Chirurgia (Bucur). 2025;120(4):459-466
http://dx.doi.org/10.21614/chirurgia.3154

Prognostic Factors of Long-Term Survival in Non-Muscle-Invasive Bladder Cancer: An 18-Year Retrospective Study from Real-Life Practice

Sever Chiujdea[1], Bogdan Petruț[2], Orsolya Martha[3,4], Ariana-Lisa Chiujdea[4], Daniel Porav-Hodade[3], Anca Ioana Rãchită[4,5], Anca Sin[4]
[1]Doctoral School, George Emil Palade University of Medicine, Pharmacy, Science and Technology, Târgu Mureș, Mureș, Romania
[2]Department of Urology, Transilvania Clinical Hospital, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj- Napoca, Romania
[3]Department of Urology, Clinical County Hospital, Târgu Mureș, Mureș, Romania
[4]George Emil Palade University of Medicine, Pharmacy, Science and Technology, Târgu Mureș, Mureș, Romania
[5]Scientific Research Methodology Discipline, Târgu Mureș, Mureș, Romania

Abstract
Introduction: Non-muscle-invasive bladder cancer (NMIBC) is common and heterogeneous, requiring risk-adapted therapeutic strategies. BCG remains standard for intermediate- and high-risk forms, but its effectiveness is influenced by limited access, variable tolerance, treatment resistance, and healthcare system disruptions.
Material and Methods: This retrospective study aimed to identify prognostic factors for survival with an additional assessment of the influence of the COVID-19 pandemic. Although we could not directly evaluate the effect of COVID-19 pandemic due to lack of recorded variables,we hypothesize it may have contributed to the limited impact of BCG therapy in our real-world setting. A total of 100 patients were selected from an initial group of 297 diagnosed in the Urology Clinic of Tg.Mureş between 2006–2008, followed up until 2024. Prognostic analysis included clinical variables, RecScore and ProgScore were calculated using the EORTC risk calculator. No specific cut-offs were applied; the scores were analyzed as continuous variables.
Results: Age over 70 and tumor multiplicity were significantly associated with increased mortality. RecScore was significantly correlated with the risk of relapse (p=0.0464). ProgScore showed a marginal association with mortality in univariate analysis (p=0.0561), but was not significant in multivariate models (p=0,9159). BCG therapy had a marginal protective effect, but did not significantly influence survival. Although we could not directly evaluate the effect of COVID-19 pandemic due to lack of recorded variables,we hypothesize that it may have contributed to treatment discontinuities in this real-life cohort.
Conclusions: The results support the need for personalized, risk-based strategies and underline the importance of integrating real-world data into NMIBC management, especially in the context of systemic disruptions.
Keywords: NMIBC, BCG, recurrence, prognostic factors, survival, intravesical therapy