

Prognostic Factors for Bladder Cancer Patients in Malaysia: A Population-Based Study

ABSTRACT

Background: Malaysia has the third highest crude mortality rates of bladder cancer within Southeast Asia. We aimed to identify the prognostic factors for bladder cancer patients in Malaysia. Methods: A retrospective population-based study was conducted among patients diagnosed between 2007 and 2011. Death date until 31 December 2016 was updated. Cox proportional hazard regression analysis was performed to examine clinical variables as prognostic factors of death. Results: Identified prognostic factors of 1828 analyzed patients were age groups, ethnicity, morphology, stage, and surgery. As compared to patients aged 15–44, the adjusted Hazard Ratio for those aged 45–54, 55–64, 65–74, and ≥ 75 were 1.59, 1.87, 2.46, and 3.47, respectively. Malay and other ethnic groups had 1.22- and 1.40-times the risk of death compared to Chinese. Patients with squamous cell carcinoma were at 1.47-times the hazard of death compared to urothelial carcinoma patients. Stages II, III and IV patients had 2.20-, 2.98-, and 4.12-times the risk of death as compared to stage I. Patients who did not receive surgery were at 50% increased hazard of death. Conclusion: Early detection and/or surgery, especially for those more than 75 years old, Malay, and squamous cell carcinoma could potentially improve survival. The findings could inform national cancer control programs.