

Prognostic factors in patients with terminal stage lung cancer

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Abstract

Background: Lung cancer is the leading cause of cancer-related death. (1) Accurate prediction of survival in the terminal stage is important, because it may help patients make a rational decision. Although several prognostic scores have been described as effective indicators of outcome, these scores were intended for patients with other types of cancers. There is no prognostic score for patients with terminal-stage lung cancer.

Objective: The aim of this study was to determine prognostic factors for patients with terminal-stage lung cancer.

Setting/Subjects: Patients in our palliative care unit (PCU) were selected retrospectively and divided into two independent groups, training and testing. Univariate and multivariate analyses were performed on data from the training group to detect independent prognostic factors, while data from patients in the testing group were analyzed to validate whether these prognostic factors predicted near-term death.

Results: Ninety-three patients (69 in the training group and 24 in the testing group) were included in the analyses. Multivariate analysis showed that fatigue, anorexia, desaturation, hyponatremia, and hypoalbuminemia were independent prognostic factors in the training group. Mean survival time in patients who had more than three of these five factors was 9.2 ± 2.6 days ($p=0.012$). In the testing group, the presence of more than three of these five factors predicted death within two weeks, with a sensitivity of 100% and specificity of 75%.

Conclusions: This study revealed that fatigue, anorexia, desaturation, hyponatremia, and hypoalbuminemia may be short-term prognostic factors in terminally ill lung cancer patients. In particular, the presence of more than three of these factors predicted death within two weeks.

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Strengths: Attempts to address the challenging issue of prognostication in end-of-life lung cancer patients, included validated tools to assess their further usefulness in more specific population, appears relevant to the needs of the study location

Weaknesses: Retrospective analysis (selection bias), very small population, does not look at prognostication during time periods when it is more difficult to determine prognosis, did not use objective tool to evaluate the symptoms of the patients, only included patients admitted to the PCU

Relevance to palliative care: Prognostication of patients with cancer in general is challenging. This study reveals that certain factors may specifically help predict prognosis of lung cancer patients who are near the end of life. However, given such a small sample size, changes in practice should not depend solely on the results of this study. Health care providers tend to be better at prognosticating at early in the course of a disease and near the end of life. Thus, it may be more useful to look at prospective research on prognosis at the time periods in between, when it is evidently more difficult to determine prognosis.