Prediction of Long-term Other-cause Mortality in Men With Early-stage Prostate Cancer: Results From the Prostate Cancer Outcomes Study.


Abstract

OBJECTIVE: To provide population-based estimates of other-cause mortality by age and comorbidity in men with prostate cancer for use at the point of care in shared decision making.

MATERIALS AND METHODS: We sampled 3183 men with nonmetastatic prostate cancer from the Prostate Cancer Outcomes Study, a US population-based prospective cohort. Survival analysis accounting for competing risks was used to provide predictions of other-cause and cancer-specific mortality by age, comorbidity, and tumor risk through 14 years of follow-up.

RESULTS: Older men had a higher absolute risk of other-cause mortality associated with comorbidity. For men with comorbidity counts of 0, 1, 2, and 3+, cumulative incidence of other-cause mortality at 14 years was 9%, 18%, 30%, and 35% for those younger than 60 years; 26%, 26%, and 48%, and 52% for those aged 60-70 years; and 49%, 57%, 66%, and 74% for those older than 70 years. Prostate cancer mortality at 14 years was 5%, 8%, and 23% for men with low-, intermediate-, and high-risk disease. Competing risk pictograms for each age/comorbidity/tumor-risk pair provide visual characterization of these risks over time.

CONCLUSION: Our survival tables may be used at the point of care as part of shared decision making. Men aged >60 years with multiple comorbidities have substantial risk of other-cause mortality within 15 years of diagnosis and should consider conservative management for low-risk disease, given its low incidence of cancer-specific mortality. Men with high-risk disease, regardless of age or comorbidity, are at greater risk for cancer mortality and may still be appropriate candidates for aggressive treatment.