

STATEMENT

by Assoc. Prof. Tanya Ivanova Deneva, MD, PhD
Dept. of Clinical Laboratory, Pharmacy Faculty
Medical University – Plovdiv

Member of the scientific jury
according to order № P-109-410/26.10.2022 of the Rector of MU-Varna

Regarding: Dissertation for the creation educational and scientific degree "Doctor of Philosophy" in professional field 7.1 Medicine, specialty "Surgery"

Author: Yanko Georgiev Yankov, MD

Department: "General and Operative Surgery", Medical University - Varna

Topic: Values of procalcitonin and delta neutrophil index in surgery of inflammatory diseases of the head and neck

Scientific supervisors: Prof. Nikola Kolev, MD; DMSc

Assoc. Prof. Yana Bocheva, MD, PhD

General presentation of the procedure and the doctoral student

The candidate's submitted set of materials is in accordance with Section III, article 69 of the Regulations for the Development of the Academic Staff at the University of Medicine - Varna and includes the following documents:

- application to the rector of the MU – Varna for disclosure of the procedure for the defence of a dissertation work
- curriculum vitae in European format with the doctoral student's signature
- copy of diploma for master's degree - medicine
- a copy of a certificate of acquired specialty in clinical laboratory
- enrolment order
- dissertation work
- abstract
- protocol of doctoral minimum in the specialty

- protocol of doctoral minimum - foreign language
- protocol of the departmental council for readiness to open a procedure for discussion of the dissertation work - internal protection
- order of deduction with right of defence
- declaration of originality
- a list of scientific publications related to the dissertation work
- copies of scientific publications related to the dissertation work
- declaration of authenticity and originality of the attached documents
- declaration of registration in a scientific database

Yanko Georgiev Yankov, MD graduated in medicine in 2014 from Varna Medical University with excellent results and the "Golden Hippocrates" award and the "First degree" award from the Bulgarian Medical Union for excellent results. In 2015, he started working as a specialist doctor in Maxillofacial surgery clinic at Sveta Marina UMBAL - Varna. In 2016, he graduated with a master's degree in Health Management at the Medical University - Varna. In the period February 2019 - October 2019, he worked as a part-time assistant in Oral and Maxillofacial Surgery at the Departments of Oral and Maxillofacial Surgery (Faculty of Dental Medicine) and General and Operative Surgery (Faculty of Medicine) at MU – Varna.

After winning a competition in 2019, he was appointed as a full-time assistant in Maxillofacial Surgery at the Department of General and Operative Surgery at the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna. In July 2020, he acquired a specialty in maxillofacial surgery. From September 2021, he is a doctoral student of independent training in "Surgery" at the Department of General and Operative Surgery of the Medical University - city of Varna.

Subject relevance

Inflammatory diseases in the neck area are common socially significant diseases with serious and severe complications, one of which are phlegmonous processes. The high frequency of these diseases, accompanied by a protracted course and a doubtful prognosis, has a significant social and psycho-emotional significance, and determines the relevance of studying the problem. In recent years, several

studies have focused attention on the reliability of routine inflammatory markers during the infectious process. This necessitates the search for new biomarkers, other than classical clinical-laboratory indicators of inflammation, as reliable and definitive indicators for diagnosis, treatment, follow-up, and prognosis in patients with inflammatory diseases of the neck and head.

Based on the above, I believe that Yanko Georgiev Yankov's topic is relevant, as it emphasizes the diagnostic value and clinical applicability of procalcitonin (PCT) and delta neutrophil index (DNI) as promising markers of inflammation in patients with head abscesses and the neck of odontogenic and non-odontogenic origin. The doctoral student emphasizes their diagnostic reliability and the effectiveness of the methodologically determined cut-off values, which determines the scientific-applied and original contribution of the developed dissertation work.

Knowing the problem

The PhD student shows a thorough knowledge of the field, which is evident from the well-structured literature review. He manages to correctly use the professional terminology, which he analyzes and systematizes in a very good way. The very targeting of this current topic shows awareness of the problem and challenges in clarifying the diagnostic and prognostic role of PCT and DNI in clinical practice.

Characterization and evaluation of the dissertation work

The dissertation "Values of procalcitonin and delta neutrophil index in Surgery of inflammatory diseases of the head and neck" is a well-planned, designed and executed scientific study. It is written on 104 pages and contains 49 graphs, 43 tables and 2 schemes. The dissertation is structured as follows: introduction – 3 pages, literature review – 20 pages, aim and tasks – 2 pages, material, and methods – 10 pages, results – 13 pages, discussion - 35 pages, conclusions, and contributions - 2 pages, appendices - 2 pages, bibliography - 8 pages. The latter contains 135 literary sources, of which 2 are in Cyrillic and 133 are in Latin.

The introduction outlines the significance of the research problem. The literature review is a systematic review analysing the potential of PCT and DNI as novel, promising markers of bacterial infection in inflammatory head and neck

diseases. The critical analysis of literary data enables the doctoral student to correctly formulate the purpose of the study and to justify the individual tasks for the implementation and.

The purpose of the dissertation work is clearly defined and corresponds to the set tasks.

The Material and Methods section is detailed and well structured. The applied clinical laboratory analyses are comprehensively described. The patients and the control group of healthy individuals included in the study were selected according to clearly defined inclusion and exclusion criteria and established criteria for making the diagnosis of "abscess"

The results of the set tasks are described in detail, graphically presented with tables and figures that emphasize the significance of the research carried out. In the discussion section there is a discussion of the obtained results with own reasoned reasoning and a comparison with the data from the international literature.

The conclusions are properly reasoned and correspond to the set goal and completed tasks. They synthesize the analysis of the survey data and their own research.

Yanko Yankov, MD has indicated 7 contributions of a practical and original nature. For our country, this is the first study of the diagnostic reliability of PCT and DNI cut-off values as markers of inflammation in odontogenic and non-odontogenic head and neck abscesses

Assessment of the PhD student's publications and personal contributions

In connection with the dissertation, 2 publications related to the dissertation work in refereed journals and two participations in international scientific forums have been presented, which fulfils the quantitative criteria laid down in the regulations of MU-Varna.

I have no critical remarks and recommendations to the conducted research and presented materials.

Abstract

The abstract is prepared according to the requirements, with high-quality illustrative material and sufficient volume to fully reflect the main results achieved in the dissertation.

CONCLUSION

I believe that the dissertation work of Yanko Georgiev Yankov, MD is up-to-date, correctly constructed, with accurate methodology and reliable results. It contains scientific and applied results with an original contribution and meets all the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its implementation and the Regulations of the University of Varna. The presented materials and dissertation results fully comply with the scientific requirements of the specified regulations.

The dissertation shows that the doctoral student has the necessary knowledge and professional skills in the scientific specialty "Surgery", showing qualities and skills for independent research.

Due to the above, I confidently give my positive assessment of the conducted research, presented by the dissertation work, abstract, achieved results and contributions, and I propose to the honourable scientific jury to award the educational and scientific degree "Doctor of Philosophy" (PhD) to Yanko Georgiev Yankov, MD in a scientific specialty " Surgery'

18.11.2022 г

Plovdiv



Assoc. Prof. Tanya Deneva, MD, PhD