

# Postgraduate Certificate

## Targeted Radioligand Therapy



## Postgraduate Certificate Targeted Radioligand Therapy

Course Modality: **Online**

Duration: **6 weeks**

Certificate: **TECH Technological University**

Official N° of Hours: **150 h.**

Website: [www.techtute.com/medicine/postgraduate-certificate/targeted-radioligand-therapy](http://www.techtute.com/medicine/postgraduate-certificate/targeted-radioligand-therapy)

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# 01

# Introduction

Oncology is an area that is undergoing major transformations in recent years. New treatments and diagnostic methods have emerged, ensuring that these types of patients receive the best care. Targeted Radioligand Therapy is one such area that has emerged in oncology. This new procedure ensures more effective treatment and more accurate detection of some types of cancer, making it a discipline that is increasingly in demand by large hospital services. Thus, specializing in this type of therapy can be a great professional advancement, making this Postgraduate Certificate perfect for all those seeking to update their knowledge in Nuclear Medicine and obtain significant progress in their careers.





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*Targeted Radioligand Therapy is an area full of possibilities. Enroll now and get access to the best Nuclear Medicine and Oncology services in the country"*



One of the most sensitive areas in healthcare is oncology. This field includes numerous pathologies that require difficult treatments to counteract their devastating effects. Fortunately, more and more effective techniques are emerging to detect and alleviate these diseases.

Targeted Radioligand Therapy is one of them. This therapy encompasses a series of very effective procedures for which specialized knowledge is required. Its effectiveness has made the best Nuclear Medicine and oncology services want to have experts in this field, so that they can provide patients with the best possible treatments.

For this reason, this Postgraduate Certificate in Targeted Radioligand Therapy is perfect for all those physicians who wish to advance professionally or update their knowledge in this field, since it offers them a series of new competencies focused on this type of Nuclear Medicine treatment.

Thus, following an innovative 100% online teaching methodology, students will be able to combine their studies with their careers and personal lives, since this Postgraduate Certificate adapts to the circumstances of each student. In this way, they will be able to specialize in this field, learning issues such as the application of this type of therapy to pheochromocytomas, neuroendocrine tumors, hepatocarcinomas or lymphomas.

This **Postgraduate Certificate in Targeted Radioligand Therapy** contains the most complete and up-to-date scientific program on the market. Its most notable features are:

- ◆ The development of case studies presented by experts in Oncology and Nuclear Medicine
- ◆ 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
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ Its special emphasis on innovative methodologies
- ◆ 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



*Continue specializing in Nuclear Medicine with this Postgraduate Certificate in Targeted Radioligand Therapy"*

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*Deepen your knowledge in the area of Nuclear Medicine and apply the best oncological treatments thanks to this Postgraduate Certificate”*

*Enroll now and access the best education in the field of Nuclear Medicine.*

*This is the Postgraduate Certificate you were looking for. Don't wait any longer and enroll.*

The program's teaching staff includes professionals from the sector who contribute their work experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

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 immersive training programmed to train in real situations.

This program is designed around Problem Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

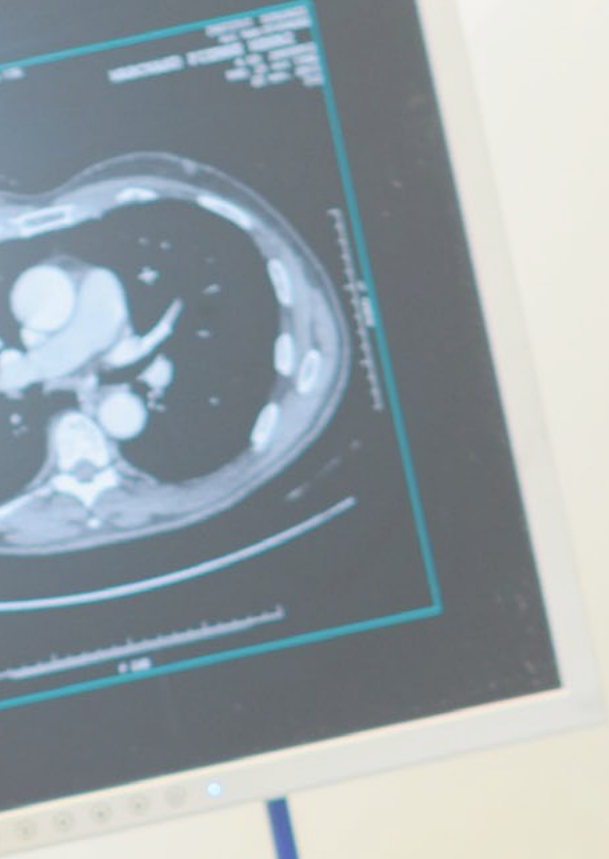


# 02 Objectives

The main goal of this Postgraduate Certificate in Targeted Radioligand Therapy is to offer its students new knowledge in this field so that they can update their skills as doctors specialized in Nuclear Medicine and can also progress professionally. To this end, this Postgraduate Certificate offers them high-level content, experienced faculty and an innovative learning process through which students will be able to develop competencies that they can apply to their careers.







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*Targeted Radioligand Therapy is the present and the future of Nuclear Medicine. Specialize now and gain access to numerous career opportunities"*



## General Objectives

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- ◆ Update the specialist in Nuclear Medicine
- ◆ Perform and interpret functional tests in an integrated and sequential manner
- ◆ Achieve diagnostic guidance for patients
- ◆ Assist in deciding the best therapeutic strategy, including radiometabolic therapy, for each patient
- ◆ Learn about the new therapies of Nuclear Medicine







## Specific Objectives

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- ♦ Master the basics of targeted radioligand therapy
- ♦ Know the applications of this type of therapy
- ♦ Present the diagnostic protocols, patient selection, therapeutic protocols, care of the patient treated with metabolic therapy, responses obtained, side effects, its positioning compared to other therapies and possible lines of research for each of the different pathologies in which it is used

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*Nuclear Medicine is an area in constant expansion. Become an expert in the field and achieve all your goals”*

# 03

## Course Management

In order for students to obtain all the specialized competencies in this area, TECH has ensured that the best teaching staff is in charge of directing the entire learning process. Thus, this faculty is a specialist in Nuclear Medicine and targeted radioligand therapy, and has extensive experience in this field. For this reason, students who complete this Postgraduate Certificate will be able to apply everything they have learned directly in their professional positions, since all the knowledge that the teachers will transmit to them has been extracted from medical practice.





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*The best teachers will be at your disposal so that you can learn everything about Targeted Radioligand Therapy”*



## Management



### Dr. Mitjavila, Mercedes

- ♦ Head of Nuclear Medicine Service Puerta de Hierro University Hospital Majadahonda, Madrid
- ♦ Project Manager of the Nuclear Medicine Unit in the Diagnostic Imaging Department of the Alcorcón Foundation University Hospital
- ♦ Head of Service of Nuclear Medicine of the Puerta de Hierro Hospital, Majadahonda. Competitive examination BOCM
- ♦ Degree in Medicine and General Surgery from the University of Alcalá de Henares
- ♦ MIR in Nuclear Medicine Specialist by the MIR System
- ♦ PhD in Medicine and General Surgery from the University of Alcalá de Henares
- ♦ Interim Physician of the Nuclear Medicine Service of the Ramón y Cajal Hospital
- ♦ Interim Physician in the Nuclear Medicine Unit at Getafe University Hospital



## Professors

### Dr. Cardona, Jorge

- ◆ Specialist physician in the Nuclear Medicine Service of the University Hospital Responsible for the areas of Endocrinology, metabolic treatments, radioguided surgery, PET-CT in endocrinology (FDG, DOPA) and PET/CT in prostate cancer (Choline and PSMA)
- ◆ Degree in Medicine and Surgery. Complutense University of Madrid
- ◆ Diploma of Advanced Studies at the Complutense University of Madrid, obtained with the work "Use of intraoperative portable gamma camera in breast sentinel"
- ◆ Doctor of Medicine. Doctoral thesis at the Department of Radiology and Physical Medicine of the Complutense University of Madrid
- ◆ Professor of the Nuclear Medicine module at the Professional Training Center Puerta de Hierro
- ◆ Coordinator of the course "Clinical Sessions on Nuclear Medicine" at the Puerta de Hierro Hospital in Majadahonda

04

# Structure and Content

This Postgraduate Certificate in Targeted Radioligand Therapy consists of a specialized module in which students will learn about this type of procedure applied to bone metastases, lymphomas or hepatocarcinomas, among many other oncologic pathologies. Thus, these contents have been designed by real experts in the field, so that students can obtain skills and competencies directly from the best specialists and from the best syllabus.





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*This syllabus will make you a great expert in Targeted Radioligand Therapy"*



## Module 1. Targeted Radioligand Therapy

- 1.1. Teragnosis
  - 1.1.1. Clinical and Therapeutic Implications
- 1.2. Thyroid
  - 1.2.1. Hyperthyroidism
  - 1.2.2. Differentiated Thyroid Carcinoma
  - 1.2.3. Goiter
- 1.3. Neuroendocrine, Gastroenteropancreatic and Other Tumors: Radiolabeled Peptides
  - 1.3.1. Indications
  - 1.3.2. Administration
- 1.4. Pheochromocytoma and Paragangliomas: <sup>131</sup>I-MIBG
  - 1.4.1. Indications and Patient Selection
  - 1.4.2. Administration Protocols
  - 1.4.3. Results
- 1.5. Bone Metastases
  - 1.5.1. Pathophysiology of Bone Metastases
  - 1.5.2. Basis of Radiometabolic Therapy
  - 1.5.3. Radiopharmaceuticals Used: Indications and Results
- 1.6. Selective Internal Radiation Therapy (SIRT): Labeled Microspheres
  - 1.6.1. Basis of Therapy with Radiolabeled Microspheres
  - 1.6.2. Available Devices: Differential Characteristics
  - 1.6.3. Calculation of the Activity to be Administered and Dosimetric Assessment according to the Device
  - 1.6.4. Hepatocellular Carcinoma: Application and Results
  - 1.6.5. Hepatic Metastases: Application and Results in Colorectal Carcinoma, Neuroendocrine and Other Tumors
  - 1.6.6. Contributions of SIRT to Liver Surgery
  - 1.6.7. Potentially Resectable Patient
  - 1.6.8. Hepatic Lobe Hypertrophy







- 1.7. Synoviorthesis
  - 1.7.1. Pathophysiological Basis of Treatment
  - 1.7.2. Radiopharmaceuticals Used
  - 1.7.3. Indications and Clinical Experience in Different Locations and Pathologies: Rheumatoid Arthritis, Other Arthritis, Vellonodular Synovitis
  - 1.7.4. Applications in Pediatrics: Hemophilic Patient
- 1.8. Metastatic Prostate Cancer:  $^{177}\text{Lu}$ -PSMA
  - 1.8.1. Pathophysiological Bases
  - 1.8.2. Patient Selection
  - 1.8.3. Management Protocols and Results
- 1.9. Lymphomas: Radioimmunotherapy
  - 1.9.1. Pathophysiological Bases
  - 1.9.2. Indications
  - 1.9.3. Administration Protocols
- 1.10. Future
  - 1.10.1. Search for New Ligands and Radioisotopes
  - 1.10.2. Translational Research
  - 1.10.3. Research Lines



*Upon completion of this Postgraduate Certificate you will be a reputable specialist in Nuclear Medicine"*

# 05

# Methodology

This training program provides you with 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 evaluate 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

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

This 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, a real revolution with respect to the mere study and analysis of cases.



*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 trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical 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 applied to the 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

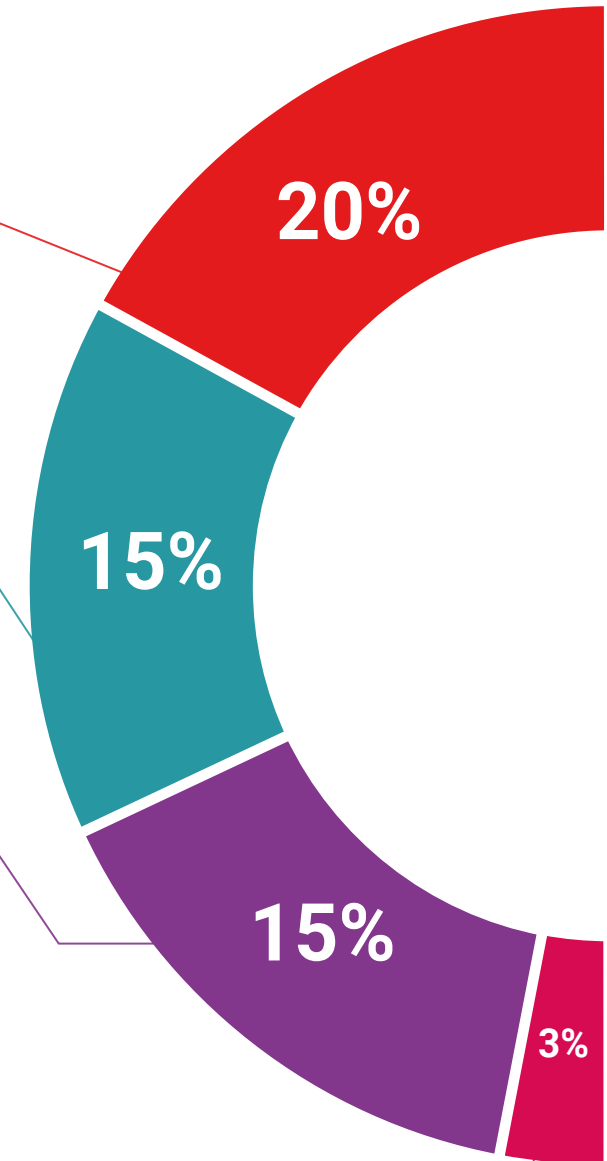
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

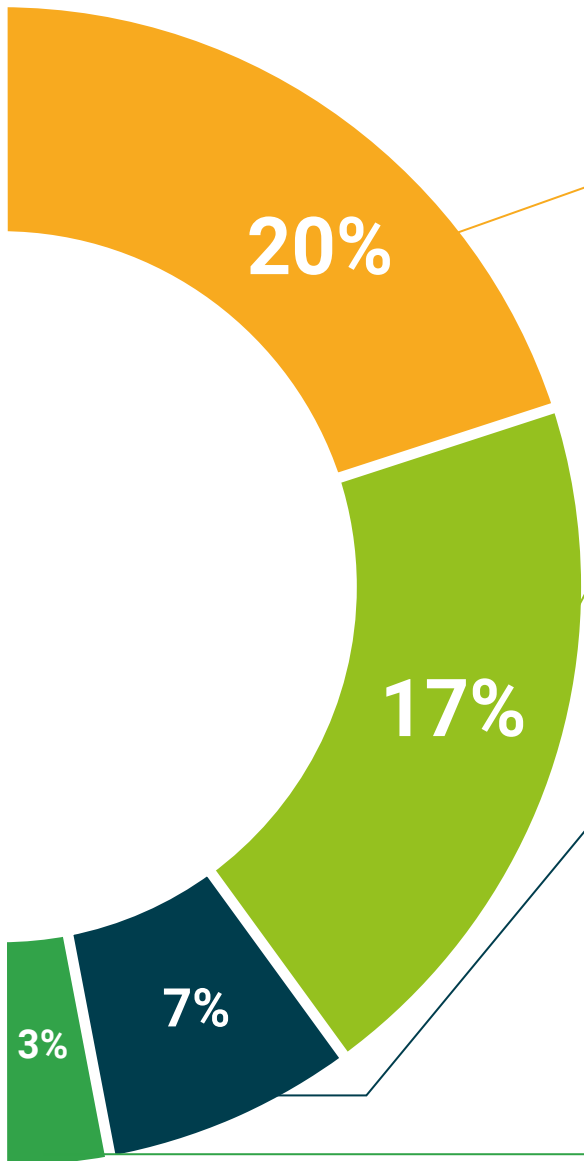
This exclusive multimedia content presentation training Exclusive system was awarded by Microsoft as a "European Success Story".



#### 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.





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

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

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



#### Classes

There is scientific evidence on the usefulness of learning by observing experts: The system termed Learning from an Expert strengthens knowledge and recall capacity, and generates confidence in the face of difficult decisions in the future.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.





# 06 Certificate

The Postgraduate Certificate in Targeted Radioligand Therapy guarantees, in addition to the most rigorous and up-to-date training, access to a certificate issued by TECH Technological University.





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*Successfully complete this training program  
and receive your university certificate  
without travel or laborious paperwork”*

This **Postgraduate Certificate in Targeted Radioligand Therapy** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery\*.

The certificate issued by TECH Technological University will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Certificate in Targeted Radioligand Therapy**

Official N° of Hours: 150 h.



\*Apostille Convention. In the event that the student wishes to have their paper certificate 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  
online training  
development languages  
virtual classroom



**Postgraduate**  
**Certificate**  
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Therapy

Course Modality: Online

Duration: 6 weeks

Certificate: TECH Technological University

Official N° of Hours: 150 h.



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