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Use of PRAME Immunostaining to Distinguish Melanoma in Situ From Lentigo Senilis

Hailey Olds
gf4979@wayne.edu

Sarah Utz
sarahutz@wayne.edu

Darius Mehregan
dmehregan@wayne.edu

Title: Use of PRAME Immunostaining to Distinguish Melanoma in Situ From Lentigo Senilis

Authors: Hailey Olds, BS[1], Sarah Utz, MD[1], Darius Mehregan, MD[1]

Affiliations: [1]Wayne State University Department of Dermatology, Detroit, MI

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Abstract:

PRAME (PReferentially expressed Antigen in MElanoma) is an antigen that is expressed by malignant cells in melanoma, as well as other cancers such as breast carcinoma, renal cell carcinoma, and leukemia. PRAME immunohistochemistry has proved effective in identifying malignant melanocytes in melanoma lesions, but it is unclear if it may be used to distinguish melanoma from benign melanocytic conditions, such as lentigo senilis. In particular, melanoma in situ may be confused with lentigo senilis clinically and histologically, thus PRAME immunostaining is potentially useful for differentiating these two lesions. We evaluated 31 samples of lentigo senilis, 26 of melanoma in situ, and 17 of sun-damaged skin with PRAME immunostain. We found that there is significantly greater PRAME expression in melanoma in situ compared to both lentigo senilis and sun-damaged skin. Although these benign skin lesions contain some cells that are immunoreactive for PRAME, these cells are sparse compared to the dense PRAME-positive cells in melanoma in situ. This suggests that PRAME immunostaining could be a clinically useful tool for distinguishing melanoma in situ from lentigo senilis. However, it should be combined with other data, such as clinical impression and histology with H&E stain, given the possibility for false positive results.