TRANSLATIONAL CANCER RESEARCH

Peer Review File

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Reviewer A

Comment: In this study, authors aimed to identify the specific risk factors affecting overall survival and finally, they developed a nomogram for prognostic prediction of patients with ovarian cancer based on data from the SEER database, which has clinical significance in the management of patients. Fortunately, although there is an overflow of studies using the SEER database in recent years, according to what I'm informed, this is the first study of developing a nomogram for visually predicting prognosis of patients with ovarian cancer. However, this study had several common limitations of population-based studies based on the SEER database. Therefore, any results in this study should be taken with a grain of salt. Also, I addressed the following research comments and hoped the authors could consider it carefully.

Reply: Thank you for your kind consideration.

Comment: 1. The running title “SEER-based study about ovarian cancer” is too general, changes may be recommended.

Reply: Thank you for your valuable comments. We have changed the running title to "SEER-based nomogram of ovarian cancer prognosis". (Line 10)

Comment: 2. I noticed that tumor staging was based on AJCC (6th Edition, 2004) criteria in this analysis, however, the revised version of the stage has been accepted and applied diffusely in 2014. (Prat J. Staging classification for cancer of the ovary, fallopian tube, and peritoneum. Int J Gynecol Obstet 2014;124:1-5; PMID: 24219974)

Reply: Thank you for your valuable comments. We have manually restaged the TNM stage according to the newest TNM staging system according to the reviewer's comment. (Fig S1 and Table 2)

Comment: 3. There are crossovers in several survival curves. Thus, the authors must be cautious of interpretation meanwhile, be regarded with caution. That's a serious problem in my view. (Line 148-150)

Reply: Thank you for your valuable comments. There is crossover in the KM-plot of the chemotherapy variable. We have added the interpretation about this in the result section.

Comment: 4. Detecting multicollinearity should be used to test the independence of the independent variables included in the regression model, and tolerance of less than 0.1 or variance inflation factor (VIF) of greater than 10 indicates a multi-collinearity problem.

Reply: Thank you for your valuable comments. We have added the VIF factors in Table 2. All VIFs are around 1, indicating there are no significant multi-collinearity problem. (Table 2)

Comment: 5. I don't know what patients are used for validation sets.

Reply: Thank you for your valuable comments. In this revised manuscript, we randomly divided all included patients in training cohort and validation cohort at a 7:3 ratio. And then we validated the nomogram using the data in the validation cohort.

Comment: 6. There is a problem with clarity and proportion of Figure 1.

Reply: Thank you for your valuable comments. We revised Fig 1 to improve the clarity and the proportion.

Reviewer B

Comment: This manuscript investigated the survival of ovarian cancer using SEER data and constructed a nomogram to predict the survival. Though there have been quite a lot

of articles which focus on the prognosis of many types cancer using SEER database, When I check the Pubmed website in recent days I find there's still no similar article which analyze the prognostic factors of ovarian cancer using SEER data. This manuscript still has some novelty.

Reply: Thank you for your kind reply.

There are several major concerns as follows.

Comment: (1) The authors used cases diagnosed between 1973 and 2014. I think the SEER database has included the cased diagnosed in 2015 and 2016. Therefore, the authors should better include the newest cases and exclude the cases in the far old time.

Reply: Thank you for your valuable suggestion. According to the comments, we now include patients diagnosed in 2015 and 2016, and exclude patients diagnosed between 1993 and 2003.

Comment: (2) The authors should better validate their nomogram using their own data.

Reply: Thank you for your valuable comment. We are quite sorry that we don't have the information of enough cases with ovarian cancer. However, we randomly divided

all included patients in training cohort and validation cohort at a 7:3 ratio. And then we validated the nomogram using the data in the validation cohort.