129 women who underwent WLE required one or more further therapeutic operation. For women with BDP < 400 mm there was no significant difference in the number requiring more than one operation between women with <1000ml and ⩾1000ml breasts (29% and 28% respectively). Of those with BDP ⩾ 400 mm, 68% of women with breast volume <1000ml required one or more further operations compared to 40% of those with breast volume ⩾1000ml. This difference just fails to reach statistical significance (p = 0.06).

Conclusion: The combination of breast volume assessment and bi-dimensional measurement of DCIS on mammography is a useful predictor of successful therapeutic surgery.

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The triple negative profile dilemma and its clinical outcome in early breast cancer

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Background: Gene expression studies have consistently identified several breast cancer subtypes including the basal-like (BBC). The BBC subtype is associated with a poor prognosis and in the majority of cases also with negativity of ER, PgR and HER-2 receptors. Therefore, the so-called triple negative breast cancer phenotype is frequently used as a surrogate for the BBC subtype.

Patients and Methods: We performed a retrospective analysis of 323 patients with primary early breast cancer treated at the Jules Bordet Institute during the year of 2001 for whom follow up data was available. Data from histological features, immunohistochemical (IHC) findings for HER-2, estrogen (ER), and progesterone (PgR) receptors, and clinical outcome were collected. The clinical outcome of the patients with triple negative breast cancer was compared to the rest of the population.

Results: From the 323 patients selected (median age 57 years (range 28–96 years), 66.2% postmenopausal and 59.1% node negative)), 23 patients (7.1%) were classified as triple negative breast cancer after central pathology review. With a median follow up period of 43 months, the triple negative subgroup had a significantly worse disease free interval (DFI) (HR = 3.01; CI 95% 1.44–6.53, p = 0.01). Using a backward selection of variables in multivariate analysis for DFI, triple negative status remains a significant variable (HR = 3.82; CI 95% 1.72–8.48, p = 0.001) together with node positive (HR = 3.02; CI 95% 1.57–5.81, p = 0.001) and adjuvant chemotherapy (HR = 3.05; CI 95% 1.32–7.02, p = 0.01).

Conclusions: Triple negative status is associated with a poor outcome in early BC. Tailored therapeutic approaches associating chemotherapy and biological agents are warranted for this particular subgroup of patients.

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Reproducibility and validity of the Claus-Extended Formula in a British cohort of women with a family history of breast cancer

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Background. Risk estimation in breast cancer families in clinical practice is often performed using the Claus Tables. Previously, we constructed a new risk estimation method especially for clinical practice: the Claus-Extended Formula [1]. This formula uses the Claus Tables (CT) and information on the presence of bilateral breast cancer (BBC), ovarian cancer (OC), and multiple (more than 2) breast cancer cases (MC) in the family and is formulated as follows: 0.08 + 0.40*CT + 0.07*OC + 0.08*BBC + 0.07*MC. It was constructed using a Dutch cohort of breast cancer families. Correlations and agreements between the Claus-Extended Formula and the Claus Model, the Claus Tables, and the Jonker Model were satisfying.

Aim. The aim of this study was to validate the Claus-Extended Formula using a British cohort of families with breast and/or ovarian cancer.

Methods. We analysed family histories of 2156 counselees selected from a British Family History Clinic. We estimated lifetime risks of breast cancer using the Claus Model, the Jonker Model, the Claus Tables and the Claus-Extended Formula and considered correlations and agreements between these methods to evaluate the reproducibility of the Claus-Extended Formula. Furthermore, we calibrated the Formula in order to evaluate whether the Formula estimates the risks accurately in this other cohort.

Results. The British counselees had on average 1.7 breast cancer cases per family (SD 0.8; range 0–6). Spearman correlations between the Claus-Extended Formula and the Jonker Model, the Claus Model and the Claus Tables were 0.768, 0.679, and 0.770, respectively. Agreements were 73%, 33%, and 63%, respectively. The calibration of the formula showed that no clinical relevant differences could be found between the lifetime risks estimated by the Claus-Extended Formula and by the Jonker model.

Conclusion. We found that the Claus-Extended Formula provides accurate lifetime risks of breast cancer, based on estimates by the Claus model and Jonker model. The Formula is easy applicable in clinical practice. Therefore, we conclude that the Claus-Extended Formula is a valid risk estimation method for clinical practice, both inside and outside the Netherlands.

References

[1] Van Asperen et al. Cancer Epidemiol Biomark Prev 2004; 13(1): 87–93.

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Recursive partitioning analysis in breast cancer patients treated by adjuvant whole breast radiotherapy followed by external beam boost or brachytherapy boost: prognostic groups in 1485 patients

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Aim: To find prognostic parameters for local failure (LF), disease free survival (DFS) and distant metastasis-free survival (MFS) derived from recursive partitioning analyses (RPA).

Patients and Method: From 1485 patients referred between 1984 and 1997 with pathologic T1–2 N0–1 breast cancer, data were analyzed. After tumorectomy, patients underwent whole breast radiotherapy and a boost either by external beams or by interstitial high dose-rate brachytherapy. Age, T-stage, grading, the number of positive axillary nodes, the ratio between the number of positive axillary nodes and the number of excised axillary nodes (n-ratio), tumor location (med/lat), the estrogen- and progesteron-receptor status (ER, PR), menopausal status, systemic therapy and the presence of surgical marker clips were included in the analyses. Cut points defining prognostic groups were estimated. For each prognostic group the relative hazard ratio (RHR) was estimated.

Results: 1238 out of 1486 patients could be used for RPA. For *LF* there were three prognostic groups. Age was the most important prognostic parameter followed by ER status and n-ratio. For *DFS*, n-ratio was the most significant factor with a cut point at 21%, followed by age. For *MFS* 4 risk groups were defined, where again the n-ratio was the most significant prognostic parameter followed by T-stage.

Conclusions: The most important factors in defining risk groups were age and node ratio (n-ratio). Whenever the n-ratio was included in the fit the number of positive nodes was not significant. For LF age was most important (with ER, n-ratio, and location also relevant), while for DFS n-ratio was most important (with age, PR/ER, and stage also relevant). For MFS n-ratio was most important (with stage, ER, and location also relevant, but not age). It is striking that high risk for DFS and MFS is defined by node ratio ⩾ 0.21, which corresponds to ⩾ 4 positive nodes in a full level I-II dissection, while the usual measure of risk, number of positive nodes, was insignificant whenever the node ratio was included in the fit.

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Outcome of invasive lobular carcinoma: the experience of the European Institute of Oncology

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Invasive lobular carcinoma of the breast (ILC) is the second most common breast cancer after the invasive ductal carcinoma (IDC), and comprises approximately 10% of all breast cancers cases, ranging from 5 to 15%. Its incidence, as well as the lobular carcinoma in situ (LCIS), is increasing, predominantly in postmenopausal women. The objective of this study was to review all cases of ILC treated at the European Institute of Oncology (EIO) and compare the outcomes with those described on the medical literature. Between January 1996 until December 2003, 810 patients diagnosed with ILC were treated at the EIO. Conservative treatment was