

# World Congress on Breast Cancer

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## Cardiac dose sparing and avoidance techniques in breast cancer radiotherapy

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Breast cancer radiotherapy represents an essential component in the overall management of breast cancer. As the number of breast cancer survivors has increased, chronic sequelae of breast cancer radiotherapy become more important. While recently published data suggest a potential for an increase in cardiac events with the administration of radiotherapy, these studies do not consider the impact of newer radiotherapy techniques commonly utilized. Therefore, the purpose of this review is to evaluate cardiac dose sparing techniques in breast cancer radiotherapy. Current options for cardiac protection/avoidance include (1) maneuvers that displace the heart from the field such as coordinating the breathing cycle or through prone patient positioning, (2) technological advances such as intensity modulated radiation therapy (IMRT) or proton beam therapy (PBT), and (3) techniques that treat a smaller volume around the lumpectomy cavity such as accelerated partial breast irradiation (APBI), or intraoperative radiotherapy (IORT). While these techniques have shown promise dosimetrically, limited data on late cardiac events exist due to the difficulties of long-term follow up. Future studies are needed to validate the efficacy of cardiac dose sparing techniques and may use surrogates for cardiac events such as biomarkers or perfusion imaging

## Outcomes of the multidisciplinary breast cancer rehabilitation programme

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**Background:** Breast cancer (BC) is a major cause of morbidity and mortality, and the most common malignancy in women worldwide. The rehabilitation model presents opportunities for intervention throughout the disease continuum phases.

**Aims:** To present the results of the 'Multidisciplinary Breast Cancer Rehabilitation Programme' at the Royal Melbourne Hospital, Australia.

**Methods:** This presentation will outline studies aimed at clinical management of rehabilitation issues in BC survivors such as pain, lymphoedema etc.; improve service provision and factors predicting clinical outcomes over longer-term following definitive treatment. Problems in conducting robust clinical trials and translation will be discussed. These include systemic reviews for evidence synthesis, randomized controlled trials and other study designs in BC rehabilitation programmes, value of observational studies, clinical practice improvement programs, individualized goal attainment processes and issues of outcome measurement.

**Results of,** systematic reviews and RCT for efficacy of multidisciplinary rehabilitation input; factors impacting long-term outcomes; psychosocial outcomes & supportive care needs in persons with BC within the Australian settings; and Australian data comparison with the BC ICF Core set, will be presented.

**Conclusion:** Findings from this research programme will be relevant to multidisciplinary teams caring for patients with complex disabilities and guide evidence based practice.