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## A nationwide pathology study on surgical margins and excision volumes after breast-conserving surgery: There is still much to be gained

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**Aim:** The current study aims to assess margin status in relation to the amount of healthy breast tissue resected in breast-conserving surgery (BCS) on a nationwide scale.

**Methods:** Using PALGA (a nationwide network and registry of histology and cytopathology in the Netherlands), all patients who underwent BCS for primary invasive carcinoma in 2012-13 was selected (10,058 excerpts). 9276 pathology excerpts were analyzed for a range of criteria including oncological margin status and distance to closest margin, specimen weight/volume, greatest tumor diameter, and with or without localization method. Calculated resection ratios (CRR) were assessed to determine excess healthy breast tissue resection.

**Results:** Margins for invasive carcinoma and *in situ* carcinoma combined were tumor-involved in 498 (5.4%) and focally involved in 1021 cases (11.0%) of cases. Unsatisfactory resections including (focally) involved margins and margins  $\leq 1$  mm were reported in 33.8% of patients. The median lumpectomy volume was 46 cc (range 1-807 cc; SD 49.18) and median CRR 2.32 (range 0.10-104.17; SD 3.23), indicating the excision of 2.3 the optimal resection volume.

**Conclusion:** The unacceptable rate of tumor-involved margins as well as margins  $\leq 1$  mm in one third of all patients is also achieved at the expense of healthy breast tissue resection, which may carry the drawback of high rates of cosmetic failure. These data clearly suggest the need for improvement in current breast conserving surgical procedures to decrease tumor-involved margin rates while reducing the amount of healthy breast tissue resected.

### Biography

M P Van Den Tol has completed her surgical training in 2002 and her training for oncological surgeon in 2004. She completed her Ph.D at the Erasmus University Rotterdam, The Netherlands in 2001. From 2004 till now she is working as a oncological surgeon and researcher at the VU Medical Center, Amsterdam, The Netherlands. She here provides clinical care for cancer patients, which she combines with training PhD candidates in research projects on surgical oncology and imaging. She has published more than 50 papers in reputed journals.

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