

# Is complete axillary dissection necessary for all patients with positive findings on sentinel lymph node biopsy? Validation of a breast cancer nomogram for predicting the likelihood of a non-sentinel lymph node

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## ABSTRACT

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**Aim and background.** Axillary dissection in patients positive for sentinel lymph nodes is currently under discussion in the literature, since approximately only 50% of such patients has metastases in the remaining lymph nodes. To identify patients at risk for non-sentinel lymph nodes metastases, a nomogram was developed by the Breast Service of the Memorial Sloan-Kettering Cancer Center. The aim of this study was to assess the nomogram's predictive accuracy in a population of Italian breast cancer patients in our hospital.

**Materials and methods.** The system of calculation used as variables prognostic factors of breast cancer: pathologic size, tumor type and nuclear grade, lymphovascular invasion, multifocality, estrogen receptor status, method of detection of the sentinel lymph nodes metastases (frozen section, serial hematoxylin-eosin, routine hematoxylin-eosin, and immunohistochemistry), number of positive and number of negative sentinel lymph nodes.

**Results and conclusions.** To measure the discrimination of the nomogram, a receiver-operating characteristic curve was construed, and the area under the curve was calculated. However, the area under the curve was 0.72, a very high value considering that the limit of acceptability is 0.70-0.80. The calculation system developed by the Memorial Sloan-Kettering Cancer Center provides a predictive value on the histopathologic state of sentinel lymph nodes.

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**Key words:** breast cancer, intraoperative pathologic evaluation, sentinel lymph node.

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Received June 27, 2008;  
accepted September 25, 2008.