Post-treatment PSA \(\leq 0.2\) ng/mL Defines Disease Freedom After Radiotherapy for Prostate Cancer Using Modern Techniques

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Introduction
Since serum prostate specific antigen (PSA) testing became widely available for clinical use in the late 1980s, it has become a conventional means of monitoring treatment outcome after radiotherapy (RT) for patients with prostate cancer. Physicians have used post-RT PSA levels to document treatment failure because a rising PSA profile has been associated consistently with subsequent clinical failure (Journal of Urology 1993 Mar;149(3):519-22). In this study, the researchers reported PSA nadir achieved in men treated with radiotherapy.

Materials and Methods
A total of 453 men who underwent prostate seed implant plus external beam radiation for prostate cancer were included. The minimum follow-up was 5 years (range 5-15 years).

Results
- 97% of the men with stage T1-2 Nx prostate cancer achieved a PSA nadir of 0.2 ng/mL or less.
- In the group as a whole, 92% of men who achieved PSA nadir of 0.2 ng/mL or less had a nonrising PSA level 10 years after treatment.
- By comparison, the PSA level rose in all men whose PSA nadir was greater than 1.0 ng/mL.

Discussion
According to this study, the vast majority of men who achieve a PSA nadir of 0.2 ng/mL or less after irradiation for prostate cancer can expect to remain disease free. Individual pretreatment characteristics should be considered when attempting to estimate the likelihood of cure at a given interval after completing RT. Patients with more favorable pretreatment characteristics (lower PSA levels and Gleason scores) may require longer follow-up than those with less favorable characteristics to achieve the same certainty of cure.

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