Original contribution

Neurofibromin protein loss in desmoplastic melanoma subtypes: implicating NF1 allelic loss as a distinct genetic driver?☆

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Summary Loss of the NF1 allele, coding for the protein neurofibromin, and polymorphism in the proto-oncogene RET (RETp) are purportedly common in desmoplastic melanoma (DM). DM is categorized into pure (PDM) and mixed (MDM) subtypes, which differ in prognosis. Most NF1 mutations result in a truncated/absent protein, making immunohistochemical screening for neurofibromin an ideal surrogate for NF1 allelic loss. Using antineurofibromin, our aims were to ascertain the incidence of neurofibromin loss in DM subtypes and to evaluate the relationship with RET, perineural invasion (PNI) and established histopathologic prognosticators. A total of 78 archival samples of DM met criteria for inclusion (54 cases of non-DM serving as controls). Immunohistochemistry was performed for neurofibromin, whereas direct DNA sequencing was used for RETp and BRAF mutation status. Statistical analyses included χ² test as well as Fisher exact test. Neurofibromin loss was more common in DM than non-DM (69% versus 54%; P = .02). In DM, significant differences in neurofibromin loss...