Risk of prostate cancer-specific mortality following biochemical recurrence after radical prostatectomy.

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Abstract

CONTEXT: The natural history of biochemical recurrence after radical prostatectomy can be long but variable. Better risk assessment models are needed to identify men who are at high risk for prostate cancer death early and who may benefit from aggressive salvage treatment and to identify men who are at low risk for prostate cancer death and can be safely observed.

OBJECTIVES: To define risk factors for prostate cancer death following radical prostatectomy and to develop tables to risk stratify for prostate cancer-specific survival.

DESIGN, SETTING, AND PATIENTS: Retrospective cohort study of 379 men who had undergone radical prostatectomy at an urban tertiary care hospital between 1982 and 2000 and who had a biochemical recurrence and after biochemical failure had at least 2 prostate-specific antigen (PSA) values at least 3 months apart in order to calculate PSA doubling time (PSADT). The mean (SD) follow-up after surgery was 10.3 (4.7) years and median follow-up was 10 years (range, 1-20 years).

MAIN OUTCOME MEASURE: Prostate cancer-specific mortality.

RESULTS: Median survival had not been reached after 16 years of follow-up after biochemical recurrence. Prostate-specific doubling time (<3.0 vs 3.0-8.9 vs 9.0-14.9 vs > or =15.0 months), pathological Gleason score (< or =7 vs 8-10), and time from surgery to biochemical recurrence (< or =3 vs >3 years) were all significant risk factors for time to prostate-specific mortality. Using these 3 variables, tables were constructed to estimate the risk of prostate cancer-specific survival at year 15 after biochemical recurrence.

CONCLUSION: Clinical parameters (PSADT, pathological Gleason score, and time from surgery to biochemical recurrence) can help risk stratify patients for prostate cancer-specific mortality following biochemical recurrence after radical prostatectomy. These preliminary findings may serve as useful guides to patients and their physicians to identify patients at high risk for prostate cancer-specific mortality following biochemical recurrence after radical prostatectomy to enroll them in early aggressive treatment trials. In addition, these preliminary findings highlight that survival in low-risk patients can be quite prolonged.

Comment in

Mortality following prostate cancer recurrence after radical prostatectomy. [JAMA. 2005]
PSA kinetics and risk of death from prostate cancer: in search of the Holy Grail of surrogate end points. [JAMA. 2005]

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