

Risk of death of colon cancer according to the time elapsed between the diagnose and the first surgery in Puerto Rico.



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Abstract

Background/Objectives: According to the Puerto Rico Central Cancer Registry (PRCCR), during the period 2010-2014, colorectal cancer was the second leading cancer with the highest incidence in both sexes. Previous studies have reported inconsistency on the effects of surgery delay after the cancer diagnose. The main objective of this study is to assess the risks of death according to the time that elapses between the diagnostic and the first surgery among patients with colon cancer, controlling for demographical and clinical characteristics.

Methods: To reach this aim we used the data collected from the PRCCR. The data analyze were from patients with colon cancer diagnosed between the years 2009 to 2012 with a maximum time of observation for death occurrence of 5 years after the first surgery. The surgery delay was defined as the time between the cancer diagnose and the first surgery, which was categorized as follow: 1) 1-14 days, 2) 15-28 days, and 3) 29+ days. The Kaplan-Meier method and the Cox model was used to evaluate the risk of death by different types of delay.

Results: Our final dataset was composed of 1,408 patients with an almost equally distribution of male and female patients; the age mean was 67.0 years (± 12.6). The risk of death for patients with more than 29 days of surgery delay is 29.1% (HR: 0.699, 99.5% CI: 0.477-0.897) lower than patients with surgery within the first two week after diagnose, after adjusting for all characteristics.

Conclusion: It was observed that risk of death is higher among patients who had less time between diagnose and first surgery. Even though our results do not support our research hypothesis, it supports the ongoing question of the effects of delay in other studies. Future studies should consider the type of surgery (elective or emergency) and different risk factors not studied in this research, such as lifestyle, nutrition and genetic factors.