

Impact of age at diagnosis on overall and disease-free survival in men with prostate cancer following conformal 3D radiation therapy

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ABSTRACT

Aims and background. The impact of age on prostate cancer outcome has been controversial. The aim of the study was to evaluate the role of age on overall survival and disease-free survival in patients affected by prostate cancer when treated with 3D conformal radiation therapy.

Methods and study design. From 1999 to 2005, 1002 patients with T1-T3 prostate cancer were treated with 3D conformal radiation therapy, delivering a median dose of 75.6, 66.6 and 45 Gy to the prostate, seminal vesicles and pelvic nodes (if necessary), respectively. Patients were divided into four groups (<65, 65-70, 70-75, >75 years) according to age at diagnosis. The relationship between age and both overall survival and disease-free survival was calculated with Kaplan-Meier analysis and the comparison between curves was performed by the logrank test. ROC analysis allowed assessment of the best age cutoff.

Results. Mean age was 71 ± 6 years (median, 72). Median and mean follow-up was 71.4 and 69 months, respectively. In multivariate analysis, there was no significant difference in the distribution of disease risk between age groups. Analysis demonstrated that older age is a strong positive predictor of survival (odds ratio for stratified patients older than 70 years was <1). In fact, at the 90 month follow-up, overall survival and disease-free survival varied with age, increasing from 85% to 95% and from 78% to 94%, respectively. ROC curve analysis yielded a cutoff age value discriminating overall survival and disease-free survival of 72 years.

Conclusions. Age is a strong positive predictor of overall survival and disease-free survival, playing a protective role for stratified patients up to 72 years of age.

Key words: age, disease-free survival, overall survival, prostate cancer, radiation therapy.

Conflict of interest statement: None of the authors has any conflict of interest.

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