status, presence of positive lymph nodes, tumor grade, and, if applicable, time since treatment, ability to continue working, type of treatment (IORT or EBRT) or radiation tolerance.

Conclusions: Allowing patients to choose between two non-equivalent therapeutic options is common practice in breast cancer treatment. This study shows that some patients would choose to consider radiation treatment that is both experimental and less efficacious at local disease control, if it meets certain extra-therapeutic goals. Thus, it may be appropriate to offer additional choices in radiation.

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Sentinel node micrometastases in breast cancer do not affect prognosis: a population-based study

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Background: Sentinel node biopsy (SNB) for axillary staging in breast cancer allows the application of more extensive pathologic examination techniques. Micrometastases are being detected more often however coinciding with stage migration. Besides assessing the prognostic relevance of micrometastases and the need for administering adjuvant systemic and regional therapies, there still seems to be room for improvement. In a population based analysis we compared survival of patients with sentinel node micrometastases with those with node-negative and node-positive disease in the era after introduction of SNB.

Methods: Data from the population based Eindhoven Cancer Registry were used on all (n = 6803) women who underwent SNB for invasive breast cancer in the South-East Region of The Netherlands in the period 1996–2006.

Results: In 451 patients (6.6%) a sentinel node micrometastasis (pN_{1mi}) was detected and in 126 patients (1.9%) isolated tumor cells (pN_{itc}). Micrometastases or isolated tumor cells in the SNB did not convey any significant survival difference compared with node-negative disease. After adjustment for age, pT and grade, still no survival difference emerged (pN_{1mi}: HR 0.9 (95% CI, 0.6−1.3) and pN_{itc}: (HR 0.4 (95% CI, 0.14−1.3)) and neither was the case after additional adjustment for adjuvant systemic therapy.

Conclusion: Our practice based study showed that the presence of sentinel node micrometastases in breast cancer patients has hardly any impact on breast cancer overall survival during the first years after diagnosis.

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Health-related quality of life in patients with early stage breast cancer treated with breast conserving surgery and radiotherapy

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Background: Patient, tumour and adjuvant treatment factors can influence health-related quality of life (HRQoL). Aim was to study the impact of these factors on HRQoL in a cohort of women with early stage breast cancer treated with breast conserving therapy (BCT).

Material and Methods: Included cases were consecutive disease-free female patients treated for invasive breast cancer (stage I-III) with BCT, at the University Medical Center Groningen from 2005–2008. After completion of irradiation, HRQoL was assessed by questionnaires (EORTC QLQ-C30 and EORTC QLQ-BR23). Evaluated subscales were global health status (GHS), emotional functioning (EF), body image (BI) and sexual functioning (SF). Scores ranged from 0% to 100% and higher scores represent better HRQoL. Data were compared to a reference group [1]. Multiple linear regression analyses with Z-transformation were performed to assess the impact of patient, tumour and staging characteristics, adjuvant treatment modalities and time since local treatment on HRQoL.

Results: Questionnaires of 333 patients were available (90.2% response), with median follow-up of 32 (Interquartile range [ICR] 28−41) months. Mean age was 57.5 (Standard deviation [SD] 10.7) years at diagnosis. All subscales, except for sexual functioning, had relatively high scores and were slightly higher than reference scores, with median GHS of 83 (ICR 75–100), EF 92 (ICR 75–100), BI 100 (ICR 92–100) and SF 33 (ICR 0−33), respectively.

Regression analyses showed that high comorbidity lowered GHS with 6.5% (95% confidence interval [95% CI] 1, 12). Younger patients had more emotional problems (3%; 95% CI 1, 5) and issues with body image (2%; 95% CI 1, 4), but less with sexual functioning (−6%; 95% CI −9, −4) than older patients, in a 10 years age difference subscale. Furthermore, BI was reduced by 6% (95% CI 2, 9) in tumours >2 cm.

Conclusions: In our cohort of disease-free early stage breast cancer survivors, treated with BCT, HRQoL was excellent, except for sexual functioning. Younger women had more problems with emotions and body image, although fewer sexual problems than elderly women. These findings stress the importance to address these issues during follow-up.

References

[1] Janz NK, Mujahid M, Lantz PM, Fagerlin A, Salem B, Morrow M, Deapen D, Katz SJ: Population-based study of the relationship of treatment and sociodemographics on quality of life for early stage breast cancer. Qual Life Res 2005;14:1467–1479.

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EORTC Radiation Oncology Group survey of current technological clinical practice in breast radiotherapy

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Background: The purpose of this survey was to determine the current technological clinical practice of radiation therapy of the breast in Europe.

Materials and Methods: A survey was conducted between August 2008 and January 2009 on behalf of the Breast Working Party within the EORTC Radiation Oncology Group. The questionnaire comprised 32 questions on 4 main topics: fractionation schedules, treatment planning methods, volume definitions and position verification procedures.

Results: Sixty-eight institutions out of 16 countries responded (a response rate of 47%). The standard fraction dose was generally 2 Gy for both breast and boost treatment, although a 2.67 Gy boost fraction dose is routinely given in the United Kingdom. A simultaneously integrated boost fractionation is implemented in 23% of the institutions and is the standard choice of fractionation in a third of these institutions. The main boost modality was electrons in 55%, photons in 47% and brachytherapy in 3% of the institutions (equal use of photon and electron irradiation in 5% of the institutions). All institutions used CT based treatment planning. Wide variations are seen in the definition of the breast and boost target volumes, with margins around the resection cavity ranging from 0−30 mm. Inverse planned IMRT is available in 27% and breath-hold techniques in 19% of the institutions. The number of patients treated with IMRT and breath-hold varied per institution. Electronic portal imaging for patient set-up is used by 92% of the institutions.

Conclusions: This survey has established precise details of radiotherapy techniques currently implemented for breast irradiation in Europe.

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Definitive radiotherapy in non-responded breast cancer patients after neoadjuvant chemotherapy

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Background: Patients with locally advanced breast cancer who respond poorly to initial neoadjuvant chemotherapy remain a therapeutic challenge. Results of radiotherapy in over two hundred not operated patients after neoadjuvant chemotherapy are presented in this report.