Prostate Specific Antigen Bounce after Radioactive Seed Implantation Followed by External Beam Radiation for Prostate Cancer

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Précis: Prostate specific antigen bounce is common after radioactive seed implantation.

Introduction
Prostate-specific antigen (PSA), a serine protease normally produced in the prostate, has become a powerful tool in the care of men with adenocarcinoma of the prostate. Prostate-specific antigen testing following therapy provides an early window for detecting recurrences that may not be clinically detectable for many years. The clinical significance of temporary increase in PSA, (so called "PSA bounce"), after radiotherapy remains unclear. Here in, the researchers report their study of the PSA bounce after radioactive seed implantation for prostate cancer.

Method
A total of 779 men who had stage T1-T2N0 prostate cancer and who were treated with radioactive seed implantation followed by external beam radiation were analyzed. PSA bounce was defined as an increase of 0.1 ng/ml or greater above the preceding PSA level.

Results
- PSA bounce was seen in 273 (35%) patients.
- PSA bounce was most commonly a single event that disappeared at the next 3- or 6-month screening.

Discussion
Prostate-specific antigen (PSA) bounce occurs in approximately one third of patients 12 to 24 months after radioactive seed implantation. It is probably due to late-developing radiation prostatitis. Physicians need to be aware of PSA bounce because it causes patient anxiety and can result in premature initiation of diagnostic tests or treatments.

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