

# Researchers find few side effects from radiation treatment given after prostate cancer surgery

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The largest single-institution study of its kind has found few complications in prostate cancer patients treated with radiotherapy after surgery to remove the prostate. Men in this study received radiotherapy after a prostate-specific antigen (PSA) test following surgery indicated their cancer had recurred.

Researchers say the findings from Mayo Clinic's campuses in Florida and Minnesota suggest that patients and their physicians should not overly worry about toxicity and [side effects](#) from the treatment, known as salvage external beam radiotherapy. The study findings will be published in the October issue of *Radiotherapy and Oncology*.

"There is a general fear of this kind of radiation treatment on the part of some patients and their physicians, but this study shows that it not only effectively eradicates the recurrent cancer in a substantial number of patients, but that there are few serious side effects," says the study's lead investigator, Jennifer Peterson, M.D., from the Department of Radiation Oncology at Mayo Clinic in Florida.

"It is really important that patients and their doctors watch PSA levels after a radical prostatectomy, which is a complete removal of the prostate," she says. In men who have an intact prostate, a PSA test can indicate either an enlarged [prostate gland](#) or development of cancer in the prostate, says Dr. Peterson. "But in men without a prostate, a rising

[PSA level](#) indicates that cancer has recurred. After a recurrence is detected, there is only a narrow window of time during which radiotherapy will be beneficial in controlling their cancer."

"No other therapy besides salvage external beam radiotherapy has been shown to cure these patients," she adds.

In 2009, an estimated 192,000 American men will have newly diagnosed [prostate cancer](#). Approximately one-third (about 64,000 men) will choose radical prostatectomy as their primary treatment, according to the National Cancer Institute. Large studies have shown that one-third of those men, about 21,000 patients, will experience a rising PSA — a recurrence of their cancer — within five to 10 years, says Dr. Peterson. "Two-thirds of these men, if left untreated, will have metastatic disease within 10 years, but the chances of that occurring are greatly reduced in patients given salvage radiotherapy," she says.

Lingering uncertainty about the effectiveness of salvage radiotherapy and its side effects have led many urologists not to recommend the treatment, says co-author Steven Buskirk, M.D., from Mayo Clinic in Florida.

This study, which lasted two decades, was undertaken to specifically document those side effects. It studied 308 patients with a median follow-up of 60 months after salvage external beam radiotherapy. Only one patient had a serious (grade 4) complication and three patients had a less serious (grade 3) side effect. None of these effects were fatal, and all were treated. Milder side effects were seen in an additional 37 patients, the researchers say, and all were successfully treated for these complications. Urinary leakage, a concern of many patients who choose not to use radiation, was not a common side effect of treatment.

Improved techniques in the administration of salvage external beam

radiotherapy since the study began in 1987 likely would mean the rate of side effects today, compared to those in the study, would be much lower, says Dr. Buskirk.

"We can do a better job today with delivering radiation precisely where we want to, while minimizing dose to surrounding normal tissues," he says.

"In our experience at Mayo Clinic, the side effects of salvage radiotherapy in patients treated after a radical prostatectomy are minimal," says Dr. Peterson. "Even more importantly, it is the only potential curative treatment possible in these patients once cancer has recurred."

The study was funded by Mayo Clinic.

Source: Mayo Clinic ([news](#) : [web](#))

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