

## **One Day Radiation May Become an Option For Breast Cancer Patients**

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Technique being tested reduces treatment time from six weeks to one day

Toronto ON - Doctors in Canada are studying the effectiveness of permanent radiation seed implants following lumpectomy as an alternative to whole or partial breast irradiation for early-stage breast cancer patients, according to a study published in the January 1, 2006, issue of the *International Journal of Radiation Oncology \*Biology\* Physics*, the official journal of ASTRO, the [American Society for Therapeutic Radiology and Oncology](#). This type of radiation would cut treatment time for certain patients from several weeks to one day.

For early stage breast cancer, women often undergo a lumpectomy to remove the tumor followed by radiation therapy to kill any cancer cells that may remain. Most women undergo external beam radiation, which is given every day, Monday through Friday, for six to eight weeks. Doctors have been experimenting with ways to shorten this treatment. One technique used by a growing number of radiation oncologists involves the use of temporary radiation implants. These radiation sources are delivered through a catheter into the breast, usually twice a day for one week.

In this study, the first of its kind in the world, doctors wanted to see if it was possible to use permanent implants, like what many men receive to treat prostate cancer, to combat the cancer with only one treatment. These implants, about the size of a grain of rice, would not be removed daily like with the temporary implants. Rather, the radioactive seeds would deliver radiation to the breast area for a number of weeks until they were no longer radioactive. The advantage over the temporary implants is that the patient only has to undergo one surgical procedure to receive the radiation, versus 10 treatments over one week for temporary implants.

The current treatment standard of lumpectomy followed by external beam radiation therapy is proven to keep the cancer from returning, but 38 percent of women develop significant toxicity, which can compromise their quality of life. According to early returns from the study, which began in May 2004, 44 patients have been treated successfully with the permanent implants. So far, none have evidence of their cancer returning and acute skin irritation is six times less frequent when compared to external beam radiation.

"The main motivation was to see if we could reduce the burden of treatment for women suffering from early-stage breast cancer," said Jean-Philippe Pignol, M.D., Ph.D., lead author of the study and radiation oncologist at Sunnybrook Health Sciences Centre in Toronto, Ontario, Canada. "The seed

implants reduce the treatment to a one-time event compared to the current standard of daily treatments over many weeks. The seeds also reduce the amount of radiation the normal breast tissue receives, which lessens the chance of the patient developing problems that affect their post-cancer quality of life. The great thing is that the patient can go home right after the procedure and live a normal life while receiving her radiation.”

Source: Nick Lashinsky

For more information on radiation therapy for breast cancer, please visit [www.rtanswers.org](http://www.rtanswers.org).

To arrange for a copy of “First Report of a Permanent Breast PD Seed Implant as Adjuvant Radiation Treatment For Early-Stage Breast Cancer,” please contact Nick Lashinsky at [nickl@astro.org](mailto:nickl@astro.org) or call 1.800.962.7876.

ASTRO is the largest radiation oncology society in the world, with more than 8,500 members who specialize in treating patients with radiation therapies. As the leading organization in radiation oncology, biology and physics, the Society is dedicated to the advancement of the practice of radiation oncology by promoting excellence in patient care, providing opportunities for educational and professional development, promoting research and disseminating research results and representing radiation oncology in a rapidly evolving healthcare environment

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