

STATEMENT

from

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The dissertation and abstract on the topic

TRANSABDOMINAL LAPAROSCOPIC TREATMENT OF ADRENAL TUMORS IN ADULTS AND CHILDREN

Dr. Stefan Blagovestov Mihaylov

Scientific supervisor: Assoc. Prof. Dr. Vesselin Marinov Marinov, MD, PhD

Form of doctoral studies: full-time

Scientific specialty: 03.01.37 "Surgery"

The dissertation has been discussed and approved for official public defense by the Department Council of the Department of General and Operative Surgery, Medical University - Varna with a report of the Department Council with entry no.7/27.06.2025 and according to Order R-109-302/14.07.2025 of the Rector of the Medical University - Varna I am appointed as an internal member of the scientific jury for the defense of the dissertation.

1. Information about the dissertation candidate

The doctoral candidate is studying full-time at the Department of General and Operative Surgery at MU-Varna in the scientific specialty of Surgery. The training is carried out in full accordance with the requirements of the regulations for the development of the academic staff of Medical University - Varna.

A set of required materials was made available to me for the preparation of this opinion:

1. Abstract
2. Dissertation work
3. Autobiography
4. Orders and protocols for enrollment and discharge with the right to defense

5. List of scientific publications on the topic of the dissertation
6. Other documents related to the course of the procedure

The doctoral student has 3 publications on the topic of the dissertation in Bulgarian and foreign publications, of which he is the first author on two of them.

2. Brief biographical data of the doctoral student

Dr. Stefan Blagovestov Mihaylov was born in 1996 in the town of Dryanovo. He graduated from high school in 2015 at the National Aprilov High School in Gabrovo with a German language profile. He graduated Medicine in 2021 at MU-Varna. He has been specializing in Pediatric Surgery since 2022 until now at the University Hospital "St. Marina" - Varna, where he currently works as a resident in the First Clinic of Surgery, University Hospital "St. Marina" - Varna and since 2022 as a full-time assistant at the Department of General and Operative Surgery, MU "Prof. Dr. Paraskev Stoyanov" - Varna. He is fluent in written and spoken English and German.

3. Topic relevance

The topic of the dissertation is topical and disputable. Adrenal gland tumors represent a significant medical problem due to their rarity and heterogeneous clinical presentation – from incidentally discovered incidentalomas to hormonally active or malignant formations. With the progress of imaging diagnostics and endocrinology, the frequency of diagnosis of these neoplasms is increasing, which emphasizes the need to improve surgical approaches. Such studies are relatively rare in the Bulgarian scientific literature, which emphasizes the relevance of the present study, aimed at systematically evaluating the effectiveness, safety and advantages of transabdominal laparoscopic treatment of adrenal tumors, as well as the popularization of this approach in Bulgarian clinical practice.

4. General characteristics of the presented dissertation work

The dissertation is written in 220 standard typewritten pages in grammatically correct Bulgarian with proper punctuation:

1. Abbreviations used - 2 pages
2. Introduction - 3 pages
3. Literature review - 92 pages
4. Goal and objectives - 1 page
5. Material and methods - 16 pages

6. Results - 43 pages
7. Discussion - 22 pages
8. Conclusion — 4 pages
9. Contributions - 1 page
10. Publications related to the dissertation - 1 page
11. Bibliography - 28 pages

The dissertation is illustrated with 50 figures and 38 tables.

The literature review is extensive (92 pages) and represents a thorough analysis of the literature on the nature of the dissertation. The various historical, anatomical, physiological and pathophysiological factors of adrenal diseases, diagnostic methods and therapeutic behavior are examined in detail. 428 literary sources were used, of which 2 are Bulgarian and the rest are foreign.

The goal is set clearly and specifically:

1. To analyze the clinical characteristics of the patients.
2. To analyze the anatomical features.
3. To study early postoperative outcomes.
4. To study late postoperative outcomes.
5. To study the influence of endocrine diseases on intraoperative outcomes.
6. To study the influence of endocrine diseases on postoperative complications.

The tasks are precisely formulated and implemented to achieve the set goal.

The study is retrospective, monocentric. It was carried out in structures at the University Hospital "St. Marina" - Varna and covers the period from 01.01.2008 to 31.12.2024. The patient population includes 82 patients who underwent transabdominal laparoscopic adrenalectomy. Demographic and clinical characteristics are illustrated and a detailed distribution according to the hormonal profile of the tumors is made. The methodology of the study is clear and meets the set tasks. The applied protocol for preoperative diagnosis, the surgical method, the postoperative follow-up, as well as the set of statistical tools are described.

Statistical capabilities were used to process data in tables through grouping of the same, descriptive methods, correlation analysis and testing of statistical hypotheses.

In the chapter "Results" three types of indicators are tracked, including demographic and

clinical parameters for observation: (sociodemographic indicators of patients, clinical characteristics of patients, laboratory results, concomitant diseases, preoperative ASA staging , antihypertensive therapy and preoperative alpha blockade), intraoperative indicators (operative time, intraoperative hemodyne hemodynamics , intraoperative blood loss, vascular anomalies, conversion rate and complications); postoperative indicators (time to verticalization , need for postoperative anesthesia and hospital stay). Of great importance is the comparative analysis between various clinical, hormonal and intra- and postoperative indicators. Of great clinical importance is the examination of the efficacy in analyzing the postoperative hormonal profile.

The discussion follows the sequence of data from the results obtained, which are comparable to generally accepted standards in the surgical treatment of adrenal tumors in adults and children. For the purposes of clinical practice, this model represents a good basis, but can be updated and simplified.

The conclusions are correctly formulated and respond to the tasks set, fully outlining the fulfillment of the goal of the dissertation.

5. I accept as contributions:

- A detailed literature analysis of laparoscopic methods for treating adrenal tumors.
- A modern and statistically reliable study of the application of transabdominal Laparoscopic access as a method for treating adrenal tumors.
- For the first time in Bulgaria, an analysis of the results of the transabdominal laparoscopic adrenalectomy in adults and children.
- Transabdominal laparoscopy are compared adrenalectomy for various pathological and functional processes of the adrenal glands.
- A comparison of transabdominal laparoscopic adrenalectomy in Bulgaria with those in Europe and the world.
- A diagnostic and treatment algorithm has been developed to serve both preoperative assessment and postoperative follow-up of patients.

6. Conclusion

His dissertation work is of high scientific and practical value, which contributes to proving the role of transabdominal Laparoscopic approach in the minimally invasive surgical

treatment of adrenal tumors.

The dissertation work of Dr. Stefan Blagovestov Mihaylov fully covers the criteria for awarding the scientific and educational degree "doctor" and meets all the requirements of the "Act on the Development of the Academic Staff in the Republic of Bulgaria" (ADABRB) and the regulations for its implementation, as well as the relevant regulations of MU-Varna.

All this gives me reason to recommend to the esteemed members of the scientific jury that Dr. Stefan Blagovestov Mihaylov be awarded the educational and scientific degree of "doctor".

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

Varna,

04.08. 2025

Prepared a statement:.....

Prof. Krasimir Ivanov, MD, PhD, DSc.