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**Value of micromorphometric criteria of sentinel lymph node metastases in predicting further nonsentinel lymph node metastases in patients with melanoma.**

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**Abstract**

Patients with metastases in the sentinel node (SN) are advised to undergo complete lymph node dissection, although the majority of them will have no further metastatic disease. Some of these patients undergo unnecessary surgery. In this study, we tried to predict the likelihood of further non-SN metastases on the basis of earlier published micromorphometric classifications of SN metastases. Metastases in the SN were re-evaluated on the basis of the microanatomic location of the lesions according to the Dewar's criteria, the S-classification of SN, and tumor burden in accordance with the Rotterdam criteria. The results of these classifications were correlated with the presence of further non-SN metastases. Specimens of 124 positive-SN basins and subsequent complete lymph node dissection were investigated. Further metastases in non-SNs were found in 30 lymph node basins (24.2%). All of the above-mentioned classification systems were significantly correlated with non-SN tumor status. Especially, in patients with SN metastases in subcapsular location, a maximum depth of invasion of less than 0.3 mm (stage I according to the S-classification) or metastases of less than 0.1 mm in diameter had a very low probability of further non-SN metastases (0-5%). The validity of earlier published classifications of SN metastases-based on the micromorphometric criteria in predicting non-SN status was confirmed. Especially, in patients with subcapsular metastases, SI stage metastases or metastases of less than 0.1 mm had a very low risk of further non-SN metastases.