

## **Nonparametric survival analysis of cervical cancer patients in Malaysia**

### **ABSTRACT**

Cervical cancer is the third most prevalent and fourth most lethal cancer among Malaysian women. It continues to be a major concern among physicians. Nevertheless, there are very few published works on the differences in survival probabilities of these patients in Malaysia. The application of survival analysis is crucial in addressing this issue. In this study, data was collected from Universiti Sains Malaysia Hospital (HUSM) throughout a seven-year period. A nonparametric statistical approach was applied to measure the differences in survival probabilities of cervical cancer patients and identify the prognostic variables. The nonparametric analyses considered were the Kaplan-Meier survival curve and the log-rank test. From the Kaplan-Meier estimation, a general pattern of the survival rates with a median survival time of 41.2 months was observed. From the survival curves, it appears that the survival probabilities of the patients are different for five variables namely lymph node involvement, distant metastasis, histology, primary treatment and stage. Meanwhile, from the log-rank test, it appears that the survival probabilities of the patients are different for three variables, namely distant metastasis, primary treatment, and stage, which indicates that only these three variables are significant prognostic factors.