Abstract

BACKGROUND: NCCN prostate cancer guidelines for prediction of life expectancy recommend subtracting 50% of life-table-predicted longevity for those in the lowest quartile of health. However, it is unclear how to identify these men and if their survival is uniform.

METHODS: We sampled 1,482 men diagnosed with prostate cancer from 1998-2004 at two VA hospitals. We identified men in the lowest quartile of health by age using Charlson scores, calculated their NCCN-predicted life expectancy, and compared with observed median survival in aggregate and across comorbidity subgroups.

RESULTS: Men with Charlson scores of 2+ (age <75) and 3+ (age ≥75) comprised the lowest quartile of health. Among those <65, 65-69, 70-74, 75-79, and ≥80 years, observed survival vs. NCCN-predicted life expectancy in years was similar: 10.4 vs. 11.1, 10.0 vs. 7.8, 6.2 vs. 6.4, 4.4 vs. 4.9, and 3.7 vs. 3.3, respectively. Yet within the lowest quartile there was significant heterogeneity in survival among men with differing Charlson scores. For example, men aged 65-69 with Charlson scores 2, 3, and 4+ had observed median survival of >13.3, 9.4, and 4.3 years, respectively. NCCN guidelines misclassified 10-year life expectancy in 24% and 56% of men aged <65 and 65-69 and 5-year life expectancy in 18% of men aged 70-74.

CONCLUSIONS: While NCCN predictions matched observed survival on average for the lowest quartile of health, there was substantial heterogeneity in survival by Charlson scores. More granular assessments of life expectancy should be used in those at highest risk for mortality.

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KEYWORDS: Charlson comorbidity index; NCCN; life expectancy; prostate cancer

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