

to the breast and the axillary, supraclavicular and internal mammary fields. Ipsilateral access was established ten years later. The other patient had a mastectomy and axillary dissection with no involved nodes of 23 resected, and no adjuvant chemotherapy or radiotherapy. An autogenous access was constructed in the ipsilateral arm after eleven years. Both patients had exhausted the veins available for access construction in the contralateral arm. Pre-operative examination showed patent veins appropriate for autogenous access construction in the ipsilateral arms. Neither patient developed significant lymphedema at one and five years respectively after access construction with cannulation for dialysis three times a week.

Conclusions: The accepted recommendations for lymphedema prevention may exaggerate the extent of risk attributable to interventions in the ipsilateral arm. A salutary benefit of the recommendations in these patients may have been the preservation of venous vasculature due to the avoidance of ipsilateral venipuncture. As a result of our experience a third patient has been scheduled for ipsilateral autogenous access construction, in order to avoid construction of a synthetic graft access in the contralateral arm.

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Poster

Antibiotic Prophylaxis as a Preventative Wound Infection After Breast Surgery

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Background: There is currently no consensus regarding the use of antibiotic prophylaxis in breast surgery. In this study we tried to propose type of used prophylactic antibiotic.

Material and Methods: For 600 female patients in period of two years who underwent breast cancer surgery we used three types of antibiotics: cephalosporin, erythromycin, amoxiclav (200 patients per group). For every group we used different type of antibiotics.

Results: In total we had 32 wound infections (5.3%). It was found that the breast cancer surgery wound infection rate varied with the type of antibiotic. The lowest rate was for cephalosporin 5 (15.6%), for erythromycin 11 (34.4%) and for amoxiclav 13 (41%) of wound infections.

Conclusions: In conclusion, preoperative prophylactic antibiotics reduce postoperative wound infections in breast operations. Antibiotic prophylaxis is a simple and safe way to decrease postoperative breast wound infections. We recommend routine use of antibiotic prophylaxis for breast operations as a single dose of intravenous cephalosporin antibiotic given within 1 to 2 hours before skin incision.

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Poster

The Role of Cardiovascular Risk Factors and the SCORE Risk as Predictive Factors of Trastuzumab-mediated Cardiotoxicity

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Background: Trastuzumab is a monoclonal antibody against the human epidermal growth factor receptor 2 that is found to be overexpressed in 25% to 30% of breast cancer patients. In spite of the therapeutic benefits of Trastuzumab, cardiotoxic side effects are still an issue. The aim of this study is to evaluate the role of various cardiovascular risk factors as predictive factors of trastuzumab-mediated cardiotoxicity.

Material and Methods: Clinical records of 116 female patients with early and advanced breast cancer treated with trastuzumab were reviewed. Age, total cholesterol, smoking status and systolic blood pressure were used to calculate the SCORE (The Systematic Coronary Risk Evaluation) risk for each patient. Other cardiovascular risk factors like body mass index, diabetes and personal history of cardiovascular disease were also assessed. New York Heart Association classification was used to document symptomatic cardiotoxicity. Asymptomatic cardiotoxicity was defined as an absolute drop $\geq 10\%$ with a final left ventricular ejection fraction $< 50\%$ or an absolute drop $> 20\%$, as determined by radionuclide angiography or transthoracic echocardiogram.

Results: The median age of the patients was 50 years (range 32–76). Nineteen of 91 (20.9%) early breast cancer patients and 6 of 25 (24%) with advanced disease experienced asymptomatic cardiotoxicity. One patient with advanced breast cancer developed symptomatic congestive heart failure. Patients with trastuzumab-related cardiotoxicity presented more often with some cardiovascular risk factors, such as history of cardiovascular disease (23.1% versus 15.6%) and body mass index ≥ 30 Kg/m² (46% versus 33.3%), but statistical significance was not observed. Age, diabetes and the SCORE risk didn't have a statistical significant impact in the development of trastuzumab-mediated cardiotoxicity.

Conclusions: Breast cancer patients with obesity and/or history of cardiovascular disease treated with trastuzumab have an increased incidence of cardiotoxicity.

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Poster

Use of Complementary Naturopathic Therapies in Breast Cancer Patient Care – Single-center Experiences From the Interdisciplinary Breast Center of the Technical University Munich, Germany

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Introduction: 60–80% of breast cancer patients use naturopathic therapies in addition to regular therapies. Major criticism concerns the wide range of different such treatments as well as the lack of prospective, randomized trials. Unquestioned, however, is their benefit as additional treatment options to minimize adverse effects of surgical, local, or systemic therapies, such as wound healing disorders, fatigue, or emesis etc.

Based on a broad prior clinical experience phytotherapeutic and naturopathic therapies were integrated into clinical routine treatments of breast and ovarian cancer patients.

Materials and Methods: In 2009 a consultation for complementary and naturopathic medicine was integrated into the outpatients' clinic of the Interdisciplinary Breast Center of the TU Munich. Until now, 1308 patients have been treated ambulant and additional ones as inpatients. We report on selenium supplementation and mistletoe therapy accompanying oncologic therapy, on taraxacum as a modulator of neoadjuvant therapy, arnica, calendula, anthyllis, and iris germanica as wound healing and tissue regenerating medications in the postoperative setting of plastic-reconstructive breast surgeries. Hempseed oil is tested in clinical trials as a preventive for hand-foot syndrome seen with caelyx or capecitabine therapies.

Results: The integrated overall concept of naturopathic treatments is presented and discussed in case reports.

Discussion: Noticeable is the high patients' acceptance and compliance of naturopathic complementary medicine when embedded in the overall concept of personalised cancer medicine. Integration in postoperative wound healing processes leads to a significant reduction and to an increased well-being of the patients.

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Poster

The Value of Patient-reported Outcomes in the Management of Women with Breast Cancer

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Background: Efficacy of breast cancer treatment is traditionally based on objective clinical data. At present patient-reported outcomes (PRO), in particular, quality of life (QoL) and symptoms are of increasing importance in evaluation of treatment outcomes in cancer patients. We aimed to study usefulness of assessing QoL and symptoms in breast cancer patients receiving antitumor treatment.

Materials and Methods: One hundred and seven breast cancer patients (Stages I-IV) were included in the study. Mean age/SD – 53/10 y.o. All the patients underwent a taxane containing chemotherapy (CT) with the previous treatment consisting of chemotherapy (89%), surgery (69%), radiotherapy (39%), hormone therapy (24%) or biotherapy (9%). QoL was assessed using generic QoL questionnaire SF-36; symptom profile and severity – using Comprehensive Symptom Profile in Patients with Breast Cancer (CSP-Br). The CSP-Br is a self-reported tool which allows the assessment of the severity of 57 symptoms specific for breast cancer patients.

Results: Feasibility of PRO tools was good: 95% of patients completed all the items; the percentage of missing items was low – 2.4%. The vast majority of patients mentioned the importance and usefulness of PROs tools to facilitate communication with physicians. The data produced by PROs were clear for interpretation by oncologists and were used by them in day-to-day decision making. It was shown that during a taxane containing CT 23% of patients had no QoL impairment; 15% patients – mild QoL impairment, 33% – moderate or severe QoL impairment, and 19% – critical QoL impairment. The most prevalent and disturbing symptoms were the following: hair loss ($> 90\%$), fatigue, felling of constant tiredness ($> 80\%$) and psychological symptoms ($> 70\%$). Symptom profile and severity varied depending on the assessment time-point.

Conclusions. PROs is a valuable outcome of breast cancer treatment along with clinical outcomes. The SF-36 and CSP-Br are robust and informative tools to measure patient perspective on the efficacy of breast

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

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Poster

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

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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

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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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Poster

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

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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.