Predominant treatment failure in postprostatectomy patients is local: analysis of patterns of treatment failure in SWOG 8794.

Swanson GP, Hussey MA, Tangen CM, Chin J, Messing E, Canby-Hagino E, Forman JD, Thompson IM, Crawford ED; SWOG 8794.

Department of Radiation Oncology and Urology, University of Texas Health Science Center, San Antonio, TX 78229-3900, USA. gswanson@ctrc.net

Abstract

Southwest Oncology Group (SWOG) trial 8794 demonstrated that adjuvant radiation reduces the risk of biochemical (prostate-specific antigen [PSA]) treatment failure by 50% over radical prostatectomy alone. In this analysis, we stratified patients as to their preradiation PSA levels and correlated it with outcomes such as PSA treatment failure, local recurrence, and distant failure, to serve as guidelines for future research.

PATIENTS AND METHODS: Four hundred thirty-one subjects with pathologically advanced prostate cancer (extraprostatic extension, positive surgical margins, or seminal vesicle invasion) were randomly assigned to adjuvant radiotherapy or observation.

RESULTS: Three hundred seventy-four eligible patients had immediate postprostatectomy and follow-up PSA data. Median follow-up was 10.2 years. For patients with a postsurgical PSA of 0.2 ng/mL, radiation was associated with reductions in the 10-year risk of biochemical treatment failure (72% to 42%), local failures (20% to 7%), and distant failures (12% to 4%). For patients with a postsurgical PSA between higher than 0.2 and \( \leq 1.0 \) ng/mL, reductions in the 10-year risk of biochemical failure (80% to 73%), local failures (25% to 9%), and distant failures (16% to 12%) were realized. In patients with postsurgical PSA higher than 1.0, the respective findings were 94% versus 100%, 28% versus 9%, and 44% versus 18%.

CONCLUSION: The pattern of treatment failure in high-risk patients is predominantly local with a surprisingly low incidence of metastatic failure. Adjuvant radiation to the prostate bed reduces the risk of metastatic disease and biochemical failure at all postsurgical PSA levels. Further improvement in reducing local treatment failure is likely to have the greatest impact on outcome in high-risk patients after prostatectomy.

Comment in

Adjuvant radiotherapy after surgery for pathologically advanced prostate cancer. [J Clin Oncol. 2007]

PMID: 17538167 [PubMed - indexed for MEDLINE]