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EDITORIAL

Rehabilitation of cancer patients: Needed, but how?

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Since 1989, *Acta Oncologica* has supported a range of symposiums, on sentinel node biopsy in breast cancer patients, prostate cancer, stereotactic body radiotherapy, normal tissue morbidity, survivorship, breast cancer, image-guided radiotherapy and biology-guided adaptive radiation therapy.

This issue of *Acta Oncologica* contains several papers from the first *Acta* Nordic Cancer Rehabilitation Symposium, which was held in Copenhagen, Denmark, on 21 and 22 September 2010. The symposium was dedicated to discussions between clinicians and researchers on cancer treatment, late effects and rehabilitation. More than 40 oral presentations were made, and more than 50 abstracts were accepted for a poster session, which attracted most of the 360 participants from 12 countries. We selected 17 papers for presentation in this issue on the basis that they would provide new insights into treatment choices and the late effects and need for rehabilitation in Nordic cancer patients.

The Nordic countries are experiencing an explosion in the number of cancer survivors, which will reach close to one million within the next few years. This has raised debate about follow-up, treatment of late effects and rehabilitation. In the new era of personalized medicine, treatment approaches that focus only on tumor eradication have given way to more curative strategies, which potentially minimize toxicity. As part of this strategy, there is a growing emphasis on rehabilitation; individual need for rehabilitation has been estimated in epidemiological studies, and clinical studies and research have addressed the biological, treatment-related and psychosocial aspects of the lives of cancer survivors. Those at the highest risk for therapy-related complications must be identified in order to prepare scientifically based guidelines for long-term follow-up and rehabilitation. We also need intervention strategies to prevent and handle late effects in cancer patients, including psychosocial aspects.

Research on psychosocial aspects of cancer treatment and care, on clinical problems, on late effects and on need for rehabilitation must be conducted within the overall clinical research agenda. The paradigm of cancer treatment should include all aspects of treatment, from the day of diagnosis. We therefore propose a new, integrated approach to the entire trajectory of the life of cancer patients.

Cancer patients are not, however, a homogeneous population to whom we can apply a common model of rehabilitation. Research in the Nordic countries and other industrialized societies has raised the problem of social inequality. A large, nationwide, population-based study of more than three million Danes followed for cancer incidence and survival over ten years showed social inequality in survival [1]. Like other Nordic countries, Denmark has striven to ensure equality in all aspects of life, and this political and administrative goal enters social support and preventive interventions; however, the study shows that, even in this egalitarian, developed country, social inequality persists in public health. These results are relevant for all societies in which health interventions are established in accordance with the goal of equal access to public services. Therefore, consideration must be given to how inequalities in cancer incidence and survival can be addressed in public health interventions, and further research into the underlying mechanisms is required.

Screening-based, individually tailored rehabilitation programs are needed for cancer patients identified as in need of rehabilitation, to provide a solid basis for future clinical practice. Fast-track surgery is now being implemented in the Nordic countries, with the aim of improving recovery and reducing morbidity, based on evidence from the fields of anesthesia, analgesia, surgery, fluid management, nutrition and ambulation [2]. Thus, a three to four-day hospitalization can be reduced to one-day ambulant surgery. This advance requires clarification

of the role of health care personnel in cancer rehabilitation and of the bridge between specialized hospital departments and cancer rehabilitation centres. In addition, methods are needed for screening and targeting cancer patients who have little education, low income, a low literacy level and perhaps the worst prognosis. Social support is also important in cancer survival and rehabilitation, as spouses and other relatives play major roles in patients' ability to cope with the disease and treatment. Although partners and other relatives may be essential in the lives of cancer survivors, the resource that partners represents is not systematically included in rehabilitation.

The main problem in cancer rehabilitation is limited knowledge about virtually all aspects of the process, including defining and identifying who is in need of rehabilitation, integrating and timing psychosocial support and health behavior changes, helping cancer survivors to return to work, reaching out to socially disadvantaged patients, increasing compliance, health service perspectives and economic aspects and involving close relatives in rehabilitation [3–5]. The serious physical, social and psychological implications of cancer diagnosis and treatment as well the risk for a second cancer, recurrence, metastases, other chronic diseases, late effects such as fatigue, lymphoedema or intestinal dysfunction after radiation and general functional decline have been widely established [4]. Although some of the physical effects of cancer treatment can be reduced by a healthy lifestyle [6], large groups of cancer patients continue to lead relatively unhealthy lives [7–9]. In this wilderness, the main directions of research must be clarified.

The research activities that have emerged in the Nordic countries over the past couple of years include close monitoring of the survival of cancer patients. One major initiative was a detailed comparative analysis of survival from all major cancers [10]. Much research has been dedicated to investigating late effects and the rehabilitation needs of women treated for breast cancer. Breast cancer has served as a model for psychosocial and rehabilitation programs; however, studies are needed that include other patient groups and men. A study of the association between cognitive impairment and quality of life in breast cancer survivors [11] was followed by one on how cancer-related cognitive impairment can be improved by meditation techniques [12]. The quality of life of women with a family history of breast cancer is a particularly interesting area in view of access to family histories of cancer in the Nordic cancer registries [13]. Likewise, the incidence and prevalence of depression in this patient group is a major clinical problem [14]. Lymphoedema and its treatment have been the subject of research [15], as have the associated psychological

problems [16–19]. More recent research has focused on quality of life [20], perceptions of illness and adjustment to breast cancer [21], the organization of follow-up programs [22], informed choice in treatment decisions [23], education of health professionals in communicating with patients [24] and the effect of concurrent use of Tamoxifen and antidepressive medication on recurrence and survival [25]. Social support at the workplace has also been investigated in a Nordic study [26]. A study of sexual functioning in women after radiation for rectal cancer [27] and a study of the association between chemotherapy and quality of life in patients with non-small-cell lung cancer with a performance status of 2 [28] are some of the few reports on patients other than women with breast cancer. A new research area is the effect of cancer in spouses, both for the risk for depression [29] and for sick leave taken by spouses of cancer patients [30].

In this issue of *Acta Oncologica*, you will find contributions on various aspects of cancer rehabilitation from several scientific groups, presented at the first Nordic Cancer Rehabilitation Symposium. The papers add to knowledge about symptom burden in a sample of survivors of mixed cancers [31] and in breast cancer survivors [32]; others address more specific late effects in cancer patients, such as depression [33] or fecal incontinence after radiation therapy [34]. The social consequences of a diagnosis of breast cancer in relation to affiliation to the work market are documented both early in the disease trajectory [35] and later [36]; another study points to social differences in the uptake of rehabilitative modalities such as breast reconstruction after breast cancer [37]. In a Norwegian sample, most patients reported a need for rehabilitation, but 40% did not receive it [38]. Cancer affects not only patients but also their close relatives [39], and unmet needs among family members of cancer patients were associated with anxiety and reduced quality of life [40]. The design of rehabilitation systems must include careful evaluation of the context [41], address the challenge of bridging and navigating between different sectors of the health system [42] and be based on proper tools for identifying people at risk, for example distress [43]. A review of diet and exercise interventions in cancer survivors showed that sustainable interventions are needed that include diverse samples of cancer patients in order to ensure generalizability; furthermore, studies are needed on the relative benefits of addressing specific needs in subpopulations [44]. New evidence is presented that physical fitness can be improved in lung cancer patients, although adherence was a significant challenge in this sample [45], whereas no positive lifestyle changes were seen in patients with breast, colorectal or prostate cancer undergoing a rehabilitation stay [46].

The research on cancer rehabilitation indicates a need for studies to disentangle the complicated challenges of how, when and which rehabilitation to offer—and which patients are actually in need. It has been decided that the second Nordic Cancer Rehabilitation Symposium will take place in Copenhagen in autumn 2012. We hope that the readers of this issue of *Acta Oncologica* will be inspired by the papers from this *Acta* Symposium.

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