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Association between dermoscopic and reflectance confocal microscopy features of cutaneous melanoma with BRAF mutational status.

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ABSTRACT

BACKGROUND: Melanomas harbouring common genetic mutations might share certain morphological features detectable with dermoscopy and reflectance confocal microscopy. BRAF mutational status is crucial for the management of metastatic melanoma. **OBJECTIVES:** To correlate the dermoscopic characteristics of primary cutaneous melanomas with BRAF mutational status. Furthermore, a subset of tumours has also been analysed for the presence of possible confocal features that might be linked with BRAF status. **METHODS:** Retrospectively acquired dermoscopic and confocal images of patients with melanoma in tertiary referral academic centres: Skin Cancer Unit in Reggio Emilia and at the Melanoma Unit in Barcelona. Kruskal-Wallis test, logistic regressions, univariate and multivariate analyses have been performed to find dermoscopic and confocal features significantly correlated with BRAF mutational status. **RESULTS:** Dermoscopically, the presence of irregular peripheral streaks and ulceration were positive predictors of BRAF-mutated melanomas with a statistically significance value, while dotted vessels were more represented in wild-type melanomas. None of the evaluated reflectance confocal microscopy features were correlated with genetic profiling. **CONCLUSIONS:** Ulceration and irregular peripheral streaks represent dermoscopic feature indicative for BRAF-mutated melanoma, while dotted vessels are suggestive for wild-type melanoma. © 2016 European Academy of Dermatology and Venereology. PMID:27790766 DOI:10.1111/jdv.14028