Journal Watch

Survival Prediction in Terminally Ill Cancer Patients by Clinical Estimates, Laboratory Tests, and Self-Rated Anxiety and Depression

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Abstract:

Purpose: To study how survival of palliative cancer patients relates to subjective prediction of survival, objective prognostic factors (PFs), and individual psychological coping.
Patients and Methods: Survival was estimated according to three categories (< 1 month, 1 to 6 months, and > 6 months) by two physicians (A and B) and the institutional tumor board (C) for 216 patients recently referred for palliative radiotherapy. After 6 months, the accuracy of these estimates was assessed. The prognostic relevance of clinical symptoms, performance status, laboratory tests, and self-reported emotional distress (Hospital Anxiety and Depression Scale) was investigated.
Results: In 61%, 55%, and 63% of the patients, prognoses were correctly estimated by A, B, and C, respectively. κ statistic showed fair agreement of the estimates, which proved to be overly optimistic. Accuracy of the three estimates did not improve with increasing professional experience. In particular, the survival of 96%, 71%, and 87% of patients who died in less than 1 month was overestimated by A, B, and C, respectively. On univariate analysis, 11 of 27 parameters significantly affected survival, namely performance status, primary cancer, fatigue, dyspnea, use of strong analgesics, brain metastases, leukocytosis, lactate dehydrogenase (LDH), depression, and anxiety. On multivariate analysis, colorectal and breast cancer had a favorable prognosis, whereas brain metastases, Karnofsky performance status less than 50%, strong analgesics, dyspnea, LDH, and leukocytosis were associated with a poor prognosis.
Conclusion: This study revealed that physicians' survival estimates were unreliable, especially in the case of patients near death. Self-reported emotional distress and objective PFs may improve the accuracy of survival estimates.

Comments:

Strengths/uniqueness:

This is a prospective study for assessing the reliability of estimating the survival of cancer patients.The study included patients who were seen at a department of radiation oncology in a single institution in Dusseldorf. The clinical estimation of survival was provided by three groups of MDs (a mix of trainee and staff MDs, a single experienced staff MD, and 5 to 10 staff MDs attending an institutional panel chaired by the head of department). Other clinical prognostic factors such as diagnosis, metastatic sites, laboratory data, symptoms were examined. symptoms included weight loss, performance status, use of morphine for pain, and psychological distress measured by the Hospital Anxiety and Depression Scale (HADS). Patients were followed up for six months after the initial assessment. A unique part of this study is the direct comparison of the reliability of survival estimation amongst three groups of MDs for the same patient population.

Weaknesses:

As the authors commented, one limitation of this study is that the impact of psychological distress on survival may have been affected by selection bias, as only a subset of patients (71% of total participants) completed the HADS questionnaire. This may have affected the result of the multivariate analysis, despite a trend for the presence of depression and anxiety to be associated with shorter survival. It would also have been informative to have a description of how the assessment data was used in daily clinical practice, as it is clear how the MDs estimated the survival of each patient.

Relevance to Palliative Care:

Patients and their family members ask for information regarding survival on a daily basis. However, it is unclear how many are actually provided with useful information regarding their prognosis. It is always valuable to understand more about how reliably clinicians are in their estimation of survival. Perhaps the most relevant point for clinicians who care for palliative care patients is to be aware of the limitation of survival estimation. Clinicians may then communicate effectively based on their awareness of this limitation.