

# Review

**FROM PROF. KRASIMIR IVANOV, MD. DSc.**

CHAIRMAN OF THE SCIENTIFIC JURY

SELECTED BY ORDER № R-100-431 / 12.07.2021.

OF THE RECTOR OF THE MEDICAL UNIVERSITY – VARNA

SUBJECT: the dissertation of Dr. Asen Ivanov Yanchev, for awarding educational and scientific degree "Doctor" at the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna, specialty - Oncology, on the topic - "Comparative analysis between screenings of the levels of distress, anxiety, depression, anger and need for help in patients with solid tumors and pending chemotherapy" with supervisor Assoc. Prof. Dr. Eleonora Dimitrova - Gospodinova, Ph.D.

The review is prepared according to the requirements of:

- The Law for development of the academic staff in the Republic of Bulgaria.
- The Regulations for implementation of the Law on the Protection of Human Rights and Fundamental Freedoms.
- "Regulations on the terms and conditions for obtaining scientific degrees and borrowing academic positions of MU – Varna” .

## **Biographical information of the candidate**

Dr. Asen Ivanov Yanchev graduated in medicine at the Medical University - Varna in 1990. From 1990 to September 1992, he worked at the District Hospital in Dobrich, as internist in the III-internal ward. In June 1991 he won a concourse for an assistant in “Department of propedeutics of Internal medicine” of MU Varna - Dobrich Branch. In 1994 he acquired the specialty “Internal diseases”, and in 1999. specialty - "Oncology". Until July 2012 he worked as assistant, and subsequently chief assistant in “Department of propedeutics of internal medicine” of MU-Varna and oncologist in UMBAL "St. Marina". In the period 2012-2016 he worked as an oncologist at SBALOZ “M. Markov ”. Since June 2016 he has been working as an oncologist in a clinic of medical oncology at the University Hospital "St. Marina". In July

2018 he won a concourse for full-time doctoral student at the “Department of propedeutics of internal medicine” of MU-Varna, specialty - “oncology”. From the same year was appointed an assistant at the same department. Dr. Asen Yanchev actively participates in academic activities of the department, has participation in national and international scientific events related to medical oncology and has over 26 publications in local and international editions. Dr. Asen Yanchev speaks English, German and Russian.

He is a member of:

- Bulgarian Association of Medical Oncology (BAMO)

- Bulgarian Oncological Society (BOD)

"European Society of Medical Oncology" (ESMO);

" American Society of Clinical Oncology!" (ASCO)

Psycho-oncology is a scientific discipline whose goal is to integrate psychological care in the treatment of cancer. It examines the psychological aspects of oncology diseases and is targeted at all affected by the disease: patients, their families and attending physicians. The aspects that this science touches on are dealing with diagnosis, adaptation to treatment, the effects of the disease on the relatives of the patient and his relationships with others. The results to which supporters the science of psycho-oncology is striving to improve the quality of life of patients and their families. They also want to help overcome the problems associated with treatment.

A major element in psycho-oncology is distress. Experts determine distress as a multifactorial, unpleasant experience with psychological (i.e., cognitive, behavioural, emotional), social, spiritual and/or physical nature that may interfere with the ability to effectively deal with cancer, its physical symptoms and its treatment. In addition to distress in cancer patients, others are of great importance psycho-emotional categories and conditions such as: depression, anger, anxiety and others.

In the dissertation an attempt is made to find a correlation between distress and anxiety, feelings of anger, depression and feelings of need for help.

## Characteristics of the dissertation submitted for review

The dissertation is presented on 79 pages, incl. and bibliography, such as contains 20 tables and 19 figures. The scientific work has a classical structure: "Introduction" – 6 p. "Literature review" - 22 pages, "Research methods" - 5 pages (with subsections: "Purpose and objectives", "Patient selection", "Specific research methods"), "Results - 35 pages", "Discussion - 5 pages", "Conclusions", "Conclusion and" Contributions of dissertation work "- 2 pages. List of scientific publications and communications in connection with the dissertation "- 6 in number, "Participation in scientific forums with published abstracts " - 1 piece. The literature includes 93 titles. It was conducted non-interventional scientific research. The study covers the period 2016-2017 (with tracking until 2018), with 225 patients surveyed who met the inclusion criteria. They all are patients of UMBAL St. Marina Varna, Medical Oncology Clinic. All patients with histologically proven oncological disease in stage P, Shi GU. When descriptive analysis of patient information (socio-demographic and clinic-pathological), it was found that the mean age of patients was 59.6 +/- 11.4 as the minimum age is 29 years and the maximum is 81 years. The distribution by sex of the persons shows that females are 126 , males 99. The surveyed patients were in good general condition, which is assessed according to the scale ECOG - performance status (PS). Depending on PS with a small difference, patients with a grade of PS-1- 122 (54.27%) for account of those with PS-0- 103 (45.89%). The survey of patients was performed with the validated from NCCN, distress thermometer.

The **main focus** of the literature review is the in-depth analysis of psycho-emotional states - distress, depression, anxiety, anger and need for help. These categories are the subject of a relatively new "branch of medical oncology, a namely psycho-oncology. The author analyses in detail the problem of levels of the above conditions in cancer patients with upcoming chemotherapy. In the basis of the dissertation is distress, which is considered in detail and analytically, measuring its levels with a validated distress thermometer, as patients are divided into 26 socio-demographic and medical characteristics (gender, age, religion, performance status, location, stages of the disease, etc.). The author considers mental categories not only separately, but also derives the correlation dependence between distress and other psycho-emotional states.

The **main goal** of the author is to conduct screening and identification of distress and the psycho-emotional categories of depression, anxiety and anger and the need for help and their correlation dependence in cancer patients with impending for the first-time chemotherapy by applying validated emotional thermometers.

To achieve this goal the author sets the following **tasks**:

To screen patients who have been diagnosed with Oncological Disease and determining levels of distress, depression, anxiety, feelings of anger and need for help by using appropriate emotional thermometers.

To establish a relationship between gender, age, type of cancer disease, stage of cancer and levels of the above psycho-emotional states.

Identify risk factors for high levels of distress, depression, anger and need for help. Determine the internal consistency of the thermometers used.

Including and excluding criteria to select are clearly formulated suitable patients for the study, as the parameters for examination and follow-up are pre-defined and retrospectively collected within the study.

## **Results**

The study covers the period 2016 - 2017 (with tracking until 2018), surveyed 225 patients who met the inclusion criteria. All patients are with a proven oncological disease and referred for treatment to a Clinic of medical oncology of the University Hospital "St. Marina". All are undergoing chemotherapy - neoadjuvant, adjuvant or 1-st. line.

The following emotional thermometers were used - distress, anxiety, depression, anger and need for help to stratify patients by gender, age, ethnicity, religion, education, income, etc. Information about additional stratification according to clinical and pathological characteristics of oncological disease (surgery, type of surgery, type of cancer, histology, TNM, stage, etc.) is collected from the available medical documentation.

The results are presented in a hierarchical form and are very well illustrated.

Analysis of the results of the measured level of distress shows that individuals with low distress levels were 114 (50,790), and those with moderate / high distress levels PS-1 (49.30). The analysis of the socio-demographic data shows that there is no relationship between characteristics: age, sex, religion, ethnicity and place of residence (distance from the oncology centre) and the level of distress recorded with the Distress thermometer. There is a relationship between, performance status, location of cancer, level of education and the level of distress.

The analysis of anxiety and the relationship with socio-demographic data also shows that there is no relationship between the characteristics: age, gender, religion, ethnicity and place of residence (distance from the oncology service centre) and the level of anxiety reported with anxiety thermometer. There is a relationship between, performance status, type of cancer and the level of anxiety.

Analysis of depression and the relationship with socio-demographic data shows that there is no relationship between the characteristics: age, gender, religion, ethnicity and place of residence (distance from the oncology service centre) and the level of depression reported with Depression thermometer. There is a connection between, performance status, location of carcinoma and the level of depression.

With the feeling of anger - the analysis of socio-demographic data shows that there is not relationship between characteristics: age, gender, religion, ethnicity and place of residence (distance from the oncology service centre) and the level, the feeling of anger reported with anger thermometer. There is a connection between, performance status, location of carcinoma, level of education and level of anger.

In need of help - the analysis of socio-demographic data shows that no relationship between characteristics: age, gender, religion, ethnicity and place of residence (distance from the oncology service centre) and the level, the feeling of anger reported with need of help thermometer. There is a relationship between performance status, stage of cancer, level of education and level of need for help.

Cronbach's alpha ( $\alpha$ ), as an objective assessor of the reliability of the thermometers used is 0.82, which shows good internal consistency. The discussion on the received results emphasizes their importance, giving guidance and interesting future development.

**Conclusions:** 7 clear conclusions are formulated, which lead to logical contributions with scientific theoretical character and scientific-practical character.

The abstract is 59 pages long and presents in a concise form the main problems and conclusions, presented in the dissertation: formulated goal and tasks, methods used, results and discussion, conclusions and contributions of the dissertation. A list is also presented of the main publications of the candidate related to the topic of the dissertation.

### **Critical remarks and recommendations:**

I am familiar with the many tasks, functions and responsibilities that Dr. Yanchev has in recent years, which naturally and logically does not allow to deploy the whole potential to carry out this research on a full scale.

### **Conclusion**

The dissertation contains scientific and scientific - applied results with original contribution to science and meets all the requirements of the Development Act the academic staff in the Republic of Bulgaria (ZRASRB), the Regulations for application of ZRASRB, Regulations of MU - Varna. The presented materials (dissertation, publications and scientific communications) comply with the specific requirements of the ZRASRB.

The dissertation shows that the doctoral student Dr. Asen Ivanov Yanchev has in-depth theoretical knowledge and professional skills in the scientific specialty medical oncology, demonstrating qualities and skills for self-conduct of scientific research.

Due to the above, I give my POSITIVE assessment of what has been done research presented by the peer-reviewed dissertation, abstract, achieved results and contributions by proposing to the esteemed scientific jury to award the educational and scientific degree "Doctor" of Dr. Asen Ivanov Yanchev in a doctoral program "Oncology".

30.08.2021

Reviewer:

prof. Krasimir Ivanov MD. DSc.

