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# Peripheral stellate telangiectasias: a clinical-dermoscopic clue for diganosing cutaneous melanoma metastases

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## Abstract

**Background:** The clinical and dermoscopic diagnosis of cutaneous melanoma metastases may be challenging especially in patients with unknown primary melanoma.

**Main observations:** We observed repetitive dermoscopic patterns of peripheral stellate telangiectasias in cutaneous melanoma metastases from 3 patients, of whom 2 had an unknown primary melanoma.

**Conclusions:** Stellate telangiectasias surrounding bluish to purple or red nodules with recent onset may represent a clue for cutaneous melanoma metastases. (*J Dermatol Case Rep*. 2012; 6(4): 102-104)

## Introduction

Skin and lymph nodes are the most frequent sites of melanoma metastases, with a reported frequency that varies between 42% to 57%, respectively.[1] Cutaneous melanoma metastases (CMM) represent a major diagnostic challenge when occurring in patients with an unknown primary melanoma. This is because they may mimic a range of benign lesions such as hemangioma, blue nevus, seborrheic keratosis or dermal cyst, which are not routinely excised; this in turn may delay the accurate management of CMMs. Dermoscopy is nowadays an essential part in the diagnosis and the management of skin tumors. However, up to date literature on the dermoscopic variability of CMMS is scarce with only two previous studies published so far.[1,2]

Herein we describe an additional dermoscopic clue that may aid the diagnosis of CMM.

## Case reports

**Case 1** refers to a 79-year-old man who was referred to our skin cancer unit (Italy) because of a biopsy of a supraclavicular lymph node melanoma metastasis. The lymph node was incidentally found during a chest x-ray performed before cholecystectomy some weeks before. The patient presented with a significantly reduced general health condition and complained about a rapidly progressing fatigue, significant weight loss (about 10 kilograms) in the last month and recent headache. Besides the recent surgical intervention of cholecystectomy, there were no other relevant medical histories; in particular there were no past surgical or non-surgical treatments of skin lesions; clinically the lymph-node metastasis appeared as a palpable and infiltrating lymph node mass. No other lymph nodes were palpable. Upon total body skin examination, 6 bluish, dome-shaped nodules

with a smooth surface measuring between 0.5 to 1 cm in diameter, were noted on the chest. According to the patient, the nodules developed within the course of the last two weeks. Dermoscopically, all nodules showed structureless blue-brown or purple-blue areas and prominent, peripherally arranged, linear telangiectasias (Fig. 1A); in one nodule centrally located dotted vessels were additionally observed (Fig. 1B). Moreover, a 2.0 x 1.5 cm large macule with ill-defined borders and different shades of brown suggestive of melanoma was detected on the hair bearing left parietal region of the scalp. According to the patient, the nodules developed within the last two weeks but he was unaware of the duration of the lesion on the scalp. In the light of these data, a diagnosis of metastatic melanoma was suspected. Subsequent PET and CT scan confirmed the suspect by revealing besides cutaneous metastases on the chest, multiple organ metastases of the chest, brain, bone and liver. In the light of these findings and the reduced general health condition of the patient, no biopsies of the CMM and the suspected scalp melanoma were performed. He was referred to the oncologic department for immediate treatment.

**Case 2** refers to a 89-year-old female with Alzheimer disease, who was brought to our skin cancer unit (Italy) because of the recent and progressive development of multiple, up to 60, partially confluent blue nodules and plaques located on her right lower limb. As a relevant clinical history, the patient had undergone radiotherapy for a pigmented lesion (i.e. presumably melanoma but no medical records or histopathologic data were available) located on the right leg about 20 years before. Despite the multiple lesions on the leg, clinical examination revealed additionally a small bluish nodule on the left ala of her nose. Dermoscopically the lesions on the leg revealed structureless steel blue areas, whereas the nodule on her nose showed structureless blue-brown areas surrounded by two prominent linear irregular vessels at the periphery (Fig. 2A). Given the unequivocal diagnosis of widespread CMM and the reduced general health condition, the patient was referred for staging and subsequent best supportive care.

**Case 3** refers to an 89-year-old woman, who sought consultation at our skin lesion clinic (Argentina) because of rapidly growing nodules on her left leg. The nodules were located

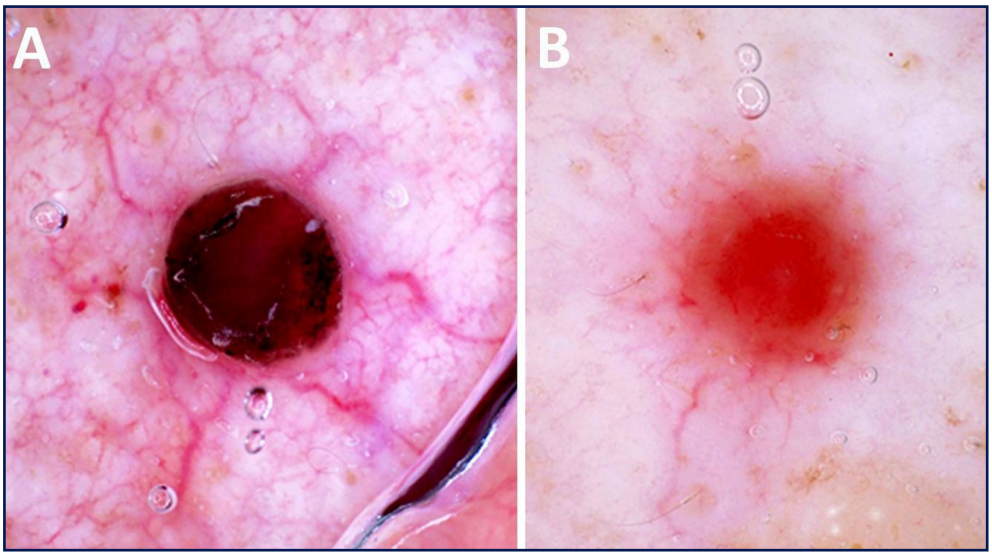


**Figure 1**

*Dermoscopic features of CMM on the chest. 1A: Round structureless areas surrounded by stellate telangiectasias. 1B: additional centrally located dotted vessels.*

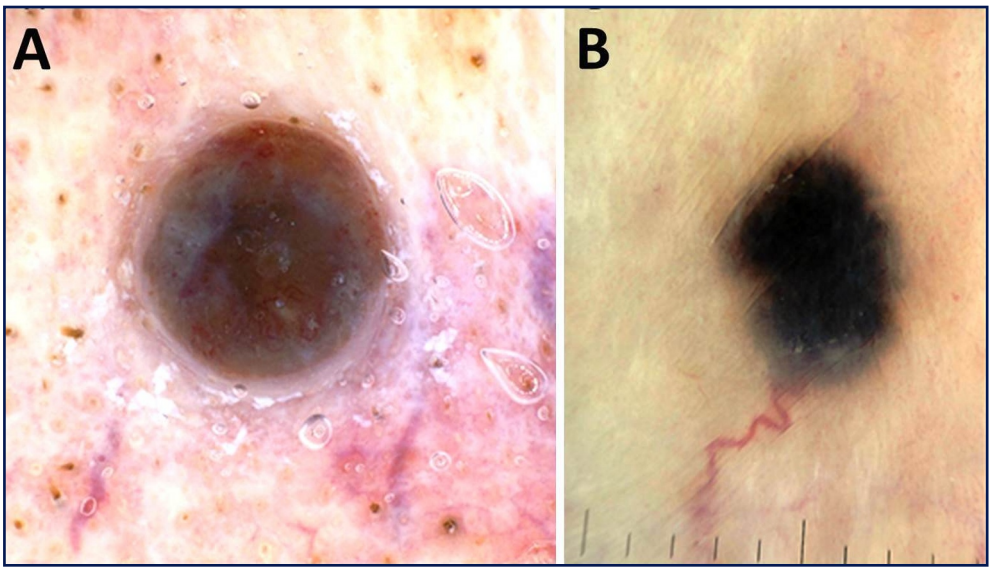


**Figure 2**

*2A: CMM of the nose characterized by structureless blue-brown areas surrounded by two prominent linear irregular vessels at the periphery.*
*2B: a single prominent linear vessel at the periphery of a blue plaque.*

close to the area of a melanoma (1 mm thickness) excised 5 years before. Clinical examination revealed multiple blue nodules of 0.5 and 1 cm in size, dermoscopically characterized by structureless blue areas and linear irregular vessel at the periphery (Fig. 2B). The patient was informed about the suspected diagnosis of CMM but refused any further diagnostic interventions; she was lost for further staging or follow up.

## Discussion

Our observations confirm previous studies identifying dermoscopically structureless blue, purple-brown or pink areas as the most common pattern of CMM.[1,2] Importantly, structureless blue, blue-white and blue-brown areas as typically seen in CMM or fast growing thick primary melanoma, may be also the only dermoscopic features of blue nevi.[3,4]

However, unlike blue nevi, which once developed are highly stable lesions, advanced melanoma and CMM are characterized by rapid growth; this is further supported by our findings, as in all 3 patients CMM developed within the course of few weeks and revealed progressive growth. Consequently, it has become a rule that the diagnosis of a blue nevus should be always confirmed by a "convincing" subjective history of an unchanged, stable lesion.[5]

Additional features that have been described in CMM are a saccular pattern, a pigmentary halo or erythema, peripheral grey dots, patches or streaks and a vascular pattern (i.e. highly polymorphic, often winded or linear vessels) mainly visible within the lesions.[1,2] In our cases, we additionally observed a striking stellate arrangement of telangiectasia at the periphery of the tumor. This observation is compatible with neovascularization, which is a well-documented key process in the development and progression of most tumors including melanoma metastases.

Limitations of our case series are the small number of cases and the fact that none of the lesions was biopsied. However, in all patients clinical data were sufficient to diagnose the lesions as CMM with great confidence.

## Conclusion

Peripheral stellate telangiectasias may represent a clinical-dermoscopic clue for the diagnosis of CMM.

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