New Devices Will Reduce Breast Cancer Radiotherapy Time

Two studies highlighting new brachytherapy devices were presented at the 87th Scientific Assembly and Annual Meeting of the Radiological Society of North America in November 2001. They demonstrated that devices that deliver radiation therapy directly to the lumpectomy site of early-stage breast cancer drastically reduce the time needed for radiotherapy after surgery. The direct-to-the-site, internal radiation also could decrease some symptoms of conventional external radiotherapy, such as skin irritation, blistering, and overall discomfort of the area.

Martin E. Keisch, MD, of Mount Sinai Medical Center in Miami Beach, FL, reported that five days of twice-daily treatment with a balloon catheter device called MammoSite™ (Proxima Therapeutics, Alpharetta, GA) could deliver a total dose of 34 Gy. This dose could replace the standard six-week course of radiation therapy for women with early-stage, noninvasive breast cancer. The U.S. Food and Drug Administration (FDA) has not yet approved MammoSite.

Keisch said that the MammoSite device is much easier to use than brachytherapy delivered by injections, which require careful needle placement and complicated dosing calculations. MammoSite, on the other hand, is so simple “I can train a monkey to implant it and calculate the dose,” said Keisch.

The deflated device is implanted surgically in the tumor area. It is inflated with saline, and twice daily a radioactive seed attached to a guide wire is moved through the catheter into the balloon. The high dose of radiation affects only the tissue surrounding the tumor site, rather than the entire breast the way conventional external radiotherapy would. Each treatment takes about 15 minutes and is done under local or general anesthesia. While the device is implanted, a small port protrudes from the breast. When the device is removed, it leaves “a scar smaller than the tip of my pinky,” Keisch said.

Euan Thompson, PhD, president and CEO of Photoelectron Corp. (Lexington, MA), the manufacturer of the other brachytherapy device, Intrabeam™, said that a single treatment with the device is as effective as conventional external-beam radiation. Intrabeam is a portable electron-beam device that is implanted during initial tumor-removal surgery. It delivers radiation ranging from 5–20 Gy at 1 cm and 0.2 cm distance from the tumor bed. The treatment takes 20–30 minutes.

Intrabeam has been approved by the FDA and can deliver radiotherapy anywhere in the body. Institutions such as Children’s Memorial Hospital in Chicago, IL, currently are using it to treat pediatric brain tumors. In both studies, none of the women tested with the devices had any recurrence of breast cancer to date. However, long-term data still are needed.

Support Offered to Caregivers of the Elderly

The National Family Caregiver Support Program, recently instituted by the U.S. Department of Health and Human Services’ Administration of Aging, is designed to provide relief to the more than seven million Americans who care for elderly relatives and friends. Most of these elderly are ill or have cancer.

The program helps overworked caregivers arrange for adult day-care, a short-term stay at a nursing home or assisted living facility, a home-health aid or companion, a private-duty nurse, or adult foster care. The program offers information and support through a national network of state and local agencies, organizations, and service providers.

The Eldercare Locator is a service provided by the Administration of Aging and helps caregivers find eldercare in their communities. Those interested should call, toll-free, 800-677-1116 Monday–Friday, 9 am–8 pm EST.

Digital Object Identifier: 10.1188/02.CJON.191-192