**ABSTRACT**

**BACKGROUND:** Spitz nevi are benign melanocytic tumors, sometimes misdiagnosed as malignant melanoma (MM).

**OBJECTIVE:** We sought identification of characteristic in vivo microscopic features of Spitz nevi, their histopathologic correlates, and diagnostic usefulness.

**METHODS:** Forty Spitz nevi were studied by in vivo confocal microscopy and dermatoscopy, evaluating histopathologic correlates, and compared with 40 MMs and 40 Clark nevi.

**RESULTS:** Some histologic aspects characteristic for Spitz nevus diagnosis were correlated with confocal features, comprising some that can be useful for atypical Spitz nevus classification. The most striking features for differentiating Spitz nevi from MMs were the presence of sharp border cut-off, junctional nests, and melanophages.

**LIMITATIONS:** No correlates were found for other aspects, such as Kamino bodies, hyperkeratosis, acanthosis, mitoses, and maturation with depth. The impossibility of exploring deeper aspects hampered an accurate distinction from MMs in some cases.

**CONCLUSION:** Confocal and dermatoscopic examination enabled the identification of different Spitz categories with different histologic substrates.