



Converging Healthcare &amp; Technology

**INTERNATIONAL JOURNAL OF CONVERGENCE IN HEALTHCARE**Published by  
IJCIH & Pratyaksh Medicare LLP

www.ijcih.com

## Effect of Modified PNF Exercises on Upper Limb Strength and Function in Breast Cancer Survivors: A Case Series

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### Abstract

**Background:** Breast cancer is the most common malignancy that affects women world-wide and one of the major cause for cancer related deaths. Breast cancer treatment induced variety of physical impairments including reduced flexibility, strength, endurance, lymphedema, pain and reduction in overall functionality.

**Methodology:** There were 5- diagnosed cases of breast cancer who had completed their active treatment were included in this case series. The intervention protocol included modified PNF exercises for upper limb with variable weights and shoulder girdle exercises for 3 times in a week for 4 weeks. The outcome were upper limb strength and disability which were measured pre and post intervention using arm curl field test and DASH questionnaire.

**Results:** Significant improvement in upper limb strength and reduced in disability were found in all 5 subjects.

**Conclusion:** Modified PNF exercises and shoulder girdle exercises are effective in improving upper limb strength, function and reducing disability in breast cancer survivors.

**Keywords:** PNF exercises, Breast cancer, upper limb strength, Disability.