Population-Based External Validation of the Updated 2012 Partin Tables in Contemporary North American Prostate Cancer Patients.


Abstract

To externally validate the updated 2012 Partin Tables in contemporary North American patients treated with radical prostatectomy (RP) for localized prostate cancer (PCa) at community institutions.

MATERIALS AND METHODS: We examined records of 25,254 patients treated with RP and pelvic lymph node dissection (PLND) between 2010 and 2013, within the surveillance, epidemiology, and end results database. The ROC derived AUC assessed discriminant properties of the updated 2012 Partin Tables of organ confined disease (OC), extracapsular extension (ECE), seminal vesical invasion (SVI), and lymph node invasion (LNI). Calibration plots focused on calibration between predicted and observed rates.

RESULTS: Proportions of OC, ECE, SVI, and LNI at RP were 69.8%, 18.4%, 7.4%, and 4.4%, respectively. Accuracy for prediction of OC, ECE, SVI, and LNI was 70.4%, 59.9%, 72.9%, and 77.1%, respectively. In subgroup analyses in patients with nodal yield >10, accuracy for LNI prediction was 76.0%. Subgroup analyses in elderly patients and in African American patients revealed decreased accuracy for prediction of all four endpoints. Last but not least, SVI and LNI calibration plots showed excellent agreement, versus good agreement for OC (maximum underestimation of 10%) and poor agreement for ECE (maximum overestimation of 12%).

CONCLUSION: Taken together, the updated 2012 Partin Tables can be unequivocally endorsed for prediction of OC, SVI, and LNI in community-based patients with localized PCa. Conversely, ECE predictions failed to reach the minimum accuracy requirements of 70%. Prostate © 2016 Wiley Periodicals, Inc.

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KEYWORDS: North American; SEER; calibration; prediction tool; risk calculation; upstaging

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