Is clinical stage T2c prostate cancer an intermediate- or high-risk disease?


Abstract

BACKGROUND: Clinical stage T2c (cT2c) is an indeterminate factor in prostate cancer (PC) risk stratification. According to the D'Amico grouping and American Urological Association guidelines, cT2c is a high risk, whereas the National Comprehensive Cancer Network and the European Urological Association classify cT2c as an intermediate risk. This study assessed whether cT2c tumors without other high-risk factors (clinical stage T2c, not otherwise specified [cT2c-NOS]) behaved as an intermediate or high risk through an analysis of biochemical recurrence (BCR) after radical prostatectomy.

METHODS: Two thousand seven hundred fifty-nine men from the Shared Equal Access Regional Cancer Hospital (SEARCH) Database and 12,900 men from Johns Hopkins Hospital (JHH) from 1988-2011 and 1982-2012, respectively, were analyzed. Patients were grouped into low-risk (prostate-specific antigen [PSA] < 10 ng/mL, Gleason sum ≤ 6, and cT1-T2a), intermediate-risk (PSA = 10-20 ng/mL, Gleason sum = 7, or cT2b), and high-risk PC categories (PSA > 20 ng/mL, Gleason sum = 8-10, or cT3). Men with cT2c tumors who were not otherwise at high risk (ie, PSA < 20 ng/mL and Gleason sum < 8) were placed into a separate category termed cT2c-NOS. Associations between cT2c-NOS and intermediate- and high-risk patients and BCR were tested with the log-rank test and Cox proportional analysis models.

RESULTS: Ninety-nine men (4%) from SEARCH and 202 men (2%) from JHH had tumors classified as cT2c-NOS. The cT2c-NOS patients had a BCR risk similar to that of the intermediate-risk patients (SEARCH, P = .27; JHH, P = .23) but a significantly lower BCR risk in comparison with the high-risk patients (SEARCH, P < .001; JHH, P < .001). When they were specifically compared with intermediate- and high-risk patients, after adjustments for year and center, cT2c-NOS patients had outcomes comparable to those of intermediate-risk patients (SEARCH, P = .53; JHH, P = .54) but significantly better than those of high-risk patients (SEARCH, P = .003; JHH, P < .001).

CONCLUSIONS: Patients with cT2c disease without other high-risk features had outcomes similar to the outcomes of patients with intermediate-risk PC and significantly better than the outcomes of patients with high-risk PC. These findings suggest that men with cT2c disease should be considered to be at intermediate risk. Cancer 2014. © 2014 American Cancer Society.

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KEYWORDS: D'Amico risk stratification; Gleason score; biochemical recurrence; clinical staging; prostate cancer; prostate-specific antigen; radical prostatectomy

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