#### **STATEMENT**

## by Prof. Albena Kerekovska, MD, PhD

Department of Social Medicine and Healthcare Organization Faculty of Public Health Medical University "Prof. Paraskev Stoyanov" - Varna

on the dissertation for the educational and scientific degree "**Doctor**" in the field of higher education "7. Health and Sports", professional field 7.1. "Medicine", doctoral program "Pediatrics"

by Hristina Yaneva Hristozova – PhD-student in full-time education

Topic of the dissertation: "Quality of life after treatment of malignant hematopathies and solid tumors in childhood"

Scientific supervisors:

Prof. Valeria Ignatova Kaleva, MD, PhD Prof. Paraskeva Mancheva Draganova, MD, DSc

# Procedure for announcing the public defense

Dr. Hristina Hristozova has completed training in the doctoral program "Pediatrics" in the professional field 7.1 "Medicine", field of higher education 7. "Healthcare and Sports". The doctoral student was enrolled in a full-time form of study by order No. R-109-22/30.01.2020 of the Rector of the Medical University - Varna at the Department of Pediatrics with scientific supervisors Prof. Valeria Kaleva, MD and Prof. Paraskeva Mancheva, MD, DSc, and the topic of the dissertation work "Quality of life after treatment of malignant hemopathies and solid tumors in childhood".

The doctoral student has successfully passed the exams for the doctoral minimum, has completed all activities provided for in the individual curriculum and has received positive attestation grades. Dr. Hristozova was dismissed with the right to defense by order No. R-109-150/13.03.2025 of the Rector of the Medical University - Varna. Based on a decision of the Department Council of the Department of Pediatrics (report by the head of the department No. 102-619 of 04.03.2025) and a decision of the Faculty Council of the Faculty of Medicine (Protocol No. 36/10.03.2025), a defense procedure was opened before a Scientific Jury by Order No. R-109-150/13.03.2025 of the Rector of the Medical University - Varna. By the same order, I was elected as a member of the Scientific Jury, and based on Protocol No. 1/20.03.2025 of the first meeting of the Scientific Jury, I was assigned to prepare an statement.

The candidate has submitted all necessary documents for the procedure in accordance with the requirements of the Act on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its implementation and the Regulations for the Development of the Academic Staff of the Medical University - Varna.

#### Brief cirrculum vitae of the doctoral student

Dr. Hristina Hristozova obtained a higher education in the specialty "Medicine" at the Medical University - Varna in 1994. In 2014, she obtained the educational and qualification degree "Master" in the specialty "Public Health and Health Management" at the Medical University - Pleven. In 2001,

2006 and 2008, she successively acquired the specialties "Pediatrics", "Oncology" and "Pediatric Clinical Hematology and Oncology".

Dr. Hristozova began her work experience as a doctor in 1994 at the Central Emergency Center, Dolni Chiflik branch. From 1995 to 2001, she worked at the First Children's Clinic, Children's Emergency Center at the University Hospital "St. Marina" - Varna as a resident physician. Since 2001 and currently Dr. Hristozova works at the Clinic of Pediatric Clinical Hematology and Oncology at the University Hospital "St. Marina" - Varna. From 2005 to the present, Dr. Hristozova is a full-time assistant at the Department of Clinical Medical Sciences, Faculty of Dental Medicine at the Medical University - Varna, teaching Bulgarian and foreign students. In 2020, Dr. Hristozova was enrolled as a full-time doctoral student at the Department of Pediatrics.

In 2023, she completed specialized training and is certified in GCP, E6 (R2) and has experience as a researcher in clinical trials with the indication of pediatric oncological diseases. She is a member of the Bulgarian Pediatric Association, the Bulgarian Society of Hematology, the Bulgarian Medical Society of Pediatric Hematology and Oncology, SIOPE and the Bulgarian Medical Union. She has excellent preparation in English and Russian, which she uses freely in her professional activities.

### Relevance and significance of the dissertation

The thematic focus of the dissertation is in the field of the doctoral program in Pediatrics. The topic is focused on a topical global issue - assessment and opportunities for improving the quality of life after treatment of malignant diseases in childhood.

Successful treatment and increasing long-term survival in childhood oncological diseases lead to a continuous increase in the number of people who have survived childhood oncological diseases, as well as the frequency of late side effects and consequences of the treatment, disrupting the quality of life of survivors. The modern holistic approach to the patient includes providing comprehensive care after completion of treatment, aimed at providing psychosocial support and achieving optimal quality of life. Assessment of quality of life is a mandatory element of follow-up care for survivors of childhood oncological diseases and is integrated into long-term follow-up programs in countries with successful practices in their treatment.

There is significant potential for real practical applicability of the results of the study. The assessment of quality of life in the follow-up of survivors of childhood malignant hematopathies and solid tumors and the identification of the factors that influence it create an opportunity for early identification of risks in survivors and contribute to the development and implementation of appropriate, person-oriented, health and psychosocial interventions to improve their well-being. The problems related to the quality of life of survivors of childhood malignant diseases have not been studied in our country to date. In this sense, the dissertation is unique for the country in the field of the problem under consideration with significant theoretical-cognitive and practical-applied contributions of an original nature and fills a gap in this area of scientific knowledge.

### Structure and content of the dissertation

The dissertation is presented in a total volume of 140 standard pages. Its structure is logically constructed and balanced and includes: introduction; first chapter - literature review; second chapter - purpose, tasks, material and methods of the study; third chapter - results and discussion; conclusions; contributions; conclusion; list of publications; bibliography and 2 appendices.

The work is illustrated with 19 tables and 38 figures.

The literature used is precisely described in the bibliographic reference, which contains 235 literary sources, 230 of which are in Latin.

#### Literature review

The literature review covers Chapter One of the dissertation. It is purposeful, comprehensive and well structured. The dissertation demonstrates broad and up-to-date awareness of the candidate, as well as the ability to critically evaluate, summarize, systematize, identify significant issues, indepth analyze and comparatively interpret the scientific literature in the research area.

The key terms and definitions related to quality of life are outlined. The measures (quantitative and qualitative) are reviewed and the questionnaires used in scientific circles to assess quality of life are presented - generic and specific for survivors of oncological disease. Special focus is placed on the areas and determinants of quality of life after experiencing a malignant disease in childhood. Long-term health care and the role of follow-up of survivors of a malignant disease in childhood in different countries and in Bulgaria are presented.

## Aim and objectives

Chapter two presents the aim, objectives, working hypothesis, material and methods of the study. The purpose of the scientific work is clearly and precisely defined, justified by the in-depth review of the literature and the unresolved problems identified in the literature review. Four main tasks have been derived, aimed at achieving the main goal. They are logically consistent and fully cover the problem posed. The formulated working hypothesis corresponds to the tasks set.

#### Material and methods

The methodology has been selected adequately to the tasks set. The methods include: documentary method; sociological methods - survey studies through the application of the WHO Generic Questionnaire for the Assessment of Quality of Life (WHOQOL-BREF 26) and a questionnaire for obtaining information on the demographic and social characteristics of the participants; clinical and laboratory methods (clinical examination, anthropometric measurements) and statistical methods, selected appropriately according to the dependencies sought.

### **Results and Discussion**

Chapter three includes the results of the own study and their discussion. The results are presented systematized and subordinated to the main tasks set. Summary results are presented regarding data on the oncological disease, the treatment performed and data from the follow-up of the participants. The results of the quality of life assessments by areas and by diagnoses are presented. Special emphasis is placed on the results of the studied interrelationships between the quality of life assessments by areas (Physical, Psychological, Relationships and Environment) and: (1) indicators related to the demographic characteristics of the participants; (2) indicators related to the disease (age at diagnosis, risk group, experience of relapse, duration of treatment, type of therapy applied); (3) indicators from the follow-up observation (duration of follow-up, presence of scars, stretch marks, body asymmetry, BMI, number of chronic diseases).

#### **Conclusions**

The conclusions are clearly formulated and logically follow from the results obtained. They are grouped according to the research tasks and are aimed at summarizing the indicators that influence the quality of life of survivors of malignant hematopathies and solid tumors in childhood. Particularly valuable in practical terms are the conclusions aimed at timely identification of patients at risk and taking appropriate measures for complex care during their follow-up.

### **Contributions**

The contributions are predominantly original in nature - with theoretical, methodological and practical-applied significance.

For the first time in Bulgaria, the quality of life of persons over 18 years of age who have survived treatment for malignant hematopathies and solid tumors in childhood has been assessed. The reliability of the WHOQOL\_BREF questionnaire has been established as a tool for quantitative assessment of the quality of life in patients who have survived treatment for malignant hematopathies and solid tumors in childhood. Indicators related to the demographic characteristics of the patients, the malignant disease, the treatment performed and clinical data from the follow-up observation have been established, which correlate with the quality of life of the survivors. An original contribution of a practical nature is the developed algorithm for collecting data -demographic and clinical - that are relevant to the quality of life of survivors of treatment for malignant hematopathies and solid tumors in childhood. The established indicators affecting the quality of life of survivors of treatment for malignant hematopathies and solid tumors in childhood can be used for timely identification of at-risk patients and taking appropriate measures for comprehensive care during their follow-up.

# Scientometric analysis of the presented publication activity related to the dissertation

In connection with the dissertation, Dr. Hristozova presents one full-text publication in a Bulgarian scientific publication, referenced and indexed in world-renowned databases with scientific information, as well as two reports from participation in national scientific forums. The scientometric analysis shows that the presented publications meet the scientometric requirements of the Medical University - Varna for acquiring the "doctor".

### **Evaluation of the abstract**

The abstract has been prepared according to the requirements and in a synthesized form fully reflects the content of the dissertation. It is developed in a volume of 76 pages, very well illustrated with highly informative figures and tables. A list of publications and reports presented at scientific forums related to the topic of the dissertation has been added to it.

#### Conclusion

The dissertation work of Dr. Hristina Hristozova is on a topical, significant and unique topic for the country, corresponding to the field of the doctoral program in Pediatrics. It is very well structured, with clearly defined goals and objectives. The methodology is complex and competently applied. The results are presented correctly and comprehensively. The conclusions are clearly formulated and are the basis of the dissertation contributions, which are predominantly original in nature.

The dissertation work and the presented publications fully meet the requirements of the Law on the Development of the Academic Staff of the Republic of Bulgaria, the Regulations for its implementation and the Regulations for the Development of the Academic Staff of the Medical University - Varna for the acquisition of the educational and scientific degree "Doctor".

The in-depth nature of the conducted scientific research, the current topic, the critical analysis of the existing literature, the adequate selection and precise application of the methods, the implementation of the set research tasks and the obtained results, as well as the contributions of a predominantly original and applied nature give me reason to give a positive assessment of the dissertation work and to confidently propose to Dr. Hristina Yaneva Hristozova that she be awarded

the educational and scientific degree "Doctor of Philosophy" in the doctoral program "Pediatrics" in the professional field 7.1. "Medicine".

Заличено на основание чл. 5, §1, б. "В" от Регламент (ЕС)

Varna

/Prof. Albena Kerekovska, MDq PhD/