IDS 2015 Abstract Submission

Topic: Confocal microscopy

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BRAFV600 MUTATED AND WILD TYPE MELANOMAS: DERMOSCOPY AND REFLECTANCE CONFOCAL MICROSCOPY CHARACTERIZATION.

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What is your preferred method of presentation?: Oral or Poster

Content: The advent of modern molecular approaches was of crucial importance for the identification of melanoma genetic signatures, opening new horizons in the treatment of metastatic disease with molecular targeted therapies. Similarly the melanoma diagnosis is aided by reflectance confocal microscopy (RCM): a promising technique that allows non-invasive imaging from the skin surface to the upper dermis with quasi-histologic resolution. The most common melanoma mutation involves the gene *BRAF* and it is represented by the *BRAF*V600E, however, V600K, V600R and V600D mutations are also known. Because different genetic aberrations categorize melanoma subtypes with distinct clinical characteristics, it is reasonable to hypothesize that a distinctive molecular signature corresponds to specific morphologic patterns. A comparison between the dermoscopic patterns of *BRAF* p.V600E, *BRAF* p.V600K and wild-type *BRAF* primary melanomas was assessed from a collection of 12 lesions (4 primary melanomas per each *BRAF*V600 mutated status and 4 wt). In 9 cases the RCM images were available and the frequency of the RCM descriptors was examined. The RCM analysis showed that the presence of plump bright cells, collagen bundles and inflammatory cells in the dermis were frequently observed even when dermoscopy showed no regression features. Our study showed that regression phenomena and the associated dermoscopic and RCM descriptors could help the clinician to discriminate between the different *BRAF* mutated *status*, providing key information for patient screening, management and follow-up.

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