

Low Serum Albumin Levels and Liver Metastasis Are Powerful Prognostic Markers for Survival in Patients with Carcinomas of Unknown Primary Site

Seve P, Ray-Coquard I, Trillet-Lenoir V, Sawyer M, Hanson J, Broussolle C, Negrier S, Dumontet C, Mackey JR. *Cancer* 2006; 107(11): 2698-2705.

Prepared by: Gary Frank, RN

Received during: Journal Rounds, Feb. 13, 2007, Tertiary Hospitals Palliative Care Consult Teams, Cross Cancer Institute, Edmonton, Alberta, CANADA

Abstract:

BACKGROUND: The authors investigated how lymphopenia and low serum albumin levels correlate with the prognosis of patients with carcinoma of unknown primary (CUP).

METHODS: Univariate and multivariate prognostic factor analyses were conducted in a population of 317 consecutive patients with CUP who were evaluated at the Cross Cancer Institute of Edmonton, Alberta, Canada, from 1998 to 2004.

RESULTS: The results from multivariate analysis showed that patients who had a performance status ≥ 2 (using the World Health Organization scale), a high overall comorbidity score (on the Adult Comorbidity Evaluation 27), liver metastasis, elevated serum lactate dehydrogenase (LDH) levels, lymphopenia (defined as an absolute lymphocyte count $\geq 0.7 \times 10^9/L$), and low serum albumin levels had a worse prognosis. Based on the observation that the presence of liver metastasis and low serum albumin levels were the most powerful adverse prognostic factors, a classification scheme was delineated that took those 2 variables into account. A group of good-risk patients (no liver metastasis and normal serum albumin levels) and a group of poor-risk patients (liver metastasis and/or low serum albumin levels) were identified with median survivals of 371 days and 103 days, respectively ($P < .0001$). This classification was validated further in an independent data set of 124 patients who were evaluated at 2 French cancer centers: Among those patients, the median survival was 378 days in the good-risk group and 90 days in the poor-risk group ($P < .0001$). The new prognostic model substantially outperformed the previous standard prognostic model, which was based on performance status and serum LDH levels.

CONCLUSIONS: Lymphopenia and low serum albumin levels were identified as 2 new independent markers of prognosis in patients with CUP. Although the authors confirmed the validity of the previous prognostic model, they developed and validated a more powerful, simple model based on the 2 most powerful adverse prognostic factors: liver metastasis and low serum albumin levels. These findings were confirmed in an independent cohort of patients with CUP, and consideration of the authors' improved prognostic model for survival of patients with CUP is warranted.

Comments:

Strengths/uniqueness: A thorough chart review with well-defined inclusion and exclusion criteria for a large number of consecutive patients. Replicated with independent data from a second center. Reliable, easy to use, prognostic model developed.

Weaknesses: Though basic identification of patient subgroups receiving different treatment protocols is given, more detail in this regard and some stratification of prognostic markers or outcomes for these sub-groups would be helpful.

Relevance to Palliative Care: Important data and practical prognostic model has the potential to be very useful in planning treatment, direction of care, and place of care for palliative patients.