cancer treatment and may be used to improve quality of care of this patient population.

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Cardiovascular Morbidity and Mortality in Patients Treated for Ductal Carcinoma in Situ of the Breast

N.B. Boekel[1], M. Schaapveld[1], J.A. Gietema[2], E.J.T. Rutgers[3], M.I.M. Versteegh[4], O. Visser[5], B.M.P. Aleman[6], F.E. van Leeuwen[1]. *[1]Netherlands Cancer Institute, Psychosocial Research and Epidemiology, Amsterdam, The Netherlands; [2]University Medical Center Groningen, Medical Oncology, Groningen, The Netherlands; [3]Netherlands Cancer Institute, Surgery, Amsterdam, The Netherlands; [4]Leiden University Medical Center, Steering Committee Cardiac Interventions Netherlands (BHN), Leiden, The Netherlands; [5]Comprehensive Cancer Center, Research, Amsterdam, The Netherlands; [6]Netherlands Cancer Institute, Radiation Oncology, Amsterdam, The Netherlands*

Several studies have shown that breast cancer (BC) radiotherapy (RT) may increase the risk of cardiovascular disease (CVD) after ten or more years. Yet, most reports are based on older treatment regimens. It is unknown whether contemporary RT and chemotherapy are associated with excess CVD risk. Therefore, we have set up two large population-based cohort studies of patients diagnosed with ductal carcinoma in situ of the breast (DCIS) and invasive BC between 1989–2004 (n = 11,524 and 94,151, respectively).

Since the introduction of the national BC screening program in the Netherlands (NL) in 1990, the incidence of DCIS has increased substantially. However, it is still unclear what proportion of these tumors would have progressed into invasive BC if left untreated. Because of potential overdiagnosis and thus overtreatment, therapy-related late health effects may be of even greater importance than late effects of invasive BC treatment.

Data on all incident DCIS cases in the NL between 1989–2004 were obtained from the Netherlands Cancer Registry (n = 11,524). In total, 26% of the patients were treated with RT, presumed to consist of tangential breast field RT in all cases. Cause of death was acquired through Statistics Netherlands. Cardiovascular morbidity data were obtained through linkages with the Hospital Discharge Registry (LMR) and the Cardiac Intervention Registry (BHN).

After a median follow-up of 9.8 years in the DCIS cohort, 1,940 deaths were observed, of which 26% were due to CVD. Compared to the general population, we observed a smaller risk of death, with a standardized mortality ratio of 0.93 (95% CI 0.89–0.97) for all causes and 0.77 (95% CI 0.71–0.84) for CVD death.

During follow-up, 936 patients were admitted to the hospital for CVD, with angina and arrhythmia as most frequent diagnosis (275 and 246, respectively). 377 patients had had an intervention for CVD (mostly angioplasty or bypass surgery). Left vs right-sided RT did not seem to increase the risk of hospital admittance or intervention for CVD; in fact unexpectedly reduced risks were found (HR = 0.70 95% CI 0.49–0.98 and HR = 0.70 95% CI 0.46–1.07, respectively).

In conclusion, DCIS patients seem to be healthier than the general population. Possible explanations are the adoption of a healthier lifestyle after BC diagnosis and/or conflicting risk profiles between BC and CVD. Moreover, with the current follow-up duration, patients treated with RT for left-sided DCIS do not have an increased CVD-risk.

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Breast Cancer Management and Outcome According to Surgeon's Affiliation – A Population-based Comparison Adjusted for Patient's Selection Bias

F. Taban[1], E. Rapiti[2], G. Fioretta[2], Y. Wespi[1], D. Weintraub[1], A. Hugli[1], H. Schubert[2], G. Vlastos[3], M. Castiglione[3], C. Bouchardy[2]. *[1]Private Geneva Breast Cancer Network, SONGe, Geneva, Switzerland; [2]University of Geneva, Geneva Cancer Registry, Geneva, Switzerland; [3]Geneva University Hospitals, Unit of Senology, Geneva, Switzerland*

Background: Studies have reported that Breast Cancer Units (BCU) could increase quality of care but none has evaluated the efficacy of alternative options such as Breast Cancer Network (BCN). This is the aim of our study.

Patients and Methods: Using data from the Geneva Cancer Registry, we included all 1,404 women diagnosed with breast cancer (BC) in 2000–2005 operated in the public BCU or in the private BCN. We compared quality indicators of care by logistic regression and evaluated the effect of surgeon's affiliation on BC specific mortality by Cox model after adjustment for the probability for each patient of having been treated by one of the 2 groups.

Results: Care quality scores were high in both groups. For in situ cancer, reporting of tumor size and grading was more frequent among women treated in the BCU than in BCN (adjusted odds ratio [OR]: 2.97, 95% confidence interval [CI]: 1.52–5.80), while the reverse was observed for breast conserving surgery (BCS) for small tumors (OR: 0.28, 95% CI: 0.09–0.88). For invasive cancer, histological assessment before surgery was less frequent in the BCU (OR: 0.44, 95% CI: 0.28–0.69), as was axillary lymph node dissection when indicated (OR: 0.36, 95% CI: 0.15–0.84), while radiation therapy after BCS was more frequently performed (OR: 2.54, 95% CI: 1.35–4.80). The surgeon affiliation had no significant effect on BC specific mortality (adjusted hazard ratio for BCN vs. BCU: 0.81, 95% CI: 0.47–1.37).

Conclusion: This study suggests that BCN could be an alternative to BCU with both structures presenting high quality indicators of BC care and similar BC specific mortality.

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Higher Risk of Locoregional Recurrences for Women Treated with Mastectomy Compared to Breast-Conserving Therapy in Postmenopausal Women with Early Breast Cancer Treated on the TEAM Trial

M. van Hezewijk[1], E.T.M. Hille[2], H. Putter[3], D. Rea[4], A. Hasenburg[5], C. Markopoulos[6], C. Seynaeve[7], C.J.H. van de Velde[2], S.E. Jones[8], TEAM Study Group[2]. *[1]Leiden University Medical Center, Department of Radiation Oncology, Leiden, The Netherlands; [2]Leiden University Medical Center, Department of Surgery, Leiden, The Netherlands; [3]Leiden University Medical Center, Department of Medical Statistics, Leiden, The Netherlands; [4]Universtiy of Birmingham, Department of Medical Oncology, Birmingham, United Kingdom; [5]Unversity Hospital Freiburg, Department of Gynaecology, Freiburg, Germany; [6]Athens University Medical School, Department of Surgery, Athens, Greece; [7]Erasmus MC Daniel Den Hoed, Department of Medical Oncology, Rotterdam, The Netherlands; [8]US Oncology Research, Medical Director, Houston TX, USA*

Background: The TEAM (Tamoxifen Exemestane Adjuvant Multinational) trial is a multinational study investigating the efficacy and safety of five years of adjuvant endocrine therapy consisting of either exemestane (E) or the sequence of tamoxifen followed by E (T—E) in postmenopausal hormone-sensitive early breast cancer. As the five-year results showed no difference in outcome between both treatment arms, the present analyses explored the association between locoregional therapy and locoregional recurrence (LRR).

Methods: Between 2001 and January 2006, 9.779 patients were randomised to E or T—E for five years after completion of locoregional therapy with or without adjuvant chemotherapy based on local practices. All data on treatment and follow-up data were collected and analysed at the Central Data Centre in Leiden. For the present analyses we excluded 199 patients not having undergone surgery or with unknown data on radiotherapy, tumour or nodal stage.

Results: After a median follow-up of 5.2 years, 275 LRRs occurred (2.9%) among 9.580 patients (134 in 4.805 E; 141 in 4.775 T—E). Of these LRRs, 129 were local recurrences only (ipsilateral breast or chest wall), 67 were regional recurrences only (axillary or supraclavicular lymph nodes), 14 were both local and regional recurrences and of 65 LRRs the site was unknown. The 5-years cumulative incidence of LRR was 4.0% (95% CI 3.3%-4.9%) for mastectomy without radiotherapy (MAST-RxT), 3.2% (95% CI 2.4%-4.2%) for mastectomy plus radiotherapy (MAST+RxT) and 1.9% (95% CI 1.5%-2.3%) after breast-conserving therapy plus radiotherapy (BCS+RxT); the hazard ratio (HR) for LRR was respectively 2.00 (95% CI 1.52–2.64) for MAST-RxT and 1.59 (95% CI 1.14–2.21) for MAST+RxT compared to BCS+RxT. After adjustment for country, assigned endocrine therapy, tumour size, nodal stage, grade, year of surgery, axillary dissection, age at diagnosis, progesterone receptor status, delay in start endocrine therapy and chemotherapy, the HR for LRR remained significantly higher for MAST-RxT (HR 1.53; 95% CI 1.10–2.12), but not for MAST+RxT (HR 0.82; 95% CI 0.52–1.28). The difference was present in local recurrences only as well as in regional recurrences only and it also remained in patients with tumours of less than 3 cm.

Conclusions: This explorative analysis in the TEAM study showed that the risk of LRR was higher after mastectomy (without radiotherapy) than after breast-conserving therapy (plus radiotherapy), even after adjustment for prognostic factors.