

# RESEARCH HIGHLIGHTS

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## Psychosocial

### Treatment Preferences and Treatment Received May Affect Body Image and Mental Health in Older Women

Researchers from Georgetown University Medical Center in Washington, DC, and the National Cancer Institute in Rockville, MD, surveyed 563 female breast cancer survivors. The participants were aged 67 and older and had stage I and II breast cancer. The survey was conducted at 3, 12, and 24 months after surgery. The purpose was to evaluate whether concordance between treatment preferences and treatment received predicts post-treatment body image and whether body image, in turn, affects mental health in older women with breast cancer two years after treatment. All women were clinically eligible for breast conservation. The study found that body image was an important factor in treatment decisions for 31% of women. Women who received breast conservation had better body image two years post-treatment than those who received mastectomies. Women who preferred breast conservation but received mastectomy had the poorest body image. The study also estimated that body image, in turn, predicted two-year mental health. The researchers concluded that receiving treatment consistent with preferences about appearance was important in long-term mental health outcomes. Body image was measured using questions adapted from the Cancer Rehabilitation Evaluation System–Short Form, and mental health was evaluated using the Medical Outcomes Study subscale.

Figueiredo, M.I., Cullen, J., Hwang, Y., Rowland, J.H., & Mandelblatt, J.S. (2004). Breast cancer treatment in older women: Does getting what you want improve your long-term body image and mental health? *Journal of Clinical Oncology*, 22, 4002–4009.

### Study Looks at Effects of Chemotherapy on Cognitive Function in Women With Breast Cancer

The term chemobrain is described as the cognitive decline associated with chemotherapy. Several retrospective studies have concluded that chemotherapy in patients with breast cancer is associated with persistent cognitive deficits after treatment is completed. However, no documented reports have evaluated cognitive function in patients

with breast cancer with no central nervous system involvement before the initiation of systemic adjuvant therapy (e.g., radiotherapy, chemotherapy, hormonal therapy). Researchers at the University of Texas M.D. Anderson Cancer Center studied cognitive function in 84 patients before they received adjuvant therapy for nonmetastatic primary breast cancer. The comprehensive neuropsychologic evaluation included 5–14 different measures. All participants had a diagnosis of primary breast cancer with no metastasis, were aged 18 or older, had completed at least eight years of formal education, and spoke fluent English. The findings showed that cognitive impairment is observed frequently even before the administration of systemic chemotherapy. Thirty-five percent of women exhibited overall cognitive impairment. Verbal learning (18%) and memory function (25%) were impaired significantly more frequently than normative expectations. In addition, differences in psychomotor processing speed and attention, nonverbal memory, confrontational naming, complex visuoconstruction, and fine motor dexterity were noted. The study recommended that investigators planning to measure chemotherapy-induced cognitive dysfunction should incorporate prechemotherapy baseline assessments.

Wefel, J.S., Lenzi, R., Theriault, R., Buzdar, A.U., Cruickshank, S., & Meyers, C.A. (2004). Chemobrain in breast carcinoma? A prologue. *Cancer*, 101, 466–475.

### Patients Undergoing Radiotherapy Exhibit High Rates of Psychosocial Distress

A study conducted by three German researchers confirmed a high rate of psychosocial distress among inpatients with cancer receiving radiotherapy. In an effort to first assess the prevalence of psychological distress and mental disorders and then compare the need for psychotherapeutic treatment as determined by self- and expert evaluation, inpatients from two radio-oncology wards were evaluated. Eighty-seven patients underwent psychodiagnostic interviews and completed self-rating instruments to determine mental disorders, psychosocial distress, coping strategies, and quality of life. Need for psychotherapeutic interventions and treatment motivation were estimated by patients and a professional. Patients undergoing radiation therapy have a tendency to become withdrawn, and difficulties in

coping with their disease frequently cause them to minimize their distress and help others rather than accepting help themselves. Using International Classification of Diseases-10 criteria, mental and behavioral disorders were diagnosed in 51% of the patients, most of which were adjustment disorders present in 28.3% of patients. The need for psychotherapeutic treatment was perceived as high by the patients (43%) and the research assistant (32%). A marked discrepancy existed between the points of view of patients and professionals in that, although professionals regarded anxiety as a highly significant predictor of the need for treatment, psychosocial distress played no role in patients' estimations. Self-assessment showed that 9% of patients experienced increased anxiety and 9% experienced increased depression. As many as 11% of patients had maladaptive coping styles, including lack of active problem-oriented coping, depressive coping, minimization, and wishful thinking. Of those patients, 31% were experiencing problems in their social lives, 43% were experiencing functional deficits in everyday living, and 32% had increased somatization. Results of the study indicated a "considerable need" for psychotherapeutic interventions in the radio-oncology inpatient population.

Fritzshe, K., Liptai, C., & Henke, M. (2004). Psychosocial distress and need for psychotherapeutic treatment in cancer patients undergoing radiotherapy. *Radiotherapy and Oncology*, 72, 183–189.

### Mothers and Fathers Cope Differently With Children's Death From Cancer

Cancer is the leading cause of nonaccidental death in children. A gap exists in the literature about the effects of parent psychological functioning and long-term bereavement related to the place of the child's death. Independent measures of psychological functioning, family functioning, and pathologic grieving were completed by 50 Australian parents. The researchers found support for a relationship between the place of death and gender of the parent with regards to differences in bereavement outcomes. Fathers had increased psychological effects when their child died in the hospital. For mothers, on the other hand, the place of death had an impact on pathologic rather

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than psychological effects. Bereavement planning is needed for parents who lose their child to cancer. Appropriate services for the family need to be available, and fathers may need additional services for psychological effects.

Goodenough, B., Drew, D., Higgins, S., & Trethewie, S. (2004). Bereavement outcomes for parents who lose a child to cancer: Are place of death and sex of parent associated with differences in psychological functioning? *Psycho-Oncology*, *13*, 779–791.

## Treatment Issues

### Does Enhanced Aspirin Prevent Colon Cancer?

Laboratory tests conducted by the researchers at the Sophie Davis School of Biomedical Education at the City College of New York in New York City and Stony Brook University in New York indicate that taking an aspirin containing nitric oxide (NO) will provide greatly improved protection against colon cancer without causing the harmful side effects associated with conventional aspirin. The findings show that NO-donating aspirin (NO-ASA) may be as many as 5,000 times more effective at preventing colon cancer than regular aspirin. In tests on mice, NO-ASA was found to reduce the number of tumors by 59%. The sizes of the tumors observed also were smaller than for mice receiving placebo. Further, the mice did not show evidence of gastric or gastrointestinal toxicity. The results were the first documented report on NO-ASA's tumor-inhibitory effect on animals with intestinal cancer. These findings will be explored further in tests on human subjects.

City College of New York. (2004). Sophie Davis, Stony Brook researchers find enhanced aspirin holds promise as colon cancer preventive agent [Press release]. New York: Author.

### Study Determines the Optimal Time for Bone Marrow Transplant in Patients With Blood Disorders

Guidelines for determining the best possible time for patients diagnosed with myelodysplastic syndrome (MDS) to receive a bone marrow transplant was published in the July 15, 2004, issue of *Blood*. Bone marrow transplant, the only cure for patients with MDS, is a life-saving procedure. However, despite advances in transplantation technology, considerable morbidity and mortality still are associated with this approach. By American Cancer Society estimates, 87,000 people worldwide are diagnosed with MDS each year. The annual incidence in the United States is estimated to be from 3.5–12.6 in

100,000, or approximately 14,000 people. Incidence rises with increasing age, with the median age at diagnosis in the 70s. The survival time for patients with MDS, depending on severity of their disorder, typically is from six months to six years.

According to Corey Cutler, MD, MPH, FRCPC, the senior author of the study and a member of the faculty at the Dana-Farber Cancer Institute, "The challenge is to determine the optimal timing of bone marrow transplantation to reduce the risk while extending survival as much as possible."

A team of researchers from several prestigious institutions studied 260 patients who were diagnosed with MDS and received bone marrow transplants; 230 patients whose MDS had progressed into acute myeloid leukemia (AML) and who had received bone marrow transplants; and 184 patients who were diagnosed with MDS but did not receive transplants. Patients were categorized into four risk groups based on their prognosis at the time of diagnosis: low, intermediate-1, intermediate-2, and high. The researchers analyzed patient outcomes for each of these risk groups for three different scenarios: a patient receiving a bone marrow transplant at diagnosis of MDS, a transplant after the MDS had progressed to AML, or a transplant at an interval between those two occurrences. Researchers found that for the low and intermediate-1 groups, the best time for a bone marrow transplant was after diagnosis; however, before development of AML for the high and intermediate-2 groups, transplantation immediately following diagnosis maximized overall survival. In a cohort of patients younger than 40 years, an even more marked survival advantage for delayed transplantation was noted.

Richard T. Maziarz, MD, medical director of the Center for Hematological Malignancies at Oregon Health and Sciences University, explained that this study "supports a widespread practice in which low-risk myelodysplasia patients are monitored for disease evolution, while high-risk patients are referred for early transplant . . . which may quite possibly become the future established guidelines for the management of myelodysplasia patients."

American Society of Hematology. (2004). Study determines the optimal time for bone marrow transplant in patients with blood disorder [Press release]. Washington, DC: Author.

### Physicians Base Difficult End-of-Life Treatment Decisions on Many Factors

The results of a survey devised to study physicians' compliance with advance directives found that internists frequently made treatment decisions that were not consistent with an explicit advance directive. Although advance directives were part of the decision-making process, physicians considered

a variety of factors, such as prognosis, perceived quality of life, and wishes of family or friends, when making treatment decisions. The study consisted of an analysis of a mailed written survey containing six hypothetical cases of seriously ill patients. Each case contained an explicit advance directive with potential conflict between the directive and (a) prognosis, (b) wishes of family or friends, or (c) quality of life. Data were collected on the clinical treatment decisions made by physicians and the reasons for those decisions. Study participants were all internal medicine faculty and resident physicians from a single academic institution. A total of 47% analyzable surveys (117 of 250) were returned. Decisions by faculty and residents were not consistent with the advance directive in 65% of cases. Faculty (68%) and resident (61%) physicians generally made similar choices in treatments. Thus, the level of training and experience did not appear to affect treatment choices. When physicians made decisions that were inconsistent with the advance directive, they were more likely to list reasons other than the directive for their decisions (89%). Overall, the advance directive was cited as determinative in less than half of the cases (37% for all physicians). Study analysis indicated that although advance directives provide potentially useful guides to medical decisions, their usefulness has serious limitations. The authors of the study identified two limitations: (a) The survey is based on hypothetical cases, and (b) the study was done at an academic institution and may be less reflective of the community clinical practice. Significant concern remains about how well physicians know and follow the treatment preferences of their patients. Decisions are particularly problematic for critically ill and dying patients who lose their capacity to make medical decisions.

Hardin, S.B., & Yusufaly, Y.A. (2004). Difficult end-of-life treatment decision: Do other factors trump advance directives? *Archives of Internal Medicine*, *164*, 1531–1533.

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