Background: Advancements in chemotherapy have greatly increased breast cancer survival, leading to an increased focus on the management of long-term effects of treatment. Chemotherapy-related cognitive impairment, one such long-term effect, is experienced by as many as 90% of breast cancer survivors (BCS) and negatively affects employment, daily function, and quality of life. Chemotherapy-related cognitive impairment is a top research and clinical practice priority.

Objectives: The aim of this article is to review computer-based cognitive training intervention studies tested in BCS, present implications for practice and directions for future research, and discuss neuroplasticity and cognitive reserve, the mechanisms by which computer-based cognitive training produces physiologic changes in the brain.

Methods: A search of PubMed, CINAHL®, and PsycINFO® databases yielded two computer-based cognitive training intervention studies in BCS.

Findings: This review suggests that computer-based cognitive training may enhance cognitive function in BCS with chemotherapy-related cognitive impairment. Oncology nurses are in a unique position to support BCS experiencing chemotherapy-related cognitive impairment. In addition to acknowledging BCS' concerns, screening for other potential factors, and providing education on healthy living, nurses may suggest computer-based cognitive training as an approach to managing chemotherapy-related cognitive impairment. Future research should use imaging and larger populations.

Key words: breast cancer survivor; chemotherapy; cognition; cognitive intervention; cognitive training

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