Can Men Skip Early Radiation After Prostate Cancer Surgery?

A new study and meta-analysis found no long-term benefit from adding radiation therapy soon after surgery.

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Men who have undergone surgery for prostate cancer do not benefit from additional treatment with immediate radiation therapy, according to a new study as well as a meta-analysis that includes that study and two others. Instead, those who receive early radiation therapy have a higher risk of side effects, including urinary incontinence and narrowing of the urethra.

After a median follow-up period of five years, 85% of men in the postoperative radiation therapy group and 88% of those who were monitored and received radiation only if their cancer worsened were still alive without disease progression, known as progression-free survival.

“The good news is that in the future, more men will avoid the side effects of postoperative radiotherapy,” said Chris Parker, MD, of the Institute of Cancer Research and Royal Marsden National Health Service Foundation Trust in the United Kingdom, who presented findings from the new study at the European Society for Medical Oncology Congress (ESMO 2019) this week in Barcelona.

The RADICALS-RT trial included 1,396 men who had received surgery for prostate cancer. They were enrolled between October 2007 and December 2016. About 80% were from the United Kingdom; the rest were from Denmark, Canada and Ireland. They had a prostate-specific antigen (PSA) level of 0.2 nanograms per milliliter or less and at least one risk factor for disease progression.

The men were randomized to receive immediate, or adjuvant, radiation therapy (the radiation group) or to undergo observation and to receive salvage radiation therapy only if they developed PSA failure, or biochemical recurrence, meaning two PSA test results above 0.1 ng/ml or three consecutive increases (the observation group).

Most of those in the radiation group (93%) received radiation therapy within five months of the study’s randomization, while 33% of those in the observation group started radiation within eight years of randomization. A respective 26% and 31% of those in each group received hormone therapy along with radiation treatment.

After a median follow-up of five years, 15% of the men in the radiation group and 12% of those in the observation group had experienced worsening of their cancer, a difference that was not statistically significant, meaning it may have been driven by chance. The researchers will also look at differences in distant cancer metastases after a longer follow-up period.

Self-reported urinary incontinence after one year of follow-up was more common in the immediate radiation group compared with the observation group (5.3% and 2.7%, respectively), a difference that was statistically significant. A respective 8% and 5% reported severe urethral stricture (narrowing of the urethra), figures that were also significantly different.

“The results from this trial indicate that postoperative radiotherapy in prostate cancer patients is equally effective whether it is given to all men shortly after surgery or only given later to those men with recurrent disease,“ Parker said. ”There is a strong case now that observation should be the standard approach after surgery and that radiotherapy should be used if the cancer comes back."

The ARTISTIC meta-analysis included the RADICALS-RT study as well as the GETUG-AFU 17 and RAVES studies. Together, the three studies included 2,151 men who had received surgery for prostate cancer. The participants were randomized to receive postoperative adjuvant radiation (1,074 men) or to undergo observation and receive salvage radiation only if needed (1,077 men).

This analysis also found that across-the-board early radiation did not lead to the men living longer without complications or prevent their cancer from recurring.

“Results of ARTISTIC provide greater evidence to support the routine use of observation and early salvage radiotherapy,” said Claire Vale, PhD, a principal research fellow at the MRC Clinical Trials Unit at University College London. “The meta-analysis provides the best opportunity to assess whether adjuvant radiotherapy may still have a role in some groups of men and to investigate longer term outcomes.”

To read a press release about the study, click here.

To learn more about prostate cancer, click here.
