primary tumour allowing conservative surgery on the breast. Data analysis, from the many studies performed, shows that this therapeutic approach results in tumour downstaging in 70–90% of cases. Complete clinical remission and no residual palpable disease in the breast, range from 17% to 51% for tumours greater than 3 cm in size, and allows breast - sparing surgery in almost the same number of patients (1–6).

As regards surgical problems related to PC, there are strictly medical issues (i.e., the choice and the way of administration of drugs, the treatment planning), some others of surgical relevance (i.e., surgical techniques or indications, intraoperative planning), and, finally, others of general interest (i.e., the degree of response to PC, the usefulness and the timing of radiotherapy, data analysis). Regarding the surgical questions, these could be summarized on the followings: 1) the possibility of disease progression during the medical treatment; 2) the persistence of microcalcifications at the mammographic examinations at the end of the PC; 3) the bifocality or the multifocality of the tumour, eventually revealed by partial regression induced by medical treatment; 4) the indications to surgery and the surgical techniques; 5) intraoperative planning (i.e., evaluation of surgical margins, surgical approach in case of macroscopic complete regression of the tumour); 6) right and suitable information given to the patients.

One of the less discussed items is the risk of disease progression during chemotherapy: how many cases of operable breast cancer could risk becoming no longer amenable to surgery? In a large series of 536 patients at the National Cancer Institute of Milan, the rate of disease progression during induction chemotherapy was in the range of 3%, but only one patient resulted no longer amenable for any surgical operation. The rate is very low and, moreover, half of these patients were monitored in complete remission after a long follow-up period. A quite similar rate (2–3%) of progressive disease during chemotherapy is presented in the study of Royal Marsden Hosp. in London, and on that of NSABP B-18 carried out by Fisher.

Friday, 22 March 2002 14:45–16:15

SYMPOSIUM

Treatment tailoring – translational research

330 INVITED

Can we predict response to therapy in breast cancer?

Abstract not received.

331 INVITED

Development of surrogate endpoints in translational research

Abstract not received.

332 INVITED

Molecular endpoints

M. Dowsett. *Royal Marsden Hospital - NHS Trust, Professor of Biochemical Endocrinology, London, United Kingdom*

The response of breast cancer patients to individual therapies is highly variable. In these circumstances individualised therapy has the potential to maximise the opportunities for response and minimise any associated toxicity and cost in the non-responsive population by avoidance of the unnecessary therapy. The opportunity exists to use molecular markers as intermediate end-points of response early in the presurgical treatment of patients to identify those who are likely to progress to clinical response and derive long-term benefit from the treatment. Changes in proliferation (measured as Ki67) and apoptosis (measured by TUNEL) have been our focus since they are intimately involved in determining changes in tumour growth. Increases in apoptosis after 24 hours of chemotherapy are measurable but these do not appear to predict response, possibly due to temporal variability in the maximal pharmacodynamic response to treatment. In contrast changes in proliferation after 2-3 weeks were significantly associated with response to chemotherapy, endocrine therapy and chemo- endocrine therapy. As such change in Ki67 is an attractive end-point for new drug development and we have applied this to the study of raloxifene, idoxifene and ICI 182780 during the 1-3 week period between diagnosis and surgical excision. Studies in xenografts demonstrate that substantial changes in proliferation and apoptosis can occur which only result in stabilisation of disease. As such these end-points may be more indicative of treatment effects on tumours than response measurements themselves and be particularly useful in the assessment of some of the new biological agents which are expected to have tumouristatic effects.

The search for further, hopefully more sensitive and reliable, indices of response is now being evaluated by modern molecular pathological techniques such as c-DNA arrays and candidate genes have been identified for further assessment in larger cohorts. It is now known that tumour cells can be isolated from the circulation of patients with metastatic breast cancer and assessment of molecular end-points of treatment in these is also an exciting possibility for future study.

333 INVITED

Facilitating translational research: the patient/advocate input

D. O'Connell. *Europa Donna Ireland, Dublin, Ireland*

Translational research utilising developments in biomedical research and medical informatics offers improved prospects for treatment tailoring in the clinic. This has led to debate on issues of concern to scientists and patient/advocates, including the use of biological materials, informed consent, patient confidentiality, and the consequences for patient and family resulting from germline genetic testing. The concerns of patient/advocates reflect an increased awareness of individual rights, balanced by a desire to find better treatments tailored to their disease. Scientists are concerned that exciting new developments leading to improved clinical treatments may be hampered. It is in the interests of both groups to collaborate, with open discussion on such topics as informed consent and privacy. The patient/advocate input includes communicating the concerns of the patient/advocacy community to the scientific community, listening to the concerns of the scientific community, collaborating in addressing those concerns, and disseminating full and accurate information among those she represents. The desired result is to achieve the maximum benefit to present and future breast cancer patients by facilitating translational research resulting in better treatment outcomes, while ensuring that patient concerns in relation to confidentiality, informed consent and other issues are met satisfactorily.

Friday, 22 March 2002 14:45–16:15

EUROPA DONNA SYMPOSIUM

The psycho-social implications of breast cancer

334 INVITED

The psycho-social impact

D.K. Wellisch. *UCLA School of Medicine, Department of Psychiatry, Los Angeles, USA*

This talk will address multiple factors related to the psychosocial impact(s) of breast cancer. One set of impacts is related to the individual with breast cancer and another set of impacts is related to the family of the breast cancer patient. For the patient this talk will outline the woman at elevated risk for psychiatric complications in facing breast cancer and its treatments. The talk will then address the etiological factors and prevalence of pathological anxiety, depression, and post-traumatic stress disorder in breast cancer patients. A focus on the psychosexual impacts of breast cancer will also be undertaken. The talk will focus on the impacts of breast cancer for the spouse/significant other and children of the breast cancer patient. The issues of depression, anxiety, and coping for the spouse and children will be addressed. For the daughter of the breast cancer patient, data from the UCLA High Risk Clinic will be presented. Specifically. a profile of the daughter at risk for psychiatric difficulties will be described, as well as levels of depression, anxiety, and post-traumatic stress disorder in such daughters will be presented. The talk will conclude with some suggestions for interventions for the patient and her family.

335 INVITED

Coping with breast cancer in the family

J. Sanitt. *Royal Free Hospital, Cancerkin, London, United Kingdom*

A diagnosis of breast cancer is devastating for any woman. For a young mother with small children it is a particularly difficult situation to cope with, not only for herself but also for all the family. How much should the children be told? How will life change after breast cancer? When over a period of twenty years another two diagnoses of breast cancer are made, these questions become even more daunting.

The coping mechanism of the family changes as the children grow older, but the basic instinct of the parents to protect their children as much as possible, while at the same time keeping them truthfully informed, does not change. Nothing is worse for the young, imaginative child than to be left wondering what is happening around them. As young adults the children are able to understand more fully about breast cancer and its implications and to participate in important decisions.

For the mother 'the patient' having to keep life "normal" can be quite stressful at times. However, this policy brings its own rewards as the children mature into caring adults.

336 INVITED

The psycho-social implications of breast cancer: the role of the psychologist

A. Fernandez-Marcos. *Europa Donna, Executive Board, Madrid, Spain*

As it is well known in the scientific literature, breast cancer patients show a wide range of psychological problems such as: anxiety, depression, fear, reduction in activity levels, difficulties with sexuality and body image, etc. Although not all breast cancer patients suffer from psychological distress, it is true that a high percentage of them refer some degree of psychological discomfort along the course of diagnosis, treatment, and afterwards, in their life as survivors.

But helping breast cancer patients to overcome those problems is just one of the fields in which psycho-oncologists develop their work. Psychosocial implications of breast cancer go beyond the single patient and have an effect on the family, on the general population, and on the National Health Policy.

Psycho-oncologists contribute with their specialized knowledge to the improvement of other aspects in breast cancer, such as:

– Psycho-social research in genetic counselling, quality of life, quality of care (ie. effectiveness of psychological treatments), and Epidemiology.

– Training health professionals in communication skills, burnout prevention and decision-making tools.

– Primary prevention, designing programmes to modify harmful patterns of life and to increase awareness about breast cancer.

– Early detection, helping women to cope with fear of mammograms, and supporting those with positive results.

To assure a high quality and comprehensive care in breast cancer, the core interdisciplinary team in charge of managing health resources and planning treatments and actions should, by all means, include specialists in Psycho-oncology.

337 INVITED

The role of the social worker

K. Rutgers-Van Wijlen. *Amarant Centre for Psychosocial Oncology, 3523 GT Utrecht, The Netherlands*

The social worker helps patients and their families to cope with cancer emotionally and offers practical support when needed. In this work it is important to start from the principle of coherence between fysical, emotional, social, spiritual and material aspects of life! And: emphasis lies on supporting the responsability and strength of the client.

Of course the help needed in the various stages of illness differs:

In the first period, the diagnostic fase, women are busy dealing with questions like shall I survive, what kind of surgery do I need or do I choose, what kind of further treatment will be necessary, how can I endure serious medical treatments.

Furthermore they suffer from fear to die and at the same time they have to be practical and organize everything at home. In this period a social worker offers practical help like organizing home care as well as support in dealing with feelings like fear, anger and so on. Also support is given in decision making and in finding tools needed for communication. The social worker helps people to get in touch with one's own sources of strength.

In the second period, a few months after treatment, when 'life goes on', women experience big changes in their lives, it will never be like before. Who am I as a woman? One has to deal with changes in the body, with mutilations, with lymphoedema. The fear of getting cancer for a second time will be forever present. Having had cancer influence on the relation with the partner, on sexuality, on family life, on work. Women can experience extreme fatigue which handicaps them enormously. Moreover, genetic features can be suspected or discovered. These also have great consequences of various aspects of life. In this period, a social worker counsels women individually and in groups. Individually we can explore and go more deeply into one's personal history and situation. Most important is to acknowledge the seriousness of the woman's complaints and to give attention to her feelings. Moreover, methods for disidentification, - which means learning to go into feelings and afterwards to discharge them - are used as a source of help. Support in groups is useful for people, when they want to meet others being in the same situation for recognition of various emotions and for the possibility to exchange information.

In the last phase, when there's no possibility for cure, the social worker helps patient and family to deal with the personal and social problems of illness, disability and impending death. In short, the social worker offers help as well on the psychological level as on the social level.

The main goal is to support women in finding their strength, their own way to live and to cope with their breast cancer.

Friday, 22 March 2002 16:30–18:00

PROFFERED PAPERS

Side effects of treatment

338 ORAL

Evaluation of cardiac and lung damage following irradiation for breast carcinoma

M. Welnicka-Jaskiewicz[1], R. Zaucha[1], J. Wojcik-Tomaszewska[1], T. Bandurski[2], K. Kuziemski[3], J. Jassem[1]. [1] *Medical University of Gdansk, Oncology & Radiotherapy Dept., Gdansk, Poland;* [2] *Medical University of Gdansk, Nuclear Medicine, Gdansk, Poland;* [3] *Medical University of Gdansk, Lung Disease and Tuberculosis, Gdansk, Poland*

The results of recently published randomized clinical trials strongly indicate that loco-regional radiotherapy after modified radical mastectomy may improve both disease free survival and also overall survival in breast cancer patients. In addition, it is also shown that modern RT technique can result in a lower cardiac and lung dose and, as a consequence, reduce cardiovascular morbidity and mortality observed in older trials but the risk of cardiac and lung toxicity is not well established.

The aim of the study was to assess prospectively the occurrence and localisation of myocardial perfusion deffects in left- in comparison to right-sided mastectomized or locally advanced breast cancer patients as well as to delineate lung complications following radical radiotherapy.

Study group consisted of 47 patients aged 32 to 66 years (median 48) with right- and left-sided disease in respectively 23 and 24 cases, treated in our institution between 1997 and 1999. Thirty-eight patients were refered for radiotherapy after surgical procedures and 9 patients had locally advanced disease. Radiotherapy was delivered with the use of Co60 or LA electron irradiation of the thoracic wall in mastectomized patients, or two tangential photon beams in other patients. All patients received elective radiotherapy to the locoregonal lymph nodes. Clinical examination, lung scintigraphy and myocardial scintigraphy were performed before treatment, and after 6 and 12 months during the follow-up period. Grade 1-2 fatigue, and grade 1-2 dyspnoe occurred in eight patients each. Scintigraphic abnormalities of different degree occurred in the majority of patients at 6 and 12 months following radiotherapy. There were two cases of clinically relevant diffuse changes, and two cases of pulmonary microembolism. No cases of myocardial infarct or cardiac failure were recorded. Fourteen of 24 patients with left-sided disease had slight perfusion deffects seen on myocardial scintigrams and localized in the apex and anterior wall of the heart.

The tolerance of radical RT was acceptable in all treated patients. Presented study does not indicate that the use of modern technique of RT causes an excess cardiovascular and lung morbidity. However, the small number of patients and short follow-up does not allow strong conclusion to be drawn.