Predictors of Self-Reported Memory Problems in Patients With Ovarian Cancer Who Have Received Chemotherapy

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Changes in cognitive function, including memory problems, are recognized as a serious potential sequela to chemotherapy (Ahles & Saykin, 2001). Estimates of the frequency of chemotherapy-related cognitive impairment (CRCI) range from 75%–95% shortly following the completion of treatment and 17%–35% two or more years after completion of therapy (Ahles & Saykin, 2001). To date, most research on this topic has involved patients with breast cancer (Bender et al., 2006, 2007; Brezden, Phillips, Abdolell, Bunston, & Tannock, 2000; Castellon et al., 2004; Fergusson, McDonald, Saykin, & Ahles, 2007; Klemp, Stanton, Kimler, & Fabian, 2006; Kreukels et al., 2006; Schagen et al., 1999; Tchen et al., 2003; van Dam et al., 1998). Few studies have been conducted specifically to evaluate CRCI in patients with other solid tumors (Ahles et al., 2002; Malmstrom & Karlsson, 2003; Shapiro, 2005; Troy et al., 2000).

About 22,000 women in the United States are diagnosed with ovarian cancer each year (American Cancer Society, 2010). Treatment of ovarian cancer typically consists of combination therapy with a platinum-based regimen and a taxane. Second-line agents may include etoposide, liposomal anthracyclines, and ifosfamide (an analog of cyclophosphamide). These agents have been related to proinflammatory cytokine release and oxidative stress, both hypothesized causes of CRCI (Ahles & Saykin, 2007; Chen, Jungsuwadee, Vore, Butterfield, & St. Clair, 2007; Wood et al., 2006). Subtle cognitive changes may be associated with chemotherapy for patients with ovarian cancer (Malmstrom & Karlsson, 2003).

Results of previous research suggest that age and education are predictors of cognitive performance after chemotherapy (Jenkens et al., 2006) and that depression and fatigue are associated with cognitive function (Bender et al., 2006; Castellon et al., 2004). Contradictory results have been published related to CRCI and time since chemotherapy. No statistical difference related to time since chemotherapy and CRCI was noted by van Dam et al. (1998) for patients receiving chemotherapy for breast cancer. However, Schagen et al. (1999) and Schagen, Muller, Boogerd, and van Dam (2002) found a decrease in changes in cognitive function between the time points of two and four years postchemotherapy.