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Touch of Courage

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Cedar Valley Breast Cancer Task Force

Partial Breast Irradiation - What are the Facts? by Cassandra Foens, MD FACR

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In the last three years, there have been increasing reports on the use of less than whole breast irradiation following lumpectomy for early stage breast cancer. The goals in the development of these techniques are certainly laudable. Patient advocates continue to report that some percentage of women who would otherwise be candidates for breast conservation therapy end up having a mastectomy done because of the perceived difficulties in receiving whole breast irradiation. The standard of care following lumpectomy for either DCIS or invasive breast cancer is 4500-5000 rads of radiation with or without an additional boost, usually delivered over 5-6 weeks of daily treatment. There will always be patients who feel that there are barriers to the standard treatment. Sometimes the barrier is transportation, some may have socioeconomic issues such as lack of family support, limited public transportation, or a job that prevents them from getting a treatment during the normal work day, and others may just have fears about the radiation that prevent them from accepting treatment. Whatever the barrier, we know that lumpectomy alone, without radiation, is never adequate treatment in breast cancer.

Because of these potential barriers to breast conservation therapy, and because the majority (although not all) of local recurrences happen

close to the original resection cavity, researchers began to look at techniques of partial breast irradiation. The main benefit to either of the two techniques currently being offered is that treatment only takes 5 days, instead of 25-35 days using standard treatment. One of the techniques is a custom brachytherapy technique called the MammoSite system. The other is highly computerized external beam treatment, commonly referred to as IMRT (intensity modulated radiation therapy).

Brachytherapy is the actual insertion of radioactive materials into a natural or manmade cavity where cancer is suspected. Brachytherapy is not new - in fact some of the first cancer cures by radiation came from inserting radium sources into the vagina and uterus to treat cervix and endometrial cancer. Breast brachytherapy using radioactive needle insertions has been done for years. The major problem with standard brachytherapy techniques was that the quality of the implant was highly linked to the skill of the person doing the implant. It did require general anesthesia, and left multiple needle scars on the breast. Patients with less than ideal anatomy got less than ideal results. The cosmetic result was worse than external beam treatment. The cost was higher because patients had to remain as inpatients throughout the 5-7 day implant.

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Therefore the technique had very limited use. The MammoSite system promises to change all that. Essentially it is a balloon catheter, inserted into the lumpectomy cavity, either at the time of the lumpectomy surgery or placed later through a trocar. Once the catheter is in place, it can stay without trouble for days or even weeks. When you are ready to give the treatment, the balloon is inflated and the catheter is connected to a machine that contains a high energy radiation source. This machine is called a remote afterloader. The afterloader pushes the radiation source into the catheter where it sits for about 10 minutes and is then removed. Two treatments are given each day, 4-6 hours apart, for 5 consecutive days. The catheter is then deflated and removed without anesthesia.

IMRT is a process where the treatment planning computer designs multiple, highly controlled treatment fields to create a very precise treatment area. This allows us to treat a much smaller and potentially more irregular area than we could before. IMRT up till now has been used mostly to treat cancers in the head and neck, where we are trying to treat the cancer without treating the brain, the spinal cord, or the salivary glands. However, there is now a research study being done by the Radiation Therapy Oncology Group (RTOG) looking at IMRT to treat just the lumpectomy cavity. Like the brachytherapy, the patients are getting 2 treatments per day, 6 hours apart, for 5 consecutive days. This is a research protocol at this time and so only available in a limited number of institutions.

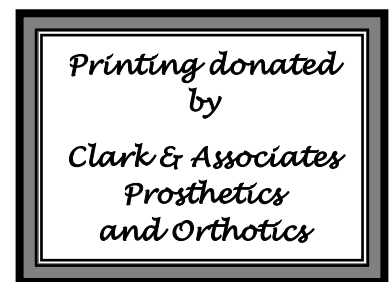
Given these options for one week treatment courses, why would any woman choose the standard

therapy? Unfortunately, there are still a lot of unanswered questions surrounding these partial breast techniques. The most important question is this - what are the long term control rates of these partial breast treatments? We know from the original NSABP B-06 trial that after lumpectomy and whole breast irradiation, the local recurrence rate at 10 years was about 8% - with modern treatment planning, it may actually be closer to 5%. We also know that of the patients who did recur, as many as 30% had their recurrence in an area of the breast NOT close to the original tumor and that a significant number of the recurrences happened more than 5 years after treatment. These patients have now been followed for over 25 years, with no obvious changes in the results. Compare that to the MammoSite system, which in the trial that gained FDA approval for the system, only 43 patients were studied and the trial only lasted 18 months. We do not know what will happen to these patients after 5, 10, or 20 years. In addition, the manufacturer recommends that you only treat patients with a tumor less than 3 cm in greatest diameter and only in patients older than 45 years. The IMRT study just got started this fall, so we don't even know what the results will be. This study also is limiting tumor size to less than 3 cm. Patients probably should only receive IMRT on study, yet I'm sure there will be institutions that will jump the gun and start offering IMRT to patients who only want to come for a week.

Will these limited treatments turn out to work as well as the current standard? Only time will tell. There were certainly skeptics in the mid-1970's when the NSABP first started to study lumpectomy and radiation in comparison to modified

radical mastectomy - that study has clearly turned out to be beneficial to many patients. The difference now is that there is more media interest in cancer treatments and there is more direct to patient marketing of treatments. With widespread access to TV news, national newspapers and most importantly, the Internet, patients are finding out about treatment alternatives much sooner than they would have in 1975. Direct to patient advertising puts pressure on physicians to offer these treatments earlier, or else lose patients to competing practices. We apparently have not learned our lesson from the failed trials of bone marrow transplantation in breast cancer, where patients went so far as to sue their insurance companies to get the transplant off-study, only to find out 10 years later that bone marrow transplantation was no better than standard chemotherapy. How many women died unnecessarily from transplant, in the rush to get the newest treatment? And how much sooner would we have known that transplant wasn't better if patients had been forced to stay on the study. The greatest misconception in cancer medicine today is that newest means best. What must be remembered is that if we knew for certain what was best, we wouldn't need to do the research study.

Perhaps time will show that partial breast irradiation is equal to whole breast irradiation in the treatment of early stage breast cancer. But until we know for sure, the standard of care remains lumpectomy followed by whole breast irradiation.



A Survivor's Story

By Sue Witwer

In February of 2002, as I was preparing myself for my annual mammogram, I was feeling fine and having no problems. Then my life suddenly and forever changed with the news that a suspicious lump had appeared on my mammogram.

Following a breast biopsy, my surgeon gave me the news that I had an infiltrating ductal carcinoma. The mass was one centimeter in size, and the cell structure of the tumor indicated it would respond well to treatment. I was scheduled for a partial mastectomy and left the surgeon's office with a rather large stack of information about breast cancer.

I felt devastated, and I felt angry about this great inconvenience to my life. The stack of information turned out to be a great source of comfort and information. The Iowa Breast Cancer Edu-action's Resource Guide answered every question I had in the next two weeks prior to surgery.

My surgery was followed with 33 radiation treatments, and I will take tamoxifen for the next five years. I am now actively involved with the Iowa Breast Cancer Edu-action organization. It's a hard-working and terrific group of women.

Touch of Courage Breast Cancer Support Group

The Touch of Courage Breast Cancer Support Group will be changing its format this year in an effort to better meet the needs of its members. The group continues to meet on the first Monday of every month (unless it's a holiday), with the meetings being held at Covenant Cancer Treatment Center at 200 E. Ridgeway Avenue in Waterloo at 1:30 and 5:30 p.m.

Quarterly, FOLLOWING the last meeting (5:30), we will have a speaker who will address a topic related to cancer. Our speakers are scheduled to speak from 7-8 p.m. This format will give us the opportunity for discussion and sharing time, as well as the educational benefits a speaker provides for us. Our first speaker, Dr. Davis, is scheduled for April 5th.

We hope you will enjoy this change. For those of you who are long term survivors, please remember what a critical role you play in the journey of the newly diagnosed.

The Support Group invites any woman or man who is dealing with breast cancer to attend the support group meetings. Spouses and significant others are also welcome.

Breast Cancer Awareness License Plate

The Iowa Department of Transportation offers a Breast Cancer Awareness License Plate. The plate has the easily recognizable pink ribbon on it, along with the message "Early Detection Saves Lives". You can have your breast cancer awareness plate personalized, or numbered. The Iowa Department of Health's Breast Cancer Awareness Fund receives \$35 for each initial fee, and \$10 from the annual fee the following years. Plates (including personalized plates) may be purchased as a gift. Gift certificates will be mailed to the purchaser and are valid for 90 days.

To obtain more information or to apply, contact your county treasurer's office, the Iowa DOT web-site at www.dot.atate.ia.us/mvd/ovs/plates/breastcancer.htm, or the following address:

Office of Vehicle Services
Park Fair Mall, 100 Euclid Avenue
P.O. Box 9278
Des Moines, IA 50306-9278
Telephone: 515-237-3110



Sample License Plate