

Publication

Accuracy of frozen section of sentinel lymph nodes : a prospective analysis of 659 breast cancer patients of the Swiss multicenter study

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OBJECTIVE: To assess the accuracy of sentinel lymph node (SLN) frozen section in a prospective multicenter study of early-stage breast cancer patients. **SUMMARY BACKGROUND DATA:** The decision to perform an immediate completion axillary node dissection (ALND) is based on results of SLN frozen section. However, SLN frozen sections are not routinely performed in all centers. Moreover, the accuracy of SLN frozen section remains a matter of great debate. **METHODS:** Prospective multicenter trial analyzing 659 early stage breast cancer patients (pT1 and pT2 = 3 cm, cN0) enrolled between January 2000 and December 2003. SLN were intraoperatively examined by frozen section. Final histopathology consisted in performing step sectioning as well as staining with H;E and immunohistochemistry. **RESULTS:** SLN were identified in 98.3% (648/659) of all patients. The accuracy of frozen section was 90.1% (584/648), the sensitivity for SLN macro-metastases 98% (142/145), and the specificity 100%. A total of 47 patients with SLN micro-metastases (n=36) or isolated tumor cells (n=11) underwent a delayed completion ALND. In 96% (45/47) of these patients the ALND specimens were free of macro-metastases. **CONCLUSIONS:** SLN frozen section provides highly accurate information regarding identification of SLN macro-metastases, a delayed completion ALND can be avoided in 98% of these patients. More importantly, in the present investigation the vast majority (96%) of patients with SLN micro-metastases or isolated tumor cells undergoing delayed completion ALND did not benefit from the second operation as ALND specimens were free of macro-metastases. We strongly recommend the routine use of SLN frozen section in early stage breast cancer patients.

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