

To  
The Chair of the Scientific Jury,  
appointed by Order R-109 - 471/20.11.2025  
of the Rector of MU-Varna

## **REVIEW**

**by Prof. Vasil Markov Bozhkov, MD, PhD, DSc**

Chair of the Scientific Jury, pursuant to Order R-109 - 452/20.11.2025 of the Rector of MU-Varna,

**Re:** Procedure for acquiring an educational and scientific degree of "Doctor" in the specialty of "Surgery", with a dissertation topic "Conventional operative treatment of incisional hernias - opportunities and challenges" with candidate Dr. Vyara Dimitrova Grigorova, at MU-Varna, in the field of education 7. Healthcare and Sports, professional direction 7.1. Medicine, specialty "Surgery".

### **Information about the procedure:**

In view of report No. 102-2852/06.11. 2025 by Prof. Vasil Markov Bozhkov, MD, PhD, DSc – Head of the Department of Surgery, with a decision under Protocol No. 49/10.12.2025 of the Faculty Council and Report No. 103-8040/ 19.11.2025 from Prof. Yoto Yotov, MD, PhD- Dean of the Faculty of Medicine at the Medical University - Varna, on the basis of Art. 24, para. 6 and Art. 30, para. 3 of the LDASRB, Article 68, paragraph 1 of the Rules of Procedure of the Medical University of Varna, I was elected as a member of the Scientific Jury (SJ), and by Protocol No. 1 of the first meeting of the SJ, I was elected as its chairperson and appointed to prepare a review.

Only one candidate, Dr. Vyara Dimitrova Grigorova, submitted documents for participation in the concours.

I received all the materials necessary for the preparation of this review in the proper manner.

My review complies with the Law on the Development of Academic Staff in the Republic of Bulgaria (LDASRB), the Regulations for its application, and the Regulations of MU – Varna.

### **Professional data of the candidate:**

Dr. Vyara Dimitrova Grigorova was born on November 16, 1988.

2002-2007 Secondary education at GPNE "Goethe" – Burgas 2007/2013

2007-2013 Master's degree in Medicine, Medical University – Varna Diploma No. 002383/06.11.2013

2014/2016 Master's Degree in Health Management, Medical University – Varna

EAD 2013/2017 working as physician at the Second surgery clinic, "UMHAT Sv. Marina"

2014/2019 Residency in General Surgery

2020 – Board certified surgeon

2017 – Honorary Assistant at the Department of Surgery – Medical University of Varna

2018 – Assistant at the Department of Surgery – Medical University of Varna

Varna 2020 – Full-time PhD student at the Department of Surgery – Medical University of

**Member of BHD, EAES, ESSO, EHS, EDS, and IASGO**

**Training courses:**

2012 – Observership program – AKH Vienna

2023 – EAES Fellowship program – Ponderas Academic Hospital Bucharest, supervised by Prof. Catalin Copescu

Seminar teacher in the academic discipline of Surgery – medical students – III, IV and V year, Bulgarian and English training program

Dr. Grigorova submits the following documents for participation in the competition:

1. Dissertation 1 copy
2. Abstract – Bulgarian language 1 copy
3. Abstract – English 1 copy

Exam – minimum doctoral requirement in the specialty

Minimum doctoral exam in a foreign language

List of publications

Reference for profiles in scientific databases

Reference for similarity

Article related to the dissertation

Since the beginning of the 20th century, there was a significant increase in the number of abdominal surgeries for benign and malignant diseases. With the development of surgical techniques, anesthesiology and resuscitation have also developed significantly. This has led to an increase in the number of patients with incisional hernias after the treatment for abdominal pathology. On one hand, this has demonstrated progress in all areas of surgery with good long-term results, but it has also raised the issue of an invariably accompanying pathology, namely incisional hernias. This branch of herniology about the treatment of incisional hernias has also developed. There is no single name for this type of hernia—eventration, postoperative hernia, incisional hernia—but in terms of pathology, it refers to the same pathology. With the increase in the number of operations for incisional hernias, another problem comes to the fore – the financial one. There are more and more publications in the world literature about the constantly growing costs, which lead to an inevitable economic burden on health systems. There are still no accepted criteria for the methods of surgical treatment of incisional hernias. The biomaterials used to make meshes are technologically evolving. The advent of laparoscopic surgery has not bypassed the treatment of incisional hernias. The conventional surgical techniques applied in the treatment of incisional hernias has not been left behind; on the contrary, it still presents new challenges, especially for young surgeons, who need to familiarize themselves in detail with this increasingly significant pathology. Dr. Grigorova has endeavored to address these challenges in a comprehensive study of this issue, and I can say with complete confidence that she has been entirely successful.

The dissertation submitted to me for review contains 203 standard pages. It is illustrated with 45 tables and 78 figures. The bibliography contains 418 references, of which 9 are in Cyrillic and 411 in Latin. The material is structured in a logical sequence.

The literature review occupies 45 pages and demonstrates the author's broad knowledge. It is written in good style and language, presenting historical aspects of the treatment of incisional hernias, the development of their treatment made by the Bulgarian surgeons, classification systems, and conventional methods of surgical treatment. This section demonstrates the author's ability to identify the most significant points from a large number of publications. The review shows that there is still an ambiguous understanding of the problem of incisional hernias in the world literature. This fact gives rise to the aim of the dissertation, namely: **"To study, analyze, and define the challenges associated with the conventional surgical treatment of incisional hernias in order to optimize treatment outcomes, reduce complications, and improve economic indicators."**

This objective clearly outlines the scientific and practical nature of the dissertation.

There are five tasks, which are presented clearly and in sufficient detail, emphasizing the scale of the studies conducted and forming a logical continuation of the objective set.



The study retrospectively covers 273 patients with primary and recurrent incisional hernias admitted to the St. Marina University Hospital for the period 2017-2021. A wide range of research methods was used to process the material:

I. Documentary method

II. Clinical examination methods:

1. Anamnestic data;

2. Paraclinical examinations – hematological and biochemical parameters

3. Instrumental examination methods:

1. ECG

2. Imaging studies

- Abdominal X-ray

- Abdominal ultrasound

- When indicated:

-Chest X-ray

- CT scan,

- Upper/lower GI endoscopy

3. Surgical methods.

- Without prosthetic material

- With prosthetic material

4. Statistical methods.

As expected, the author strictly adhered to the parameters of the research methods used in her analysis, which lends rigor and credibility to the results obtained.

A merit of the dissertation is the application of various statistical methods, through which the author presents the results obtained in a consistent, logical, and convincing manner, illustrating them with well-chosen and precisely formatted tables. The results obtained indisputably demonstrate the correctness of the approach applied by the author in the conventional treatment of postoperative hernias.

The "Results" section analyzes demographic, clinical, and paraclinical indicators: 1. Demographic – 59% women, 41% men, average age 60.3 years. 33% of the study group of patients are in their sixth decade.

2. A high BMI was reported in patients with incisional hernias

A total of 422 previous interventions were reported in the 273 patients studied, with the highest number of patients after oncological surgery (17.8%), followed by those after gynecological surgery (14.7%) and those after appendectomy (8.5%).

An economic analysis was also prepared, calculating the direct and total costs associated with the treatment of patients at  $2041.27 \pm 1530$  BGN.

The analysis of global literature sources and the results obtained by the dissertation author allow for the development and practical application of an original algorithm for incisional hernia management.

As expected, the conclusions summarize the essence of the dissertation.

The results of this dissertation call into question the role of risk factors known in the literature, such as obesity, diabetes mellitus, smoking, and COPD as independent risk factors for the occurrence and recurrence of incisional hernias, emphasizing the multifactorial genesis of the process.

A statistically significant correlation was found between the number of previous interventions, increased bleeding during the initial operation, and the type of previous repair of the abdominal wall in the process of recurrence formation after conventional surgical treatment of incisional hernia.

For the first time in the literature, non-compliance with the postoperative physical regimen involving heavy lifting was identified as an independent risk factor for recurrence in incisional hernias.

The influence of a number of variables on the economical value of conventional surgical treatment of incisional hernias, expressed in terms of direct and total costs, has been statistically proven: patient age, anesthesiologic risk, the hernial defect area surface, the duration of antibiotic therapy and antithrombotic prophylaxis, complications rate, and the length of hospital treatment.

The value of direct costs generated in the course of surgical treatment of incisional hernias is most dependent on the area of the defect, the duration of antibiotic therapy, and the length of hospital stay.

The contributions of the presented work are six in number and stem naturally from the author's research and are of a scientific and applied nature.

In connection with the dissertation, a list of 1 actual publication is presented.

### **Conclusion:**

The dissertation submitted for review represents an in-depth study of a current and important practical problem – incisional hernias. The diverse surgical techniques, the use of modern methods of diagnosis and treatment, and the comprehensive and in-depth analysis of the data obtained can be described as a very serious attempt to assess the possibilities for treating incisional hernias.

The work is written in excellent Bulgarian, is easy to read and enjoyable. It meets the necessary criteria of the LDASRB and RDAS of MU-Varna.

Therefore, I am confident in giving my positive assessment and recommend that the esteemed Scientific Jury award the educational and scientific degree of "Doctor," Scientific Specialty: General Surgery, code 03.01.37 to Dr. Vyara Dimitrova Grigorova.

17. 12. 2025

Rewiew prepared

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

Prof. Vasil Markov Bozhkov, MD, PhD, DSc