A joint model based on longitudinal CA125 in ovarian cancer to predict recurrence

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ABSTRACT

Aims: To develop a new package of joint model to fit longitudinal CA125 in epithelial ovarian cancer relapse.

Patients & methods: Included were 305 epithelial ovarian cancer patients who reached complete remission after cytoreductive surgery and first-line chemotherapy. Univariate and multivariate analysis with a joint model was performed to select independent risk factors, which were subsequently combined to predict recurrence.

Results: Independent factors were longitudinal CA125, age, stage and residual tumor size (p < 0.05). Prediction of recurrence with these factors had an average of 80.7% accuracy, 5.6–10.7% better than kinetic factors.

Conclusion: The new package of joint model fits longitudinal CA125 well. Potential application can be extended to other biomarkers.

Keywords: joint model • longitudinal CA125 • ovarian cancer • recurrence

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