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High-dose, short-course radiation for prostate cancer does not increase side effects

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When treating prostate cancer with radiation therapy, side effects such as urinary problems and rectal pain and bleeding are a concern, as is impact on the patient's overall quality of life. So when new, more efficient treatment methods are developed, one important question is whether better treatment comes at the cost of increased side effects and decreased quality of life.

In the case of short-course, high-dose (hypofractionated) radiation therapy, the answer is no, according research at Fox Chase Cancer Center led by Aruna Turaka, M.D., radiation oncologist at Fox Chase. Turaka will present the results on November 2nd at the annual meeting of the American Society for Radiation Oncology.

Turaka and colleagues compared two groups of prostate cancer patients treated with intensity-modulated radiation therapy (IMRT), a technique that uses multiple beams of varying intensities to precisely radiate tumors while minimizing exposure to healthy, adjacent tissues. One group received conventional IMRT; the other group was treated with hypofractionated IMRT, which delivers a higher total dose of radiation in fewer sessions.

The patients—a total of 307 men randomly assigned to one or the other treatment group—were given quality of life assessments at the beginning of treatment and six, 12, and 24 months later. They were also evaluated at the same timepoints for genitourinary and gastrointestinal problems.

"We found no significant differences between the two groups," says Turaka. "Hypofractionated IMRT not only decreases the treatment duration—26 days compared to 38 days for conventional IMRT—but it also allows us to deliver a higher total dosage. Our results tell us that we can achieve these higher dosages with no change in side effect profile or quality of life."

Longer follow-up is needed to draw conclusions about the relative efficacy of regular and hypofractionated IMRT in treating prostate cancer, Turaka says.

Provided by Fox Chase Cancer Center