



**UNIVERSITE DE LIEGE**  
**Faculté de Médecine**  
Département des Sciences de la Motricité  
*Service de Médecine Physique et Kinésithérapie-Réadaptation*  
Professeur J.F. KAUX

*Étude fonctionnelle et de qualité de vie des  
patientes traitées pour un cancer du sein :  
intérêt de la prise en charge rééducative  
multidisciplinaire*

**LECLERC Anne-France**

Licenciée en Kinésithérapie et Réadaptation ainsi qu'en Sciences de la Motricité, orientation générale, à finalité spécialisée en activité physique, santé et bien-être

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de Monsieur le Professeur CRIELAARD Jean-Michel

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## Abstract

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Breast cancer is the most common cancer found in women worldwide. Although its treatments are constantly improving and are therefore causing a reduction in the mortality rate, they are still, with the disease itself, causing side effects. These, affecting both the physical and psychological aspects, generate an alteration of the quality of life of patients not only in the short term, but also in the long term. This explains the reason why we consider breast cancer as a « chronic » disease.

Through extensive, validated and standardized assessments, the first study identifies these adverse effects in terms of physical abilities, body composition, quality of life, and psychological and symptomatic aspects.

From the comparison of the variables observed with patients at  $4 \pm 2$  months as of the end of their treatments (radiotherapy and/or chemotherapy) with those obtained from healthy women recruited for the study and in the literature, we objectify physical deconditioning, high body mass index, high body fat percentage, impaired overall health status and increased symptomatology.

These data therefore justify the interest of defining multidisciplinary care for patients who have been treated for breast cancer.

In this regard, the scientific literature shows the benefits of a regular physical activity and also defines recommendations. However, it also indicates that only a minority of patients are physically active at the end of their treatment and that by consequent a few follow those recommendations. In order to contribute to the establishment of adequate physical management that meets both the patients' and health professionals' expectations, the second study identifies the representations and beliefs about physical activity in the context of breast cancer.

Patients' rather positive opinion on physical activity is thus noted, although they indicate a reduction in their rate of practice between the day of diagnosis and the end of treatment. Barriers to practice as well as motivational factors and patients' preferences are identified. The wish to receive information and an education on the interest, the benefits and the methods of practice to be privileged is also indicated. Finally, the barriers and factors facilitating the promotion of the exercise are identified among health professionals.

Based on this information, the aim of the third study was on the one hand to set up an adapted management, meeting the established recommendations and the patients' needs and preferences, and on the other hand, to evaluate the possible short-term effects. Thus, given the extent of the areas affected by the disease and its treatments and the desire for information and therapeutic education of patients, the care was intended to be multidisciplinary. It included not only regular physical training on cardiopulmonary skills, muscular function and flexibility, but also psycho-educational sessions on stress management, sleep disorders, dietetics, sexuality and physical activity.

From the evaluations performed at baseline and at the end of a three-month follow-up by patients divided into an experimental group (n = 103) and a control group (n = 106), various information could be identified. On the one hand, the results show that the side effects of cancer and its treatments persist over time in the control group (in the absence of specific intervention), or even deteriorate, more particularly in terms of body composition. On the other hand, they indicate that most symptoms and decreases in function are reduced in the group that benefited from the revalidation program. Indeed, the results show a significant, and often highly significant, improvement in physical abilities, body composition, quality of life, psychological and symptomatic aspects as well as the behavior of patients towards physical activity.

However, the results of this previous study need to be considered with caution, as significant differences in quality of life are reported between the control and experimental groups at baseline. The fourth study addresses this bias due to non-randomization of the population through « Propensity Score Matching ».

This new analysis mitigates the results previously described, especially regarding body composition and quality of life, but it corroborates them overall and therefore underlines the interest and the short-term benefits of such a multidisciplinary care in the follow-ups of breast cancer treatments.

The fifth study evaluates the influence of the type of surgery performed (mastectomy or lumpectomy), the presence or absence of chemotherapy and the time between the end of treatment (radiotherapy and/or chemotherapy) and the inclusion in the study (delay  $\leq 4$  months or  $\geq 8$  months) on the health status of patients at baseline as well as on their response to the revalidation program.

Besides the negative influence of chemotherapy on physical function, pain, dyspnea and financial difficulties, the results do not indicate any influence of these characteristics on the initial state of the patients. After three months, all of them seem to present the same recovery profile and similarly benefit from the program. The benefits of revalidation are nevertheless greater in terms of flexibility and physical functions for patients who have benefited from chemotherapy and they are also more important in terms of reduced « diarrhea » and improved financial difficulties felt by patients treated with mastectomy.

Finally, the sixth study completes this work. On the one hand, it assesses the long-term (at three, six, twelve and twenty-four months) effectiveness of the twelve-week multidisciplinary revalidation program on quality of life, psychological and symptomatic aspects and the patients' relationship with physical activity. On the other hand, it gives a preliminary opinion on its economic efficiency.

For the majority of the data, the results of the longitudinal follow-up suggest a significant better global evolution within the group having benefited from the management than within the control group. They therefore demonstrate the long-term benefits of management, although the discussion raises questions about the need to offer revalidation to all patients, given the improved quality of life that can be achieved in the long-term without support. The literature also substitutes the results related to the economic variables of this study whose relevance can be questioned. It demonstrates a favorable cost-effectiveness ratio, which constitutes an

additional interest in the implementation of such multidisciplinary revalidations for the benefit of breast cancer patients.

In conclusion, the collection of these data contributes to the development of optimal management taking into account the needs and the preferences of each patient, but also the recommendations established in the literature. The results, both short-term and long-term, encourage the development of such multidisciplinary interventions and the various discussions and conclusions refer to future research prospects.