Inventory of prostate cancer predictive tools.

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Abstract

PURPOSE OF REVIEW: We created an inventory of current predictive tools available for prostate cancer. This review may serve as an initial step toward a comprehensive reference guide for physicians to locate published nomograms that apply to the clinical decision in question. Using MEDLINE a literature search was performed on prostate cancer predictive tools from January 1966 to November 2007. We describe the patient populations to which they apply and the outcomes predicted, and record their individual characteristics.

RECENT FINDINGS: The literature search generated 111 published prediction tools that may be applied to patients in various clinical stages of disease. Of the 111 prediction tools, only 69 had undergone validation. We present an inventory of models with input variables, prediction form, number of patients used to develop the prediction tools, the outcome being predicted, prediction tool-specific features, predictive accuracy, and whether validation was performed.

SUMMARY: Decision rules, such as nomograms, provide evidence-based and at the same time individualized predictions of the outcome of interest. Such predictions have been repeatedly shown to be more accurate than those of clinicians, regardless of their level of expertise. Accurate risk estimates are also required for clinical trial design, to ensure homogeneous high-risk patient groups for whom new cancer therapeutics will be investigated.

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