External Validation of Nomogram Predicting the Probability of Specimen-Confined Disease (pT2-3a, R0N0) in Patients Undergoing Radical Prostatectomy and Pelvic Lymph Node Dissection.


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Abstract

Introduction: Before radical prostatectomy (RP), a nomogram [Briganti et al., Eur Urol 2012;61:584-592] permits to measure the probability of specimen-confined (SC) disease (pT2-pT3a, node negative with negative margins) in high-risk prostate cancer (PCa). The aim of our study was to perform an external validation of this nomogram.

Materials and Methods: Between 2007 and 2011, 623 patients with high-risk PCa (prostate-specific antigen (PSA) >20 ng/ml and/or biopsy Gleason score ≥8 and/or clinical stage T3) underwent RP and pelvic lymph node dissection at tertiary referral centers. Multivariable logistic regression models predicting the presence of SC disease were built in; we then used the area under curve of the receiver operating characteristic analysis to quantify accuracy of the nomogram to predict SC disease. The extent of over- or underestimation was evaluated within calibration plots. Results: 29% (181/623) of men had SC disease at RP. Preoperative PSA, biopsy Gleason score and stage differed significantly (all p < 0.001) between men with SC disease and those without. External validation of the nomogram showed an acceptable accuracy (area under curve: 66.3, 95% CI 62.4-70%) and a perfect calibration plot. Conclusions: The external cohort validates the original nomogram, with perfect calibration characteristics. The adequate although reduced accuracy may reflect the wide spectrum and behavior of the so-called high-risk PCa. © 2013 S. Karger AG, Basel.

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