

## **ACADEMIC REVIEW**

**From: Assoc. Prof. Dr. Koni Ivanova - Taneva, MD, PhD**

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**Subject:** PhD-thesis for the award of an educational and scientific degree “PhD”

**To Dr. Alexander Georgiev Ivanov**

PhD-thesis topic: **“Analysis of oral and maxillofacial biopsies for the period 2009–  
2019 at University Hospital "Saint George" – Plovdiv, EAD”**

Scientific Supervisor:

**Assoc. Prof. Dr. Iliya Petrov Bivolarski, MD, PhD**

### **Brief Biographical Data**

Dr. Alexander Georgiev Ivanov was born on 29.12.1990 in the city of Plovdiv. In 2009 he graduated from the French Language High School – Plovdiv. He was admitted to study “Medicine” at Medical University–Plovdiv, where in 2017 he graduated as a medical doctor, and in the same year he began his professional career as a part-time assistant at the Department of General and Clinical Pathology at the Medical University – Plovdiv. Since February 2018 he has been working as an assistant at the same department and as a resident physician at the Department of Clinical Pathology at University Hospital "Saint George" – Plovdiv. Since 2022 he has been enrolled in full-time doctoral studies with the topic of the dissertation “Analysis of oral and maxillofacial biopsies for the period 2009–2019 at UMBAL “Sv. Georgi” – Plovdiv, EAD” and scientific supervisor Assoc. Prof. Dr. Iliya Petrov Bivolarski, MD, PhD. Dr. Ivanov is fluent in English and French, and is a member of the Bulgarian Medical Association, the Bulgarian Society of Pathology and the European Society of Pathology.

## Relevance of the Topic and Characteristics of the Dissertation

The topic “Analysis of oral and maxillofacial biopsies for the period 2009–2019 at University Hospital “Saint George” – Plovdiv” is of high scientific and practical significance. It allows tracking the frequency, distribution and histopathological spectrum of lesions in the oral and maxillofacial region within a prolonged period of time. This type of retrospective studies is essential for identifying trends in morbidity, early diagnosis of precancerous and cancerous conditions, as well as for optimizing diagnostic and therapeutic approaches. The obtained results contribute to improving the quality of clinical practice and are of significant importance for the development of effective preventive and health strategies.

The dissertation of Dr. Aleksandar Georgiev Ivanov is written in a total of 140 pages and includes the following parts: Introduction, Literature Review, Aim and Objectives, Materials and Methods, Own Results, Discussion, Conclusions and Final Remarks, Contributions, Appendices, Publications and participation in scientific congresses related to the dissertation, Bibliography.

At the beginning Dr. Ivanov presents the abbreviations used in the text. This is followed by a brief “**Introduction**”, in which brief data are presented on the necessity of early diagnosis in various malignant diseases, as well as a complex morphological approach in the different processes in oral and maxillofacial pathology.

This is followed by the chapter “**Literature Review**”, in which the author consistently and

synthesized describes the information available in the literature, concerning the historical overview, after which the epidemiology, demographic characteristics, brief anatomy of the maxillofacial region, as well as the modern classification systems in oral pathology are stepwise examined. The morphological aspects of oral biopsy are considered. Another significant part of the review is dedicated to granulomatous processes in the oral cavity, where sarcoidosis is discussed in detail. Rare neoplastic processes in the oral cavity are also carefully presented. The chapter ends with analysis and conclusions from the literature review.

In the next section “**Aim and Objectives**” Dr. Ivanov formulates **the aim** of his study, namely – to perform a comparative clinical-morphological analysis of oral and maxillofacial biopsies in the Department of Clinical Pathology at UMBAL “Sv. Georgi” – Plovdiv, over an 11-year period, with evaluation of diagnostic approaches, tumor processes, rare nosological units and development of a plan for updating the curriculum of students in Dental Medicine. For the implementation of this aim, a total of **six objectives** are presented – directly related to the aim, and it is expected that a number of

morphological and comparative analyses with the available clinical-morphological data will be carried out.

In the chapter “**Materials and Methods**” it is evident that the study includes a retrospective study of 6038 biopsies from 5218 patients for a period of 11 years (2009–2019) from the biopsy archive of the Department of Clinical Pathology. The materials are from 2630 women and 2588 men. The methods present the classical histological technique, immunohistochemical examination including S-100, p63 and CD10, the components for performing the examination, as well as the respective protocols for evaluation of each of the markers. At the end of the chapter the statistical methods of the study are presented, in accordance with the specifics of the set objectives and the type of the studied variables.

The section “**Own Results**” is organized according to the order of presentation of the objectives and their sub-objectives, discussed in the previous section of the dissertation.

Under **objective 1**, a retrospective study of oral biopsies in the archive of the Department of Clinical Pathology at University hospital “St. George” for an 11-year period (2009–2019) was carried out, where a detailed distribution of the studied materials by years, referring unit/clinic, as well as type of examination, namely primary, secondary or follow-up, is made. The quantitative and frequency distribution of odontogenic, non-odontogenic cysts (n=1146), benign tumors (n=1169) and malignant tumors (n=1071) is presented. Within **objective 2**, the gender and age distribution of pathological processes in the oral and maxillofacial zone is presented.

The **third objective** is a comparison between the clinical and morphological diagnosis, with analysis of the reasons for discrepancies between them, with concordance between clinical and pathological diagnosis observed in 74.7% of the total number of patients studied. In **objective 4**, an analysis of classification approaches in clinical and biopsy diagnostics is presented, and an expanded classification scheme is presented. In the next **objective 5**, cases with rare granulomatous, neoplastic processes and bisphosphonate-associated necrosis of the jaws are demonstrated. In the last **objective 6**, an update of the student material in the field “Oral Pathology” is presented, in relation to the classification changes in ICD 10/11 and the established frequency of diseases.

In the chapter “**Discussion**”, the results from the objectives are again presented in summary, with emphasis placed on the significant ones, as well as those in which a clear trend is outlined. All findings are discussed and summarized by Dr. Ivanov, with comparison to available scientific literature. WHO classifications from 2005, 2017, 2022 and 2023 are described, with discussion of diagnostic challenges.

In the section “**Conclusions**”, the conclusions are eight in number, and the final conclusion confirms that precise diagnosis of diseases of the oral cavity and maxillofacial

region requires high professional qualification and training. A total of 11 contributions are made: five of original character, two of practical character and four of confirmatory character.

Dr. Aleksandar Ivanov presents four publications related to the dissertation topic, in which he is first author, as well as three participations in scientific forums.

The **bibliography** contains 191 titles, 8 of which in Bulgarian and 183 in Latin script.

The entire work is illustrated with 16 figures, 23 tables, 8 microphotographs.

**In addition** – the presented abstract is a synthesized material, including the most important textual elements, tables, graphs and photographs from the dissertation work.

### **Critical Remarks and Recommendations**

I recommend that a larger part of the results be published in highly indexed journals. I have no critical remarks.

### **Conclusion**

In conclusion, the dissertation work thus submitted for evaluation for the award of the educational and scientific degree "Doctor", is an extensive, interesting and fully completed scientific work, which includes all mandatory elements, results, conclusions and contributions made based on them. The same could be continued, deepened and expanded in the next stage of research, as the information in the work could be of assistance to clinical specialists in their scientific research.

Based on this, **I confidently give my positive assessment, and I convincingly vote "POSITIVE" for awarding the educational and scientific degree "Doctor"**, to Dr. Aleksandar Georgiev Ivanov, in the doctoral program "Pathoanatomy and Cytopathology", field of higher education 7. Health and Sports, professional field 7.1 Medicine, and I call on the other members of the esteemed jury to support the candidate with a positive vote.

Assoc. Prof. Dr. Koni Ivanova-Taneva, MD, PhD

Stara Zagora

01.04.2026

Заличено на основание  
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