

# Postgraduate Certificate

## Pain and Nutrition in Radiation Oncology





## Postgraduate Certificate Pain and Nutrition in Radiation Oncology

Course Modality: Online

Duration: 2 months.

Endorsed by: TECH Technological University

2 ECTS Credits

Hours 50 hours

Website: [www.techtute.com/medicine/postgraduate-certificate/postgraduate-certificate-pain-nutrition-radiation-oncology](http://www.techtute.com/medicine/postgraduate-certificate/postgraduate-certificate-pain-nutrition-radiation-oncology)

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# 01

# Introduction

Pain is one of the most frequent problems in cancer patients, above all in those who have a more advanced stage of cancer. Radiotherapy is one of the most widely used tools to cure cancer, but also to alleviate side effects such as pain, so it is essential for the physician to be aware of the latest developments in treatments to alleviate them. Courses like the one we offer in this case will allow specialists to provide their patients with better care.





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*With this course, you have the opportunity to update your knowledge comfortably and without sacrificing scientific accuracy, in order to incorporate the latest advances in the approach to ocular diseases in your daily medical practice"*

Around 90% of patients with advanced stage cancer suffer pain. That's why it is all the more important to be aware of the most up-to-date and efficient treatment for alleviating the effects in these patients.

Furthermore, malnutrition is another one of the main effects, making it all the more complicated to cure the patients. Therefore, it is necessary for specialists to perform the appropriate assessments in each case, in order to be able to make a better diagnosis and advise their patients on the most effective nutritional treatment in each case.

In this sense, health professionals must constantly study the advances that arise in this area in order to alleviate the effects on patients so that they can cope with the disease as comfortably as possible.

In this Postgraduate Certificate in Pain and Nutrition in Radiation Oncology, the medical professional will learn the latest advances in radiotherapy to alleviate pain in cancer patients, as well as the appropriate nutrition that these patients should receive. The program is focused on the features of pain and the main treatments, whether it be through drugs or radiotherapy, but also the causes and consequences of malnutrition in oncological patients and the main nutritional recommendations given.

This **Postgraduate Certificate in Pain and Nutrition in Radiation Oncology** contains the most complete and up-to-date scientific program on the market. The most important features of the course are:

- ♦ Clinical cases presented by experts in Pain and Nutrition in Radiation Oncology.
- ♦ The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice.
- ♦ Latest developments in nutrition in oncology patients.
- ♦ Practical exercises where the self-evaluation process can be carried out to improve learning.
- ♦ Clinical and diagnostic imaging and testing iconography.
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course.
- ♦ Special emphasis on evidence-based medicine and research methodologies in Pain and Nutrition in Radiation Oncology.
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments.
- ♦ Content that is accessible from any fixed or portable device with an Internet connection.



*Work with the latest educational technology, with an innovative interactive video system"*

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*This course may be the best investment you can make when choosing a refresher program for two reasons: in addition to updating your knowledge in Pain and Nutrition in Radiation Oncology, you will obtain a postgraduate certificate from TECH Technological University”*

The teaching staff includes professionals from the field of Pain and Nutrition in Radiation Oncology, who bring their experience to this training program, as well as renowned specialists from leading scientific societies.

The multimedia content developed with the latest educational technology will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive training program to train in real situations.

Problem-Based Learning underpins this program design, and the doctor must use it to try and solve the different professional practice situations that arise throughout the course. For this purpose, the physician will be assisted by an innovative interactive video system created by renowned experts in the field of Radiation Oncology and with extensive teaching experience.

*Increase your decision-making confidence by updating your knowledge through this program.*

*Improve your knowledge in the the treatment of pain in cancer patients through this program, where you will find the best didactic material with real clinical cases. Learn here about the latest advances in the specialty to be able to perform a quality medical practice.*



# 02 Objectives

This Postgraduate Certificate aims to facilitate the performance of physicians in the field of Pain and Nutrition in Radiation Oncology.







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*Expand your knowledge with this course  
in which you will find the most complete  
training on the market”*



## General Objective

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- Create a global and updated vision of Pain and Nutrition in Radiation Oncology allowing the student to acquire useful knowledge and, at the same time, to generate interest in expanding the information and discovering its application in daily practice.

*Update your knowledge through the  
Postgraduate Certificate in Pain and  
Nutrition in Radiation Oncology"*

A green graphic element consisting of a horizontal line that turns into a vertical line and then a diagonal line pointing downwards and to the right, resembling a bracket or a callout box.



## Specific Objectives

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- ♦ Review the different types of cancer that warrant radiotherapeutic management and show the specific issues in each case.
- ♦ Create a global and updated vision of the exposed topics that will allow the student to acquire useful knowledge and at the same time, generate interest in expanding the information and discovering its application in their daily practice.
- ♦ Know the radiotherapeutic advances that allow a differential diagnosis to be made, making it possible to precisely define the field of resection, and providing information on prognosis and post-treatment monitoring.
- ♦ Know the general aspects of oncologic pain, its characteristics and main treatment to alleviate it.
- ♦ Understand the causes and consequences of malnutrition in oncology patients, as well as nutritional risk factors.
- ♦ Know the main data on mortality and survival rates caused by malnutrition in cancer patients.
- ♦ Be aware of the main dietary recommendations for cancer patients using radiation therapies.

03

# Course Management

The program's teaching staff includes leading specialists in Pain and Nutrition in Radiation Oncology and other related areas, who bring their years of work experience to this training program. In addition, other specialists of recognized prestige participate in its design and elaboration, completing the program in an interdisciplinary manner.





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*This Postgraduate Certificate offers you the opportunity to train with renowned specialists from prestigious universities, who will help you to update your knowledge in this field"*

## Management



### Dr. Morera López, Rosa María

- ♦ Degree in Medicine and Surgery
- ♦ Doctor of Medicine from the Complutense University of Madrid.
- ♦ Specialist in Oncology Radiotherapy.
- ♦ Master's Degree in Health Services Management and Administration
- ♦ Head of the Radiation Oncology Service at La Paz University Hospital since 2017.
- ♦ Honorary Collaborating Professor in the subject of Radiology and Physical Therapeutics in the Degree of Medicine at the Faculty of Medicine of the UCLM in Ciudad Real
- ♦ Associate Professor in the Onco-Hematology course in the Medicine Degree at the Faculty of Medicine of the UCLM in Ciudad Real
- ♦ Implantation of the HDR Prostate Brachytherapy technique in the Radiation Oncology Department of the G.U.H Ciudad Real in 2013
- ♦ Implementation of the Tomotherapy Unit in the Radiation Oncology Department of the G.U.H Ciudad Real in 2014
- ♦ Participation as Head Researcher and collaborator in a large number of research projects.
- ♦ Editor of several dozen articles in high-impact scientific journals



### Dr. Rodríguez Rodríguez, Isabel

- Degree in Medicine
- Radiotherapy Specialist
- Specialist in Oncology Radiotherapy. La Paz University Hospital Madrid
- Clinical Research Coordinator. Biomedic Foundation of the Ramón y Cajal Hospital until 2007
- Member of the American Brachytherapy Society
- Member of the European School of Oncology
- Member of the European Society for Therapeutic Radiology and Oncology
- Founding member of the Latin American Society of Breast Imaging
- Collaborating researcher in many research projects
- Editor of several dozen articles in high-impact scientific journals



### Dr. Belinchón Olmeda, Belén

- ◆ Degree in Medicine and Surgery from the University of Alcalá de Henares, Madrid
- ◆ Specialist in Radiation Oncology Puerta de Hierro University Hospital, Madrid
- ◆ Diploma of Advanced Studies from the Autonomous University of Madrid.
- ◆ Attending Physician of the Radiation Oncology Service at La Paz University Hospital since 2007.
- ◆ Attending Physician of the Radiation Oncology Service at Ruber International Hospital since 2013.
- ◆ Training clinical residencies in prestigious centers such as The Christie Hospital, Manchester
- ◆ Participation as Head Researcher and collaborator in a large number of research projects.
- ◆ Author of various articles in high impact scientific journals and frequent collaborator in chapters of books and presentations at congresses.

## Coordinators

### Dr. Celada Álvarez, Francisco Javier

- ◆ Adjunct physician of the Radiation Oncology Service
- ◆ La Fe Polytechnic University Hospital, Valencia.

### Dr. Conde Moreno, Antonio José

- ◆ Head of Radiation Oncology Section
- ◆ La Fe Polytechnic University Hospital, Valencia.

### Dr. Gómez Camaño, Antonio

- ◆ Head of Radiation Oncology Service
- ◆ Clinical University Hospital of Santiago de Compostela.

### Dr. Lozano Martín, Eva María

- ◆ Head of Radiation Oncology Service
- ◆ General University Hospital, Ciudad Real. Castilla La Mancha University.

### Dr. Palacios Eito, Amalia

- ◆ Head of Radiation Oncology Service
- ◆ Reina Sofia University Hospital, Córdoba.

### Dr. Romero Fernández, Jesús

- ◆ Head of Radiation Oncology Service
- ◆ Puerto de Hierro University Hospital Majadahonda.



**Dr. Rodríguez Pérez, Aurora**

- ◆ Head of Radiation Oncology Service
- ◆ Ruber International Hospital, Madrid.

**Dr. Rubio Rodríguez, Carmen**

- ◆ Head of Radiation Oncology Service
- ◆ University Hospital H.M. Sanchinarro, Madrid.

**Dr. Samper Ots, Pilar María**

- ◆ Head of Radiation Oncology Service
- ◆ Rey Juan Carlos Hospital, Móstoles.

**Dr. Vallejo Ocaña, Carmen**

- ◆ Head of Radiation Oncology Section
- ◆ Ramón y Cajal University Hospital, Madrid.



# 04

# Structure and Content

The structure of the content has been designed by the best professionals in radiation oncology who work in centers of national reference. These experts are aware of the need for training in the world of medicine in order to advance in the treatment of Pain and Nutrition in Radiation Oncology. That is why they offer this quality training, adapted to new educational technologies, so that health professionals can provide the best medical care, adapting it to the needs of their patients.



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*If you want to know the latest innovations in the treatment of pain in Radiation Oncology, don't think twice about taking this course which will allow you to obtain a qualification from the main private education institution in Spain, TECH”*

## Module 1 Pain and Nutrition in Radiation Oncology

- 1.1. General Information on Oncologic Pain.
  - 1.1.1. Epidemiology.
  - 1.1.2. Prevalence.
  - 1.1.3. Impact of Pain.
  - 1.1.4. Multidimensional Concept of Cancer Pain.
- 1.2. Characterization of Pain.
  - 1.2.1. Types of Oncologic Pain.
  - 1.2.2. Evaluation of Oncologic Pain.
  - 1.2.3. Prognosis of Pain.
  - 1.2.4. Classification.
  - 1.2.5. Diagnostic Algorithm
- 1.3. General Principles of Pharmacological Treatment.
- 1.4. General Principles of Radiotherapy Treatment.
  - 1.4.1. External Radiotherapy.
  - 1.4.2. Dosages and Fractions.
- 1.5. Bisphosphonates.
- 1.6. Radiopharmaceuticals in the Management of Metastatic Bone Pain.
- 1.7. Pain in Long-Term Survivors.
- 1.8. Nutrition and Cancer.
  - 1.8.1. Concept of Malnutrition.
  - 1.8.2. Prevalence of Malnutrition.
  - 1.8.3. Causes and Consequences of Malnutrition in Oncology Patients.
  - 1.8.4. Mortality and Survival.
  - 1.8.5. Nutritional Risk Factors in Oncology Patients.
  - 1.8.6. Objectives of Nutritional Support.
- 1.9. Cachexia.
- 1.10. Initial Nutritional Assessment in a Radiation Oncology Service.
  - 1.10.1. Diagnostic Algorithm
  - 1.10.2. Specific Treatment
  - 1.10.3. General Dietary Recommendations.
  - 1.10.4. Specific Individualized Recommendations.
- 1.11. Nutritional Assessment During Monitoring in a Radiation Oncology Service.



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*It is essential for healthcare professionals to continue with their training throughout their professional career”*

# 05

# Methodology

This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

This teaching system is used in the most prestigious medical schools in the world, and major publications such as the ***New England Journal of Medicine*** have considered it to be one of the most effective.



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*Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization".*

## At TECH we use the Case Method

In a given situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you can experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching potential or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in professional medical practice.



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*Did you know that this method was developed in 1912 at Harvard for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our University is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.



*The physician will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*

At the forefront of world teaching, the Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 250,000 physicians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

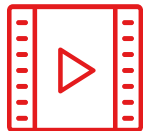
*Re-learning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

In our program, learning is not a linear process, but rather a spiral (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by our learning system is 8.01, according to the highest international standards.



In this program you will have access to the best educational material, prepared with you in mind:



#### Study Material

All the teaching materials are specifically created for the course, by specialists who teach on the course, so that the teaching content is highly specific and precise.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



#### Latest Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



#### Interactive Summaries

We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

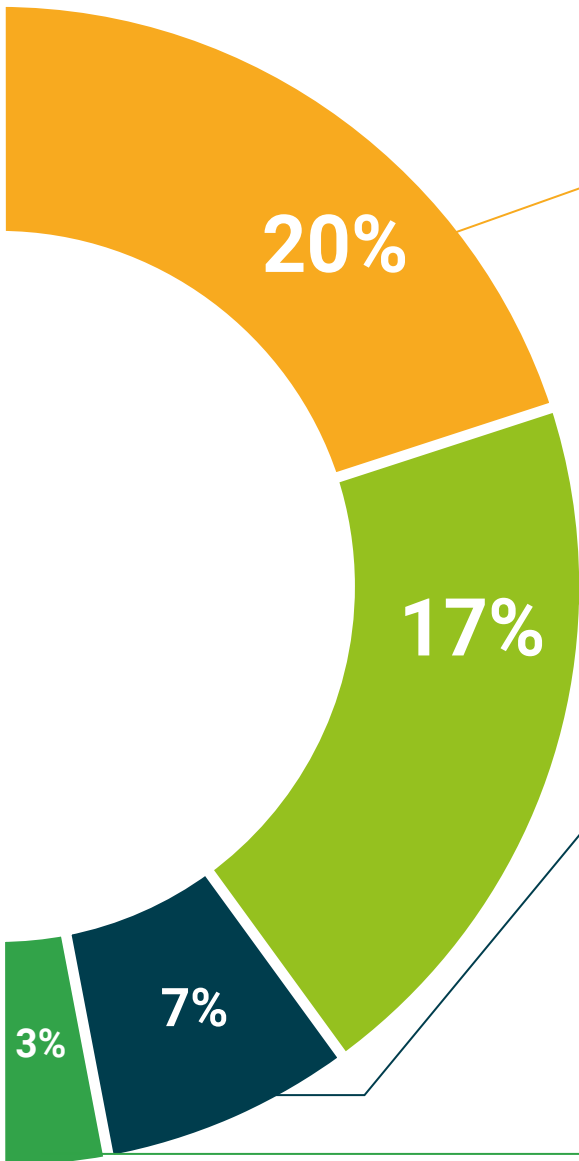
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.





#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Re-Testing

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



#### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence in our difficult future decisions.



#### Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



# 06 Certificate

The **Postgraduate Certificate in Pain and Nutrition in Radiation Oncology** guarantees you, in addition to the most accurate and up-to-date training, access to a Postgraduate Certificate issued by **TECH Technological University**.



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*Successfully complete this training and receive your diploma without the hassle of travel or paperwork”*

This **Postgraduate Certificate in Pain and Nutrition in Radiation Oncology** contains the most complete and up-to-date scientific program on the market.

After students have passed the evaluations, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery\*.

The certificate issued by **TECH Technological University** will specify the qualification obtained through the course, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

**Diploma: Postgraduate Certificate in Pain and Nutrition in Radiation Oncology**

**ECTS: 2**

**Nº Hours: 50**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.



health future  
confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present quality  
development languages  
virtual classroom



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Pain and Nutrition  
in Radiation Oncology

Course Modality: Online

Duration: 2 months.

Endorsed by: TECH Technological University

2 ECTS Credits

Hours 50 hours

# Postgraduate Certificate

## Pain and Nutrition in Radiation Oncology