Delays in radiation therapy lead to increased breast cancer recurrence

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A new analysis of the National Cancer Institute's cancer registry has found that as many as one in five older women experience delayed or incomplete radiation treatment following breast-conserving surgery, and that this suboptimal care can lead to worse outcomes.

Dr. Heather Taffet Gold of Weill Cornell Medical College and colleagues found that among a nationally representative sample of nearly 8,000 breast cancer registry patients aged 65 and older, almost 1,300 women experienced delayed radiotherapy and approximately 270 had incomplete radiotherapy. Of these women, those with Stage 1 breast cancer had worse health outcomes associated with this less-than-ideal therapy, while those with a precancerous lesion called ductal carcinoma in situ (DCIS) were not as affected.

"Timeliness of post-surgical radiotherapy is important in reducing the risk of subsequent recurrence or new breast malignancies in patients with early breast cancer. Delaying treatment by eight weeks or more significantly increased the odds for recurrence," says Dr. Gold, the study's lead author and an assistant professor of public health in the Division of Health Policy in the Department of Public Health at Weill Cornell Medical College. "One possible reason for the delays is that the coordination of care can be a challenge as treatment is usually delivered by multiple providers from different specialties, including surgeons, radiation oncologists and medical oncologists."

Stage 1 breast cancer patients with radiation treatment delayed by eight

weeks were 1.4 times more likely to have a recurrence or subsequent new primary breast tumor compared with those receiving timely treatment; they also had reduced survival. Patients whose radiotherapy was delayed by 12 weeks or longer were four times more likely to have a recurrence or subsequent new breast tumor. And women who had incomplete radiation treatment for Stage 1 breast cancer -- those who underwent fewer than three weeks of the typical five-to-seven-week regimen -- had a higher rate of overall mortality, with a 32 percent higher likelihood of death.

The researchers also found treatment disparities in subgroups of older women. "Older black women were more likely to delay radiation treatment, whereas women living in areas with a high concentration of radiation oncologists were less likely to delay. Additionally, older women living in high-poverty areas were less likely to complete radiation treatment," says Dr. Gold.

The work appears in the latest online issue of the journal Cancer and the Dec. 1, 2008, print issue. Research collaborators include Huong T. Do, M.A., and Andrew W. Dick, Ph.D., senior economist at the RAND Corporation in Pittsburgh, Pa.

The study is based on an evaluation of women aged 65 and older diagnosed with either DCIS or Stage 1 breast cancer from 1991 to 1999 and followed through 2002 in registries of the Surveillance, Epidemiology, and End Results (SEER) Program sponsored by the National Cancer Institute.

This nationally representative, population-based study of older women provided a unique opportunity to study the effects of suboptimal treatment in the community setting. "Our findings indicate that radiation treatment should be made easier for all patients to ensure completion and that delays should be minimized. To improve health outcomes following

treatment for breast cancer, health care facilities and providers should implement supportive services, such as transportation, and provide educational materials to encourage and ease access to optimal radiation treatment, thereby improving disease-free and overall survival," said Dr. Andrew Dick, senior author on the study.

Source: New York- Presbyterian Hospital