

## **SCIENTIFIC STATEMENT**

**By**

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**Appointed member of the Scientific Jury, according to Document P- 109- 102/  
28.01.2025  
of the Rector of Medical University Varna**

**On dissertation thesis for obtaining scientific and academic degree  
"Philosophy Doctor"**

**"Quality of life in patients with herniated disc disease"**

**Authored by Dr. Rositsa Gancheva Krasteva,  
External PhD student in Department of Neurological Diseases and Neurosciences,  
Medical University of Varna**

Dr. Krasteva's thesis is 178 pages long, 257 papers are included in the literature review, 12 of them by leading Bulgarian experts and 245 by foreign authors. Most of the reviewed sources (66 %) are published during the last decade.

The thesis is illustrated with 31 tables and 94 figures. Statistical analysis is made using the most up to date statistical instruments like SPSS v 26.

Back pain is a leading cause of disability worldwide and one of the most common reasons people seek medical help or miss work. Back pain may be due to different pathologies, in some cases caused by intervertebral disc involvement as disc degeneration, protrusion or disc herniation.

Disc herniations become a significant medical, economic and social problem in modern world.

Symptomatic cases of disc herniation may cause frequent hospitalizations, unsatisfying treatment results and worsened quality of life. Cervical or lumbar disc pathology represents one of the most common reasons for neurology clinics hospitalization, even more than once per year and in some cases for few consecutive years. Patients with disc disease are subject of broad spectrum of medical specialty but even after neurosurgery disc herniation and pain could reappear. All mentioned negatively impact on quality of life, healthcare services burden and socio- economic situation.

Pain, motor symptoms and depressive symptoms in some cases contribute to decreased activity and independency, disability, missed work, increased health related expenses and denial of leisure activities.

Measuring and monitoring pain intensity, disability, depression and quality of life could provide a control on the disease course, decision making for diagnosis and treatment and providing better outcome, quality of life and decrease the healthcare costs.

The thesis has a clearly defined research aim, namely to study the health related quality of life of patients with herniated disc disease and its relationships with disability, pain

and depression. Four research goals and four working hypotheses are logically formulated, subject to the aim.

A total of 120 patients with disc herniation, diagnosed by CT or MRI, were included in the study, divided into two groups. First group comprised of 40 patients with pathology in cervical area.

The second group comprised of 76 patients with pathology in lumbar area.

For study purposes, all the patients completed self- assessing questionnaires, concerning disability (RMDQ, ODI, CNFDS, NDI), pain intensity (NPRS), quality of life (SF-36), and depression (PHQ- 9).

The results obtained were analysed and clearly demonstrated in tables and graphics.

Statistical analysis included descriptive methods, Confidence Interval, ANOVA, Mann- Whitney U test, Pearson's and Spearman's correlation analyses. The results were processed with SPSS v 26.

The analysis of investigation data revealed relationship between pain intensity and gender, namely female patients showed higher levels of pain. Pain was not correlating with age, disc herniation localization, nor place of residence.

Higher levels of depression were observed in countryside residents, and no correlations were found with age, gender or disc herniation localization. The results differ from published in the literature, most probably due to specific social and economic conditions in Bulgaria.

Disability had higher levels in female patients and missing to slight correlation with disc herniation localization.

Higher prevalence of cervical disc herniation were observed in female and urban residents.

Female patients also showed worse results for physical functioning, role limit due to emotional issues and energy/ fatigue domains.

General health domain results, expectedly, revealed strong reciprocal correlations with pain intensity disability and depression.

Pain influenced negatively all domains of health related quality of life.

The most important results of the study are summarized and six general conclusions are drawn.

Also seven contributions are defined, two with original and five with confirming character, all of them fully acceptable.

Dr. Krasteva's study, in my opinion, contributes to both scientific and clinical aspects of the problems discussed.

The abstract of the dissertation is structured according to institutional requirements, corresponded exactly to the main study and is illustrated with 31 tables and 87 figures.

In conclusion, I find Dr. Krasteva's thesis to treat a question of important current interest and wide prevalence, well structured, and well written. The aim of the study was clearly defined and accomplished. The conclusions directly correspond to the aim and purposes and are useful for everyday clinical neurological practice and interdisciplinary efforts in this area.

All mentioned above gives me the grounds to appeal that the members of the Honorable Jury stand in support of awarding the research doctoral degree Philosophy Doctor to Dr. Rositsa Krasteva.

Date: 27.Mar.2025  
Varna, Bulgaria

Signed:

Borislav Ivanov M.D., Ph.D.

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