

June 1, 2025

EM376: Exercise Oncology - Benefits of exercise in patients with cancer



Cancer is a major public health challenge globally, accounting for more than 10 million deaths each year. Despite continued advances in cancer diagnosis and treatment, the incidence of the disease continues to rise, requiring innovative strategies for its management. Against this backdrop, exercise is emerging as a powerful resource for both cancer prevention and treatment.

In recent years, numerous scientific studies have shown that exercise can not only improve survival in cancer patients but also significantly reduce the risk of recurrence. In addition to enhancing the response to traditional therapies (such as chemotherapy and radiotherapy), exercise helps to mitigate their side effects, promoting improved muscle strength, physical function, cardiovascular health, and, most importantly, quality of life in cancer patients.

Although the biological mechanisms by which exercise carries out these protective effects are not yet fully understood, it represents a promising therapeutic frontier for the future of cancer research. Exercise, understood as a true medicine, requires accurate and personalized prescription, calibrated according to the type and stage of the tumor as well as the patient's specific clinical condition.

This intensive two-day workshop will be structured to provide a solid practical and theoretical foundation on how to use exercise as a therapeutic tool in the context of oncology. During practical sessions, participants will learn assessment techniques, personalized training principles (specifically, resistance and aerobic training), and how to optimally regulate exercise intensity, volume, and periodization in oncology patients. Principles of exercise self-regulation and load management will also be addressed, with a focus on the latest therapeutic innovations.

The main objective of this workshop is to provide participants with the skills and knowledge based on the latest scientific evidence so that they can integrate exercise into oncology rehabilitation pathways, taking into account the different types of cancers and stages of the disease.

At the end of the course, participants will know:

- Understand the crucial role of exercise in cancer prevention and treatment.



- Identify the mechanisms by which exercise can improve quality of life and reduce the side effects of cancer therapies.

- Apply personalized exercise training principles for cancer patients.

- Effectively assess the physical condition of cancer patients and adapt the workload according to their needs.

This course provides a unique opportunity to train and help improve the quality of life of cancer patients through exercise.Cancer represents a major public health challenge globally, with more than 10 million deaths each year. Despite continued advances in cancer diagnosis and treatment, the incidence of the disease continues to increase, requiring innovative strategies for its management. Against this backdrop, exercise is emerging as a powerful resource for both cancer prevention and treatment.





SCHEDULE

DAY 1

9:00 - 10:15 | Lecture 1: Cancer - Epidemiology.

Introduction to the global cancer landscape. We will discuss its incidence, mortality, and the importance of adopting innovative strategies to improve patients' quality of life.

10:15 - 10:30 | Break

10:30 a.m. - 12:00 p.m. | Lecture 2: Exercise in Cancer

Insight into the benefits of exercise in cancer patients, with a focus on reducing side effects of therapies and improving survival.

12:00 - 13:00 | Lunch Break

13:00 - 14:00 | Lecture 3: The Muscular System as an Endocrine Organ.

We explore the biological mechanisms by which exercise positively affects cancer patients, considering the role of muscle as an endocrine organ.

2 p.m. - 4 p.m. | Lecture 4: Principles of Strength and Conditioning

Learn the fundamentals of strength and conditioning training, tailored to the oncology population, with a focus on intensity, volume, and programming.

16:00 - 16:15 | Break

16:15 - 18:00 | Practice Session 1: Resistance Training.

We put strength training techniques into practice, adapting resistance exercises based on the physical condition of oncology patients.

DAY 2

9:00 am - 10:15 am | Practical Session 2: Aerobic Training.

Practical session on aerobic training, with a focus on how to adapt intensities and volumes for cancer patients during and after treatment.

10:15 - 10:30 | Break

10:30 a.m. - 12:00 p.m. | Lecture 5: The Role of Exercise in Cancer-Associated Comorbidities

Analysis of the impact of exercise on cancer-associated conditions such as diabetes, cardiovascular disease, and obesity, thereby improving overall disease management.

12:00 - 13:00 | Lunch Break

13:00 - 15:00 | Practical Session 3: Power Training

Explores methods of power training, with a focus on innovative techniques to improve patients' quality of life and physical function.

15:00 - 15:15 | Break

15:15 - 17:00 | Practice Session 4: Application of Advanced Exercises in the Oncology Population.

Interactive session on how to customize and apply advanced exercise programs to different types of cancer patients, based on the type and stage of cancer.

17:00 - 18:00 | Practical Session 5: Clinical Cases We will work on real cases to integrate the skills learned during the workshop, with discussions and practical applications on oncology patients.