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Cancer
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Long-term Cancer Survival and Cognitive Functioning

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Background: There has been a notable increase in the length of survival associated with numerous forms of cancer. Much of this increase relates to the aggressive use of chemotherapy and radiation treatment. Both chemotherapy and radiation have been associated with short-term decreases in cognitive abilities. The long-term effect of such therapies on cognition is poorly understood. This study evaluates the cognitive performance of long-term cancer survivors.

Methods: This study used data from the Women's Memory Study (WMS), a 5 year prospective cohort study of women age 75 or older that investigates the relationship of hormone use to cognitive performance. The WMS enrolled 3,924 elderly women in 1999. Of these, 3,681 completed a baseline structured telephone interview and a cognitive assessment (Telephone Interview of Cognitive Status-modified (TICS_m)). The baseline interview collected information on personal habits and medical history, including the question "Have you ever in your life been hospitalized for cancer?" Differences between those with and without cancer were analyzed with t-tests.

Results: A total of 555 (15.1%) women reported at least one hospitalization for cancer, 3123 (84.8%) reported no such hospitalizations and three (< 1%) were unsure. To assure that only long-term survivors were included in the analysis, only women who were first hospitalized at least five years prior to the interview were included. This resulted in 455 long-term survivors. There were no statistically significant differences between cancer survivors and those without a history of cancer on age or education. A t-test between groups for TICS_m scores found no significant difference (mean survivors = 29.8; mean no cancer = 29.3; $p = .1$).

Conclusions: These findings suggest that cancer, and its treatment, do not have a long-term negative effect on cognition. While further analyses are needed to explore effects of specific types of cancers and treatments, current results do not indicate that when considered in the aggregate, either cancer or its treatment impacts cognitive performance.