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Breast radiation trial provides more convenience, better compliance, lowered cost

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An experimental regimen of once-weekly breast irradiation following lumpectomy provides more convenience to patients at a lower cost, results in better completion rates of prescribed radiation treatment, and produces cosmetic outcomes comparable to the current standard of daily radiation.

These interim results of the 5-year Phase II clinical trial using the experimental regimen are being presented at the Breast Cancer Symposium 2014 in San Francisco by Anthony E. Dragun, M.D., vice chair and associate professor of radiation oncology at the University of Louisville, at 11:45 a.m. PDT, Thursday, Sept. 4.

Dragun, a radiation oncologist with University of Louisville Physicians, launched the trial three years ago at UofL's James Graham Brown Cancer Center, a part of KentuckyOne Health and the only site offering the experimental regimen in the United States. A second KentuckyOne Health site is being planned, he said, and is expected to begin enrolling patients this autumn.

Reviewing data from Europe – the United Kingdom in particular – Dragun found an alternative to the currently standard daily radiation treatments prescribed to patients after a lumpectomy. Physicians in the U.K. and other European countries were reporting excellent results with a regimen of radiation administered once-weekly.

"Instead of daily treatments for 25-30 days, five to six treatments

administered once each week were being used," he said. "I thought this regimen would give our patients here in Kentucky a great deal of access and choice, so we developed the trial and launched it in 2011."

Approximately 150 female patients have been enrolled in the trial thus far, he said. Patients undergoing a lumpectomy following diagnosis of breast cancer are given a choice of the current standard of daily radiation treatments or the option to enroll in the trial and receive treatment one time per week.

The radiation dosing has been calibrated to compensate for the change in how the treatments are administered, but no adverse effects have been seen, Dragun said. "The outcomes with once-weekly treatments are absolutely in line with what we see in daily breast irradiation," he said. "The standard of care is maintained."

Giving women the choice of how their treatment is administered means more women complete their treatment, he said. "Finding time for daily treatments for 6 weeks or more just isn't possible for many women," Dragun said. "Scheduling once-weekly treatments is much easier to fit into the busy lives our patients lead.

"We also see many patients who depend on public transportation or live in rural areas that are 30 miles or more from our center, and they have told us that they would not have been able to complete a traditional course of daily radiation treatment. Their only alternative would be a mastectomy," he said.

Because radiation treatment is reimbursed on a per-treatment basis, Dragun said the overall cost is lowered. "We have reduced the number of treatments to about one-fourth to one-third of what the current daily treatment regimen is," he said. "Medicare reimburses radiation costs on a per-treatment basis, and most private insurers do likewise.

"This means we've been able to reduce the cost by 50 to 60 percent without jeopardizing the quality of care."

Dragun plans to enroll another 50 patients at the Louisville site and 30 at the future trial site. After the completion of this trial, he intends to expand into a multi-center Phase III trial at facilities in other states.

"We believe the once-weekly regimen such as this will become a standard option in the next decade," he said.

Provided by University of Louisville