**OPINION**

**by Prof. Dr. Atanas Stefanov Yonkov, PhD**

**Head of the "General and Operative Surgery" Department, Sofia University**

of a dissertation for awarding the educational and scientific degree 'doctor'

Field of higher education 7. Health care and sports, direction 7.1. Medicine

Scientific specialty: "General surgery"

**Author: Dr. Anastasia Siemon Petresca**

Form of doctoral studies: independent preparation

Institution: ACK UMBAL "Tokuda", Sofia

Topic: "Resectability of pancreatic head carcinoma - pre- and intraoperative criteria"

**Scientific supervisor: Prof. Dr. Kiril Draganov, DSc., ACK UMBAL "Tokuda", Sofia**

**General notes and commentary on the procedure**

By order No. 15-05-148/ 18.10.2022 of the executive director of "ASK UMBAL Tokuda", Dr. Venelina Atanasova, I have been appointed as a member of the scientific jury for the official defense of the above-mentioned dissertation work.

At the first meeting, I was assigned to prepare an opinion.

The defense procedure fully complies with the requirements of the current regulatory framework in the Republic of Bulgaria - the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB), the Regulations for the Implementation of the ZRASRB, the Regulations for the Development of the Academic Staff in "ACK UMBAL Tokuda", as well as the Regulations on the terms and conditions for acquiring scientific degrees and occupying academic positions (PURPNSZAD) in "ACK UMBAL Tokuda".

Dr. Anastasia Simeon Petresca is enrolled in the doctoral program of self-study according to Art. 27 and art. 28 of PURPNSZAD in "ASK UMBAL Tokuda" by order No. 88/21.02.2018 of the executive director.

She completed the individual doctoral plan and successfully passed the doctoral minimum exam. On 28.06.2022, the completed dissertation work was presented and successfully defended before an extended scientific collegium (order No. 15-05-100/13.06.2022 of the executive director of "ASK UMBAL Tokuda"), then with order No. 15- 05-138/30.09.2022, Dr. Petresca was dismissed with the right to official defence.

On time, I received the dissertation work, the author's reference to it, as well as a complete set of documents and materials related to the official defense, which fully meet the legal requirements of the above-mentioned regulatory framework, in paper and electronic format.

**Brief biographical data of the PhD student**

Dr. Anastasia Simeon Petresca graduated in medicine at the Faculty of Medicine of MU-Sofia in 2001, after which she specialized in the Clinic for Surgical Diseases "Prof. A. Stanishev", UMBAL "Alexandrovska" and after successfully passing the state exam acquired the specialty "General Surgery" in 2008. Immediately after that she became part of the team of the Clinic for Liver, Biliary, Pancreatic and General Surgery, MBAL "Tokuda Hospital Sofia" (now "ASK UMBAL Tokuda" EAD), where she works until now. Since 2019, she has also been a part-time assistant in surgery at the Faculty of Medicine of the University of St. Kliment Ohridski.

Dr. Petresca has conducted a number of courses for postgraduate training and professional development, both at home and abroad. This definitely contributed to her professional growth, and co-authorship in a number of studies sparked her interest in pancreatic resection oncosurgery.

**Actuality of the topic**

The technical performance of duodeno-pancreatic resections in cases of carcinoma of the head of the pancreas (HCP) has long been perfected and has resulted in a significant reduction of the early postoperative mortality to acceptable values ​​below 5%, even 2.5-3%, and in some series also tending to 0%. This concludes the positive information. What do the rest of the facts show? Morbidity and especially specific complications remain high. The diagnosis is made late in 75-80% of patients. Hence, long-term outcomes have not improved over the past 25-30 years, despite a multimodal treatment approach. Last but not least, the preoperative assessment of resectability in a number of cases turns out to be wrong. These are the points of concern regarding the diagnosis and treatment of CPH.

Dr. Anastasia Petresca's dissertation is a successful attempt to find answers to the problem of accurately determining resectability before the patient enters the operating room.

**Literature review and problem awareness**

The literature review is thorough, up-to-date and sufficient in volume (32 pages). Without entering and without falling into unnecessary details, the doctoral student concisely presents brief statistical, demographic, genetic, clinical and paraclinical data, as well as key points of the surgical technique, concerning the radical resection of pancreatic cancer. A significant place is devoted to a number of modern instrumental non-invasive and interventional methods, without which the diagnosis and determination of treatment tactics would not be possible. A number of studies from the last 2 decades are indicated with a discussion of their sensitivity and specificity, which determines to one degree or another their reliability and informativeness. At the end of the review, Dr. Petresca makes a brief summary and defines seven conclusions.

All this proves the presence of sufficient practical experience, good theoretical preparation, detailed knowledge of the issues, and the conclusions are the main argument for starting and conducting one's own research.

**Research methodology. Significance of the achieved results, conclusions and contributions.**

The purpose of the dissertation work is precise and clear. As with any such contemporary research, the PhD student formulates a working hypothesis that is in tune with the overall concept. The tasks are adequate and sufficient in number and content to achieve the goal.

The initially processed 695 cases of CGP through inclusion and exclusion criteria were reduced to 400, representing one of the largest reported series with this pathology in the country. The research methods are described in sufficient detail, summarized in 7 groups, and in terms of operational methods, this is supplemented with rich visualization with figures. The statistical processing of the obtained results and facts is an essential part of the methodology, guaranteeing reaching reliable conclusions.

Dr. Anastasia Petresca presents her own results and analyzes them (respectively in a volume of 29 pages and 30 pages) descriptively, in tabular and graphic form.

In these chapters of the dissertation work, the scientific-based approach and research qualities of the doctoral student are once again evident.

Demographic, clinical, laboratory, instrumental, intraoperative, and patho-anatomical data and characteristics of CGP cases were thoroughly analyzed in search of predictability. From a practical point of view, the established or rejected dependencies of tumor resectability on clinical symptoms, values ​​of tumor markers, tumor size, diameter of the main pancreatic duct, data from invasive diagnostic procedures for involvement of the main vessels, etc. are important.

Based on the statistical analyzes of the achieved results, the dissertation concludes with 13 conclusions and 5 contributions. Five of the conclusions are of a confirmatory nature, and the remaining eight of an original nature. I accept everything

Assessment of the PhD student's publications and personal contributions

The list of titles and presented full-text articles and reports from scientific forums related to the topic of the dissertation is eight in number. All of them contain information and analysis, which to one degree or another are also presented in the dissertation and prove the systematic and purposeful work of Dr. Petresca on the issues of resectability of KGP over the years.

**Critical remarks and recommendations**

Some of the materials included in the overview, although in a very short form, could have been avoided, as they do not have a direct connection with the topic of the dissertation - e.g. genetic aspects of carcinogenesis, some statistics, etc.

The lack of Bulgarian sources in the bibliography is another critical note, but in truth I am not aware of other studies with a similar aim and scientific search. It is possible that the doctoral student and his supervisor decided not to cite Bulgarian authors, since in reality this would mean "self-citation".

The indicated critical remarks in no way reduce the scientific value of the dissertation work and do not belittle its qualities.

**Abstract**

The abstract is sufficient in terms of volume and content and gives a clear, accurate and detailed idea of ​​the essence of the dissertation, the achieved results, conclusions and contributions.

**CONCLUSION**

After my acquaintance as a member of the scientific jury with the dissertation, the author's abstract and the publications related to it, I give an extremely high assessment of the overall work of Dr. Anastasia Simeon Petresca on the prognostic value of some factors in relation to the resectability of KGP.

The dissertation contains scientific and scientific-applied achievements that represent an original contribution to science and meet all the requirements of ZRASRB, the Regulations for the implementation of ZRASRB and the Regulations of "ASK UMBAL Tokuda".

The presented materials and dissertation results fully correspond to the specific requirements, are original in nature and no plagiarism is detected.

I confidently state that Dr. Anastasia Petresca possesses in-depth theoretical knowledge and professional qualities, demonstrating qualities and skills for independent conduct of scientific research. Obtained results, their analysis, conclusions and contributions prove the personal merits of the doctoral student.

Due to the above, I give my positive assessment for the dissertation work on the topic "Resectability of carcinoma of the pancreatic head - pre- and intraoperative criteria" and propose to the members of the honorable scientific jury to award the educational and scientific degree "PhD" to Dr. Anastasia Simeon Petresca in a PhD program in "General Surgery", for which I strongly vote "For".

Prepared the opinion:

07.11.2022 ………………………………………………

(Prof. Dr. Atanas Yonkov, PhD)