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**Regional and inter-hospital variations in the use of breast-conserving surgery in the Netherlands between 1990–2000**

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**Background:** Breast-conserving surgery (BCS) is generally considered to be a safe treatment option for the majority of patients with T1 breast tumours (i.e.,  $\leq 2$  cm) and a substantial part of those with T2 tumours (i.e., 2–5 cm).

**Material and Methods:** We used data of two cancer registries to study the trends in the use of BCS in 10,514 patients with T1 (i.e.,  $\leq 2.0$  cm) and 6961 with T2 (i.e., 2.1–5.0 cm) breast cancer, treated in general hospitals in the southern and eastern part of the Netherlands in the period 1990–2000.

**Results:** Between 1990 and 2000, the proportion of patients undergoing BCS in the eastern and southern part of the country was 51% and 66% for pT1 cancers and 25% and 37% for pT2 cancers, respectively. In both regions a significant increase was observed in the use of BCS for patients of 70 years or older with T1-tumours; in the early nineties around 30% underwent BCS, whereas in 2000 64% underwent BCS in the southern part of the country and 46% of those in the eastern part. A decrease in the use of BCS was observed in patients <50 years of age, especially for those with T1-tumours in the eastern part of the country (from 71% to 57%). Only in the eastern part of the Netherlands, the use of BCS increased from 50% to 60% for patients of 50 to 70 years (screened age group) of age with T1 breast cancer and from 20% to more than 35% for those with T2 breast cancer. Inter-hospital variations within regions appeared to be larger than the differences between regions. In the period 1996–2000 the use of BCS for patients with T1 tumours varied between 42% (95% CI: 36–48) and 82% (95% CI: 77–86) in the hospitals in the southern part and between 43% (95% CI: 37–49) and 61% (53–68) in the eastern part of the Netherlands. For T2 tumours these proportions were 16% (95% CI: 11–21) versus 63% (95% CI: 56–71) and 24% (95% CI: 18–29) versus 38% (95% CI: 29–46), respectively.

**Conclusions:** More than 20 years after the introduction of BCS in the Netherlands, large variations still exist between hospitals and regions in the use of this treatment. Differences can be partly explained by the patient's wish, specialist's belief in the treatment and favourable or unfavourable experiences with local recurrence after BCS. More specific guidelines and regular evaluation of adherence to these guidelines and the local recurrence rate in each hospital are needed to attain acceptable variations in the surgical treatment of breast cancer.

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**Breast cancer surgery in ambulatory setting**

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**Background:** Ambulatory surgery for breast cancer was introduced over the last two decades. The results were presented in uncontrolled studies using selected populations, or were based on retrospective analyses. The present study evaluates in an unselected group of patients feasibility, effectiveness, safety and acceptability from the patients' perspective for breast cancer surgery in ambulatory setting.

**Material and Methods:** From October 2001 until September 2002 a prospective cohort study was performed in patients undergoing all types of surgery for primary breast cancer. Patients were included in a patient centred breast cancer care programme in which the patient was given the final decision on when to go home postoperatively.

**Results:** One hundred twenty-two patients with a mean age of 56 years (sd 11.5, 31–89) underwent 174 operations. One hundred forty-four operations were planned in ambulatory setting, of which 64% succeeded, 31% went home the next morning and 5% stayed 3 days or more. Out of 174 operations 98 were lumpectomies with or without a sentinel node biopsy (SN) 64/98 (65%) went home the day of operation and 30/98 (31%) the next morning. Axillary lymph node dissection with or without a lumpectomy was performed in 28 patients 11/28 (39%) went home the day of surgery and 12/28 (43%) the next morning. Of the 17 patients who underwent a simple mastectomy with or without a SN

10/17 (59%) went home the day of surgery 5/17 (29%) the next morning. Twenty-seven patients had a modified radical mastectomy 7/27 (26%) went home the day of surgery and 11/27 (41%) the next morning. Four patients underwent a bilateral operation and stayed more than 1 night. The mean duration of hospitalisation was 1.8 days per operation. One patient regretted her choice of going home the evening of operation. No complications were recorded related to a shorter hospital stay. Satisfaction score for the total surgical treatment was rated at 8 or higher by 81% of the patients (4% scored 5 or lower).

**Conclusions:** Breast cancer surgery in ambulatory setting together with a patient centred breast cancer care program is feasible in the whole range of surgical procedures for primary breast cancer. Such a programme is effective, as 86% of the patients returned home within 24 hours after the operation and safe as no increase of complications related to a shorter hospital stay was observed. Patients appreciated the total surgical care in the context of the program.

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**Aesthetic evaluation of conservative breast cancer treatment: new scales of agreement or disagreement?**

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**Background:** Subjective assessment of aesthetic result of breast cancer conservative treatment, in spite of being frequently used, has several pitfalls. In this study we tried to ascertain the agreement in the subjective appreciation of breast cancer conservative treatment, assessing different types of classification using the same scale and different distributions.

**Material and Methods:** Pictures were taken from 55 women submitted to conservative breast cancer treatment and 5 controls with a digital camera in four positions (front arms up and down, left and right side arms up). Previously a score (0–15) was established and the final sum was fitted into one of four classes (bad <3, medium  $\geq 3$  <8, good  $\geq 8$  <13 and excellent  $\geq 13$ ). In a first round the seven observers gave each case a final score subsequently converted into one of the four classes. In a second round, the seven observers directly classified each case in one of the four classes. The individual agreement between the score classification converted in four classes and the direct classification in four groups was evaluated by the kappa statistic (k), for each of the seven observers. In order to improve the agreement and presuming that the intermediate classes were more difficult to discriminate, we recoded the two previous four classes classifications in three groups, merging the "medium" and "good" classes together and recalculated the kappa statistic (k) for each observer. A last approach was to select new boundaries between classes in order to minimise the difference between the score and the direct classifications. This classification used the difference measured by counting and weighting the mismatched results. Once again the kappa statistic (k) was calculated for the agreement between the score classification and the direct classification.

**Results:** The agreement between the score classification and the direct classification in four classes for each of the seven observers was very low, k coefficients between 0.26 and 0.59. Calculating the k coefficients for the three classes the values ranged from 0.38 to 0.53. Finally, for the optimized classes again the agreement remained very low, k coefficients between 0.37 and 0.61 for the four classes and between 0.38 and 0.54 for the three classes.

**Conclusions:** We found poor agreement between observers, regardless of the classification used. Even when optimised classes were used, the agreement between observers did not improve.

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**Breast cancer and mammography**

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**Background:** Breast cancer is one of the life threatening problem in women's life. One of its early diagnostic method is mammography which determine masses even less than 0.5 cm in diameter. In order to encourage women to perform mammography, we have to change their attitude and behavioral trends, so their knowledge about health believes is an important issue to be considered.

**Objective:** to determine Health believes of women about mammography.

**Material and Method:** This was a comparative cross sectional study. Information gathering means were questionnaire.