pattern and not a separate histological type of melanoma. In the past, some authors reported PPM as a virulent and more aggressive variant of nodular melanoma with a propensity to metastasize early [1,4,5]. Kiene et al [6] suggest that physicians should “classify pedunculated variants of nodular melanoma as “non-stageable” because the predictive value of the level of invasion does not seem to be comparable with other melanomas. In a review of 2296 patients with malignant melanoma McGovern et al [2] found an incidence of PM by 21.5% and concluded that the poor prognosis of this type of melanoma is owing to the fact that it is typically thick and sometimes ulcerated. Reed et al [7] argue that the prognosis for PPM is determined by its thickness. Although controversial in the past, it now appears that PM is not a separate entity and that the poor prognosis is related to the usually large thickness and ulceration of this form of melanoma and not to the shape of the lesion [2,7-12,13]. Spindle-cell variant of PPM is rarely described in the literature. Our case is a pure spindle-cell variant and it has never been described before. Desmoplastic and spindle-cell melanomas are rare entities and form a continuum; pure desmoplastic melanomas are HMB45 negative whereas nearly 50 % of spindle-cell melanomas show some staining for HMB45. Some authors [14] argue that HMB45+ spindle-cell melanomas have a more aggressive biologic behavior than HMB45-. Our case is strongly positive for HMB45, but in this particular case of a spindle-cell variant of PPM, the follow-up period is too short to conclude anything about its behavior.

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