dietician, a psychologist, a physiotherapist and a sexologist conducted the educations. The group of breast cancer patients and their relatives had focused group discussions, supervised by two experienced nurses. A questionnaire survey was performed before and after each session.

Results: Until now, 161 Patients and 75 Relatives have joined the programme. Patients were before and after the education, asked about their knowledge on breast cancer. Before the education, 21% were "not" or "less satisfied" with their knowledge on breast cancer, which fell to 0.7%, after having accomplished the education. The score "satisfied" or very "satisfied" with their knowledge on breast cancer increased from 73% to 93%. Furthermore, patients were asked about their mood, drive and energi-level: Before education 36% were "not" or "less satisfied", which ultimately fell to 6% while the score "satisfied" or "very satisfied" increased from 59% to 87% after having accomplished the education.

Conclusion: Both the patients and their relatives obtained by a systematic education a significantly increased and much more useful knowledge on breast cancer pathology and also a better understanding on how the disease affected the individual patients and their surroundings. All topics were scored as important and the focused supervised group discussions were regarded as very helpful, supportive and useful in cooping and rehabilitation by both the patients and their relatives.

70 Poster

Multiple primary cancer in breast cancer in Korea

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Background: In Korea, the pattern of incidence in breast and thyroid cancer is similar according to age. The relationship between breast cancer (BC) and thyroid cancer is debated. To clarify this controversial issue, a retrospective study on the multiple primary cancer including thyroid cancer in breast cancer patients who have been following at Konkuk University Hospital was performed.

Materials and Methods: We analyzed the clinicopathologic data of 207 patients with breast cancer with or without other primary cancer.

Results: Of 207 patients, 34 (16.4%) had a second primary cancer. The most common cancer were papillary thyroid cancer [19 (9.2%)], followed by stomach [7 (3.4%)], colorectal [3 (1.5%)], renal[2 (1.0%)], liver, ovary and endometrial cancer [1 (0.5%)]. Regarding the time of detection for such second primary cancers, although 86% of stomach cancer were detected metachronously, but 26% of thyroid cancer were detected synchrolously.

Conclusions: Breast cancer patients may have second primary cancer in other organs, such as synchronous thyroid cancer. The present findings give rise to the usefulness of screening for thyroid cancer in the patient with breast cancer.

Wednesday, 24 March 2010 18:15–19:15

POSTER SESSION

Psychosocial aspects

71 Poster

Psychometric properties of the WHOQOL-BREF quality of life assessment in women with malignant and benign breast problems

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Background: The aim of this study in women with breast problems was to compare the psychometric properties of the World Health Organization Quality of Life instrument, short form (WHOQOL-BREF) data derived from the World Health Organization Quality of Life instrument, 100 items (WHOQOL-100) with data obtained directly from the WHOQOL-BREF. Furthermore, additional psychometric properties of the WHOQOL-BREF were assessed.

Material and Methods: Study group 1 (SG1; $N = 607$) completed the WHOQOL-100 four times, Study group 2 (SG2; $N = 549$) completed the WHOQOL-BREF once. The groups consisted of women with a palpable lump in the breast or an abnormality on a screening mammography who received a diagnosis of their breast problem after the first measurement. All participants (women with breast cancer and women with benign breast problems) completed measures of anxiety (STAI), depressive symptoms (CES-D), and fatigue (FAS). Women with breast cancer also completed the EORTC QLQ-BR23.

Results: Confirmatory analyses of the WHOQOL-BREF-data of both groups (SG1 and SG2) showed a reasonably good fit (CFI = 0.88, RMSEA = 0.06 and CFI = 0.90; RMSEA = 0.06). Cronbach's alphas of the domains exceeded 0.70 in both groups, except for Social Relationships ($\alpha = 0.67/0.68$) (Table 1). Correlations between domain scores of the WHOQOL-BREF and the WHOQOL-100 within SG1 were all significant at $p = 0.01$ level (Physical $r = 0.86$; Psychological $r = 0.91$; Social Relationships $r = 0.89$; Environmental $r = 0.14$). Construct validity was shown by the moderate ($r = 0.30$–0.49) to high ($r > 0.49$) correlations between scores on the FAS, STAI-State, EORTC QLQ-BR23 and the WHOQOL-BREF domains Physical and Psychological Health. Good test-retest reliability (r's >0.70) was found.

Conclusion: WHOQOL-BREF-data derived from the WHOQOL-100 or obtained from the WHOQOL-BREF directly are comparable, and the WHOQOL-BREF has good psychometric properties in women with breast problems.

Table 1. Internal consistency of the WHOQOL-BREF at baseline: Cronbach's alpha for the total groups SG1 and SG2, and for the breast cancer and benign breast problems groups separately

	Total group		BC group		BBP group	
	SG1	SG2	SG1	SG2	SG1	SG2
Overall Quality of Life and General Health	0.64	0.71	0.58	0.70	0.67	0.72
Physical Health	0.77	0.82	0.75	0.83	0.78	0.82
Psychological Health	0.72	0.78	0.71	0.78	0.72	0.79
Social Relationships	0.67	0.68	0.66	0.61	0.67	0.69
Environment	0.80	0.82	0.80	0.78	0.80	0.83

Abbreviations: SG1 = Study group 1; SG2 = Study group 2; BC = breast cancer; BBP = benign breast problem.

72 Poster

Psychological distress in breast cancer patients

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Background: A diagnosis of breast cancer is a potentially life-threatening disease and is often accompanied by major psychological distress. Anxiety and depression in cancer patients are well documented. The reported rate of depression in cancer patients has been quite variable, but a recent study finds the rate of depression with breast cancer patients to be 10−15%.

A Danish study found an elevated risk for hospitalisation with depression for up to ten years after a cancer diagnosis. An efficient screening tool for detecting psychological distress is needed for breast cancer patients.

Aim: Our overall objective was to validate an Danish version of the Distress Thermometer for its ability to detect psychological distress at time of diagnosis.

Our aims in this study were to describe

- The extent of distress among women with breast cancer at time of diagnosis.
- Characteristics of women with breast cancer suffering from severe distress.

Material and Methods: 363 patients out of 431 consecutive breast cancer patients filled in a baseline questionnaire at time of diagnosis. Inclusion of patients was completed ultimo October 2009.

The questionnaire consisted of the Distress Thermometer and a number of validated scales, The Hospital Anxiety and Depression Scale (HADS), Impact of Event Scale (IES-R) and EORTC QLQ-C30. Furthermore sociodemographic variables and questions related to life-style and available social support was included.

Data on treatment and information about tumor size, histopathology and staging will be collected through the Danish Breast Cancer Coorporative Group.

Analysis: The extent of distress is described in terms of the Distress Thermometer, HADS and IES-R. Characteristics of women experiencing a high level of distress will be analysed in relation to age and available social support and rehabilitation needs. The following covariates will be included in analyses: age, stage of disease, cancer treatment, socioeconomic class, marital status, and available social support in and outside the family.

Results: Preliminary results on the relationship between high level of distress, age and available social support in newly diagnosed women with breast cancer will be presented.

73 Poster

Quality of life in younger versus older breast cancer survivors

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Background: Breast cancer is one of the most frequently occurring cancers in the developing world, but with earlier detection and better treatment, the majority of breast cancer survivors will live many years after diagnosis. Breast cancer survivors may experience many symptoms that impact their quality of life, and these symptoms may vary by age. The purpose of this study is to compare breast cancer survivors who were diagnosed at 45 and under (n = 469) with survivors diagnosed at 55 to 70 (n = 584) years of age.

Materials and Methods: Participants were identified through a large cooperative group (Eastern Cancer Cooperative Group). Eligibility criteria included use of chemotherapy at initial diagnosis, being 3 to 8 years from diagnosis, and not having a recurrence of breast cancer. The mean current age of younger survivors was 45.2 and for older survivors was 66.7. Women who agreed to participate were sent a survey and informed consent which was completed and returned via mail. Overall, 80% of eligible women contacted by researchers agreed to participate. Measures included physical, psychological, social, spiritual, and overall quality of life constructs. All measurements had good reported validity and reliability. A total of 469 younger and 584 older breast cancer survivors are included. Linear regression was used to compare the two groups on continuous outcomes while adjusting for the following potentially confounding covariates: marital status (married versus not), years of education, and total household income, and years since diagnosis.

Results: Younger survivors scored significantly worse than older survivors on gynecological problems, sexual enjoyment, attention function, and overall reported symptoms. Psychologically, younger survivors demonstrated greater symptom distress, greater depression, and greater state and trait anxiety than older survivors. Younger survivors had lower marital satisfaction scores. Younger survivors reported greater fear of recurrence and less favorable body image. Younger survivors reported lower perceived social support from their partners and greater social constraint. Older survivors held higher spiritual beliefs and behaviors as compared to younger survivors. Perceived self efficacy for dealing with problems related to cancer survivorship was lower in younger survivors as compared to older survivors. For overall quality of life measures, younger survivors reported lower index of well being scores than older survivors and reported that breast cancer had a greater impact on their life. Health care service use was greater for younger as opposed to older survivors both during and after treatment.

Conclusions: Younger survivors reported significantly more problems on several, physical, psychological, social and generic quality of life issues as compared to older survivors. Results indicate a need to proactively assess quality of life issues in younger women at time of diagnosis.

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Development of a structured yoga DVD for women following breast and axillary surgery

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Background: Post operative shoulder and arm complications following breast cancer surgery still occur despite advances in surgical techniques. One disadvantage of early discharge from hospital following breast surgery is that patients are less likely to be taught specific post operative arm exercises. Many are merely given a leaflet of exercises to follow at home. Yoga classes are offered in some cancer centres and studies suggest that it improves quality of life, and mood, and reduces fatigue in cancer patients. We conducted a pilot study of a yoga programme specifically designed to improve arm and shoulder mobility following axillary surgery for breast cancer. We then produced a structured DVD for use in a subsequent randomised clinical trial. This abstract describes the production of the DVD.

Material and Methods: A breast cancer surgeon, experienced yoga teacher, physiotherapist and volunteers from the local breast cancer support group all contributed to development of a structured yoga programme of poses suitable for women following breast cancer surgery. First we conducted a ten week pilot course with women from the local support group who were receiving different breast cancer treatments. The pilot study was conducted to assess the acceptability of the postures and give feedback on the structure of the course. Following those changes we invited volunteers to work with us on producing a user friendly DVD that was accessible and acceptable for women with different levels of ability.

Results: The DVD took 3 days of filming and two months of editing. The final version with accompanying booklet will only be available following its evaluation in a randomised clinical trial. The DVD has two discs. Disc 1 includes a description of some of the arm problems experienced after breast cancer surgery, an introduction to yoga and the equipment including which props (e.g. cushions, folded blankets) patients can use at home in order to help them with their practice. There is also a step by step guide to each posture at different levels, 1, 2 and 3. Level 1 is aimed at practise during the 12 week post operative period and makes use of props such as sitting in a chair to perform an arm stretch, or standing or using a wall for support. Disc 2 features an hour long class of yoga for women with breast cancer led by an experienced yoga teacher. The class comprises of women of different ages and abilities who belong to the Brighton Breast Cancer Support Group. The programme is now being tested in an RCT.

Conclusions: As more patients survive breast cancer with improved surgical techniques, radiotherapy and systemic therapies it is also important to ameliorate symptoms and side effects of treatment. These supportive interventions demand patient input during development then rigorous evaluation through RCTs before implementation.

75 Poster

Communication to children about mother breast cancer: how can physicians help?

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Background: A quarter of French breast cancer cases are diagnosed in women less than 50 years old. A majority of them have got children living at home. Communication about illness is known to be associated with more favourable outcomes in children of parents with cancer. The objectives of this study are to determine timing of first communication to children about the mother's breast cancer, frequency of further discussions about mother illness, and factors that may influence communication to the children.

Methods: Since July 2005 all consecutive women included in the long duration disease registry of the French National Health Insurance Fund for a diagnosis of primary breast cancer, aged 18−40 years and living in South Eastern France have been asked to participate in a 5 years follow-up. Until March 2009, 291 women have been included (response rate: 70%), 235 of them had at least one child at the time of diagnosis. 10 months after diagnosis, women were asked about frequency of discussions with their children about their illness. This was studied in relation to socio-demographic factors, clinical variables and children's characteristics using logistic models.

Results: Children were usually told about their mother disease at the time of diagnosis (65%), but a minority of women waited until after treatment to inform their children (32%) or said nothing at all (3%). Concerning further discussions about their illness, 53% of women reported frequent discussions with their children, 38% few discussions and 9% no discussion at all. In multivariate analysis further communication with children was more often reported in women having a high level of education, living in couple, with a known family history of breast or ovarian cancer, who received chemotherapy and hormonal adjuvant therapy and who declared they have had the opportunity to ask questions about their disease at the time of diagnosis announcement. Age of women, maternal language, tumour size, cancer prognosis, depression, perceived quality of life, number of children, age and sex of children, and spouse contribution were unrelated to discussions about maternal cancer.

Conclusion: Our results suggest that maternal factors, but also physician's factors strongly influence communication to the children. Physicians on charge of cancer announcement should be aware of the importance of the information they provide to women to help them to better communicate with their children.

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Support group intervention after breast cancer treatment: first results of a prospective randomized study

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Background: Many women confronted with a breast cancer diagnosis react with anxiety and depression. Previous studies have demonstrated that 20−35% of women treated for breast cancer has measurable anxiety and depression, compared with 6% in a population of healthy women. Psychological distress has been proposed as a predictive factor for