



STANDPOINT

by

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regarding

dissertation and abstract on the **topic:**

"CURRENT ASPECTS OF THE OSTEOPOROSIS FRACTURE RISK"

Presented for the defense and awarding of the educational and scientific degree "**Doctor of Sciences**"

Professional direction **7.1. Medicine, 7. Healthcare**

Scientific specialty **Rheumatology**

In the Department of Propedeutics of Internal Medicine

Medical University - Plovdiv

Author: Prof. Dr. Stoyanka Georgieva Vladeva, PhD, Professor of Rheumatology, Faculty of Medicine, Trakia University

Relevance of the topic

Osteoporosis is defined as a systemic skeletal disease characterized by low bone mass and deterioration of bone tissue microarchitecture with subsequent increase in bone fragility. The question of what constitutes osteoporotic fracture risk is key for each individual. Assessment of bone mineral density within osteodensitometry is not sufficient to predict increased fracture risk.

Clinical risk factors that vary in the different risk models created so far are determinants of fracture. The two methods for assessing the BMD of the axial skeleton - DXA and REMS - have different capabilities. The REMS-based fragility index “Fragility Score (FS)” is an innovative parameter that allows to assess bone quality and bone fragility, in parallel with performing osteodensitometry with REMS.

Knowing the problem

The literature review reflects the current state of the art of osteoporotic fracture risk and demonstrates the author’s excellent literature awareness. 255 scientific sources were used, of which 7 are in Cyrillic and the rest - in Latin. The highlighted and compared facts show the thoroughness of the doctoral student to analyze and summarize the literary data.

Structure

The dissertation is presented in a volume of 173 standard pages and is illustrated with 30 figures, 7 tables and 2 appendices. It is structured according to drafting rules and is balanced as a ratio between the individual sections. The author uses a wide range of statistical methods from the extensive capabilities of the SPSS program to fulfill the purpose of her study. The statistically significant results are well discussed in the dissertation and in the abstract.

The purpose of the dissertation is formulated precisely and clearly. The concrete material is used to direct the study to the practical aspects of the problem. 8 tasks are very well defined to serve the set goal.

Research methodology

BMD and FRAX by DEXA and REMS studies, fragility index by REMS and patient self-report questionnaire for osteoporosis were performed.

Characterization and evaluation of the dissertation work and contributions

Prof. Stoyanka Vladeva's dissertation work, dedicated to the topic of osteoporosis fracture risk, includes several new aspects: a wide-ranging study of BMD and FRAX among the Bulgarian population and ethnic groups; study of the Fragility Index with REMS osteodensitometry; multivariate analysis of risk factors and patient self-report of osteoporosis. This is the first study presenting extensive data on BMD values and T-scores of the axial skeleton from DXA scans in the Bulgarian population. It updates the existing national data that form the basis of the national health programme.

12 conclusions are drawn precisely and clearly, which correspond to the presented results. I accept the formulated 6 contributions of the dissertation work.

In connection with the dissertation, 37 scientific publications and reports were made. Of these, 27 were published in scientific issues, referenced and indexed in world-renowned databases (Scopus; Web of Science), and 10 were published in non-refereed peer-reviewed journals or in edited collective volumes in Bulgaria.

27 citations are presented on the topic of the dissertation work, apart from the citations involved in other procedures (for scientific positions) of Prof. Vladeva, of which 20 are in scientific publications, referenced and indexed in world-famous databases.

Conclusion

The present standpoint is about the dissertation work on the topic "Actual aspects of the osteoporosis fracture risk". The scientific development is up-to-date, well synthesized and shaped, fully meeting the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for its Application at the MU Plovdiv. Due to the above, I give my positive assessment of the dissertation work and propose to the honorable scientific jury to award Prof. Dr. Stoyanka Georgieva Vladeva, Phd, the scientific degree "Doctor of Sciences" in Rheumatology in the professional field of Medicine.

18.12.2023

Prepared the standpoint:

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