

Researchers study faster radiation treatment

Medical nuclear procedures are old hat – why is power not old hat after 40 years?

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The transition from breast cancer patient to breast cancer survivor could be a lot quicker for women in South Carolina once a national study examining a five-day radiation regimen gets under way.

It's the latest battle in the research world's breast cancer war, which has made it possible for more women to keep their breasts and their health in the face of a once-grim diagnosis.

Today, women are more apt than ever to undergo lumpectomies in lieu of disfiguring mastectomies, and follow-up treatments are increasingly effective and less burdened by side effects.

After surgery, most breast cancer patients undergo six weeks of radiation treatments in hopes of warding off any stray cancer cells. But research has shown that 97 percent of recurrences appear within 2 centimeters of the original tumor site, leading some doctors to tone down recommendations about the necessity of radiation to the entire breast.

The Medical University of South Carolina is set to begin enrolling breast cancer patients in a 10-year, National Cancer Institute-sponsored study that aims to see whether a five-day, partial-breast radiation regimen is as effective as the standard six-week blast to the whole breast.

Roper Hospital also plans to participate in the study.

"Medicine is an inquisitive science, and doctors are always challenging dogmas and looking for better ways to do things," said Dr. Joseph Jenrette, professor and chairman of the Department of Radiation Oncology at MUSC. "Time is important. It doesn't matter whether you're retired or you're working, if you can get things taken care of in one-sixth of time, it just makes sense."

But the research isn't just about convenience or cosmetics, doctors say. It's about saving lives.

Low-income women or those who live in rural areas without radiation facilities often have trouble following up with the prescribed six-week treatment.

"Some people just say, 'I just can't do it, and I'm going to have a mastectomy,' or 'I'm just going to take my chances,'" said Dr. Mary Decker, the medical director of radiation oncology at Roper Hospital. "You never want to hear that."

Cancer specialists are hopeful the five-day treatment, to be given in the Charleston area using technology called MammoSite, will eliminate those tough trade-offs.

With increased early detection, at least 70 percent of women diagnosed with breast cancer are eligible for a lumpectomy rather than a mastectomy. Of those, Jenrette said, about half should be candidates for partial-breast radiation – some 75,000 people a

year. Women with tumors buried deep in the breast are most apt to be eligible, since tumors too close to the skin pose a larger risk of radiation burns.

Women who are accepted into the study will be randomly assigned, along with 3,000 other women across the nation, into either a group receiving partial-breast radiation or one undergoing the traditional six-week course.

Libby Holladay, who lives in Wilmington, N.C., was the second patient treated with MammoSite at MUSC in 2002. After her diagnosis – Stage 1 cancer, with totally clean lymph nodes – she had a lumpectomy to remove the tumor, and then enlisted her husband and daughter to help her research radiation options.

She knew the typical six-week course of radiation often had side effects, including exhaustion, skin burns and damage to other organs in the chest. The partial-breast radiation treatment, however, sounded like a good option to her, once she learned it had been used successfully for years with other cancers.

"I felt like it was probably a pretty good option and wasn't terribly experimental," said Holladay, now 60. "It wasn't like I was taking a great risk, and it certainly would be more convenient."

So she and her husband headed to Charleston, the nearest city where the treatment was offered at the time, and spent a week combining a vacation and lifesaving medical treatment.

Twice a day for five days, she underwent the 10-minute radiation procedure. It began with a surgery to implant a catheter leading to a tiny balloon near where her tumor had been. The catheter remained in place throughout the week, serving as a road map for the tiny radioactive pellets placed in the balloon during each treatment.

At the end of the week, she went home to Wilmington, a cancer survivor after just a fraction of the time she'd otherwise have spent getting treatment.

The practice of partial-breast radiation isn't new. It has been used in various forms for more than 15 years, but the NCI study will be the first prospective trial examining long-term efficacy.

Retrospective data available pegs long-term survival rates after partial-breast radiation at at least 85 percent.

But in the medical research world, prospective studies – where patients are followed from the beginning of their treatment until years later, according to a set protocol – are the gold standard, the real indicator of a drug or treatment's worth.

"These women have an ability to be part of a landmark study," Decker said. "They will be very brave and part of something very exciting."