Undetectable PSA after radiation is possible and predicts good patient outcomes

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Fox Chase Cancer Center researchers report that radiation therapy alone can reduce prostate specific antigen (PSA) levels below detectable amounts in prostate cancer patients. Patients who have an undetectable level of PSA after therapy have less chance of biochemical failure than other patients and a good chance of being cured. The data was presented today at the annual meeting of the American Society for Radiation Oncology.

"With high quality radiation--whether it is from an implant or external beam--it is possible to get really low PSAs," says Eric M. Horwitz, M.D., acting chairman and clinical director of radiation oncology at Fox Chase. "And if you do, you have a really good chance of being cured."

Prostate cancer patients have several options for therapy, including radiation or surgery. After surgery, patients are expected to have an undetectable PSA because the entire prostate has been removed. However, patients treated with radiation alone may still have viable prostate tissue after treatment because the radiation beam is narrowly focused on the tumor. Therefore, radiation oncologists have not expected their patients to have the same very low PSA scores as surgical patients. That expectation appears to be changing, according to Horwitz.

"We used to tell our patients that they wouldn't have an undetectable or really low PSA, but we are seeing that some do," Horwitz says.

To find out whether a very low PSA score predicts a better clinical outcome, Horwitz and colleagues examined patient records for 1,330 men with prostate cancer who were treated with radiation therapy alone at Fox Chase between 1989 and 2005. The 154 men who had undetectable PSA after therapy were 59% less likely to have biochemical failure than men who had detectable PSA after therapy. The reduction in risk was statistically significant in a multivariable analysis.

There were also trends for reductions in the risk of local or distant recurrence and in cancer-specific death.

Physicians should no longer be surprised when they see radiation-treated patients achieve such low PSA levels, according to Horwitz. With better radiation techniques, such as three-dimensional conformal radiotherapy (3DCRT), which was developed at Fox Chase, and intensity-

modulated radiation therapy (IMRT), radiation oncologists regularly deliver higher doses to the tumor bed than they were able to in the past. Patients experience fewer side effects with these techniques, despite the increased radiation dose.

Source: Fox Chase Cancer Center (news : web)