Medical Xpress

Poorer breast cancer survival associated with micrometastases in axillary lymph nodes

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Metastases that were 2 millimeters or less in diameter ("micrometastases") in axillary lymph nodes detected on examination of a single section of the lymph nodes were associated with poorer disease-free and overall survival in breast cancer patients, according to a new study published online February 26 in the *Journal of the National Cancer Institute*.

The prognostic relevance of isolated tumor cells and micrometastases in lymph nodes in breast cancer patients has become a major issue since the introduction of the sentinel lymph node procedure. Recently, patients with minimal lymph node involvement detected after a sentinel node procedure in the Dutch MIRROR study were found to have a reduced disease-free survival.

To better understand this issue, Maaike de Boer, M.D., and Vivianne C.G. Tjan-Heijnen, M.D., Ph.D., Division of Medical Oncology, at Maastricht University Medical Centre, the Netherlands, and colleagues performed a systematic review of literature published between 1977 and 2008 on the association of isolated tumor cells and micrometastases in axillary lymph nodes and survival. A total of 58 articles were included and divided into three categories according to the methods used to detect the small metastases: cohort studies with single-section pathological examination of axillary lymph nodes; occult metastases studies with retrospective examination of negative lymph nodes by step sectioning and/or immunohistochemistry; and sentinel lymph node biopsy studies with intensified work-up of the sentinel but not of the non-sentinel

lymph nodes.

The presence (vs. the absence) of metastases that were 2 mm or less in diameter was associated with poorer overall survival among cohort studies and with poorer overall survival and poorer disease-free survival among occult metastases studies.

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