

A nomogram with Ki-67 in the prediction of postoperative recurrence and death for glioma

Fengfeng Li¹, Dongyuan Wang², Nana Wang², Linlin Wu², and Bo Yu²

¹Tengzhou Central People's Hospital

²The Affiliated Tengzhou Central People's Hospital of Xuzhou Medical University

November 9, 2023

Abstract

Background: To evaluate the predictive value of a nomogram with Ki-67 in overall and disease-free survival in glioma patients. **Methods:** A total of 76 patients diagnosed with glioma were enrolled. The baseline data and followups were retrospectively collected from medical records. The associations between Ki-67 and survival status were examined using log-rank test, univariate and multivariate Cox proportional hazard regression models. Calibrations were performed to validate the established nomograms. **Results:** Ki-67 negative group showed a longer OS survival time and a longer PFS survival time with log-rank test ($\chi^2=16.101$, $P<0.001$ and $\chi^2=16.961$, $P<0.001$). Age older than 50 years (HR=2.074, 95% CI: 1.097-3.923), abnormal treatment (HR=2.932, 95% CI: 1.343-6.403) and Ki-67 positive (HR=2.722, 95% CI: 1.097-6.755) were the independent predictive factors of death. High grade pathology (HR=2.453, 95% CI: 1.010-5.956) and Ki-67 positive (HR=2.200, 95% CI: 1.043-4.639) were the independent predictive factors of recurrence. The C-index for the nomogram of OS and PFS were 0.745 and 0.723, respectively. The calibration results showed that the nomogram could predict the overall and disease-free 1-year survival of glioma patients. **Conclusion:** The nomograms with Ki-67 as independent risk factor for OS and PFS could provide clinical consultation in the treatment and follow-up of malignant glioma.

Hosted file

Cover letter.doc available at <https://authorea.com/users/697762/articles/685814-a-nomogram-with-ki-67-in-the-prediction-of-postoperative-recurrence-and-death-for-glioma>

Hosted file

Manuscript-cancer reports.doc available at <https://authorea.com/users/697762/articles/685814-a-nomogram-with-ki-67-in-the-prediction-of-postoperative-recurrence-and-death-for-glioma>

Hosted file

Fig.docx available at <https://authorea.com/users/697762/articles/685814-a-nomogram-with-ki-67-in-the-prediction-of-postoperative-recurrence-and-death-for-glioma>