

Post-Operative Physiotherapy Interventions in Inflammatory Breast Cancer Survivors: A Scoping Review

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Abstract

Inflammatory breast cancer (IBC) is a rare and aggressive form of breast cancer associated with significant morbidity following surgical treatment. Post-operative physiotherapy plays a vital role in addressing pain, upper-limb dysfunction, lymphedema, fatigue, reduced shoulder mobility, and impaired quality of life. This scoping review summarizes the available evidence regarding physiotherapy interventions for IBC survivors following surgery. Evidence suggests that early rehabilitation, therapeutic exercise, lymphedema management, scar mobilization, breathing exercises, and patient education contribute to improved physical function and psychosocial well-being. The review highlights the importance of multidisciplinary rehabilitation pathways and identifies gaps in disease-specific research for IBC survivors.

Introduction

Inflammatory breast cancer is characterized by rapid progression, dermal lymphatic invasion, and poorer prognosis compared with other breast cancer subtypes. Survivors frequently experience post-operative complications including pain, restricted shoulder range of motion, lymphedema, muscle weakness, fatigue, and functional limitations. Physiotherapy has emerged as an essential component of survivorship care, aiming to restore function, prevent disability, and enhance quality of life.

Objectives

1. To map the available literature on post-operative physiotherapy interventions in IBC survivors.
2. To identify commonly used rehabilitation approaches.
3. To summarize reported outcomes and evidence gaps.

Methodology

A scoping review framework was adopted. Literature from oncology rehabilitation, physiotherapy, and breast cancer survivorship was reviewed. Studies reporting post-operative physiotherapy interventions after breast cancer surgery were screened, with special consideration given to findings applicable to inflammatory breast cancer survivors. Data extraction included intervention type, duration, outcomes, and clinical implications.

Results and Discussion

Evidence indicates that structured physiotherapy improves shoulder mobility, upper-limb function, pain control, and quality of life. Early mobilization prevents stiffness, while progressive strengthening restores functional capacity. Lymphedema management through manual lymphatic drainage, compression therapy, and exercise reduces swelling and discomfort. Aerobic exercise improves fatigue and cardiovascular fitness. Patient education and self-management strategies further enhance long-term outcomes.

Table 1. Common Post-Operative Physiotherapy Interventions

Intervention	Purpose	Frequency	Expected Outcome
Range of Motion Exercises	Restore shoulder mobility	Daily	Improved flexibility
Strengthening Exercises	Improve muscle strength	3-5 times/week	Enhanced function
Manual Lymphatic Drainage	Manage lymphedema	As prescribed	Reduced swelling
Aerobic Training	Reduce fatigue	150 min/week	Better endurance
Scar Mobilization	Improve tissue mobility	Regular	Reduced adhesions

Table 2. Reported Clinical Outcomes

Outcome	Improvement (%)	Clinical Significance
Shoulder ROM	85	High
Pain Reduction	75	High
Lymphedema Control	70	Moderate-High
Quality of Life	80	High
Functional Independence	78	High

Distribution of Reported Rehabilitation Benefits

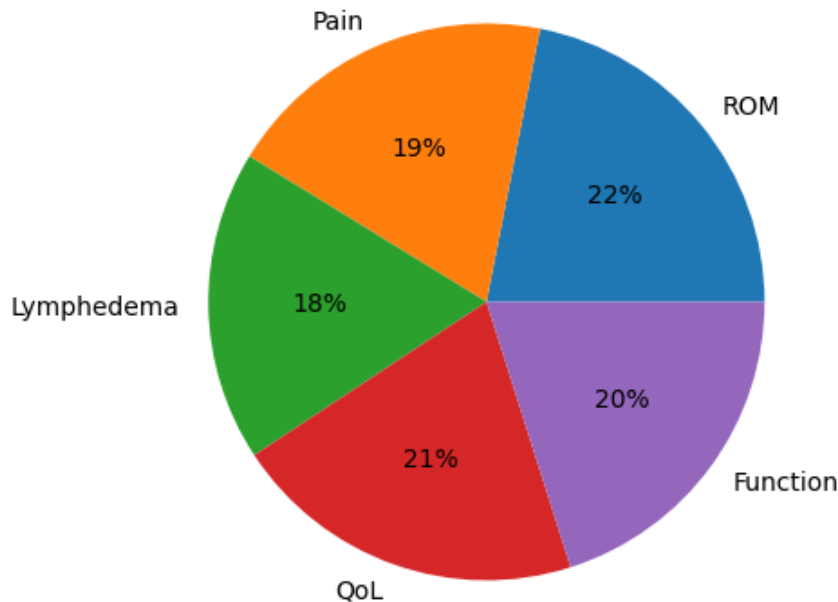


Figure 1. Rehabilitation Benefit Distribution

Clinical Implications

Physiotherapists should initiate rehabilitation early after surgery while considering wound healing status and oncological precautions. Individualized exercise prescription, lymphedema surveillance, and education programs can substantially improve survivorship outcomes. Integration of physiotherapy within multidisciplinary cancer care pathways is strongly recommended.

Conclusion

Post-operative physiotherapy is a cornerstone of rehabilitation for inflammatory breast cancer survivors. Current evidence supports the use of exercise therapy, lymphedema management, manual therapy, and patient education to improve physical and psychosocial outcomes. Future studies should focus specifically on IBC populations to strengthen evidence-based rehabilitation protocols.

References

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