Impact of biochemical recurrence in prostate cancer among US veterans.

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Abstract

BACKGROUND: Among men treated for prostate cancer, increasing prostate-specific antigen (PSA) is known as biochemical failure or biochemical recurrence (BCR). The impact of BCR on subsequent mortality is uncertain, however, especially given competing causes of death.

METHODS: To describe patterns of BCR and subsequent mortality, we conducted an observational study in a community-based, "high-comorbidity" setting of 623 US veterans diagnosed as having prostate cancer from 1991 to 1995 and receiving radical prostatectomy or radiation therapy. The main outcome measures were BCR, defined as a PSA level of 0.4 ng/mL or higher (treated with surgery) or "PSA nadir+2 ng/mL" (treated with radiation therapy), and prostate cancer mortality, determined through 2006.

RESULTS: With 5-, 10-, and 15-year follow-up periods, respectively (for all results shown herein), the cumulative incidence of BCR after prostatectomy (n=225) was 34%, 37%, and 37%; prostate cancer mortality among men who failed treatment (n=81) was 3%, 11%, and 21%. Among men receiving radiation therapy (n=398), the cumulative incidence of BCR was 35%, 46%, and 48%; prostate cancer mortality among those who failed treatment (n=161) was 11%, 20%, and 42%. Overall, BCR was associated with an increased risk of death from prostate cancer in the study population, but the individual probability of this outcome was relatively low.

CONCLUSIONS: Biochemical recurrence is associated with increased prostate cancer mortality, yet when BCR occurs only a minority of men subsequently die of their disease. The phrase "most men die with prostate cancer, not of it" applies to elderly veterans, even after failure of primary treatment. New strategies for defining and managing treatment failure in prostate cancer are needed.

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MeSH Terms, Substances

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