



**World
Physiotherapy**
Europe region

Report - The Role of Physiotherapy in Cancer Care in the Europe region

CANCER Cross Working Group (CA Cross WG)

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ABSTRACT

Physiotherapists have strong knowledge and skills to deal with many of the functional problems that result from cancer treatment. The role of physiotherapy spans from cancer prevention to palliative and end of life care. Physiotherapeutic interventions offer a solution for many of the impairments experienced by patients living with and beyond cancer such as declines in physical function and quality of life. Specialised physiotherapeutic interventions can manage complex cancer-related side effects e.g., lymphedema, chemotherapy induced peripheral neuropathy, cardiotoxicity, bone metastases and cancer-related fatigue. With some cancers, research has shown that exercise can manage many side-effects of cancer and cancer treatment, may reduce the risk cancer recurrence, and increase survival. The management of cancer related impairments results in cost saving to hospitals and healthcare symptoms, as well as enabling patients to return to role functions in their communities. This document outlines the role of physiotherapy in the pathway of cancer patients.

REPORT - THE ROLE OF PHYSIOTHERAPY IN CANCER CARE IN THE EUROPE REGION

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CONTENTS

1. INTRODUCTION	3
1.1. The Role of Physiotherapy in Cancer Care.....	3
1.2. A key physiotherapeutic intervention for the oncology patient is exercise prescription.	4
1.3. Aim of this report	5
2. THE ROLE OF PHYSIOTHERAPY IN PRIMARY AND SECONDARY CANCER PREVENTION	5
3. THE ROLE OF PHYSIOTHERAPY IN CANCER PREHABILITATION.....	5
4. THE ROLE OF PHYSIOTHERAPY DURING CANCER TREATMENT.....	6
5. THE ROLE OF PHYSIOTHERAPY IN POST-TREATMENT CANCER REHABILITATION.....	7
6. THE ROLE OF PHYSIOTHERAPY IN THE LONG-TERM REHABILITATION OF PEOPLE LIVING AFTER CANCER.....	9
7. THE ROLE OF PHYSIOTHERAPY IN ADVANCED CANCER	9
8. SUMMARY STATEMENTS.....	10
8.1. General Statement.....	10
8.2. The role of physiotherapy in primary and secondary cancer prevention	10
8.3. The role of physiotherapy in cancer prehabilitation	10
8.4. The role of physiotherapy during cancer treatment.....	10
8.5. The role of physiotherapy in post-treatment cancer rehabilitation	10
8.6. The role of physiotherapy in the long-term rehabilitation of people living after cancer	11
8.7. The role of physiotherapy in advanced cancer	11
9. ACKNOWLEDGEMENTS.....	11
10. REFERENCES.....	12

1. INTRODUCTION

The Europe region is a non-profit, non-governmental organisation that represents the physiotherapy profession in Europe.

The Organisation has a membership of 37 Physiotherapy Associations representing approximately 185,000 physiotherapists in Europe.

The Purpose of the Europe region is to lead, promote and represent the Physiotherapy profession in the Europe region by driving excellence in education, practice and research advocating and influencing health policy.

During 2021, the European Commission published the Europe Beating Cancer Plan, knowing that in 2020, 2.7 million people in the European Union were diagnosed with cancer, and another 1.3 million people lost their lives to it. Unless there is no decisive action now, cancer cases are set to increase by 24% by 2035, making it the leading cause of death in the EU.

There are estimated to be over 12 million cancer survivors in Europe, including around 300,000 childhood cancer survivors, due to advances in early detection, effective therapies and supportive care. There is a need to develop the care provided to people diagnosed with cancer within Europe, and to ensure patients receive the supportive care needed to maximise their quality of life during and after cancer treatment.

1.1. The Role of Physiotherapy in Cancer Care

Cancer and its treatment often lead to impaired functioning in daily living and a decrease in quality of life. The immediate and long-term sequelae of cancer treatment, including deconditioning, fatigue, impaired bone health, altered body composition, depression and anxiety, is well documented [1-3]. Physiotherapeutic interventions offer support for patients to manage many of these impairments during the cancer. Physiotherapists work with patients across the different cancer control categories in the cancer care continuum, as described by the Physical Activity and Cancer Control (PACC) framework (Figure 1) [4].

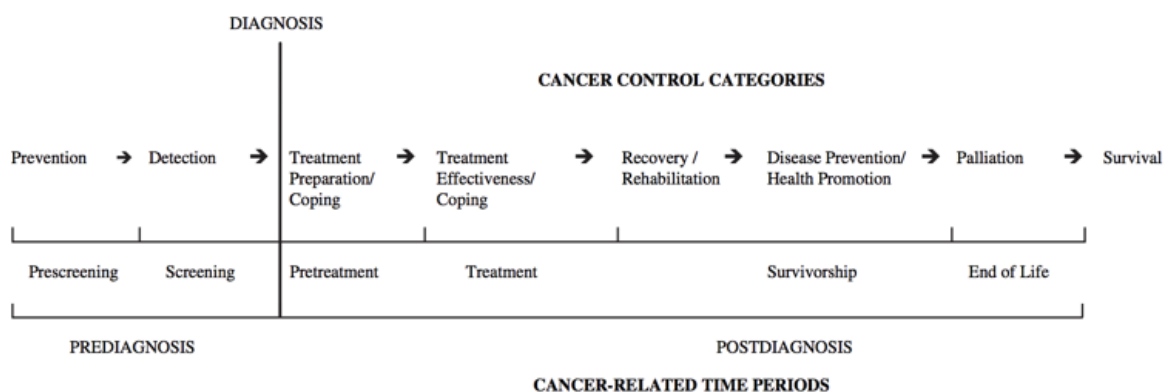


Figure 1 The Physical Activity and Cancer Control Framework[4]

Rehabilitation services should be integrated at the point of diagnosis to assess an individual's baseline functional performance status and inform the cancer care plan [5]. Interval functional screening and reassessment should continue throughout medically directed treatment to identify and manage clinically meaningful declines in function. Physiotherapists are well placed to assess and treat patients in the acute hospital setting as well as in the community and provide the specialist and targeted assessments and interventions needed by many cancer survivors.

Current recommendations provide specific guidance for improving cancer treatment-related symptom management and highlight the critical role of cancer rehabilitation services. [6]. Physiotherapists should be included as members of the care planning team from the point of diagnosis and throughout the duration of the cancer care plan to provide evidence-based interventions to patients living with and after cancer.

1.2. A key physiotherapeutic intervention for the oncology patient is exercise prescription.

Exercise in patients living with and beyond cancer has been shown to be a feasible, safe, acceptable and effective treatment in every cancer-related period. There is growing evidence for the benefit of exercise on cancer-related health outcomes like improved survival, less fatigue (e.g. cardiac and skeletal muscle function), improved physical functioning and better quality of life [7-9]. Based on the current evidence and established effectiveness, it is well accepted that exercise is and should be a part of standard care across the cancer care continuum (Figure 2).

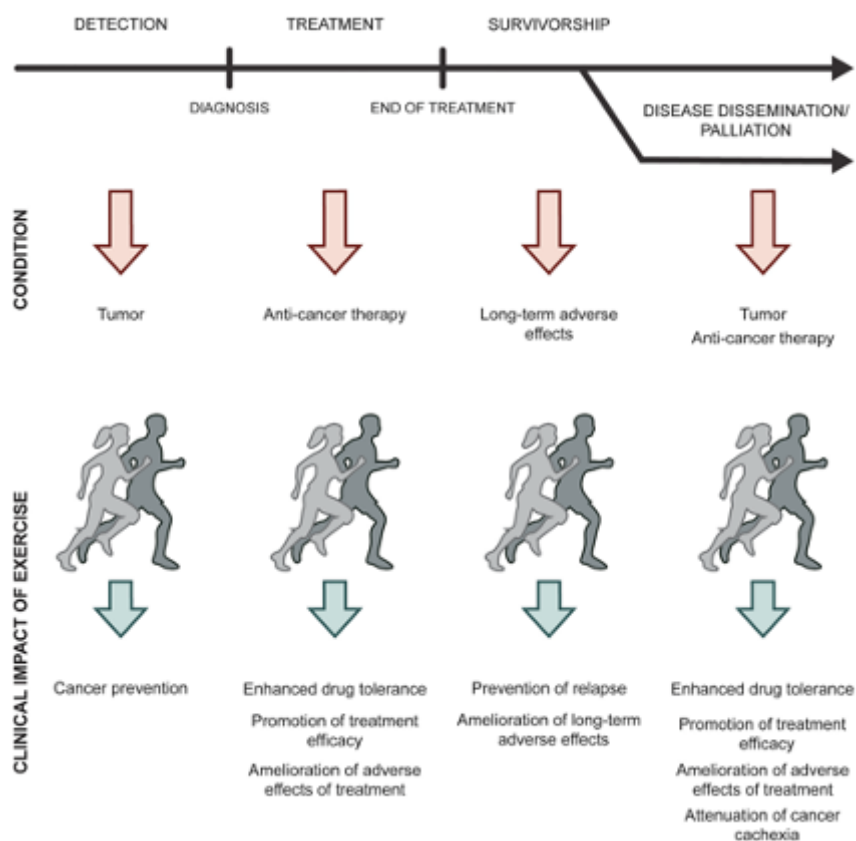


Figure 2 The Role of Physical Activity Throughout the Cancer Continuum [10]

1.3. Aim of this report

The aim of this report is to outline the role of physiotherapy in the pathway of cancer patients, as an effective and cost-effective treatment.

2. THE ROLE OF PHYSIOTHERAPY IN PRIMARY AND SECONDARY CANCER PREVENTION

For all adults, exercise is important for cancer prevention and specifically lowers risk of seven common types of cancer: colon, breast, stomach, oesophageal, bladder, endometrial and kidney cancer [11]. In addition, exercise is linked to improved survival before and after breast, colorectal or prostate cancer diagnoses and reduces risk of recurrence of breast, colon and prostate cancers by 20% to 40%. Physiotherapists can enable and encourage everyone to have a physically active lifestyle.

3. THE ROLE OF PHYSIOTHERAPY IN CANCER PREHABILITATION

Physiotherapists can provide exercise based prehabilitation to patients, with the goal of enhancing functional and physiological capacity to enable them to withstand cancer treatments and minimise any deterioration in function.

Prehabilitation, provided after diagnosis and before subsequent treatments, aims to optimise physiological reserve and address modifiable risk factors prior to surgery to improve post treatment outcomes [12]. Prehabilitation is an intervention to enable people with cancer to enhance their own physical and mental health and well-being [13, 14]. The core components of a multi-faceted prehab programme include cardiovascular and strength training, nutritional management, wellbeing with psychological support, and medical optimisation [15].

Prehabilitation can improve a person's functional capacity following cancer surgery[16]. It may also lead to reduced post-treatment complications, decreased hospitalisation, increased physical and mental wellbeing after treatment and improved quality of life [13, 17, 18]. Prehabilitation exercise programs that consist of cardiovascular and/or strength training provided at least two weeks before surgery are associated with positive outcomes [19]. Physiotherapists can provide tailored exercise programmes based on the current evidence supporting prehabilitation, including appropriate programmes for patients with contraindications to exercise such as certain types of cancer (e.g. bone cancer) or certain types of treatment (e.g. reductions in normal blood counts) [20, 21].

4. THE ROLE OF PHYSIOTHERAPY DURING CANCER TREATMENT

Physiotherapists work with patients to manage and improve specific side-effects and impairments that arise as a result of cancer and its treatment.

Physiotherapy led rehabilitation contributes to the prevention, management, and reduction of possible treatment side-effects. An increasing number of calls for the integration of exercise into clinical cancer care have since been issued and physiotherapists therefore play a central role in providing exercise guidance and programming to patients with cancer [22, 23]. The variable and dynamic nature of cancer treatment necessitates ongoing interval assessment throughout cancer treatment, based on risk for, and presentation of, treatment-related functional morbidity [5, 24]. There is strong evidence for the role of exercise prescription to manage the following side effects: anxiety, depressive symptoms, fatigue, health related quality of life, lymphoedema and physical function. There is moderate evidence for the role of exercise in the management of bone health and sleep in patients living with cancer [25].

While exercise guidelines are in place for patients during and after treatment, physiotherapists have an important role to play in the prescription of individualised exercise programmes to enable patients to meet these guidelines.

Physiotherapists prescribe and adapt exercise programmes suitable for patients receiving cancer treatment.

Physiotherapists have an important role to play in the exercise screening of high-risk patients such as those at risk of skeletal related events, those treated with neurotoxic chemotherapy and those receiving cancer treatment that puts them at higher risk of cardiovascular disease [26].

All patients diagnosed with cancer who are exposed to treatments with high symptom load and/or physiological impact, and who are at risk of functional decline due to this treatment should receive a comprehensive assessment by a physiotherapist of all components of health-related physical fitness (i.e., cardiorespiratory fitness, muscle strength and endurance, body composition, and flexibility), with some cancer-specific considerations to individualize an exercise prescription. Physiotherapists are well placed to complete detailed assessments as they are familiar with the common treatment approaches to cancer, the side effects and symptoms these treatments can cause, and the subsequent impact on exercise tolerance [27].

5. THE ROLE OF PHYSIOTHERAPY IN POST-TREATMENT CANCER REHABILITATION

Patients who experience cancer related impairments during and after cancer treatment should be offered access to cancer rehabilitation.

Cancer survivors are almost three times more likely to report fair or poor health after treatment and twice as likely to have psychosocial disabilities and physical and functional limitations as persons without cancer or chronic illness [28]. Patient should have access to rehabilitation in order to manage any side-effects that cause a deterioration in the patients' ability, function and quality of life, e.g. cancer-related fatigue, deconditioning, lymphedema, pain, neuropathy, urinary and bladder problems [29].

Physiotherapy led interventions, including exercise, are known to improve cancer related side effects such as symptoms of anxiety and depression, quality of life, physical function, cancer related fatigue and lymphoedema.

As the side effects of cancer and its treatment are extremely varied, there are many indications for physiotherapy input. Internationally recognised frameworks are available to describe the consequences of cancer on an individual in the context of their environment, such as The International Classification of Functioning, Disability, and Health (ICF). These frameworks recognise that rehabilitation for cancer patients can involve a broad range of physical and psychosocial factors [30]. An example of the impairments associated with breast cancer are given in Figure 3 [31], however physiotherapy input is indicated after several cancers and cancer treatments. Some of the most debilitating side-effects requiring physiotherapy input are included here. For example, early mobilisation and bronchial hygiene techniques for surgical oncology patients [32]. Other examples are the indication for physiotherapy to address shoulder complaints following both surgery and radiotherapy for head and neck cancer or to address incontinence and pelvic health impairments following uro-gynaecological surgery [33-36]. Physiotherapists can provide all patients with sufficient knowledge/competency/self-management skills to exercise on their own accord or supervised in a non-healthcare setting following cancer treatment.

Cancer-related fatigue is often cited by patients as the most debilitating and disabling symptom during medical treatment and following its completion [37]. Several reviews and meta-analysis have shown that exercise is effective in reducing fatigue and its impact in cancer patients and survivors [38-40]. In particular, interventions supervised by an exercise professional were found to be more effective than unsupervised home programmes in promoting adherence to

exercise, resulting in more significant improvements in fatigue and quality of life [41]. Existing guidelines recommend screening for fatigue at various time frames of treatment and survivorship as well as providing education and guidance. Physiotherapists can play an active role in educating and guiding patients through the management of cancer related fatigue and a referral to physiotherapy should be considered for these patients [41].

Lymphoedema, a common side-effect of cancer treatment, can cause functional impairments and psychosocial morbidities and may lead to diminished health related quality of life [42-44]. Physiotherapists are first-in-line to treat cancer related lymphedema by Complex Decongestive Therapy (CDT or Complex Physical Therapy). (ISL consensus document 2020) CDT consists of 4 pillars including compression by garments or bandages or sleeves, manual lymphatic drainage, advice for skin care and infection prevention and exercise therapy methods like passive or active movements [45, 46].

Physiotherapists embrace the prospective surveillance model for physical rehabilitation and exercise in cancer. The goals of this model are to promote the surveillance of common physical impairment and functional limitations associated with cancer treatment, to provide education to facilitate early identification of impairments; to introduce rehabilitation and exercise intervention when physical impairments are identified; and to promote and support physical activity and exercise behaviours through the trajectory of disease treatment and survivorship [47].

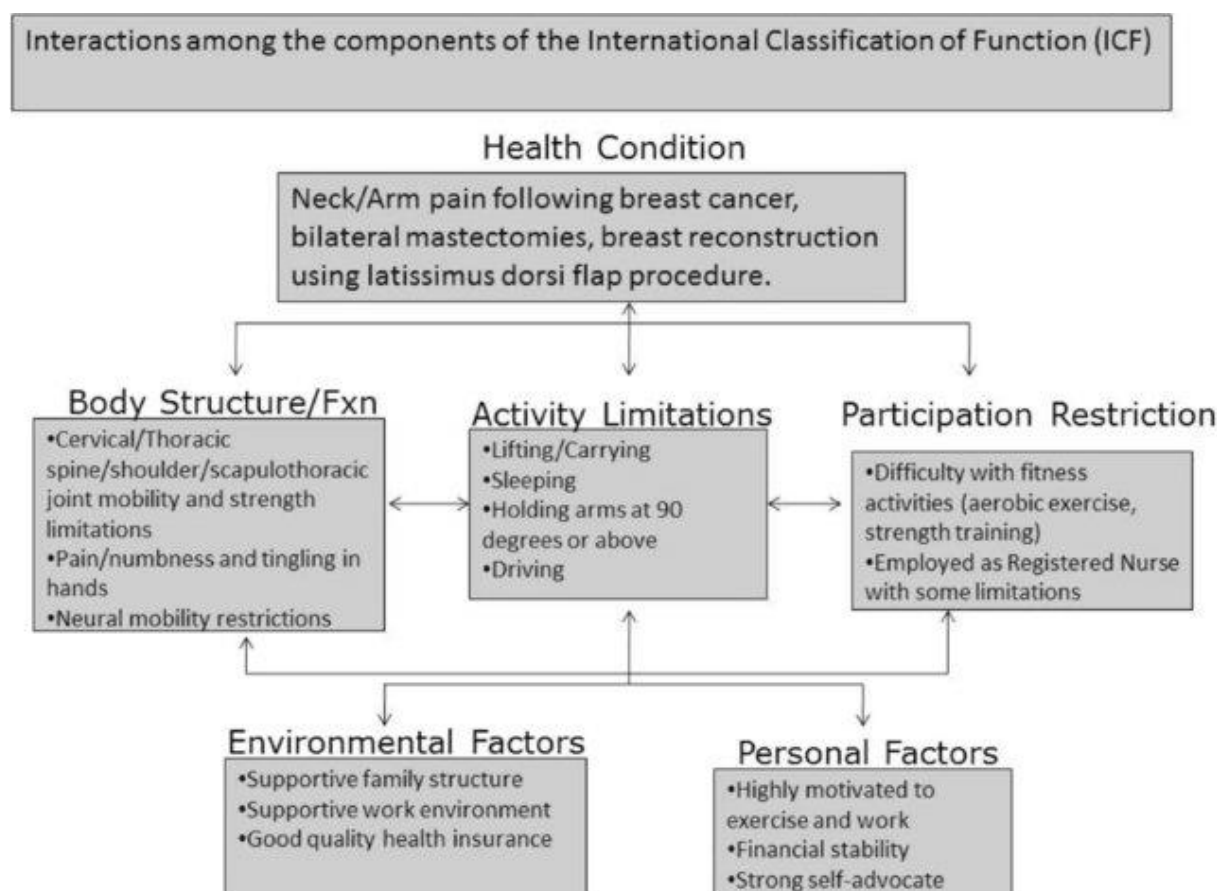


Figure 3 An example of the use of the ICF in cancer rehabilitation for breast cancer

6. THE ROLE OF PHYSIOTHERAPY IN THE LONG-TERM REHABILITATION OF PEOPLE LIVING AFTER CANCER

Physiotherapists play a key role in the monitoring and treatment of the long-term side effects (5 years after diagnosis) of cancer.

The absence of prehabilitation and rehabilitation, as described in the previous sections, can lead to an increase in long-term side effects for patients living with and after cancer. Survivorship care that lacks appropriate rehabilitation services could lead to unnecessary long-term physical and psychological suffering [48]. Several long-term side effects, i.e., those that persist after five years, remain under-documented. Patients suffering from long-term sequelae have difficulties in having their symptoms recognised and in accessing adequate treatment or support. Some cancers require lifelong treatment, and their side effects tend to become persistent, turning the cancer disease into a chronic illness. The most common side effects of cancer and its treatment are pain, fatigue, and emotional distress [49].

For all types of cancer, emphasis should be placed on appropriate physical activity. In both the short and long term, physical activity can prevent the development of new cancer, improve quality of life, and manage many symptoms such as cancer related fatigue [50].

7. THE ROLE OF PHYSIOTHERAPY IN ADVANCED CANCER

The role of physiotherapy in advanced cancer includes symptom control, optimisation of functional mobility and education.

Developments in systemic therapies for cancer have prolonged survival even in patients who cannot be cured, and many people now live with advanced stages of cancer for longer periods [51]. Patients with advanced cancer may experience high levels of functional disability related to disease progression, deconditioning, pain, local or systemic effects of cancer treatment and its complications [52-54]. Rehabilitation can enable people with advanced cancer to participate as fully as possible in all aspects of their daily lives. It represents an important route for people to fulfil meaningful goals, maintain dignity and adapt constructively to the uncertainty and loss that is often intrinsic in the lived experience of advancing illness [55]. Physiotherapy for patients receiving palliative care aims to maintain and/or improve physical function, minimize or eliminate complications, alleviate discomfort and pain, optimizing functional status, physical independence, and quality of life [56-58]. Team based palliative care should be implemented to address the needs of patients and their families. [59, 60].

Access to a physiotherapy should be available to any patient, who requires palliative care or in the final stage of their life. A unique approach with person-centred palliative care and integrated physiotherapy activities are essential [60]. The benefit of exercise has been covered earlier in this document and those benefits continue even for those patients requiring palliative care or are in the final stages of their life [57, 61]. Patients may also benefit from receiving equipment to enable the safe maintenance of physical function [62]. Receiving palliative care may contribute to the general well-being of patients and to the reduction of the severity of the comorbid symptoms, especially pain, drowsiness, loss of appetite and depression [54, 63, 64].

8. SUMMARY STATEMENTS

8.1. General Statement

Physiotherapists have strong knowledge and skills to deal with many of the functional problems that result from cancer treatment.

Rehabilitation services, including physiotherapy, should be integrated at the point of diagnosis to assess an individual's baseline functional performance status and inform the cancer care plan.

8.2. The role of physiotherapy in primary and secondary cancer prevention

Physiotherapists have an important role in encouraging and enabling patients to be physically active, essential for lowering risk of seven common types of cancer and improving survival before and after breast, colorectal or prostate cancer diagnoses.

8.3. The role of physiotherapy in cancer prehabilitation

Physiotherapists can provide exercise based prehabilitation to patients, with the goal of enhancing functional and physiological capacity to enable them to withstand cancer treatments and minimise any deterioration in function.

8.4. The role of physiotherapy during cancer treatment

Physiotherapists work with patients to manage and improve specific side-effects and impairments that arise as a result of cancer and its treatment.

Physiotherapists prescribe and adapt exercise programmes suitable for patients receiving cancer treatment.

8.5. The role of physiotherapy in post-treatment cancer rehabilitation

Patients who experience cancer related impairments during and after cancer treatment should be offered access to cancer rehabilitation.

Physiotherapy led interventions, including exercise, are known to improve cancer related side effects such as chemotherapy induced peripheral neuropathy, depressive symptoms, anxiety, quality of life, physical function and cancer related fatigue.

8.6. The role of physiotherapy in the long-term rehabilitation of people living after cancer

Physiotherapists play a key role in the monitoring and treatment many of the long-term side effects of cancer.

8.7. The role of physiotherapy in advanced cancer

The role of physiotherapy in advanced cancer includes symptom control, optimisation of functional mobility and education.

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