Comparison between Briganti, Partin and MSKCC tools in predicting positive lymph nodes in prostate cancer: a systematic review and meta-analysis.

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Abstract

OBJECTIVE: The aim of this study was to analyze the discriminative capabilities of Briganti, Partin and Memorial Sloan Kettering Cancer Center (MSKCC) nomograms in predicting lymph-node invasion (LNI) and to perform a meta-analysis to yield pooled area under the receiver operating characteristics curves (AUCs) for model comparison.

MATERIALS AND METHODS: An electronic search of the MEDLINE and Embase databases up to October 2016 was undertaken. The AUC value, total number of patients and rate of LNI were extracted from the included references. After excluding redundant literature, 19 studies were identified including 86,338 patients. The Briganti, Partin and MSKCC nomograms were validated in 6629, 69,681 and 10,028 patients, respectively.

RESULTS: The pooled AUCs for Briganti, Partin, and MSKCC nomograms were 0.793, 0.778 and 0.780, respectively. The Mantel-Haenszel-derived comparison of AUC values revealed no statistical differences of predictive capabilities for Briganti vs Partin (p = 0.23), Briganti vs MSKCC (p = 0.83) and Partin vs MSKCC (p = 0.26). The accuracy of Briganti, Partin and MSKCC models is statistically similar in predicting the presence of LNI. International guidelines could consider these findings by reporting similarities in the accuracy of these models.

CONCLUSIONS: The accuracy of Briganti, Partin and MSKCC was similar in predicting the presence of LNI. Based on these results, patients and clinicians may use any of these nomograms without significant advantages.

KEYWORDS: Lymph node; lymph-node dissection; meta-analysis; nomogram; prostate cancer

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