Critical review on Abstract for dissertation work
for a degree of Doctor of Philosophy (Ph.D.)

Study of morphological indicators of ovarian malignancy in women with neoplasms

Specialty "6D110100-Medicine".

ADILGEREYEVA AKMARAL SAPARBAYEVNA

Reviewer
Professor M.M. Farghali
Professor of Obstetrics and Gynecology Ain Shams Universiy

Consultant of Obstetrics and Gynecology Kuwait Maternity Hospital

Member of editorial Board of BMC Women Health Journal

Thank you for inviting me to review this Abstract for dissertation work for a degree of Doctor of Philosophy (Ph.D.). It reports on Study of morphological indicators of ovarian malignancy in women with neoplasms.
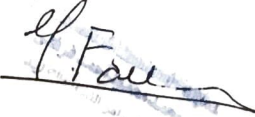
General comment

The article is interesting. The study follows a clear objective and a theory-based question, it is clear what the points are used to discriminate malignant from benign ovarian tumors. The study conclusion is relevant to the findings. The study design is appropriate to answer the research question (including the use of appropriate controls), and the conclusions are supported by the evidence presented. The use of statistics and treatment of uncertainties is appropriate.

Evaluation Points

№	Criteria	Compliance with the criteria (it is necessary to mark one of the answer options)	
1.	The topic of the dissertation (as of the date of its approval corresponds to the directions of scientific development and /or state programs	1.1 Compliance with priority directions of science development or government programs: 1) The dissertation was completed within the framework of a project or target program funded from the state budget (specify the name and number of the project or program) 2) The dissertation was completed within the framework of another state program (specify the name of the program) **3)** The dissertation corresponds to the priority direction of science development approved by the Higher Scientific and Technical Commission under the Government of the Republic of Kazakhstan (specify the direction)	**The dissertation corresponds to the priority direction of science development approved by the Higher Scientific and Technical Commission under the Government of the Republic of Kazakhstan - "Science of life and Health".**

2.	Importance for science	The work **makes** a significant contribution to science, and its importance is well **disclosed**	The obtained results of the risk of malignancy Index supplemented scientific data on the frequency of malignancy of benign ovarian neoplasms in different age groups, which in general determines the tactics of therapeutic measures and favorable outcomes of surgical treatment.
3.	The principle of independend	The level of independence: 1) **High** 2) Average 3) Low 4) There is no independence	Independent
4.	The principle of internal integrity	4.1 Substantiation of the relevance of the dissertation: 1) **reasoned** 2) Partially reasoned 3) Not reasoned	Reasoned
		4.2 The content of the dissertation reflects the topic of the dissertation: 1) **Reflects;** 2) Partially reflects 3) Does not reflect	2) Partially reflects
		4.3. The purpose and objectives correspond to the topic of the dissertation: 1) **correspond to** 2) partially correspond to 3) do not match	The study Give diagnostic and morphological criteria for the risk of early malignancy of ovarian neoplasm in women.
		4.4 All sections and provisions of the dissertation are logically interrelated: 1) **completely interrelated** 2) the interrelated is partial 3) there is no interrelated	Results reflects objectives and methods used in the dissertation.
		4.5 The new solutions proposed by the author (principles, methods) a reasoned and evaluated in comparison with the known solutions: 1) **there is a critical analysis** 2) partial analysis;	The author analyzed the used methods and found that Calculation of RMI (RMI> 200) showed high efficiency in predicting the type of ovarian neoplasm in women of different age groups. The

		3) the analysis is not your own opinions, but citations from other authors.	malignant type of formations had a higher RMI. ROC curve analysis showed that RMI at cut-off value> 247.5 has the best sensitivity of 82.9%, specificity 100%. A significant positive correlation was found between age and RMI, as well as between CA-125 and RMI, which were finally confirmed by a morphological conclusion.
5.	The principle of scientific novelty	5.1 Are the scientific results and provisions new? 1) completely new 2) partially new (25-75% are new) 3) not new (less than 25% are new	2) partially new (25-75% are new)
		5.2 Are the conclusions of the dissertation new? 1) completely new 2) partially new (25-75% are new) 3) not new (less than 25% are new)	The obtained results of the risk of malignancy index supplemented scientific data o the frequency of malignancy of benign ovarian neoplasms in different age groups, which in general determines the tactics of therapeutic measures and favorable outcomes of surgical treatment.
		5.3 Technical, technological, economic or managerial decisions are new and substantiated 1)completely new 2) partially new (25-75% are new) 3) not new (less than 25% are new)	2) partially new (25-75% are new)
6.	Reasonableness of the main conclusions	All the main conclusions are **based** on scientifically significant evidence or are sufficiently well-founded (for qualitative research and areas of training in the arts and humanities)	Statistics are explained and justify the results.

7.	The main provisions submitte for defence	It is necessary to answer the following questions for each provision separately: 7.1 Is the position proved? **1) proved** 2) rather proven 3) rather not proven 4) not proven 7.2 Is it trivial? 1) yes; **2) no** 7.3 Is it new? **1) yes (partially new)** 2) no 7.4 Level for application: 1) narrow **2) average** 3) wide 7.5 Is it proved in the article? **1) yes** 2) no	
8.	The principle of reliability Reliability of sources and information provided	8.1 The choice of methodology is substantiated or the methodology is described in sufficient detail **1) yes** 2) no	**Yes**
		8.2 The results of the dissertation work were obtained using modern methods of scientific research and methods of data processing and interpretation using computer technologies: **1) yes** 2) no	**Statistical analysis was performed using the SPSS application, version 20 (Chicago, IL, USA).**
		8.3 Theoretical conclusions, mode identified relationships and laws have been proved and confirmed experimental research (for areas o training in pedagogical sciences, th results have been proved on the basis of a pedagogical experiment **1) yes** 2) no	**Proved and confirmed**
		8.4 Important statements are	

		confirmed/partially confirmed/not confirmed by references to relevant and reliable scientific literature	
		8.5 references used are **sufficient**/not sufficient for a literary review	**Many references are used to confirm the conclusions**
9	The principle of practical valu	9.1 The thesis has theoretical significance: 1) yes 2) no	**The calculation of the risk index of malignancy is presented in the clinical guidelines for practicing physicians.**
		9.2 The dissertation is of practical importance and there is a high probability of applying the results obtained in practice: 1) yes 2) no	**The present study is of practical interest for predictir groups at increased risk of progression, requiring additional treatment or more careful follow-up**
		9.3 Are the suggestions for practic new? 1) completely new; 2) partially new (25-75% are new) 3) **not new (less than 25% are new**	2) partially new (25-75% are new)
10.	Quality of writing and design	Quality of academic writing: 1) high 2) **average** 3) below average 4) low	**Average**

General comment

The introduction reflects the magnitude of the problem (The preoperative discrimination between benign and malignant adnexal swellings is important to decide further clinical and surgical management. Women with malignant tumors should referred to gynecology oncologist, as the quality of surgical staging/lymph node dissection is an important prognostic factor in ovarian cancer. Furthermore, appropriate, and timely referral to gynecology oncologist has proven to increase the overall survival of women with ovarian cancer). Which explains the aim of the dissertation (to detect the morphological parameters of ovarian swellings, and accuracy of RMI in diagnosing ovarian malignancy).

The methods of the dissertation are clear and include the inclusion, exclusion criteria and calculation of the RMI.

The sample size calculation is appropriate for three groups. In addition, the statistical methods used properly, specially, the use of the receiver operating characteristic (ROC) to detect the cut-off value of RMI with highest sensitivity, specificity, PPV, and NPV in diagnosing ovarian malignancy in each group and in the three studied groups collectively. The correlation coefficient analysis was also used to detect the relation between RMI, and participants' variables in ovarian malignancy group.

The discussion contains the comparison of the dissertation findings with other research findings. In addition, it contains the imitations faced, strength, and future suggested research.

The dissertation reaches a clear conclusion reflecting its results and it contains relevant references.

Regards