

STATEMENT

by Assoc. Prof. Nikolay Vladimirov Conev, MD, PhD, Head of the Clinic of Medical Oncology,
University Hospital "St. Marina" - Varna,

According to the Order of the Rector of Medical University Varna № R-109-567/19.12.2023 I was elected as a pre-sitting member of the Scientific Jury, and on the basis of Protocol № 1/20.12.2023 I was appointed to prepare a statement on the procedure for the acquisition of the educational and scientific degree "Doctor" in the scientific specialty "Oncology" with the code number 03.01.46., in the field of higher education "Health and Sport", professional field 7.1. "Medicine"

Regarding the dissertation of : "Expression of tumor reversion markers in colorectal cancer"

Author: Mariya Ivanova Penkova-Ivanova, MD

Scientific supervisor: Assoc. Prof. Eleonora Georgieva Dimitrova-Gospodinova, MD, PhD.

1. Significance of the problem, formulation of the aim and objectives

Colorectal cancer is a socially significant disease that continues to challenge the practicing oncologist today. Improvements in diagnostic methods, surgical treatment, discovery and application of various predictive biomarkers, personalized approach in drug treatment significantly improve the quality of life of patients overall survival. However, the 5-year survival rate of patients in clinical stage IV remains below 14%.

Tumor reversion is a complex biological process occurring under the influence of a number of genetic and epigenetic factors that lead to suppression of the malignant phenotype of tumor cells and they lose partly or completely their malignant characteristics. A number of genes are involved in the reversion process, and a key point in tumour cell reprogramming is the reduction of TPT1/TCTP expression.

Translationally controlled tumor protein (TCTP) is a protein involved in a number of fundamental cellular processes, and dysregulation of TCTP levels plays a significant role in the carcinogenesis of a large number of malignant solid tumors. High expression of TCTP in tumor tissue is a poor prognostic marker.

All this has determined the formulation of the aim and the main tasks of the research presented in the dissertation.

2. Structure of the dissertation

The thesis contains 117 pages and is illustrated with 18 tables and 17 figures. The scientific work contains the following structure: "Introduction" - 2 pages, "Literature review" - 58 pages, "Aim and objectives of the study" - 1 page, "Patient population and study methods" - 11 pages, "Results" - 12 pages, "Discussion" - 4 pages, "Conclusion" - 1 page, "Conclusions" - 1 page, "Contributions of the scientific work" - 1 page, "Scientific publications and communications related to the thesis" - 2 pages (5 scientific publications are presented, 3 of which are published in international journals). The reference list contains 274 titles, of which 1 in Cyrillic and 273 in Latin.

The structure of the dissertation is well balanced, the proportions between the different sections are respected, it meets the requirements of the Law for the Development of the Scientific Staff of the Republic of Bulgaria.

3. Literary awareness

The PhD student presents a thorough literature analysis of a large volume of scientific information. It presents current data on incidence, prevalence, survival in CRC, contemporary insights into risk factors, disease pathogenesis, known and previously used biomarkers, and the use of TCTP as a novel prognostic biomarker. The structural characteristics of TCTP, its involvement in a number of fundamental cellular processes, and its role in carcinogenesis and tumor reversion are described in detail. The relationship between high levels of TCTP expression and oncogenic transformation, tumor progression and chemoresistance in some tumor types is presented in depth and in details.

Results from research conducted to date worldwide are also presented. It is evident that no such studies have been conducted in the Bulgarian patient population.

4. Methodological level and research design

A retrospective single-center noninterventional study with 74 patients meeting the formulated inclusion criteria and no exclusion criteria is presented. Routine clinical examinations performed and specific ones are described. The methods used for statistical processing of the results are presented.

5. Relevance between the objective, results and conclusions

There is consistency between the stated aim, the formulated objectives and the reported results obtained, summarized in the discussion and conclusions. The dissertator has illustrated the data from his own research with tables, figures and graphs. The identification of the potential value of TCTP as a novel prognostic biomarker in patients with histologically verified colorectal cancer was highlighted as the main focus of the study. In this study, the dissertator sought to correlate TCTP expression levels in the primary tumor with clinicopathological characteristics, progression-free survival, and overall survival in the studied patient population. Our own results were compared with the data accumulated to date from the world literature.

6. Analysis of conclusions and contributions

Seven conclusions are formulated, reflecting the results obtained. The conclusions are clear and specific. I accept the presented contributions. For the first time, the potential role of TCTP expression level in the primary tumor as a prognostic factor regarding progression-free survival and overall survival in patients with histologically verified colorectal cancer is reported worldwide. For the first time in Bulgaria, the expression level of TCTP in the primary tumor was investigated as a marker of tumor reversion in patients with CRC. For the first time in Bulgaria, the expression level of TCTP in the primary tumor and its correlation with various clinicopathological characteristics in patients with histologically proven CRC was investigated.

The PhD student presents 5 scientific publications related to the dissertation, of which she is a co-author.

The abstract is 52 pages long, containing the main chapters of the thesis.

7. Conclusion

The dissertation of Dr. Maria Penkova-Ivanova is a thorough and complex scientific work. The topic is topical, dissertable, extensive. The methods applied are adequate to achieve the formulated goals and objectives, the results are convincing, the conclusions are clearly formulated, the contributions are significant with theoretical and potential practical value.

The dissertation work on "Expression of tumor reversion markers in colorectal cancer" meets the requirements for the acquisition of the educational and scientific degree "Doctor", meets the requirements of the Law on the Treatment of Colorectal Cancer and the Regulations for its implementation.

On the basis of the above, I give a positive evaluation of the dissertation work of Dr. Maria Ivanova Penkova-Ivanova and propose to the members of the esteemed Scientific Jury to award her the Education and Scientific degree „Doctor“.

Заличено на основание чл. 5,
§1, б. „В“ от Регламент (ЕС)
2016/679

Prepared the opinion: Assoc. Prof. Nikolay Vladimirov Conev, MD, PhD.

Заличено на основание чл. 5,
§1, б. „В“ от Регламент (ЕС)
2016/679