

STATEMENT

by Prof. Mariya Negreva, MD, DSc,
Head of the Educational Sector of Cardiology at the First Department of Internal Medicine,
Vice-Rector "Career Development" of the Medical University of Varna

Subject: dissertation for the award of the educational and scientific degree "Doctor" in the doctoral program "Cardiology," professional field 7.1. Medicine, in the higher education area 7. Healthcare and Sports, on the topic "*Cardiotoxicity of Traditional and Modern Antineoplastic Regimens*" by Dr. Svetoslava Elefterova Slavcheva

I. Procedure for Announcing the Public Defense

The dissertation has been discussed and approved for defense before a scientific jury by the Departmental Council of the First Department of Internal Medicine at the Medical University – Varna. By order No. R-109-101/28.01.2025 of the Rector of MU – Varna, I have been appointed as a member of the Scientific Jury, and based on Protocol No. 1/05.02.2025, I have been assigned to prepare this statement, for which I have received all the necessary documents from the "Doctoral School" department. This statement has been prepared in accordance with the requirements of Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), the Regulation of the Ministry of Education and Science (MES) for its implementation, and the Regulations for the Development of the Academic Staff (RDAS) of MU – Varna.

II. Brief biographical data on the doctoral candidate

Dr. Svetoslava Elefterova Slavcheva obtained her higher education in Medicine at the Medical University – Varna in 1999. In 2009 and 2014, she consecutively acquired specializations in Internal Medicine and Cardiology, and has undergone qualification courses in highly specialized activities in echocardiography at both basic and expert levels. As part of her doctoral studies, Dr. Slavcheva completed a course in medical statistics at Stanford University (11.2020 – 07.01.2021).

Between 1999 and 2006, Dr. Slavcheva worked at the Emergency Medical Center – Varna, and since 2007, she has been employed at the First Cardiology Clinic with ICU at the University Hospital St. Marina – Varna.

III. Scientometric analysis of the publications related to the dissertation

In connection with the procedure, Dr. Slavcheva has submitted two full-text articles (one clinical case and one review article). Scientometric analysis indicates that these meet the minimum scientometric requirements of MU – Varna for obtaining the degree of "Doctor."

IV. Structure of the dissertation

The work contains all the mandatory elements of a dissertation. They are logically arranged according to an established model in the professional field and are well-balanced; therefore, I will not list the individual sections. The dissertation is richly illustrated with 83 figures and 41 tables.

V. Literature sources

The bibliography contains a sufficient number of literary sources – a total of 262, of which 4 are in Cyrillic and 258 in Latin.

VI. Relevance and significance of the dissertation

The dissertation is dedicated to cardio-oncology—one of the newest branches of cardiology. The complexity of the issues in this rapidly developing field arises from the necessity of a multidisciplinary team and comprehensive treatment, which has diverse effects on the cardiovascular system. Right ventricular involvement, its clinical and prognostic significance, as well as the capabilities of diagnostic methods for its early detection, remain subjects of research. This makes the topic examined in the dissertation undoubtedly relevant.

VII. Presentation of the Individual Sections of the Dissertation

The literature review consists of six main sections and demonstrates the author's strong familiarity with the topic. The mechanisms of cardiotoxic effects of the most commonly used oncological treatment agents are examined, explaining the possibility of early functional disturbances in the myocardium. A dedicated section summarizes and analyzes existing scientific studies on right ventricular involvement in the context of antitumor therapy. The mechanisms of right ventricular damage and the diagnostic potential of various imaging methods for its early detection are explored. The literature overview clearly indicates that the cardiotoxic effects of oncological treatment on the right heart remain insufficiently studied, justifying the author's research.

The objective is clearly defined, and the five formulated tasks logically follow from it.

The materials and methods are described in detail.

The obtained results are systematically presented in accordance with the defined tasks. The main findings are summarized separately. The study establishes early deviations in conventional echocardiographic indicators of left and right ventricular function following the initiation of chemotherapy. A chronological and prognostic correlation is sought between disturbances in the functional echocardiographic parameters of the right ventricle, left ventricle, and high-sensitivity troponin T. A key finding is the early alteration in right ventricular tissue velocities, as well as the earlier impairment of right ventricular indices compared to left ventricular indices. The temporal evolution of diastolic dysfunction of the right ventricle is analyzed using not only individual indicators but also categorization into degrees of impairment based on an established algorithm.

The discussion thoroughly analyzes the results and compares them with the current scientific knowledge on the problem. The obtained results align with those reported in the literature. A critical analysis is provided regarding the suitability of certain indicators for regular monitoring of cancer patients, considering their variability and diagnostic value. In this context, the doctoral candidate independently identifies and discusses the limitations of the study, which may serve as a basis for future research.

There are seven conclusions, which follow logically from the data and statistical analysis. An important conclusion is that among the standard echocardiographic parameters for monitoring right ventricular function during antitumor therapy, systolic tissue velocity is a suitable indicator due to its early decline and low variability.

The contributions accurately reflect the achievements of the dissertation. Some have original significance, while others confirm previously reported findings in the literature.

VIII. Critical remarks on the dissertation

A critical aspect of any study is the sample size, which determines the reliability of the conclusions. The studied patient population is small and unbalanced in terms of gender and systemic oncological therapy received, which may lead to discussions regarding the reproducibility of the results and conclusions derived from them.

IX. Conclusion

Dr. Svetoslava Slavcheva's dissertation "Cardiotoxicity of Traditional and Modern Antineoplastic Regimens" follows the standard structure of a dissertation. The work and its related publications meet the requirements of LDASRB, the regulations for its implementation, and RDAS of MU – Varna. The dissertation presents data with practical applicability concerning the cardiovascular health of patients undergoing oncological therapy. These facts allow me to confidently give a positive evaluation of the dissertation and vote in favor of awarding the educational and scientific degree "Doctor" in the doctoral program "Cardiology" to Dr. Svetoslava Elefterova Slavcheva.

March 21, 2025
Varna

Signed:

/Prof. Mariya Negreva, MD, DSc/

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

