

Postgraduate Certificate

Radiotherapy Treatment of Breast Tumors



Postgraduate Certificate Radiotherapy Treatment of Breast Tumors

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

Website: www.techtute.com/us/medicine/postgraduate-certificate/radiotherapy-treatment-breast-tumors

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01

Introduction

Lung and breast tumors are those which affect the most people worldwide. That's why research in the field of radiology is so important to be able to offer the most effective treatments to alleviate the symptoms and treat the different types of cancer. In this sense, it is important that oncologists undergo constant training in order to know the latest advances in the field of radiotherapy and be able to apply them to their patients. Training like this Postgraduate Certificate in Radiotherapy Treatment of Breast Tumors will give the physician the necessary tools to improve their diagnosis and treatment.





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New scenarios in radiotherapy drive us to propose new specialization programs that meet the real needs of experienced professionals, so that they can incorporate new advances into their daily practice”

The specialty of radiotherapy oncology is one of the biggest technological advances that occurs each year, allowing us to treat the different types of cancer in a more effective way. That is why radiotherapy is seen as one of the most effective ways for treating cancer, whether it be the only treatment or combined with others. In fact, it is estimated that more than half of cancer patients receive radiation treatment.

The fact that continuous advances are being made in this field makes it necessary for oncologists to be constantly trained and to be aware of the new developments that will enable them to offer the most personalized and effective treatment to each patient.

In order to update their knowledge, there are courses such as this one, specialized in the radiotherapeutic management of breast tumors, in which the specialist will be able to learn, in a simple way and from any device with internet connection, about the latest research in the field and offer better care to their patients.

In the case of this training, the professional will gain in-depth knowledge on the radiotherapy treatment and the best indications in each case and the studies conducted in this field. But on this occasion, the focus will be on breast tumors and thoracic tumors, of which lung tumor is one of the most common in the world. Therefore, don't miss this opportunity to complete your training with one of the most comprehensive educational programs in the market. It will allow you to complement your knowledge in the field of oncology with a detailed and updated review of the most relevant technical and conceptual advances in the field.

This **Postgraduate Certificate in Radiation Treatment of Breast Tumors** is the most comprehensive and up-to-date scientific program on the market. The most important features of the course are:

- ♦ Clinical cases presented by experts in Radiation Treatment in ENT Tumors.
- ♦ 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.
- ♦ Diagnostic-therapeutic developments on assessment, diagnosis, and intervention in ENT tumors.
- ♦ 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.
- ♦ With special emphasis on evidence-based medicine and research methodologies in ENT tumors.
- ♦ All of this will be complemented by 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 your training with this Postgraduate Certificate and learn the newest advances in radiotherapy in the treatment of breast tumors. It will help you to carry out your professional work in a more effective way, offering the best treatment to your patients"



This Postgraduate Certificate may be the best investment you can make when choosing a refresher program for two reasons: in addition to updating your knowledge in Radiotherapy Treatment of Breast Tumors, you will obtain a Postgraduate Certificate from TECH Global University"

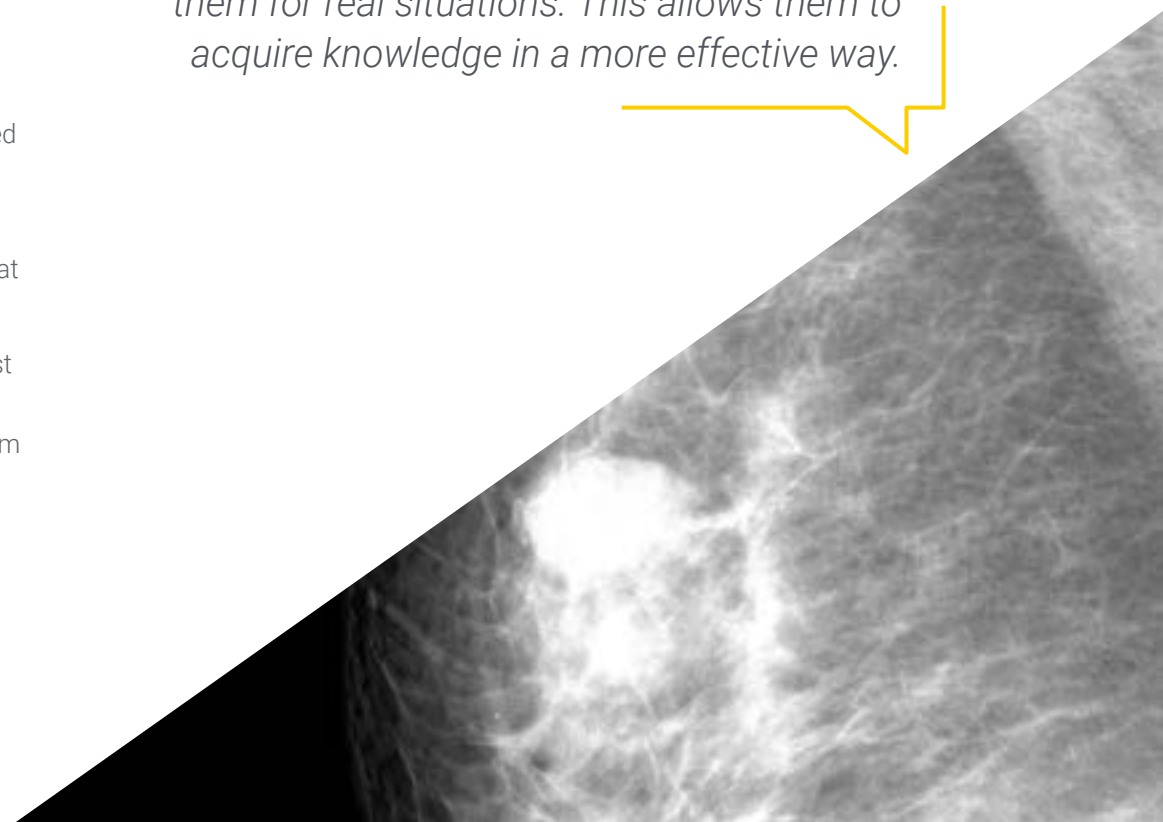
The teaching staff includes professionals from the field of Radiotherapy Treatment of Breast Tumors, who bring their experience to this training program, as well as renowned specialists from leading scientific societies.

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.

This program is designed around Problem Based Learning, whereby the physician must try to solve the different professional practice situations that arise during the course. For this purpose, the physician will be assisted by an innovative interactive video system developed by renowned experts in the field of Radiotherapy Treatment of Thoracic Tumors with extensive teaching experience.

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

The multimedia content will help the specialist to obtain a contextual learning which will train them for real situations. This allows them to acquire knowledge in a more effective way.



02 Objectives

This Postgraduate Certificate aims to facilitate the performance of physicians in the field of Radiotherapy Treatment of Breast Tumors.



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If you want to improve your patient care, don't think twice and take this Postgraduate Certificate which will facilitate your radiotherapy management in your professional practice”



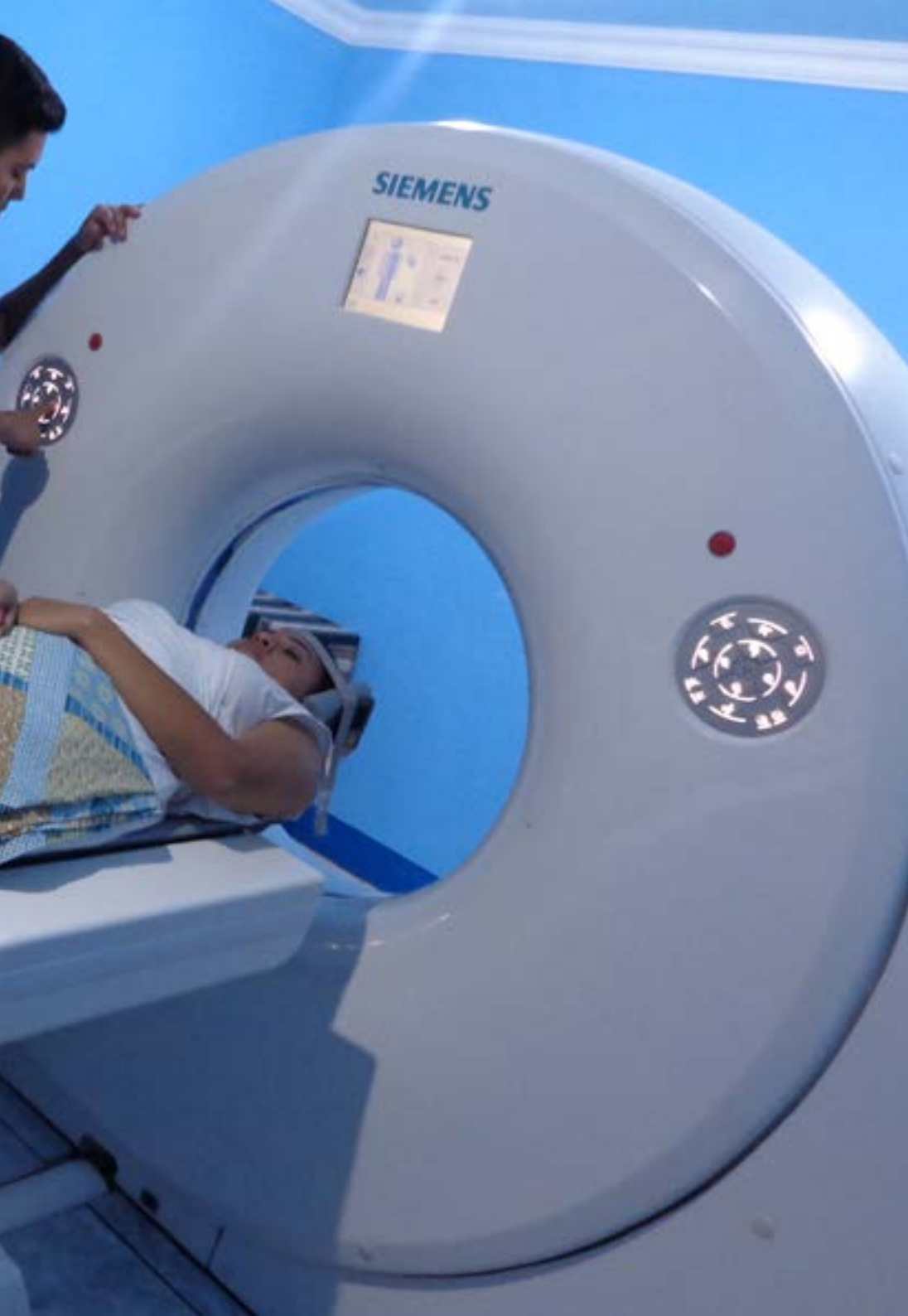
General Objective

- Create a global and updated vision of Radiotherapy Treatment of Thoracic Tumors, 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.



Learn the basis of radiotherapy in breast tumors through this Postgraduate Certificate, allowing you to be up-to-date on the newest advances in the field"





Specific Objectives

- ♦ Analyze how the advances of the last decades in both diagnosis and treatment of cancer have managed to increase survival.
- ♦ Review the different types of cancer that warrant radiotherapeutic management and show the specific issues for each tumor.
- ♦ 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.
- ♦ Learn the basics of radiotherapy, as well as the different techniques available and their efficacy in order to know the place of each in the management of different breast tumors.
- ♦ 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 best indications for radiotherapy treatment of different breast tumors.

03

Course Management

The program's teaching staff includes leading specialists in radiotherapy treatment of breast tumors 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"

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

- 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

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

Management



Dr. Morera López, Rosa María

- Degree in Medicine and General Surgery from the Complutense University of Madrid
- Specialist in Radiation Oncology 12 de Octubre University Hospital
- PhD in Medicine from the Complutense University of Madrid
- Master's Degree in Administration and Management of Health Services, (2013-2013) Pompeu Fabra University
- Head of the Radiation Oncology Service at La Paz University Hospital since 2016.
- Head of the Radiation Oncology Service at Ciudad Real General University Hospital (2012-2015)
- Associate Professor in the Medicine Degree at the Faculty of Medicine of the UCLM in Ciudad Real (2013- 2015)
- Faculty Specialist in the Radiation Oncology Service at Ramón y Cajal University Hospital (2000-2012)
- Coordinator of the Tomotherapy Unit "La Milagrosa" Clinic IMO Group (2006- 2009)
- Founding member of SBRT Spanish Group Coordinator of SBRT Working Group of the Spanish Society of Radiation Oncology
- Spokesperson of the Spanish National Commission of Radiation Oncology
- Member of the National Executive Committee of the Spanish Association Against Cancer (AECC)
- 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 Specialist in Radiation Oncology
- Specialist in the Radiation Oncology at La Paz University Hospital. Madrid
- Clinical Teaching Collaborator at the Autonomous University of Madrid
- Resident tutor in Radiation Oncology at La Paz University Hospital
- Coordinator of the Brachytherapy Unit of the Radiation Oncology Department of La Paz University Hospital
- Collaborator in basic and clinical research in the Spanish pharmaceutical industry (Pharmamar).
- Coordinator of the National Alliance for the Prevention of Colon and Rectal Cancer (2016-2018)
- Coordinator in Clinical Research of the Biomedical Foundation at Ramón y Cajal University 2002-2006
- Participation as Head Researcher and collaborator in a large number of clinical 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.

Professors

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 radiotherapy treatment of breast tumors. 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.



“

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 radiotherapy in breast tumors in your daily medical practice"

Module 1. Update on Radiotherapy Treatment in Breast Tumors

- 1.1. Introduction Infiltrating Breast Cancer
 - 1.1.1. Etiology
 - 1.1.2. Epidemiology
 - 1.1.3. Advantages of Screening: Overdiagnosis and Cost Overruns
 - 1.1.4. Clinical and Pathological Staging
 - 1.1.5. Radiological Diagnosis
 - 1.1.6. Histological Diagnosis: Molecular Subtypes
 - 1.1.7. Prognosis
- 1.2. General Information on Radiotherapeutic Treatment of Breast Cancer
 - 1.2.1. Simulation Process: Positioning and Immobilization Systems
 - 1.2.2. Image Acquisition and Volume Delimitation
 - 1.2.3. Techniques: 3D-CRT, Evidence of IMRT/VMAT Use in Breast Cancer
 - 1.2.4. Dosage, Fractionation and Constraints
 - 1.2.5. Breath Hold
 - 1.2.6. Image-Guided Radiation Therapy (IGRT)
 - 1.2.7. Radiotherapy in the Presence of Cardiac Devices
- 1.3. Indications for Radiotherapy on the Breast After Conservative Treatment in Infiltrating Breast Cancer
 - 1.3.1. Exclusive Preoperative Radiotherapy
 - 1.3.2. Adjuvant Radiotherapy After Conservative Surgery and/or Primary Systemic Therapy
 - 1.3.3. Evidence in Subdivisions
 - 1.3.4. Better Conservative Treatment than Mastectomy?
 - 1.3.5. Radiotherapy according to Molecular Subtype?
- 1.4. Indications for Radiotherapy after Mastectomy in Infiltrating Breast Cancer
 - 1.4.1. Radiotherapy Post Mastectomy According to Type of Surgery
 - 1.4.2. Radiotherapy Post Mastectomy in N0 Cancer Radiotherapy according to Molecular Subtype?
 - 1.4.3. Radiotherapy Post Mastectomy in Complete Response After Primary Systemic Treatment
 - 1.4.4. Rib Wall Hypofractionation
 - 1.4.5. Inflammatory Carcinoma
- 1.5. Radiotherapy and Postmastectomy Breast Reconstruction
 - 1.5.1. Types of Surgery (Radical Mastectomy, Skin Sparing, CAP Preservation...)
 - 1.5.2. Types of Reconstruction and Advantages/Disadvantages of RT before or After RT
 - 1.5.3. Hypofractionation in Reconstructed Patient
- 1.6. Management of the Axilla for the Radiation Oncologist Radiotherapy Indication in Chains
 - 1.6.1. Nodal Staging in Diagnosis and Sentinel Node Detection Methods
 - 1.6.2. RT After Lymphadenectomy and After Positive Sentinel Gland at the Time of Surgery
 - 1.6.3. RT After Sentinel Node Before/After Primary Systemic Therapy
 - 1.6.4. Hypofractionation in Chains
 - 1.6.5. Risk of Plexopathy
- 1.7. Boost: Indications and Radiotherapy Techniques
 - 1.7.1. Justification for the Implementation of the Boost
 - 1.7.2. Indications After Conservative Surgery, Oncoplastic Surgery and Mastectomy
 - 1.7.3. External Radiotherapy Techniques Simultaneous Integrated Boost (SIB)
 - 1.7.4. Brachytherapy
 - 1.7.5. Intraoperative Radiotherapy (IORT)
- 1.8. Partial Breast Irradiation: Indications and Radiotherapy Techniques
 - 1.8.1. Justification for Performing Magnetic Particle Imaging (MPI)
 - 1.8.2. Preoperative Radiotherapy
 - 1.8.3. External Radiotherapy RTC3D Intensity-Modulated Radiation Therapy (IMRT) SBRT
 - 1.8.4. Brachytherapy
 - 1.8.5. Intraoperative Radiotherapy (IORT)
- 1.9. Radiotherapy in Non-Invasive Carcinoma
 - 1.9.1. Introduction
 - 1.9.1.1. Etiology
 - 1.9.1.2. Epidemiology
 - 1.9.1.3. Advantages of Screening
 - 1.9.2. Indications After Conservative Surgery and Evidence After Mastectomy
 - 1.9.3. Genetic platform in Ductal Carcinoma In Situ (DCIS)

- 1.10. Radiotherapy and Systemic Treatment
 - 1.10.1. Concomitant Radiotherapy/Chemotherapy
 - 1.10.1.1. Neoadjuvant.
 - 1.10.1.2. Inoperable
 - 1.10.1.3. Adjuvant
 - 1.10.2. Sequence with Systemic Treatment : Is it Possible to Administer Radiotherapy Before Chemotherapy After Surgery?
 - 1.10.3. Radiotherapy and Hormonal Therapy (Tamoxifen, Aromatase Inhibitors): Evidence for their Sequential Administration: is Concomitance Better?
 - 1.10.4. Chemotherapy Followed by Radiotherapy Without Surgery?
 - 1.10.5. Association Radiotherapy and Anti-Her2 Treatment (Trastuzumab and Pertuzumab)
 - 1.10.6. Possible Toxicities of the Association
- 1.11. Evaluation of the Response Follow up Treatment of Locoregional Recurrences Reirradiation
- 1.12. Locoregional Radiotherapy in Metastatic Breast Cancer Treatment of Oligometastases Stereotactic Body Radiotherapy (SBRT) Radiotherapy and Immunotherapy
- 1.13. Male Breast Cancer and Other Breast Tumors: Paget's Disease; Phyllodes; Primary Lymphoma

“*Learn the latest advances in procedures in the field of radiotherapy in breast tumors from leading professionals*”



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

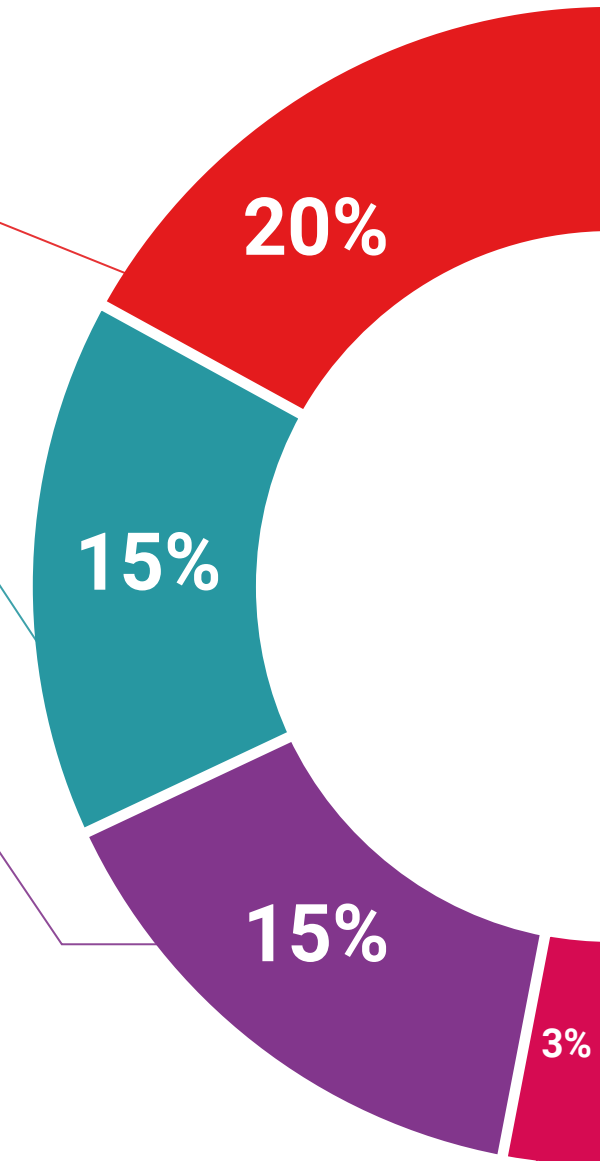
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

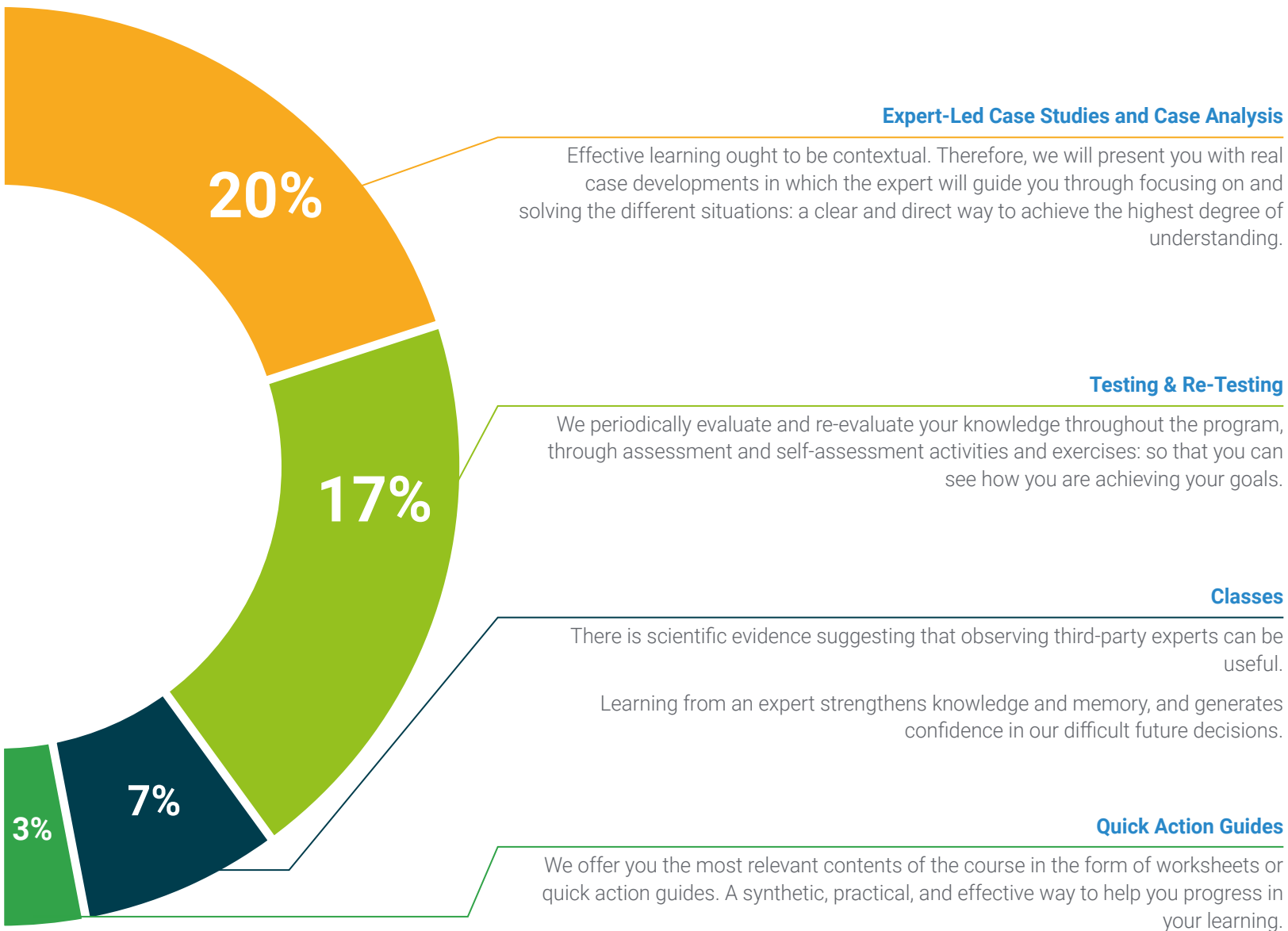
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



Additional Reading

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





06 Certificate

The **Postgraduate Certificate in Radiotherapy Treatment of Breast Tumors** guarantees you, in addition to the most rigorous and updated specialization, access to a **Postgraduate Certificate** issued by **TECH Global University**.



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

This program will allow you to obtain your **Postgraduate Certificate in Radiation Treatment of Breast Tumors** 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** title 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 Systemic Lupus Erythematosus**

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
development languages
virtual classroom



Postgraduate Certificate Radiotherapy Treatment of Breast Tumors

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

Postgraduate Certificate

Radiotherapy Treatment of Breast Tumors

