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**Integration of dermoscopy and reflectance confocal microscopy for distinguishing melanomas from nevi of the breast area.**

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### ABSTRACT

**BACKGROUND:**Nevi of special sites encompass a class of benign lesions characterized by the presence of atypical clinical and histopathologic features that can be difficult to distinguish from melanoma. Dermoscopy and reflectance confocal microscopy may improve the clinical assessment of melanocytic lesions in order to avoid unnecessary excisions. **OBJECTIVES:**The aim of this study was to assess the value of specific dermoscopic and confocal criteria in distinguishing melanomas from nevi of the breast area. **METHODS:**Dermoscopic and confocal images from consecutive patients with at least 1 clinically and/or dermoscopically equivocal melanocytic skin lesion of the breast area were retrospectively evaluated. In this case-control study, only histopathologically-proven melanomas (cases) and nevi (controls) were included. Spearman's coefficients were first calculated to flag significant correlation; then univariate and multivariate logistic regression analysis were performed to assess which factors were independently associated with the histopathological diagnosis. Finally, a mixed dermoscopic/confocal score was created to distinguish nevi from melanomas on the breast area. **RESULTS:**The study population included 55 skin lesions of the breast area, 34 (61.8%) nevi and 21 (38.2%) melanomas. Among dermoscopic criteria, atypical network and irregular pigmentation resulted independently associated with melanoma diagnosis (OR: 11.1; 95%CI 1.0-119.9; P:.048 and OR: 6.5; 95%CI 1.1-37.5; P:.037, respectively). Furthermore, on RCM examination the presence of pagetoid cells was an independent positive predictor for melanoma (OR: 38.5; 95%CI 3.9-379.6; P:.002). The mixed score showed high levels of sensitivity and specificity, 95.2% and 82.4%, respectively, which were higher than dermoscopic and confocal evaluations alone. **CONCLUSION:**The combined use of dermoscopy and confocal microscopy in the triage of pigmented lesions of the breast area may help in increasing the diagnostic accuracy and avoiding unnecessary excisions. This article is protected by copyright. All rights reserved. **KEYWORDS:**breast; dermoscopy; melanoma; nevi of special sites; reflectance confocal microscopy PMID: 29125708 DOI: 10.1111/jdv.14685