Patterns of Postprostatectomy Adjuvant Radiotherapy Techniques for Nonmetastatic Prostate Cancer in a Large National Cohort.

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Abstract

PURPOSE: To analyze the contemporary patterns of care regarding adjuvant radiotherapy (RT) techniques for patients with pT3/4 disease or positive margins after prostatectomy.

PATIENTS AND METHODS: Men who were diagnosed with nonmetastatic prostate cancer and underwent prostatectomy between 2004 and 2012 were abstracted from the National Cancer Data Base. Only those with pT3-4Nx-0M0 or pT2cNx-0M0 with positive margins were included. We identified patients receiving RT to the pelvis to a dose between 5940 and 7560 cGy. Delivery of hormone therapy was also identified. Descriptive statistics were used to determine adjuvant RT use as well as patterns of care regarding RT dose and hormone use; data were compared by Pearson's chi-square test.

RESULTS: A total of 133,874 men were included in this study, of whom 12,073 (9.0%) received adjuvant RT. Of those receiving adjuvant RT, 4011 (33.2%) also received hormone therapy. There was a trend toward more frequent use of higher RT doses over time. RT doses of ≥ 7000 cGy were provided 21.4% of the time in 2004-2006 and increased over time to 38.9% by 2010-2012 (P < .001). There was also a rapid increase in the use of intensity-modulated radiotherapy from 20.7% of patients in 2004 to 69.2% in 2012.

CONCLUSION: Most men (91.0%) with pT3/T4 or pT2 disease with positive margins do not receive adjuvant RT. Use of intensity-modulated radiotherapy and RT dose escalation increased over time and are now used routinely. Hormone therapy is used in about one third of patients who are receiving RT, and its use has remained relatively stable over time.

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