Materials and Methods: Patients completed a questionnaire to record lifestyle habits such as exercise, diet, smoking and alcohol consumption. In addition, the absence or presence of chemotherapy and radiotherapy were recorded. The BMD was measured before and at 1 year after starting AI treatment by dual-energy X-ray absorptiometry or quantitative computed tomography in 208 patients. The measured sites were as follows; the radius in 155 patients, lumbar spine in 43 patients and metacarpal bone in 10 patients, respectively.

Results: The median age of patients was 63 years (range 44−84 years). Anastrozole, letrozole and exemestane were used in 137, 59 and 12 patients, respectively. The BMD decreased by 3.4% from baseline at 1 year after the start of AI treatment. Osteoporosis and fractures were observed in 11 (5.3%) and 5 (2.4%) patients, respectively. The percent decrease in BMD was significantly smaller in patients who exercised at least once per week than in those who did not (−2.3% vs −4.4%; P = 0.005). By contrast, the percent decrease in BMD was significantly greater in patients who received chemotherapy than in those who did not (−5.3% vs −2.7%; P = 0.001). Smoking and alcohol consumption were not associated with changes in BMD.

Conclusions: Japanese postmenopausal women with hormone receptor-positive early-stage breast cancer on initial treatment with AIs are at high risk of bone mass reduction and fractures. Performing moderate exercise at least once per week may reduce this risk.

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Changes in Bone Mineral Density During Aromatase Inhibitor Therapy in Post-menopausal Breast Cancer Patients in Japanese

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Background: Currently, aromatase inhibitors (AIs) are the standard endocrine therapy for post-menopausal breast cancer patients, but they reduce bone mineral density (BMD) as a result of estrogen deficiency, leading to osteoporosis, increased risk of bone fracture, and thus decreased quality of life, which is the major concern of AI therapy. Changes in BMD during AI therapy in Japanese post-menopausal breast cancer patients have not been fully investigated.

Materials and Methods: In 142 post-menopausal breast cancer patients (age 40−89y, mean 62.5y, median 62y; 40 anastrozole, 36 exemestane, 66 letrozole), lumbar and/or femoral neck BMD was measured multiple times (2−5, mean 3.2, median 3) using dual energy X-ray absorptiometry before and/or during AI therapy more than 12 months apart. Data were analyzed using the paired t-test.

Results: In 110 patients who had BMD measured at the beginning of AI usage, 29 (26.4%) were <70% of the young-adult mean, and therefore osteoporotic. BMD significantly decreased using AI alone continuously over time. During AI therapy with combined use of vitamin D with/without calcium, BMD did not decrease at the second measurement, but decreased thereafter. During AI therapy, combined use of oral bisphosphonate significantly increased BMD at the second measurement, which was maintained thereafter. Ten patients experienced fractures; 2 fragile and 8 traumatic fractures.

Conclusion: In Japanese post-menopausal breast cancer patients, AI alone continuously decreased BMD. Combined use of vitamin D with/without calcium may delay AI-induced bone loss. Oral bisphosphonate can prevent AI-induced bone loss.

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How Reliable is the Measurement of Pain in Oncological Day Hospital (DH) Patients?

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Background: The majority of cancer patients experience pain, but they are often reluctant to communicate the pain they feel.

The Pain Visual Analogic Scale (VAS) and the Happy Face Pain Rating Scale (PRS) are two useful, cost-effective and rapid means of measuring pain in every kind of patient. This study was carried out to measure the percentage of pain in our DH patients and to study any discrepancies between the results obtained.

Material and Methods: From January 2010 to February 2011, 154 patients were evaluated with an average number of 10 admissions per patient. 89 patients had advanced or metastatic disease and 65 were undergoing adjuvant therapy. All patients were affected by solid cancers. 42/154 patients had attended high school and 8/154 had a degree. Pain was measured by both an oncologist and a nurse using VAS and by a nurse alone using PRS. The discrepancies were defined by at least 2 points of difference between these scores: VAS nurse/VAS oncologist or VAS nurse/PRS nurse.

Results: 70.8% patients reported pain in 31.4% of the 1,546 daily DH admissions. The VAS scores of 8/109 patients and 80/485 admissions could not be evaluated. The following discrepancies were observed: in 18/101 patients and 38/405 admissions the VAS score recorded by the oncologist was greater than that registered by the nurse; in 52/101 patients and 137/405 admissions the opposite was noted. In 71,3% patients and 76,8% DH admissions the discrepancy was noted between the VAS score and PRS score recorded by the nurse; in 257/311 admissions the PRS score was greater than the VAS score whereas in 54/311 admissions the opposite was observed. In 32/101 patients and 58/405 admissions the discrepancy was greater than 2 points.

Conclusions: The incidence of pain noted in our DH patients is as high as that mentioned in literature. One must take into consideration that these patients have active disease or recently undergone surgery. Our results appeared to confirm the reluctance of patients to reveal their pain, especially to the oncologist. Even the registration performed by the nurses using two different methods did not give the same results. One of the reasons could be due the median low level of education (67.5% patients). The measurement of oncological pain is essential, but it is not easy and the best instrument has yet to be found.

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Copying Letter to Patients − Distress or Satisfaction?

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Background: Patients should be involved in decisions relating to their own treatment and care but it is perceived that patients may misunderstand the content of copy letters which could cause unnecessary distress; this perception needs to be explored.

Materials and Methods: All patients who attended the Breast Clinics in a District General Hospital over a period of one month were sent a postal questionnaire with their copy letter (unless the patient opted out of receiving a copy letter). 300 questionnaires were posted.

Results: 217 questionnaires were returned to the Breast Unit (72.3%). The study group included new patients, patients discharged with a benign diagnosis, cancer diagnosis, breast cancer follow up and Family History. The results showed that 90.6% understood the content of the letter with only 16 patients not understanding the medical terminology. 76% of the patients felt this practice was helpful to them. 130 patients understood their diagnosis better with this information and 114 patients understood their management. The free text section of the questionnaire contained comments which demonstrated some patients contacted the Breast Care Nurses if they did not understand some of the content within the letter.

Conclusions: The study clearly demonstrates that sending a copy letter to patients does help them to understand their condition better, contrary to the misconception amongst health professionals. Hence all hospital departments should consider implementing this useful practice.

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Anxiety Disorder and Major Depressive Disorder in Women with Breast Cancer

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Background: The goal of this research was (1) to study the prevalence of anxiety disorders (AD) and major depressive disorders (MDD) in women with breast cancer (BC), and (2) to compare psychological distress, quality of life (QoL), and health status levels in breast cancer patients with and without a diagnosis of MDD or AD.

Material and Methods: Women with a breast problems referred to a Dutch outpatient clinic were recruited for this study. Participants completed an informed consent and a set of questionnaires before diagnosis (time0) and at one (time1), three (time2), six (time3), 12 (time4), and 24 months (time5) after surgical treatment. For this study only data of women with BC were used. The questionnaires assessed demographics, state anxiety, depressive symptoms, fatigue, QOL, and health status. At t4 lifetime diagnoses of anxiety disorders and MDD were administered with a diagnostic interview.

Results: Of the 143 BC patients, 25 (18%) had a MDD during their life and 21 (15%) an AD during their life. Six patients (4%) had both diagnoses. Patients with a diagnosis of AD during their life scored significantly higher 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.

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

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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.

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An Algorithm for Screening and Treatment of Breast Cancer Related Lymphedema

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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.

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Perceptions of Fertility and Risk in Young Breast Cancer Patients

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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.