on state anxiety at time0 and time4, depressive symptoms at time4, fatigue at time1 to time5, than patients without an AD during their life. Also Physical and Environmental QoL at time5, and Breast symptoms at time3 and time5 were worse.

Patients with an MDD during their life scored significantly higher on state anxiety at time 0, time 1, and time 3, depressive symptoms at time 0 to time 4, and fatigue at time 0 to time 5 than patients with no MDD during their life. Physical QoL at time 0 and time 4, Psychological QoL at time 0, time 4, and time 5, Social and General QoL at time 0, body image at time 1 and time 5, side effects at time 1 and time 3, breast symptoms at time 1, and future perspective at time 2 were worse.

Conclusions: Prevalence of lifetime MDD or AD was 18% and 15%, respectively, in this group of BC patients. These patients had more state anxiety, depressive symptoms, and fatigue, and a worse QoL and health status at various moments in the two years after initial surgery compared with women who did not have a diagnosis of AD or MDD. This suggests that women who ever in their life had an MDD or AD are at risk of experiencing negative feelings and emotions and a worse QoL after treatment for BC. Therefore, patient's history regarding MDD or AD should be asked during the patient's first visit to the hospital, so that patients can be offered tailored psychological care if necessary or desired.

375 Poster

Follow-up of Breast Cancer Patients: West Sussex Breast Unit Experience

D. Betal[1], A. Lawn[1], F. Rapisarda[1], L. Kalra[1], A. Johri[1], R. Bonomi[1]. [1]*Worthing Hospital, West Sussex Breast Unit, Worthing, United Kingdom*

Background: The primary aim of this study was to investigate the contribution of clinical examination, patient self examination and surveillance screening on breast cancer recurrence within 5-year follow up, secondary aim was survival at 5-years.

Methods: Our study included all newly diagnosed operable breast cancer between 1 January 2003 to 31 June 2003 at West Sussex Breast Unit. Exclusion criteria were operations for recurrent cancers and metastatic disease at presentation. Patients were divided into those presenting as symptomatic patients and screening. These patients were followed for five years and the patients were investigated for recurrence (local, new contralateral and metastases) and survival at 5-years.

Results: During the study period 120 women were operated consecutively, 64 were symptomatic and 56 were screening patients. The mean age of symptomatic patients was 64 years old (range 42−90), screening patients 59 years old (range 51−70). The proportion of women with high grade cancers was higher in symptomatic compared to screening group − DCIS alone (symptomatic 3%, screening 21%); Grade 1 (11%, 21%); Grade 2 (39%, 34%); Grade 3 (47%, 24%).

In the symptomatic group there were 13 recurrences (20%) compared to the screening group with 4 recurrences (7%) as summarised by Table 1.

Table 1. Breast cancer recurrence and metastases within 5 years and mode of detection

	Ipsilateral breast	Contralateral breast	Axilla recurrence	Metastases
Symptomatic	1 Surveillance mammogram	1 Patient detected	2 Clinical examination 1 Patient detected 1	9 Patient detected 9 Bone 4 Brain 2 Liver 1 Lung 1 Supraclavicular node 1
Screening	1 Patient detected	0	0	3 Patient detected 3 Lung 1 Bone 1 Peritoneal 1
Total	2	1	2	12

The proportion of patients alive at 5-years was 67% amongst the symptomatic group and 86% amongst the screening group. Amongst the symptomatic group 6 patients (9%) died due to metastatic breast cancer compared to 3 (5%) screening patients.

Conclusion: Our study showed that only one axilla recurrence was detected by clinical examination all other recurrence and metastatic disease was mainly patient detected. This would concur with other studies that clinical examination in follow-up clinic has limited value for breast cancer survival. Our study suggests that valuable resources in terms of clinic and specialist time could be better channelled to provide a symptomatic open-access clinic.

However potential problems may be encountered by abandoning clinical follow-up that include anxiety of patients, resistance from medical professionals to change practice, reliability of patients detecting symptoms and reporting these to a health professional, the increased responsibility of those in primary care and resource re-allocation for open-access follow-up.

376 Poster

An Algorithm for Screening and Treatment of Breast Cancer Related Lymphedema

T.R. Lopez Penha[1], E.M. Heuts[1], S. Tuinder[2], R.R.W.J. van der Hulst[2], M.F. Von Meyenfeldt[1]. [1]*Maastricht University Medical Centre, General surgery, Maastricht, The Netherlands;* [2]*Maastricht University Medical Centre, Plastic & Reconstructive surgery, Maastricht, The Netherlands*

Background: Breast cancer related lymphedema (BCRL) has a high disease burden and can compromise the quality of breast cancer survivorship. Currently, there is evidence advocating both conservative and micro-surgical treatment, with effectiveness dependent on the BCRL stage. However, an evidence based integrated BCRL treatment regimen is lacking. We propose a multidisciplinary screening program with the aim of preventing BCRL progression and ensure disease regression by early identification and treatment initiation.

Methods: All women with early stage breast cancer are included in this screening program. We use preoperative and sequential postoperative bilateral upper limb volume measurements and patient perception to identify lymphedema. A 10% limb volume increase, between post-operative and baseline volume measurements, and/or patient perception of (refractory) swelling constitutes a diagnosis of lymphedema. Upon lymphedema diagnosis, patients are referred to a lymph therapist for initiation of conservative therapy in the form of complex decongestive physiotherapy. Therapy effect is evaluated after 3 months. In case of unsatisfactory symptom or limb volume reduction, the patient is considered for surgical treatment. A plastic surgeon evaluates the possibility of microsurgical lymph vessel repair in the form of lymphatic-venous anastomoses. This minimal invasive surgery can improve lymph flow in the affected limb. If despite this, symptom improvement and patient satisfaction remains minimal, autologous lymph node transplantation is considered.

Results: The primary endpoints are limb volume and perceived symptoms (refractory swelling). Secondary endpoints are quality of life, long-term limb volume and perceived symptoms, lymph-transport capacity (lymphoscintigraphy) and shoulder/arm disabilities.

Conclusion: This multidisciplinary screening program is a structured approach for the treatment of BCRL that will ultimately lead to a reduction of the negative functional, psychosocial and cosmetic consequences resulting from chronic lymphedema.

377 Poster

Perceptions of Fertility and Risk in Young Breast Cancer Patients

R. Lee[1], S. Foy[1], A. Armstrong[1]. [1]*Christie Hospital NHS Foundation Trust, Medical Oncology, Manchester, United Kingdom*

Background: With better treatment options available, breast cancer survival rates are improving and quality of life issues post cancer treatments are consequently becoming increasingly important. Previous studies have shown that the possible loss of fertility due to treatment for breast cancer in young women is a frequently neglected issue. This can result in considerable anxiety. Our study aimed to examine women's fears and beliefs regarding issues such as pregnancy post breast cancer and ovarian stimulation and whether conversations with health professionals were of benefit.

Materials and Methods: Findings from a literature review and a previous focus group study formed the basis of the questionnaires. They were further developed through cognitive interviews with 9 patients. The final questionnaires were sent to 263 women with early stage breast cancer, aged below 40 at time of diagnosis, attending a UK regional cancer centre.

Results: 88 questionnaires were returned. Women who recalled a fertility conversation with a health professional were more satisfied overall with discussions than those who did not (median satisfaction 7/10 versus 1.75/10 respectively, $p < 0.0001$). Common barriers to fertility discussions were health professionals not prioritising fertility issues (39% of respondents), women already had children (34%), there was insufficient time (28%) and that it would delay treatment (27%). 66% of participants expressing an opinion (33/50) believed pregnancy increased the chance of cancer returning. 66% (33/50) believed ovarian stimulation increased risk of recurrence. 12% (10/84) of participants thought they would try for a baby in the future, 17% (14/84) were unsure and 71% (60/84) did not want to. 52% (11/21) of women without children were prepared to delay chemotherapy by up to 8 weeks and 42% (20/48) of women with one child or more would delay.

Conclusions: Women recalling a conversation regarding fertility issues are more satisfied with discussions than those who do not. Participants felt there were a number of barriers to fertility discussions. The majority of participants felt ovarian stimulation and pregnancy post breast cancer increased risk of recurrence. Despite these concerns, a proportion of women would consider trying for a baby in the future. Some women, both with and without children, were prepared to delay chemotherapy in order to undergo fertility preservation treatment, suggesting the importance of fertility issues to them.

378 Poster

The Support and Information Needs of Women with Advanced Breast Cancer

M. Marven[1], L. Sheeran[2], S. Aranda[3], K. Robins-Browne[4], K. Gough[2], L. Mileshkin[2]. [1]*Breast Cancer Network Australia, Melbourne, Australia;* [2]*Peter MacCallum Cancer Centre, Department of Nursing and Supportive Care Research, East Melbourne, Australia;* [3]*Cancer Institute NSW, Cancer Services and Information, Alexandria, Australia;* [4]*University of Melbourne, Department of General Practice, Carlton, Australia*

Introduction: Improved treatments mean that women with advanced breast cancer (ABC) are living longer, sometimes for many years. As a result, these women often experience chronic needs that are different to those of women with early breast cancer. We aimed to assess the support and information needs of women living with ABC.

Methods: A national postal survey was sent to 2345 women with ABC registered as members of BCNA and/or BreaCan (a support and information service for Victorians with breast and gynaecological cancers). Women were asked questions about their disease and treatment, their experiences of care, and to complete the Supportive Care Needs Survey.

Results: The response rate was 34% (792 valid responses). The average age of respondents is 57 (range 25−99) with 21% of women living alone, 27% working and 58% treated as private patients. 18% reported living with ABC for >7 years. 656 (85%) were having current treatment: chemotherapy (43%), hormonal therapy (46%), bisphosphonates (49%), and/or Herceptin (19%) respectively. 49% of women reported having access to a Breast Care Nurse (BCN) since their diagnosis of ABC but only 3% cite a BCN or cancer nurse as their main point of contact. The majority (76%) cite their medical oncologist as their main contact, with 8% citing their GP. Important issues that women want information about include current treatments and options (84.2%), new treatments and latest research (79.2%), symptoms and side effects (78.9%), clinical trials (60.8%), and pain management (57.2%).

The top 10 unmet support needs reported by women are listed in the table below.

Rank	Item	Domain	% with some-high need
1	Concerns about the worries of those close to you	Psychological	77%
2	Uncertainty about the future	Psychological	74%
3	Fears about the cancer spreading	Psychological	74%
4	Lack of energy/tiredness	Physical	73%
5	Not being able to do the things you used to	Physical	71%
6	Work around the home	Physical	62%
7	Being informed about the things you can do to help yourself get well	Information	61%
8	Being informed about test results as soon as feasible	Information	60%
9	Learning to feel in control of your situation	Psychological	60%
10	Worry that the results of treatment are beyond your control	Psychological	60%

Conclusions: Women with ABC have multiple unmet support needs across psychological, physical and information domains. They are heavily reliant on their medical oncologist as their main point of contact, with limited regular contact with BCNs. Models of care need to be developed to address the unmet supportive care needs of women with ABC living in Australia.

379 Poster

Metachronous Contralateral Breast Cancers − Characteristics and Risk Factors

P.M.Y. Chan[1], J. Chen[1], E.Y. Tan[1]. [1]*Tan Tock Seng Hospital, Breast Unit, Singapore, Singapore*

Background: Bilateral breast cancer can occur either at the time of initial diagnosis or occur later as contralateral breast cancer. The development of metachronous contralateral breast cancer (MCBC) can be devastating for breast cancer survivors. Our study set out to find the characteristics of and risk factors for developing MCBC.

Methods and Materials: The records of 2621 female patients who were initially treated in our institution between 2002 and 2009 for breast cancer were obtained. We excluded patients who had metastatic disease, defaulted treatment after diagnosis or had since died from the study. Synchronous cancers are bilateral breast cancer found at initial or within six months of diagnosis while metachronous cancer are contralateral cancers diagnosed at least six months after the initial breast cancer diagnosis.

Results: From our records, there were 101 patients with bilateral breast cancer. There were 60 synchronous breast cancers (2.9%). Of the remainder 1385 patients with follow-up records, there were 41 MCBC (2.96%) in the follow-up group with mean follow-up of 55.7 months (5−182 months). The proportion of MCBC that were detected within the first 2 years, 5 years and 8 years were 29%, 65% and 93% respectively. Comparing the stages of the initial and contralateral cancer revealed that in 78% of patients, the stage of the MCBC was similiar to or lower than that of the initial cancer. 4 patients (10%) were found to have metastatic disease at the diagnosis of their MCBC. Although analysis of the whole group did not reveal any significant risk factors for contralateral breast cancers, sub-analysis of the group with invasive cancers (n = 35) revealed that the factors that increase the risk of contralateral breast cancer include younger age ($P = 0.02$), Her2Neu over-expression ($P = 0.04$), the ratio of positive nodes to the total number of nodes examined ($P = 0.03$) and tumour size ($p = 0.04$). Multivariate analysis showed that only young age and a high nodal ratio ($P = 0.02$ and $P < 0.01$ respectively) were independent risk factors for MCBC development.

Conclusions: Our study found that the rate of MCBC is to be 3%. Majority of these cancers appear to arise within 8 years of initial diagnosis. As 3 in 4 of the contralateral cancers are found at a lower or similiar stage as the initial breast cancer, the prognosis of these patients did not significantly changed as a result of the metachronous cancer. Our study found that a younger age at diagnosis and high nodal ratio predicted for the risk of MCBC. It is therefore important to have close monitoring of the contralateral breast in the initial 8 years after diagnosis more so for patients who are in this high risk group.

380 Poster

Quality of Life in Women with Breast Cancer, Benign Breast Disease and Gallstone Disease: What is the Influence of Personality?

A.F.W. van der Steeg[1], C.M.G. Keyzer-Dekker[1], J. de Vries[2], M.C. Mertens[3], J.A. Roukema[4]. [1]*Paediatric Surgical Center of Amsterdam Emma Children's Hospital AMC and VU University Medical Center, Paediatric Surgery, Amsterdam, The Netherlands;* [2]*Tilburg University, Center of Research on Psychology in Somatic Disease (CoRPS), Tilburg, The Netherlands;* [3]*Academic Hospital Maastricht, Medical Psychology, Maastricht, The Netherlands;* [4]*St Elisabeth Hospital, Surgery, Tilburg, The Netherlands*

Background: High trait anxiety causes diminished Quality of Life (QoL) in women with breast cancer (BC). We examined whether the lowered QoL was caused by the combination of personality and diagnosis (i.e. malignant or benign disease) *or* solely by the personality characteristic high trait anxiety. Trait anxiety is defined as a relatively stable individual difference in anxiety proneness.

Methods: In a prospective longitudinal study, women with BC (N = 152), benign breast disease (BBD, N = 205), and gallstone disease (GD, N = 128) were included. Before diagnosis was known (BC and BBD) or before the laparoscopic cholecystectomy (GD) and six months later, questionnaires concerning trait anxiety, fatigue, and QoL were completed. Multivariate linear regression analysis was performed to analyse the predictors for QoL at six months.

Results: At baseline and at six months women with high trait anxiety scored unfavorable on fatigue and QoL compared with women with not-high trait anxiety. During follow-up the changes in QoL were significantly different for each diagnosis. In BC, physical and social QoL diminished whereas in BBD physical and general QoL increased, and in GD all scores on QoL increased. Fatigue at baseline was the most important predictor for QoL at six months in all three groups, irrespective of the score on trait anxiety. Only in women with BC the score on fatigue was significantly increased at six months compared with baseline. In all three groups the majority of women scoring high on fatigue at baseline remained tired at six months up to 73% in women with BC. Women with BC and a low score on fatigue at baseline became tired at six months in 29%, resp. 13% in BBD and 20% in GD.

Conclusion: This present study shows that the severity of diagnosis, i.e. benign or malignant breast disease versus gallstone disease, in combination with fatigue and / or the personality characteristic trait anxiety determines the impact on QoL. Therefore, we recommend to identify those women with a high score on fatigue and / or trait anxiety and to offer them a tailormade follow-up protocol to prevent impaired QoL.