



Fund “Nauka” Project № 22026 Resume – Competition-Based Session 2022:

“Effects of cancer rehabilitation and Cordyceps in breast cancer patients”

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This project **aims** to study and evaluate the combined effect of cancer rehabilitation and Cordyceps administration in breast cancer patients undergoing chemotherapy to improve their quality of life (QL).

Objectives:

1. Development of a new chromatographic method to study serum Paclitaxel levels;
2. Development of an individualized cancer rehabilitation program for breast cancer patients;
3. Research the scientific evidence on the effects and appropriate dosage of Cordyceps in cancer patients;
4. Randomization of patients into three groups;
5. Administering the cancer rehabilitation program to groups 2 and 3 and Cordyceps to group 3;
6. Analysis of serum Paclitaxel levels of the three study groups; before initiation and after completion of the rehabilitation program;
7. Assessment of participants’ QL before initiation and after rehabilitation program completion.

Target group: the proposed prospective study of 3 years’ duration will include 150 breast cancer patients undergoing chemotherapy, selected according to inclusion and exclusion criteria.

Methods: an innovative, original combination of methods – clinical (centimetry and angulometry), chromatographic (determination of serum Paclitaxel levels) and survey (assessment of QL with the WHO-QOL-BREF questionnaire).

Short-term expected results:

1. Development of a new modern chromatographic method with mass-selective detection in order to study Paclitaxel levels in blood serum, characterized by high analytical reliability;
2. Obtainment of new data on the role of oncorehabilitation in cancer patients with breast cancer who have undergone chemotherapy, insufficiently studied in Bulgaria and worldwide;
3. Obtainment of new data on the effects of Cordyceps combined with oncorehabilitation.

Long-term expected results:

4. Introduction of a new complex recovery program, oriented to the specificity in the metabolism of the most frequently applied chemotherapeutic agent in individual patients, with the potential to be included in the clinical pathways under the National Health Insurance Fund;
5. Promotion of the results of the project among patients diagnosed with oncological diseases, oncologists, physiotherapists and general practitioners with a view to promoting the benefits of individualizing the recovery process;
6. Preparation of recommendations for the introduction of a complex cancer rehabilitation program in kinesitherapeutic practice to improve the quality of life for patients with proven oncological disease on the basis of the study results;
7. Development of dissertation theses in kinesitherapy and public health on the basis of the study results.