

# Postgraduate Certificate

## Pain and Nutrition in Radiation Oncology





## Postgraduate Certificate Pain and Nutrition in Radiation Oncology

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Accreditation: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-certificate/pain-nutrition-radiation-oncology](http://www.techtute.com/us/medicine/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 that the doctor is aware of the latest developments in this field. Programs such as this one will allow specialists to provide better patient care.







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*With this Postgraduate Certificate 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.** Its most notable features are:

- ♦ Clinical cases presented by experts in Pain and Nutrition in Radiation Oncology
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and healthcare education on those disciplines that are essential to professional practice.
- ♦ The latest developments in nutrition for oncology patients
- ♦ Its practical exercises where to perform the self-assessment process 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.
- ♦ A 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 Postgraduate Certificate is the best investment you can make when selecting 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 Global University"*

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

Thanks to its multimedia content developed with the latest educational technology, they will allow the professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to prepare for real situations.

The design of this program is based on Problem-Based Learning, through which the physician must try to solve the different professional practice situations that arise throughout the academic 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 Postgraduate Certificate.*

*Improve your knowledge in 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 Postgraduate Certificate in which you will find the most complete program on the market"*



### General Objective

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- Develop a holistic and up-to-date vision of Pain and Nutrition in Radiation Oncology, allowing the student to acquire useful knowledge and generate interest in discovering its application in their daily clinical practice.





## Specific Objectives

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- ♦ Understand the causes and consequences of malnutrition in Oncology patients, as well as nutritional risk factors.

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



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 professional experience to this program. In addition, other specialists of recognized prestige participate in its design and elaboration, completing the program in an interdisciplinary manner.





A close-up photograph showing a pair of hands gently holding the back of a person's head. The person has grey hair, and their skin appears aged. The hands are positioned to support the neck and head. The image is partially obscured by a diagonal blue and white graphic element.

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

## International Guest Director

Awarded by the Royal College of Radiologists of the United Kingdom for his BCRM presentation, Christopher Nutting is a prestigious **Oncologist** specialized in the areas of **Radiotherapy** and **Chemotherapy**. He has an extensive professional background of more than 30 years, where he has been part of reference health institutions such as the Royal Marsden Hospital or the Institute of Cancer Research in London.

In his firm commitment to optimize the quality of life of his patients, he contributed to the installation of **Magnetic Resonance Imaging** machines for the first time in Great Britain, incorporating a scanner and Linear Accelerator to locate tumors with greater precision. In addition, his clinical research has contributed to the development of several advances in the oncological field. His most outstanding contribution is **Intensity-Modulated Radiation Therapy**, a technique that improves the efficacy of cancer treatments by directing radiation to a specific target so as not to damage nearby healthy tissue.

In turn, he has performed more than 350 clinical studies and scientific publications that have facilitated the understanding of malignant tumors. For example, its *"PARSPOT"* trial provided relevant clinical data on the efficacy of Linear Accelerator Intensity Modulated Radiation Therapy in terms of local carcinoma control and patient survival. Thanks to these results, the UK Department of Health established practices to optimize both the accuracy and effectiveness of Radiotherapy in the treatment of **Head and Neck Cancer**.

He is a regular speaker at **Scientific Congresses**, where he shares his solid knowledge in subjects such as Radiotherapy Technology or innovative therapies for the approach of people with Dysphagia. In this way, he helps medical professionals to stay at the forefront of advances in these fields in order to provide excellent services.



## Dr. Nutting, Christopher

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- Medical Director and Oncology Consultant at The Royal Marsden Hospital in London, United Kingdom
  - Chairman of the Oncology Section at the Royal Society of Medicine, London, United Kingdom
  - Clinical Head of Head and Neck Cancer at the Department of Health and Social Care, United Kingdom
  - Consultant Oncologist at The Harley Street Clinic in London, United Kingdom
  - Chairman of the National Cancer Research Institute in London, United Kingdom
  - President of the Association of British Oncology in London, United Kingdom
  - Senior Research Fellow at the National Institute for Health and Care Research, United Kingdom
  - PhD in Medicine and Cellular Pathology from the University of London
- Member of:
- UK College of Physicians
  - UK College of Radiologists



*Thanks to TECH you  
will be able to learn with  
the best professionals  
in the world”.*

## Management



### Dr. Morera López, Rosa María

- ♦ Head of the Radiation Oncology Service at La Paz University Hospital since 2017.
- ♦ Doctor of Medicine from the Complutense University of Madrid.
- ♦ Specialist in Radiation Oncology
- ♦ Master's Degree in Health Services Management and Administration
- ♦ Implementation of the HDR Breast Brachytherapy technique in the Radiation Oncology Department of the G.U.H Ciudad Real in 2013
- ♦ 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
- ♦ Honorary Collaborating Professor in the subject of Radiology and Physical Therapeutics taught in the 3rd year of the Degree of Medicine at the Faculty of Medicine of the UCLM in Ciudad Real
- ♦ Associate Professor in the Onco-Hematology course taught in the 4th year of the Medicine Degree at the Faculty of Medicine of the UCLM in Ciudad Real
- ♦ Participation as Principal Investigator and collaborator in a large number of research projects.
- ♦ Editor of several dozen articles in high-impact scientific journals





### **Dr. Rodríguez Rodríguez, Isabel**

- ♦ Specialist in Radiation Oncology La Paz University Hospital. Madrid
- ♦ Degree in Medicine. Specialist in Radiotherapy
- ♦ 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
- ♦ Participation as a collaborating researcher in many research projects
- ♦ Editor of several dozen articles in high-impact scientific journals



### **Dr. Belinchón Olmeda, Belén**

- ♦ Specialist in Radiation Oncology La Paz University Hospital. Madrid
- ♦ Specialist in Radiation Oncology Ruber International Hospital Madrid
- ♦ Doctorate in Medicine from the Autonomous University Madrid
- ♦ Participation as a collaborating researcher in many research projects
- ♦ Editor of several dozen articles in high-impact scientific journals
- ♦ Teaching collaborator for residents of Radiation Oncology La Paz University Hospital. Madrid
- ♦ Member of the Multidisciplinary Unit of Cardio-Onco-Hematology (U.H La Paz)
- ♦ Member of the Sarcoma Group of the Spanish Society of Radiation Oncology (SEOR)
- ♦ Member of the Spanish Group of Breast Radiation Oncology (GEORM).

## Professors

### Dr. Romero Fernández, Jesús

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

### Dr. Samper Ots, Pilar María

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

### Dr. Vallejo Ocaña, Carmen

- ♦ Head of the Radiation Oncology at Ramón y Cajal University Hospital Madrid
- ♦ Degree in Medicine and Surgery

### Dr. Gómez Camaño, Antonio

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

### Dr. Rodríguez Pérez, Aurora

- ♦ Degree in Medicine and Surgery
- ♦ Head of Radiation Oncology Service Ruber International Hospital Madrid, Spain

### Dr. Rubio Rodríguez, Carmen

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





**Dr. Celada Álvarez, Francisco Javier**

- ♦ Specialist - Resident tutor
- ♦ Radiation Oncology Service, La Fe Valencia University and Polytechnic Hospital

**Dr. Conde Moreno, Antonio José**

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

**Dr. Palacios Eito, Amalia**

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

**Dr. Lozano Martín, Eva María**

- ♦ Head of the Radiation Oncology Service at from Ciudad Real General University Hospital

“ *TECH's objective? Helping you to achieve your professional growth* ”

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 medical instruction in order to advance knowledge of Pain and Nutrition in Radiation Oncology. That is why they offer this quality program, adapted to new educational technologies, so that health professionals can provide the best medical care, adapting it to patient needs.



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*If you want to know about the latest developments in Pain and Nutrition in Radiation Oncology, do not hesitate to take this Postgraduate Certificate”*

## 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 specialization throughout their professional career”*

# 05 Methodology

This program offers students a different way of learning. Our methodology uses a cyclical learning approach: Relearning.

This teaching system is used, for example, 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.





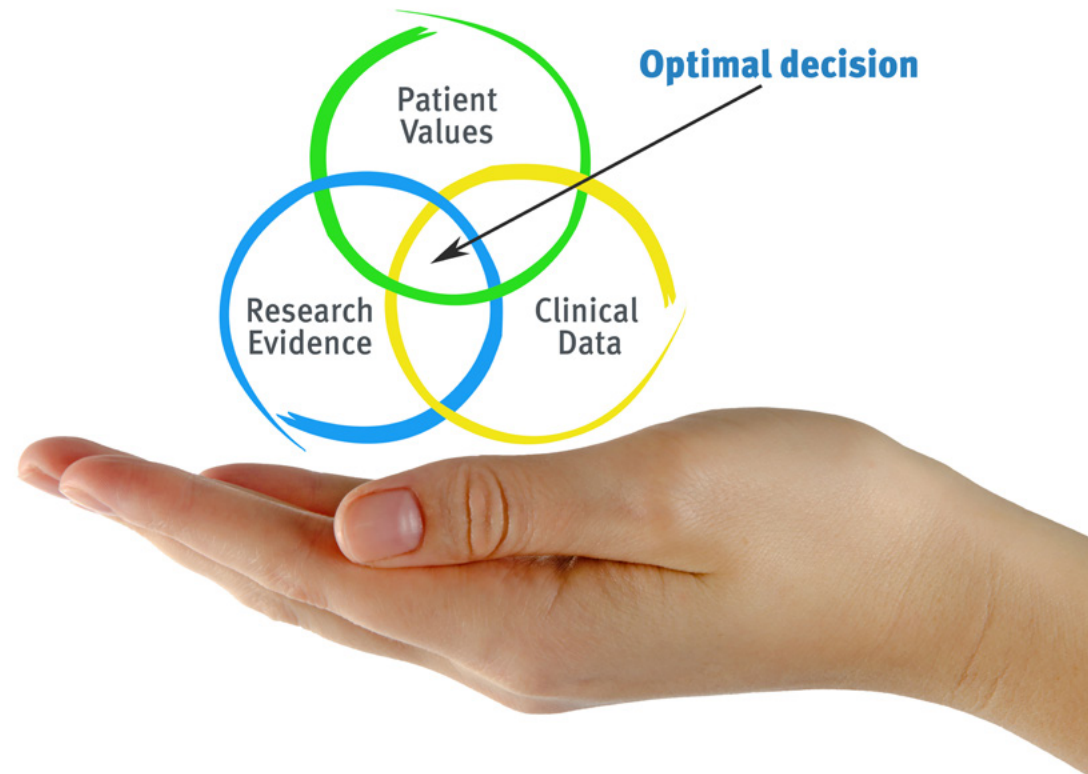
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization”*

## At TECH, we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you will 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 power 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 the physician’s professional 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 achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into 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.



## Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

*Professionals will learn through real cases and by resolving 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 Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been prepared with unprecedented success in all clinical specialties regardless of surgical load. Our educational methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*Relearning 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 (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

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





This program offers the best educational material, prepared with professionals in mind:



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then adapted in audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high-quality pieces in each and every one of the materials that are made available to the student.



#### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### Interactive Summaries

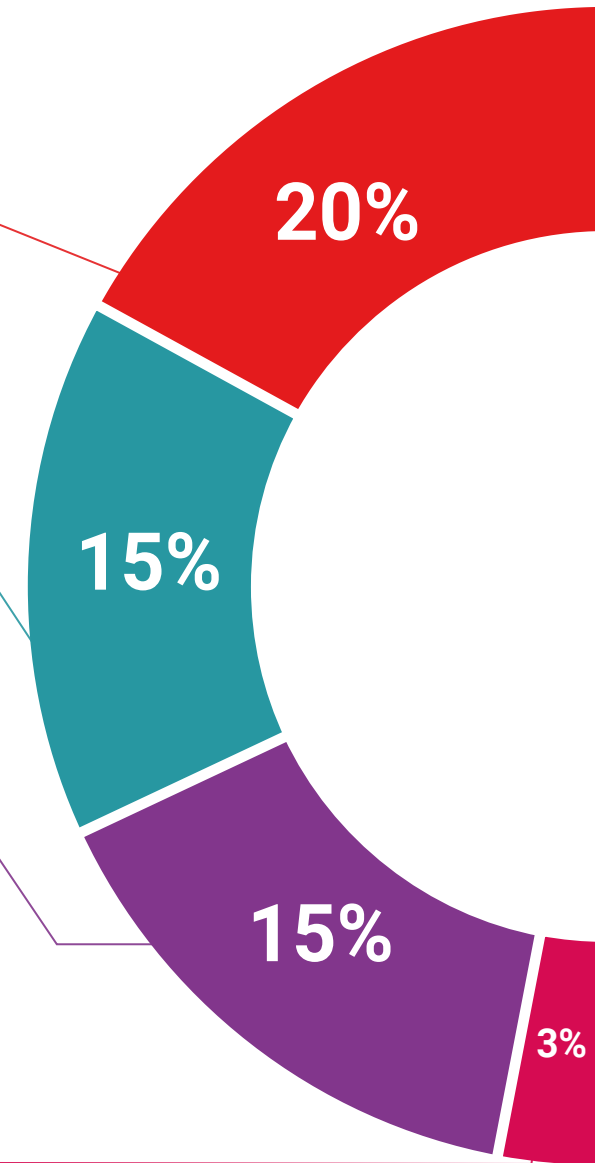
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

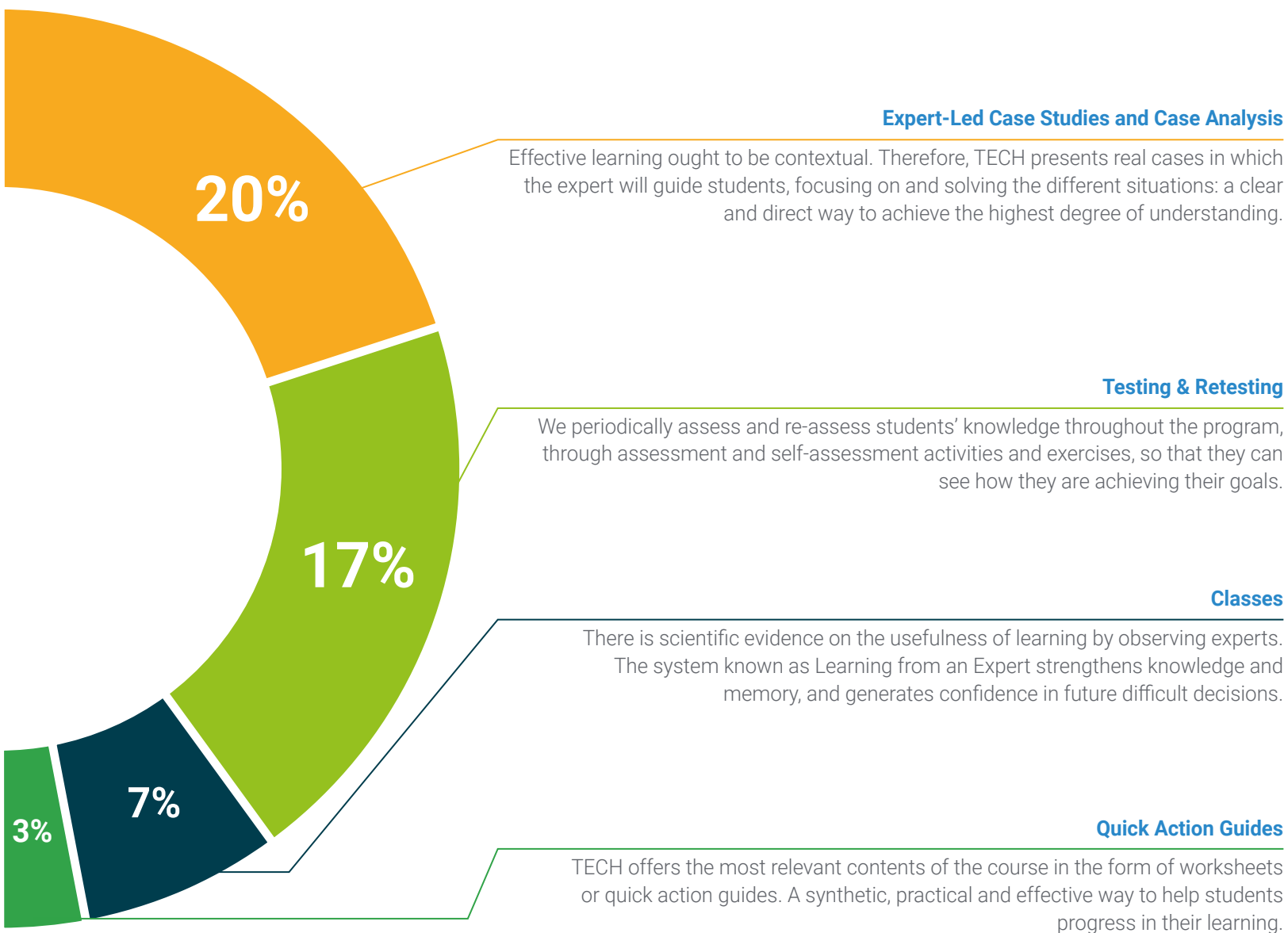
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





# 06 Certificate

The Postgraduate Certificate in Pain and Nutrition on Radiation Oncology guarantees, in addition to the most accurate and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.





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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”*



This private qualification will allow you to obtain a diploma for the **Postgraduate Certificate in Pain and Nutrition in Radiation Oncology** endorsed by TECH Global University, the world's largest online university.

**TECH Global University**, is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** private qualification, is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

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

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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



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

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