

**TO THE PRESIDENT OF THE SCIENTIFIC JURY,
APPOINTED BY ORDER P-109-265/23.05.2023
OF THE RECTOR OF THE UNIVERSITY OF VARNA**

OPINION

by Assoc. Prof. Dr. Angel Borisov Angelov, Ph.
Associate Professor of Vascular Surgery
at the Department of Cardiovascular Surgery and Angiology

Subject: Defense of the dissertation of **Dr. Martina Sasheva Sapundzhieva-Nikolova**
"Contemporary surgical approach in vascular access for hemodialysis" for obtaining the
educational and scientific degree "DOCTOR"

The submitted dissertation, as well as the abstract to the dissertation of Dr. Martina Sasheva Sapundzhieva-Nikolova is in a form and volume that meets the requirements of the Law on the Dissertation the Regulations for its application and the Regulations of the Medical University - Varna. It is printed on 143 pages, structured stylistically correctly and in good language. It is illustrated with 34 figures and 30 tables. The bibliography comprises 272 authors, of which 10 in Cyrillic and 262 in Latin.

The dissertation was discussed, accepted and directed for defence by the Departmental Council of the Department of Cardiovascular Surgery and Angiology (protocol No. 3 from 15.05.2023) and approved by the Faculty Council of the Faculty of Medicine at MU- Varna.

The main goal of the dissertation according to the accumulated experience is to study and refine the optimal approach in patients on hemodialysis creating a functional arteriovenous access.

For the optimal solution of the main goal Dr. Sapunjieva has set 6 tasks, which are well formulated and the development of the dissertation follows their logical solution.

I. Assessment of the Topic Relevance

Terminal chronic renal failure is a socially significant disease and the number of patients is increasing progressively. This is associated with an increase in newly diagnosed cases of patients with hypertensive disease as well as diabetes mellitus.

Ensuring effective vascular access and its proper exploitation is a challenge that requires collaboration between an increasing number of specialists from different medical specialties.

The chronic dialysis continues to be the leading method of replacing failing renal function yet. Of particular importance is the quality of the dialysis performed, which inevitably correlates in direct proportion with the duration and quality of life of patients. To achieve quality dialysis, it is essential to establish appropriate vascular access.

II. Outcome assessment

This dissertation summarizes patient outcomes for the five-year period 2016-2021. Two groups were formed: a control group with 37 patients for the period 2016 to 2018 and a main group with 48 patients for the period 2019 to 2021. The number of patients undergoing dialysis is sufficiently large and guarantees the representativeness of the results.

Patients in both groups were followed up pro- and retrospectively with respect to demographics, medical history, status, laboratory and imaging tests, type of treatment procedure, complications, etc. Complications were tracked and summarized both before the early preoperative period, up to day 3, and in the later one, up to day 30. The relationship of color-coded duplex Doppler and CT angiography to postoperative outcomes is studied and documented in detail. The 1-year patency of the chronodialysis fistulas in the two separate groups is examined and compared accordingly.

It is demonstrated in an irrefutable manner that the results obtained are comparable to most publications in the world literature.

III. Conclusions and contributions of the thesis

The main conclusion of the author is the undeniable advantage of preoperative duplex sonography and CT angiography.

In summary, the conclusions stated by the dissertator are seven in number and are based on the comprehensive analysis of the information on the literature review, clinical material, analysis and discussion of own results. They are well formulated and reflect an essential part of the analyzed sections. They have scientific, confirmatory and practical value.

The contributions of the dissertation work, brought out by Dr. Martina Sapundzhieva, are 5 in total, 3 of which are of original character, 2 - of scientifically applied and confirmatory character.

IV. Autoreferate

The autoreferate accurately and correctly reflects the main parts and sections of the thesis.

Both the thesis and the abstract are written in clear and correct Bulgarian language and very well styled and illustrated.

V. Publications related to the dissertation topic

Dr. Martina Sapundzhieva has submitted a list of 2 publications in medical journals on the topic of the dissertation, one of which she is the author and the second - co-author.

VI. Conclusion

In my opinion, this is a fully completed and very well structured dissertation, in form and volume fully complying with the requirements of the Law on the development of Academic staff in the Republic of Bulgaria, the Regulations for its Application and the Regulations of the Medical University of Varna.

The topic is relevant and of clinical importance in modern vascular surgery. It reflects

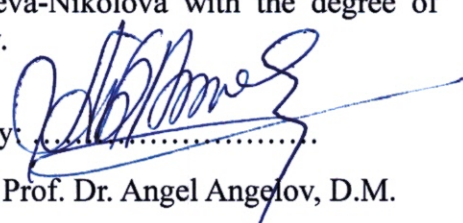
the results of five years of the author's work, containing scientific and scientific-practical results that represent contributions of an original, confirmatory and scientifically applied nature.

Taking into account the professional development, publication activity and scientific appearances in national and international forums of surgeons, as well as my overall assessment, I confidently recommend the esteemed members of the National Council of Surgeons to vote positively and to award Dr. Martina Sasheva Sapundzhieva-Nikolova with the degree of "Doctor" in the scientific specialty of cardiovascular surgery.

07.07.2023 г.

Varna

Sincerely


Assoc. Prof. Dr. Angel Angelov, D.M.