Chemotherapy-Related Cognitive Impairment: The Breast Cancer Experience

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Purpose/Objectives: To provide an in-depth description of the experience of chemotherapy-related cognitive impairment (CRCI) for women with breast cancer and identify related information that women would find useful prior to chemotherapy and at the onset of cognitive changes.

Research Approach: Qualitative, descriptive design.

Setting: Academic breast cancer survivorship center in Kansas City, KS.

Participants: 18 breast cancer survivors within 6–12 months of having completed chemotherapy who self-reported changes in cognitive function.

Methodologic Approach: Data were collected with a demographic questionnaire, semistructured interviews, and a focus group. Qualitative content analysis was performed.

Findings: Study themes were Life With Chemobrain, How I Changed, How I Cope, and How to Teach Me. Participants described difficulty with short-term memory, focusing, word finding, reading, and driving. Issues with fatigue, trouble sleeping, neuropathy, balance, and coordination also were of concern. Coping strategies included writing things down, depending on others, focusing on one task at a time, and giving oneself permission to make mistakes. Participants described exercise and getting enough rest to be helpful and recommended activities to stimulate the mind. Participants wanted information about the potential for CRCI prior to initiating chemotherapy and desired an individualized approach to education. Specific recommendations for education were provided.

Conclusions: The study results provide a framework for understanding the experience of CRCI that can be used to guide development of patient and family education and generate questions for additional research.

Interpretation: Application of the study results will enhance informed consent, validate the experience of CRCI, and contribute to patient satisfaction.

Cognitive changes, a commonly reported toxicity of breast cancer treatment, have been referred to as chemotherapy-related cognitive impairment (CRCI) in the literature and chemobrain by the lay public. Up to 83% of breast cancer survivors who have received chemotherapy report some degree of cognitive dysfunction (Jenkins et al., 2006; O'Shaughnessy, 2003). Cognitive changes can have a significant effect on cancer survivors' quality of life, and lack of information regarding the potential risk prevents patients from granting full informed consent prior to initiation of therapy.

The body of literature supporting the occurrence of CRCI is growing, although causal mechanisms have yet to be determined conclusively (Ahles et al., 2002; Brezden, Phillips, Abdolell, Bunston, & Tannock, 2000; Schagen et al., 1999; Von Ah et al., 2009; Wefel, Lenzi, Theriault, Davis, & Meyers, 2004; Wieneke & Dienst, 1995). A few qualitative studies have described patients' experience with CRCI, including the experience related to breast cancer treatment (Boykoff, Moieni, & Subramanian, 2009; Mulrooney, 2007; Downie, Mar Fan, Houede-Tchen, Yi, & Tannock, 2006; Fitch, Gray, Godel, & Labrecque, 2008; Thielen, 2008; Wagner, Sweet, Butt, Lai, & Cella, 2009). Fitch et al. (2008) interviewed 32 cancer survivors to study the effect of cognitive changes on daily living, as well as survivors' coping strategies. In addition, Boykoff et al. (2009) interviewed 74 Caucasian and African American breast cancer survivors to describe the psychosocial ramifications of CRCI. Study results included descriptions of the general psychosocial influence of cognitive changes, effect on interactions with healthcare providers, and consequences for social networks and work performance.

A common complaint of participants in those studies, as well as in unpublished work by Thielen (2008), was the lack of acknowledgment or education about the potential for cognitive changes by healthcare providers. Few educational tools are available, and oncology nurses have acknowledged lack of access to appropriate patient and family educational materials (Myers & Teel, 2008). The purpose of this qualitative, descriptive study was to