

## **A NEW REPORT IN THE TREATMENT OF BREAST CANCER MASTECTOMY VS. LUMPECTOMY/RADIATION**

**by: Gil Lederman, M.D.**

Respected randomized studies both from this country as well as Europe have evaluated and confirmed the fact that breast-conserving therapies are equivalent to mastectomy in terms of survival for women with breast cancer. Breast conserving means the woman is treated without the loss of her breast.

The National Cancer Institute (NCI) of the United States compared lumpectomy/radiation to modified radical mastectomy. The study has a median follow up of ten years and was written by Jacobson et al and published in the prestigious New England Journal of Medicine.

The NCI evaluated 247 women with Stage I or II breast cancer. After agreeing to participate, women were randomly allocated to have either mastectomy or lumpectomy/radiation. Disease-free survival as well as overall survival in the two groups of women was similar. Seventy-five percent of women having mastectomy were alive at ten years compared to 77% having lumpectomy and radiation. Disease-free survival at ten years - meaning no evidence of cancer - was 69% for those women having mastectomy and 72% for these women having lumpectomy/radiation.

Local or regional recurrence - meaning cancer coming back in the vicinity of the breast or surrounding tissues - was 4% in both the mastectomy and lumpectomy groups - as a first event.

The authors looked specifically at the women who unfortunately had a breast recurrence despite lumpectomy and radiation. In the NCI's study, there were nineteen such recurrences. Twelve of the 19 patients had no further cancer after salvage mastectomy, being followed three months to 9.9 years. The authors evaluated the disease free survival at ten years and estimated it to be 67% - what they called "a rate that is not significantly different from that for all women assigned to lumpectomy plus radiation."

This is dramatically different than the women who had mastectomy and then had a recurrence in the local or regional area. All of these ten women first having mastectomy and then a local regional recurrence had distant disease eventually diagnosed either at the time of local recurrence or eventually and none had successful salvage therapy.

Dr. Henderson, a prominent breast oncologist from the University of California, noted that "A local recurrence after mastectomy has about the same prognostic importance as a distant recurrence, and it is often assumed that a recurrence within the breast after radiation has the same implication as any other type of local or regional recurrence. The fact that the overall survival of patients randomly assigned to receive breast conserving therapy and radiation in these studies is equivalent to survival of patients who underwent mastectomy in spite of the higher local failure rate suggests that recurrences confined to the irradiated breast do not have the same prognostic importance as recurrences in the lymph nodes, skin and muscle."

So what was important to predict recurrence of cancer? It was tumor stage and whether the cancer had spread to the lymph nodes in the axilla. For the earliest stage breast cancer - called T1 - the disease-free survival at ten years was 81%. For those with larger tumors - called T2 - it was 58%.

Similarly, of those women who had no cancer involving lymph nodes, ten year disease-free survival was 82% whereas if cancer had involved the lymph nodes, the disease-free survival fell to 54%. The NCI noted no difference based upon age and disease-free survival.

Craig Henderson, formerly Director of the Breast Evaluation Center at the Harvard Medical School, Dana Farber Cancer Institute and currently at the University of California San Francisco, in an accompanying editorial wrote "Six randomized trials have demonstrated that the survival of patients treated with a breast-conserving operation (variously referred to as lumpectomy, tylectomy, wide excision or quadrantectomy) plus radiotherapy is equivalent to that of patients treated with mastectomy."

Furthermore, Henderson describes potential benefits of radiation in that "if anything, this form of local treatment is more extensive (or more radical), because the supraclavicular and internal mammary nodes are treated more effectively with radiation than they are even with the most radical forms of surgery."

Henderson is impressed with the fact that in the National Cancer Institute's study "ten year survival of all patients exceeded 70%. This data should be reassuring to the many patients with cancer who believe that a diagnosis of breast cancer is a death sentence. Taken together, these numbers also demonstrate that many patients survive for a long period with local therapy only and presumably at least in part as a result of that therapy. Adjuvant chemotherapy prolongs the survival of other patients."

The NCI physicians gave this message to the women with breast cancer: "After careful evaluation in discussion with her surgeon, radiation oncologist and medical oncologist, it is the patient who must decide which of the two local therapies (mastectomy versus lumpectomy/radiation) to receive. We believe that improvements in survival can only arise from improvement in the early detection of breast cancer before dissemination has occurred or from improvements in adjuvant therapy."

Thus, another important study confirms the effectiveness of lumpectomy and radiation. A woman can rest comfortably that there is no detriment in choosing this therapeutic modality that preserves her body more intact. Of course, the best outcome still relies on the earliest possible diagnosis.