

**STANDPOINT**

From **Assoc. Prof. Iliya Petrov Bivolarski, MD, PhD**  
**Department of General and Clinical Pathology,**

**Medical University - Plovdiv**

in his capacity as a member of the Scientific Jury,

based on the Order of the **Rector of the Medical University - Plovdiv**, № P -1889/27.10. 2020y  
and the decision of the Faculty Council under protocol № 5/08.07.2020y of the Faculty of  
"Medicine"

On the Dissertation of **Dr. Maria Stoyanova Koleva-Ivanova**,  
Department of General and Clinical Pathology, Medical Faculty - Plovdiv, for acquisition of  
educational and scientific degree "Doctor" in the field of higher education 7. "Health and Sports",  
professional field 7.1 "Medicine", scientific specialty " Pathology and Cytopathology",

On the topic: " **Eosinophilic metaplasia in the prostate epithelium: main characteristics,  
morphology, morphogenesis "**

**Supervisor:** Associate Professor d-r Dorian Ivanchev Dikov, MD, PhD

A set of materials on paper and electronic form have been submitted for the competition,  
including all required documents - dissertation, abstract, biographical and professional data,  
administrative documents, copies of publications by Dr. **Maria Stoyanova Koleva-Ivanova**.

The submitted dissertation is written on 165 pages and includes the following parts:  
introduction, literature review, aim and tasks, material and methods, results, discussion,  
conclusions, contributions and bibliography.

Submitted are three publications related with the topic of the dissertation.

**The introduction** focuses on the main problems in the prostate pathology and presents  
the deficit in the study of eosinophilic metaplasia of the prostate at the moment.

**The literature review** is written on a total of 39 pages and is structured in eight main  
parts. The beginning of the review presents a definition of the metaplasia as a process and its  
main types in different organs, from an etiopathogenetic point of view, with an emphasis on  
morphology. In the following parts of the literature review, Dr. Maria Koleva-

Ivanova systematically discuss the types of prostate metaplasia. Each of them is presented in detail from a morphological point of view and is indicated the connection with other pathological benign ( chronic inflammation , atrophy ) and malignant processes in the prostate. Histological descriptions of the types of prostate metaplasia are illustrated with pictures from own microscopic specimens, for the preparation of which a different staining techniques were used. After that there is a presentation of eosinophilic metaplasia in the prostate and other organs, with a detailed description of its morphological characteristics ( light microscopic, histochemical , immunohistochemical and electron microscopic ) , the combination with other pathological processes and its differential diagnosis. The separate parts of the literature review are skillfully structured in the context of eosinophilic prostate metaplasia, and the facts from the literature sources are covered in a concept justifying the aim of this dissertation.

In the chapter " **Aim and tasks** " the purpose is clearly stated: "To study quantitatively and qualitatively the eosinophilic prostate metaplasia of TURP material, in order to clarify the pathogenesis and general pathological significance of the process." There are six tasks directly related to the set aim.

In " **Material and methods** " Dr. Maria Koleva-Ivanova presents a retrospective review of TURP-materials from two groups of patients - Bulgarian and French. The group with Bulgarian patients includes 61 cases from the biopsy archive of the Department of Clinical Pathology of University Multiprofile Hospital for Active Treatment "St. George" EAD - Plovdiv for a period of 1 year. The group of French patients includes 62 cases from the archives of the Service d'Anatomie et de cytologie pathologiques , Grand Hôpital de l'Est Francilien , Jossigny , France. For the control group were used 19 prostates from deceased patients with no clinical data of urologic diseases and without pathological histological changes in the prostates . In " **Methods** " are described classical histological, histochemical and immunohistochemical techniques. The characteristics of the antibodies used in the IHC investigation are given in tabular form. The expression of the used markers, the statistical research methods, the forms of graphic visualization and the application software are presented.

The " **Results** " chapter is structured according to the first five tasks, describing accurately and clearly the data obtained in them. The results are broadly illustrated with pictures, figures and charts. Some of the large amount of information is compressed in tabular form. The nature of the last task, which requires analysis and synthesis of the results of the previous five tasks, necessitated its result to be redirected to the next chapter of the dissertation.

Chapter " **Discussion** " follows a critical analysis and comparison of own results with the data from the literature. The distribution is again consistent with the tasks that bring in more



clarity and allows specifics in the discussion of the results. The observed dependencies were analyzed with skill. The significant differences between the derived indicators are interpreted professionally and with scientific competence. A precondition for this is the exact statistical processing of the data and the research methods adequate to the study. The scientific style and expression are accurate and clear, at a high academic level.

In the chapter "**Conclusion**" Dr. Maria Koleva-Ivanova summarizes the final results and presents the main aspects concerning the pathogenesis, general pathological significance and morphological characteristics of eosinophilic prostate metaplasia.

The Dissertation ends with the chapters "**Illiation**" and "**Contributions**", as they present seven significant conclusions and numerous contributions of confirmatory, original scientific-theoretical and scientific-applied nature, which are also divided into groups according to the tasks of the dissertation.

The bibliography is presented by 156 authors - 10 in Cyrillic and 146 in Latin.

The dissertation contains 75 pictures with high resolution and quality, 6 figures and 28 tables.

The abstract has a volume of 63 pages and contains the main part of the dissertation.

## **CONCLUSION**

The Dissertation of Dr. Maria Stoyanova Koleva-Ivanova is fully completed, contains original scientific results and contributions, as well as those with applied character and practical orientation. The significance of the presented dissertation is predetermined by the choice of topic and focus on current and classic problem as in prostate pathology, as well as general pathology process. Regarding to this it should be noted that the topic is the first and original scientific development in Bulgaria, with modern design and scientific-practical and value. It corresponds to the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria (LDASRB), the Implementing Regulations of LDASRB and on the conditions and procedure for acquisition of scientific degrees at MU - Plovdiv. The dissertation demonstrates that Dr. Maria Koleva-Ivanova has in-depth theoretical knowledge and professional skills in the scientific specialty "Pathology and Cytopathology", as well as qualities and skills for independent research.

Given the above, I confidently give my **positive assessment** of the Dissertation and **vote for acquisition of scientific degree „Doctor” of Dr. Maria Stoyanova Koleva-Ivanova.**

12.11.2020

Plovdiv

Assoc. Prof. Iliya Petrov Bivolarsky, MD, PhD

