Peer Review File

Reviewer A

The manuscript is very interesting and has a practical importance, therefore I am in favour of publication, after minor revision. I suggest you to underline the most significant differences in the tables and in the discussion section.

Reply: Thank you for the suggestion. What we have described in both the results and the discussion section are statistically different results.

Changes in the text: None.

Reviewer B

This is a very interesting, well-written study. The discussion and introduction drew upon a solid foundation of current literature. The premise itself was somewhat well-supported. However, the presentation of the results was confusing and the reader was left with a few major questions.

First, there was very little explanation of how the two groups (those with negative emotions and those without; those with combined negative emotions and those without, etc.) were defined in terms of score cutoffs on the SAS and the SDS. In looking at the results, it does not seem accurate to label the comparison groups as having "no negative emotions" because many times even if the differences between the "with" and "without" negative emotion groups were statistically significant on t-test, the raw differences seemed fairly small. The lack of consistent, explicit definition of the two-group design was a major concern. 1a) Another related concern was the lack of detail as to the timing of the administration of the self-report psychological scales (SDS, SAS, FACT-O): were they all administered at the same timepoint relative to a clinical event. For example, were all patients completing the FACT-O, SDS, and SAS immediately after diagnosis but before treatment began? Within the first cycle of treatment or just before surgery? If the timing of the psychological scales was not consistent among all patients, it is highly likely that patients who scored high on negative emotions were already experiencing post-op complications. 1b) At some point in the manuscript, it seemed that the analysis shifted from those without negative emotions at all to those without any combined negative emotions.

Reply: According to SAS scale, score > 50 is considered to have anxiety; On the SDS scale, a score of > 52 is considered to be depressed. Whether the patient has anxiety or depression or both, it is defined as co-negative emotion. All patients were evaluated by SAS and SDS at 1 day before surgery. FACT-O scale was performed 1 month and 6 months after surgery. Finally, without negative emotions is the same as without any combined negative emotions.

Changes in text: we added some data (see Page 6, line 182-184; Page 7, line 210)

Second, the analytic plan did not control for multiple comparisons. There was no description of how baseline predictors were selected for the logistic regression. The second major concern is that it is unclear why they did not simply perform a survival analysis, since it seems that the

combined negative emotion factor (present vs non-present?) was itself highly correlated with several clinico pathologic variables. It seems that multicollinearity should itself be checked to see whether the negative emotion factor was truly an independent predictor of prognosis or whether its contribution to the variance could be better explained by one of its own predictors (age, education, income, lymph node infiltration, pressure sores, etc).

Reply: For the choice of negative sentiment binary Logistics regression factors, we put the factors that have differences in the test result of unifactor analysis into multi-factor regression. Due to limited resources and energy of the research team, patients were followed up for three years and Kaplan-Meier survival curve was developed to judge the survival of patients. We performed collinear diagnosis before regression of negative emotion and prognosis, and the results showed no significant correlation between the dependent variables ($P > 0.05$).

Changes in text: None.

A minor concern is that some of the complications associated with negative emotions (lines 272-79) appear to be in the wrong direction (those patients in the negative emotions group have lower urinary tract infection, irregular post-op bleeding, compared to the non-negative emotion group).

Reply: As for the description of complications, we are sorry that it was a clerical error and we have revised it in the article.

Changes in text: we added some modified our text as advised (see Page 20, line 625)

1. You've mentioned "studies", while only one reference was cited in the below sentences. Please check. (You could either choose to revise them to "study" or to give **more than one reference** in those sentences. In the latter case, please keep the citations consecutively in text.)

120	serious physical and psychological burdens (14). Studies have shown that OC patients
121	suffer from severe long-term fatigue, depression, neuropathy, and sleep disorders after
122	treatment (15). In addition, patients with OC may experience negative emotions during

452	resistance in chemotherapy is more likely, leading to a worse prognosis (33). Previous
453	studies have found that histological grading is an important factor affecting prognosis
454	(34). Tissue with low differentiation and higher stage indicates higher tumor

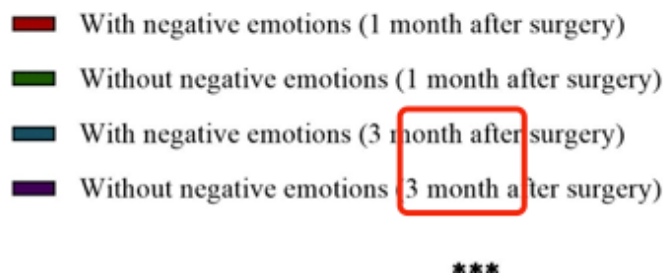Reply: Thank you for the suggestion, we have revised.

2. Table 4: How you presented those data? Please define them either inside the table or in table footnote.

Table 4 Comparison of ovarian function between the two groups of patients before and after surgery

Item	Time	With negative emotions	Without negative emotions	t	P	
Ovarian cross-sectional area (cm²)	Preoperative	4.16±0.54	4.20±0.53	0.533	0.595	
	3 months postoperative	3.84±0.55	3.82±0.53	−0.266	0.790	
PSV (cm/s)	Preoperative	16.34±0.53	16.39±0.60	0.493	0.622	
	3 months postoperative	17.57±0.76	17.28±0.66	−2.593	0.010	
RI	Preoperative	0.69±0.06	0.68±0.06	−1.018	0.309	
	3 months postoperative	0.58±0.06	0.6±0.07	2.758	0.006	
EDV (cm/s)	Preoperative	7.04±0.41	7.0±0.42	−0.521	0.603	
	3 months postoperative	7.56±0.58	7.32±0.45	−3.125	0.002	

Reply: Thank you for the suggestion, we have revised.

3. Figure 3: Please revise them to "3 month**s**".

With negative emotions (1 month after surgery)

Without negative emotions (1 month after surgery)

With negative emotions (3 month after surgery)

Without negative emotions (3 month after surgery)

★★★

Reply: Thank you for the suggestion, we have revised.

4. The hospital name in figure 1 and the Methods section is different. Please check and revise.

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280 patients with ovarian cancer at the Affiliated Hospital of Jiangsu University between August 2014 and December 2019

135 #Methods

136 ##Research participants

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138 A total of 258 OC patients admitted to the Affiliated Hospital of Jiangnan University

139 between August 2014 and December 2019 were included in this study.

Reply: Thank you for the suggestion, we have revised.