Postgraduate Diploma

Radiotherapy Treatment of Tumors of the Central Nervous System and ENT

tech technological university

Postgraduate Diploma

Radiotherapy Treatment of Tumors of the Central Nervous System and ENT

Course Modality: **Online**

Duration: **6 months.**

Certificate: **TECH Technological University**

17 ECTS Credits

Teaching Hours: **425 hours.**

Website: www.techtitute.com/medicine/postgraduate-diploma/postgraduate-diploma-radiotherapy-treatment-tumors-central-nervous-system-ent

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01
Introduction

The specialty of Radiation Oncology is one of the most demanded therapeutic techniques in the field of oncology, as well as one that undergoes the most technological development year after year. The management of tumors of the central nervous system and ENT is complex and requires professionals to master knowledge of the latest procedures and advances in the field. Being up-to-date is essential if we want to provide our patients with the best care possible. This program allows you to update your knowlegde in a practical way, 100% online and making the most of the latest educational technology.

Update your knowledge of the latest procedures in the management of tumors of the central nervous system with this specialist program"

Advances in the study and treatment of tumors of the Central Nervous System are becoming more and more widespread. However, there is still a long way to go for us to increase the survival rates of patients with this type of cancer.

Tumors of the head and neck, also known as ENT, are some of the least common. However, their scarcity doesn't mean that we should invest fewer resources into researching them, since advances in this area would lead to increased survival rate among patients affected by this type of cancer.

But as well as having the necessary technological advances to treat patients, is is equally as important that healthcare professionals have the ability to make a proper diagnosis from the very beginning. Therefore, it is essential that they have all the information and updated training to provide personalized and effective care to their patients.

In this Postgraduate Diploma we delve into the knowledge of radiotherapy in patients with tumors of the central nervous system and ENT, with the possible effects that such treatment with radiotherapy can cause. In this way, medical professionals will update their knowledge of the different types of tumors of the Central Nervous System and ENT.

Another of the highlights of this course is the development of knowledge of pain and malnutrition in oncology patients.

In short, this Postgraduate Diploma provides oncology professionals with the keys for the use of the main advances in radiation treatment of tumors of the Central Nervous System and ENT which will help them to evolve in their profession and to keep up to date with recent research in this field of oncology.

This **Postgraduate Diploma in Radiation Treatment of Tumors of the Central Nervous System and ENT** contains the most comprehensive and up-to-date scientific program on the market. The most important features of the program include:

- Development of more than 75 clinical cases presented by experts in Radiation Oncology.

- The graphic, schematic and eminently practical contents of which they are composed provide scientific and practical information on the disciplines that are essential for professional practice.

- Diagnostic-therapeutic developments on assessment, diagnosis and intervention in tumors of the central nervous system and ENT.

- It contains practical exercises where the self-evaluation process can be carried out to improve learning.

- Clinical and diagnostic imaging and testing iconography.

- Algorithm-based interactive learning system for decision-making in the presented clinical situations.

- With special emphasis on evidence-based medicine and research methodologies in Radiation Oncology.

- 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.

Improve your clinical skills through this program in Radiotherapy Treatment of Tumors of the Central Nervous System and ENT"

This Postgraduate Diploma 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 Tumors of the Central Nervous System and ENT, you will obtain a Postgraduate Diploma from TECH Technological University"
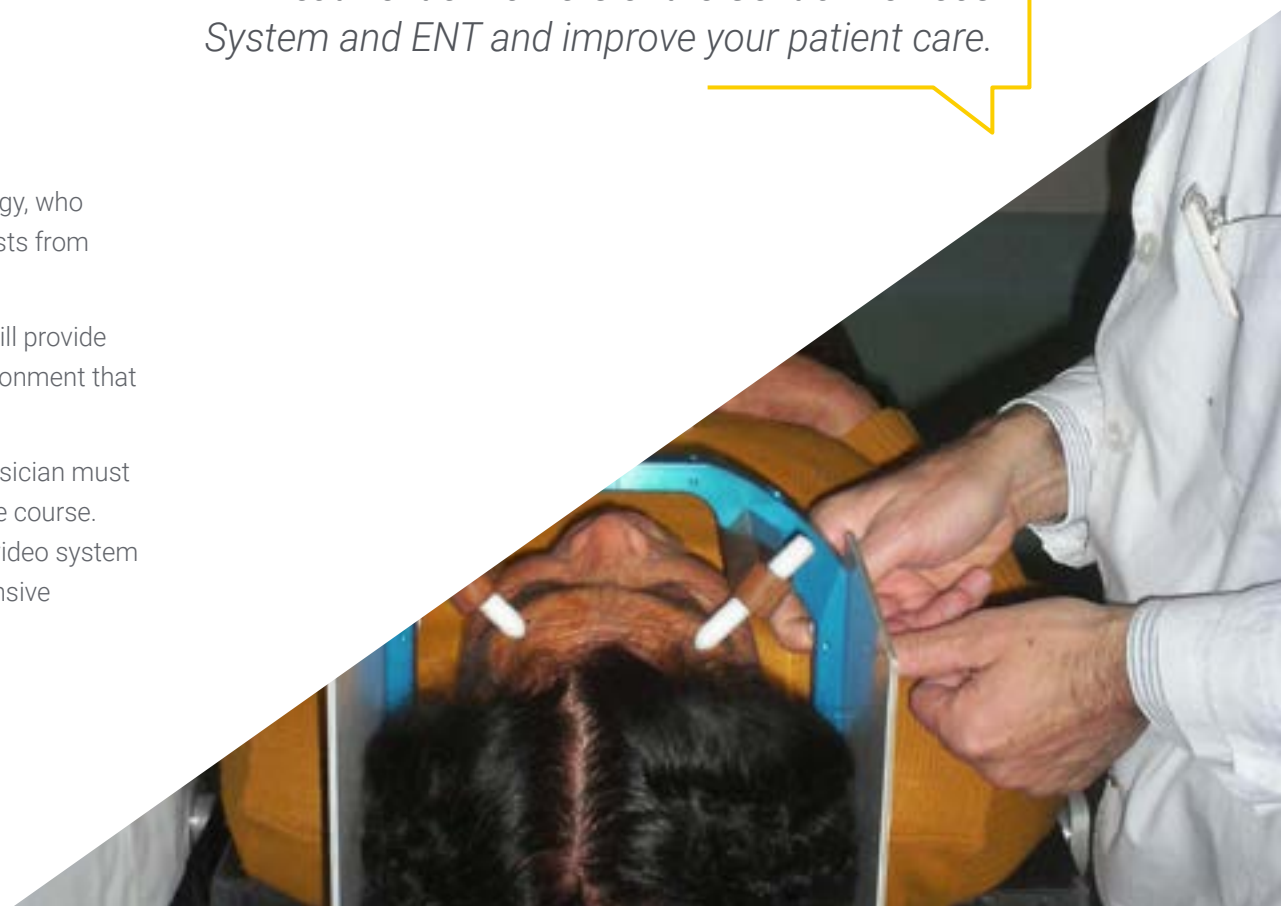
*Increase your confidence in decision making by updating your knowledge through this program.*

Make the most of the opportunity to learn about the latest advances in Radiotherapy Treatment of Tumors of the Central Nervous System and ENT and improve your patient care.

The teaching staff includes professionals from the field of 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.

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 Radiation Oncology with extensive teaching experience.
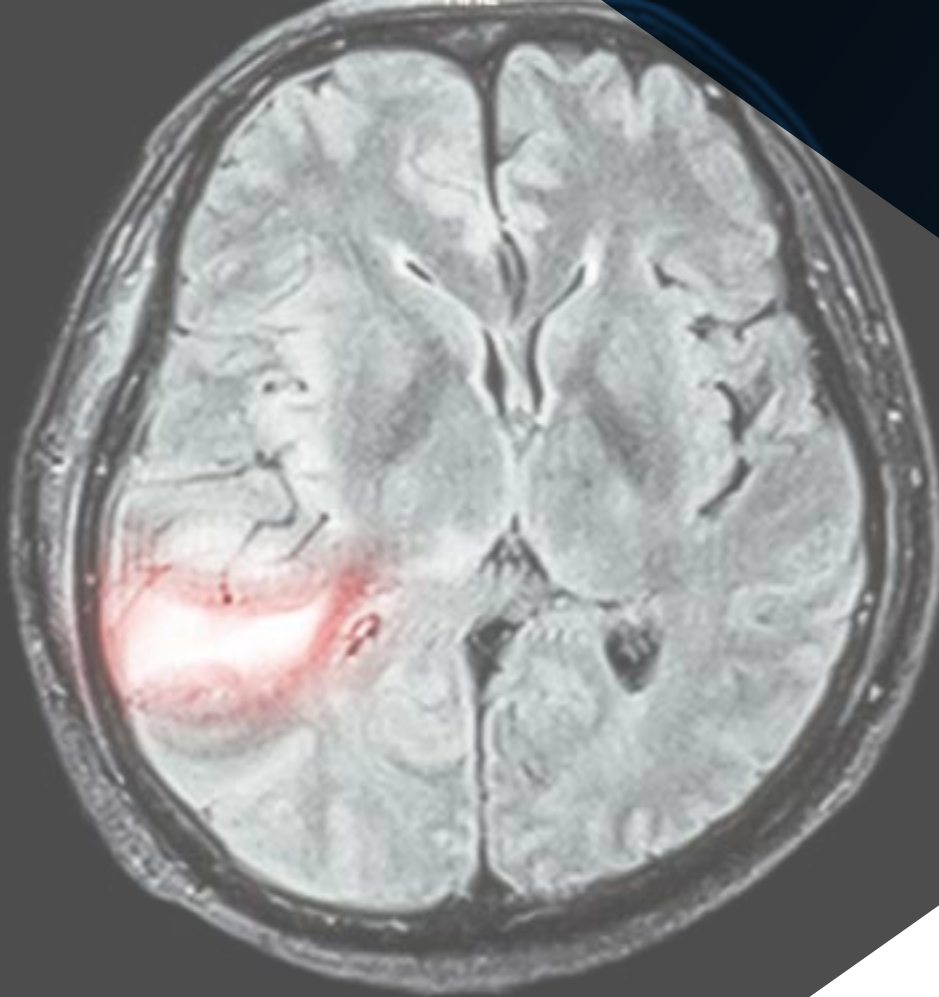
02
Objectives

This Postgraduate Diploma aims to facilitate the performance of physicians in the field of Radiotherapy Treatment of Tumors of the Central Nervous System.
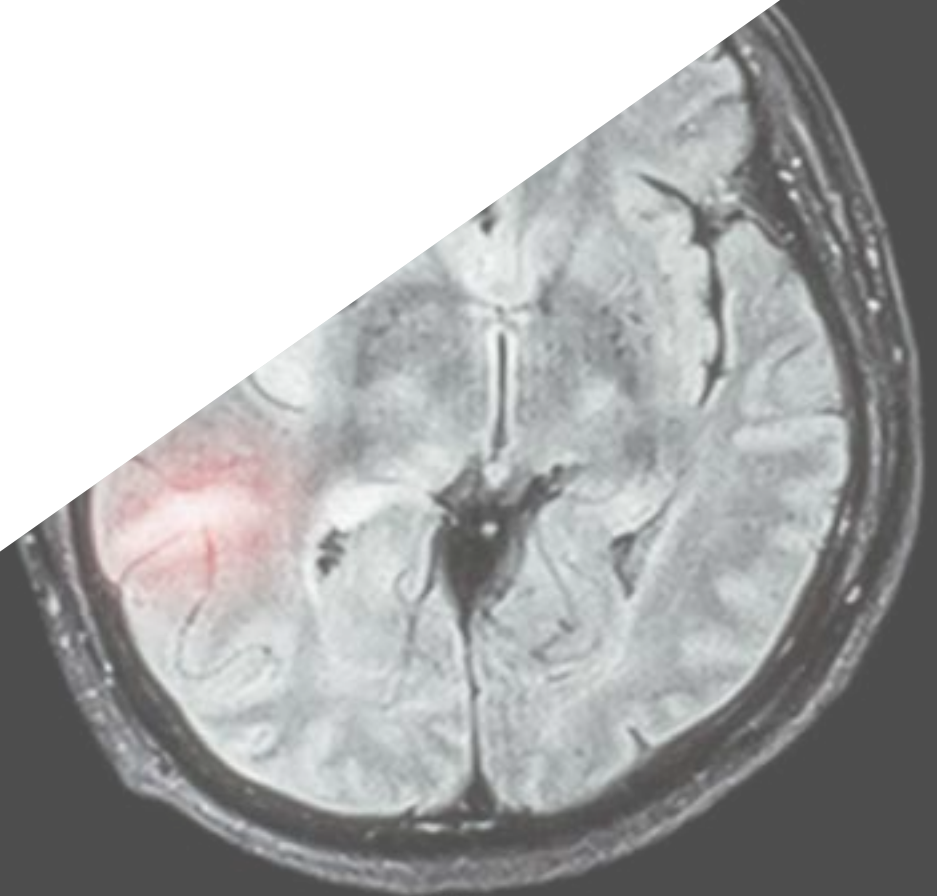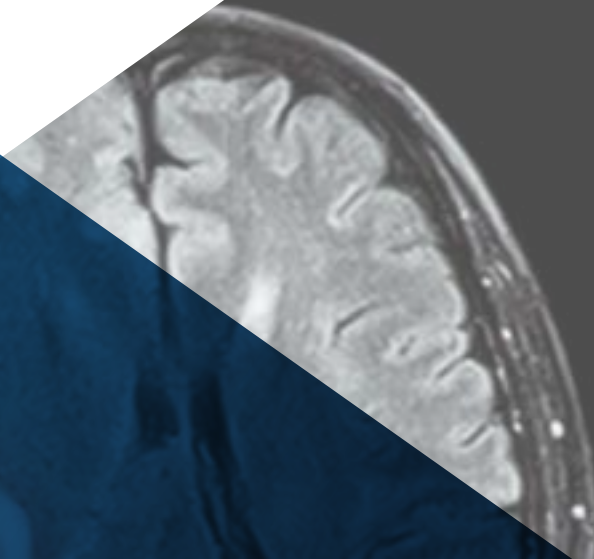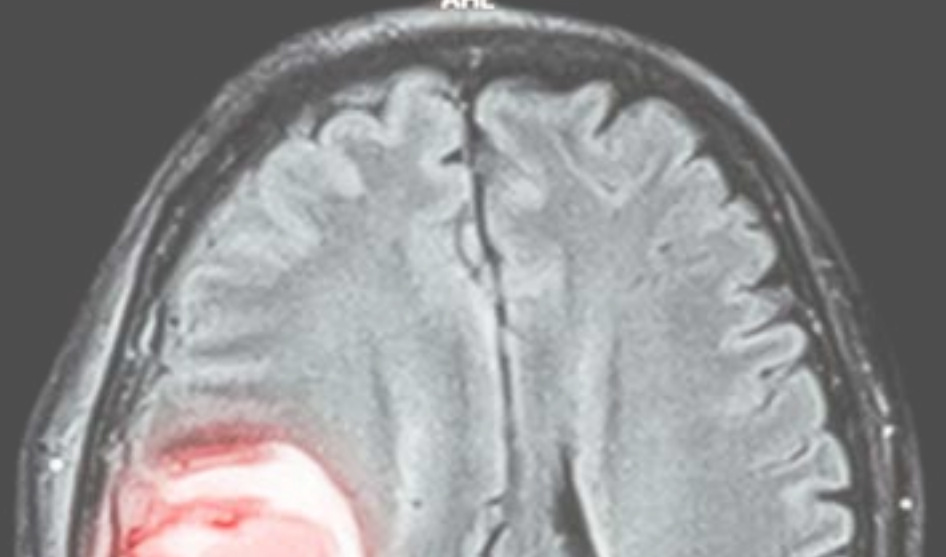
Make the most of this Postgraduate Diploma and update your knowledge, broaden your training and obtain a certified qualification from TECH Technological University"

General Objective

• Create a global and updated vision of Radiotherapy Treatment of Tumors of the Central Nervous System, allowing the student to acquire useful knowledge and, at the same time, to generate interest in discovering its application in daily practice.

Learn about the latest advances in radiation oncology and complement your specialist skills in the field of radiotherapy treatment of tumors of the central nervous system"

Specific Objectives

* Analyze how the advances of the last decades in both diagnosis and treatment of cancer have managed to increase survival rates.

* 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 central nervous system 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.

* Understand the causes and consequences of malnutrition in oncology patients, as well as nutritional risk factors.

* Know the best indications for radiotherapy treatment of different tumors of the central nervous system.

* Learn the basics of radiotherapy, as well as the different techniques available and their efficacy in order to know the role of each one in the management of different ENT tumors.

03

Course Management

The program's teaching staff includes leading specialists in radiotherapy treatment of tumors of the central nervous system 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.

This Postgraduate Diploma is the best opportunity you could have to complete your training with the best professionals in the field"

Management

Morera López, Rosa María

* Degree in Medicine and General Surgery from the Complutense University of Madrid.
* Specialist in Radiation Oncology University Hospital 12 de Octubre.
* 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.

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.

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. This experts are aware of the need for training in the world of medicine in order to advance in radiotherapy treatment of tumors of the central nervous system. 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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It includes clinical cases to bring the program content as close as possible to the reality of medical practice"

Module 1. Basis of Radiotherapy Treatment Radiobiology

1.1. Biological Effects of Ionizing Radiations
    1.1.1. DNA Damage
    1.1.2. Non-Clonal Effects
1.2. Dose Fractionation
    1.2.1. Linear-Quadratic Model
    1.2.2. Time Factor in Radiotherapy
    1.2.3. Altered Subdivisions
1.3. Oxygen Effect and Tumor Hypoxia
1.4. Radiobiology of Brachytherapy
1.5. Effects of Irradiation on Healthy Tissues
1.6. Combination of Irradiation with Drugs
1.7. Predictive Assays of Response to Radiotherapy
1.8. Radiobiology of Re-Irradiation
1.9. Effects of Irradiation on the Embryo and Fetus
1.10. Radiation-Induced Carcinogenesis

Module 2. Update of Radiotherapy Treatment in Central Nervous System Tumors (Adults)

2.1. Low-Grade Gliomas.
2.2. High-Grade Gliomas.
2.3. Benign Brain Tumors.
    2.3.1. Meningiomas
    2.3.2. Vestibular Schwannoma
    2.3.3. Neurinoma
2.4. Pituitary Tumors
    2.4.1. Non-Functioning Adenomas.
    2.4.2. Prolactinoma
    2.4.3. GH-Producing Adenoma.
    2.4.4. Cushing's Disease.
    2.4.5. TSH-Secreting Adenomas, GnRH-Secreting Adenomas.
    2.4.6. Pituitary Carcinomas

2.5. Spinal Cord Tumors.
    2.5.1. Astrocytoma
    2.5.2. Ependymoma
    2.5.3. Meningioma
    2.5.4. Chordoma
    2.5.5. Chondrosarcoma
    2.5.6. Miscellaneous Spinal Tumors.
    2.5.7. Spinal Cord Compression
    2.5.8. Medulloblastoma
    2.5.9. Craniopharyngioma
2.6. Orbital, Ocular and Optic Nerve Tumors.
    2.6.1. Rhabdomyosarcoma
    2.6.2. Pineal Gland Tumors.
    2.6.3. Orbital Lymphoma
    2.6.4. Ocular Melanoma
    2.6.5. Ocular Metastases
    2.6.6. Optic Nerve Glioma.
    2.6.7. Optic Nerve Meningioma.
2.7. Primary Cerebral Lymphoma.
2.8. Cerebral Metastases.
2.9. Arteriovenous Malformations

Module 3. Update on Radiotherapeutic Treatment of ENT Tumors

3.1. Oral Cavity.
    3.1.1. Lip.
    3.1.2. Tongue
    3.1.3. Floor of Mouth.
    3.1.4. Gum.
    3.1.5. Hard Palate.
    3.1.6. Retromolar Trigone
    3.1.7. Jugal Mucosa

Module 4. Pain and Nutrition in Radiation Oncology

05
Methodology

This training 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.

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 the physician's professional practice.

"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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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 training, 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:
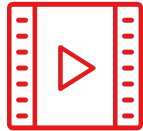
Study Material

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.

20%

15%

15%

3%

20%

17%

7%

3%
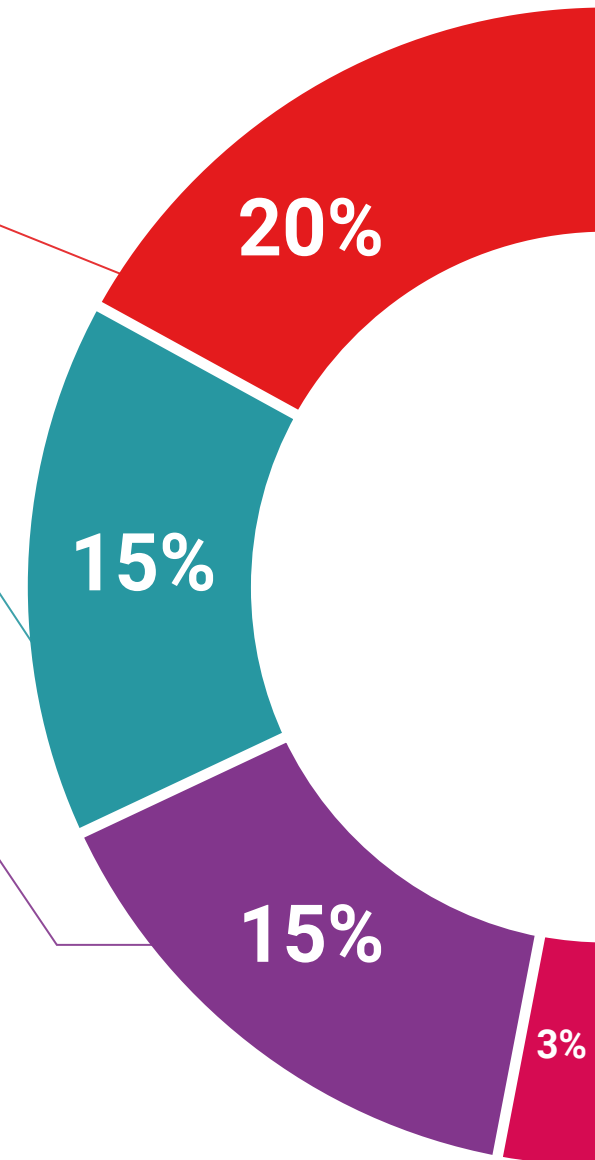
Expert-Led Case Studies and Case Analysis

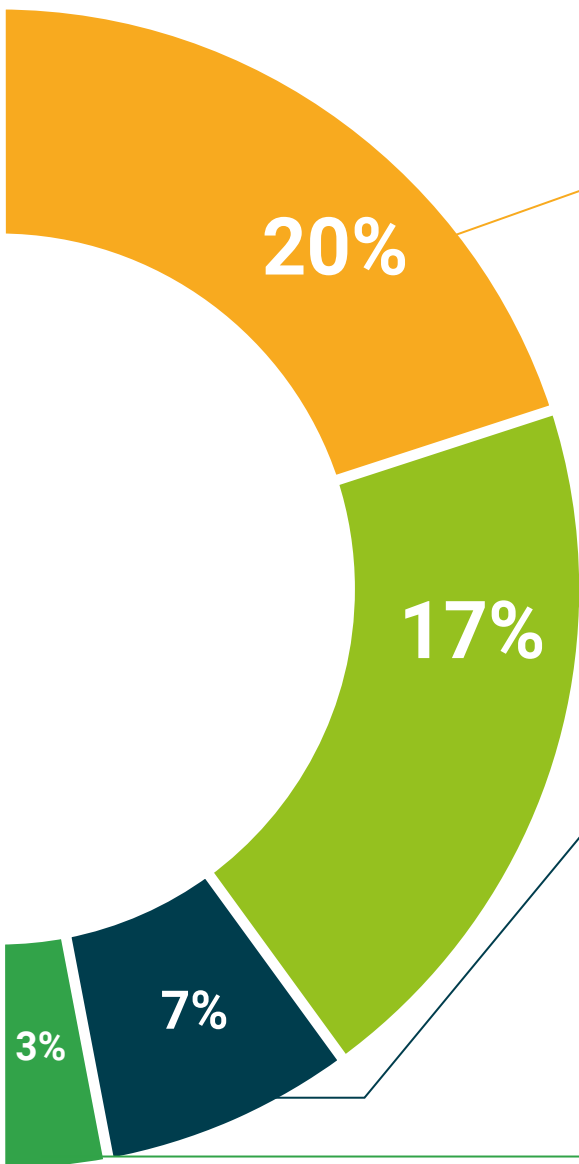Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.

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.

Certificate

The **Postgraduate Diploma in Radiotherapy Treatment of Tumors of the Central Nervous System and ENT** guarantees you, in addition to the most rigorous and up-to-date training, access to a Postgraduate Diploma issued by **TECH Technological University.**

Successfully complete this specialisation and receive your university degree without travel or laborious paperwork"

This **Postgraduate Diploma in Radiotherapy Treatment of Tumors of the Central Nervous System and ENT** contains the most comprehensive and up-to-date scientific program on the market.
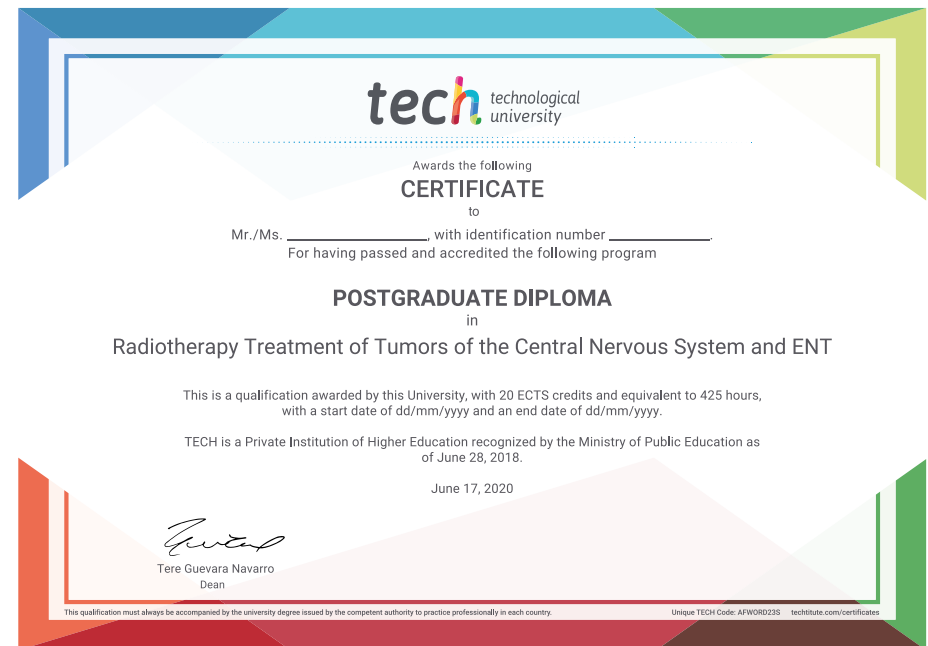
After the student has passed the evaluations, they will receive their corresponding **Postgraduate Diploma** issued by TECH Technological University via tracked delivery*.

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

Title: **Postgraduate Diploma in Radiotherapy Treatment of Tumors of the Central Nervous System and ENT**

ECTS: **17**

Official Number of Hours: **425**

tech technological university

Awards the following
CERTIFICATE
to

Mr./Ms. _____, with identification number _____.
For having passed and accredited the following program

POSTGRADUATE DIPLOMA
in
Radiotherapy Treatment of Tumors of the Central Nervous System and ENT

This is a qualification awarded by this University, with 20 ECTS credits and equivalent to 425 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country.   Unique TECH Code: AFWORD23S   techtitute.com/certificates

*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.

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Postgraduate Diploma

Radiotherapy Treatment
of Tumors of the
Central Nervous System
and ENT

Course Modality: **Online**
Duration: **6 months.**
Certificate: **TECH Technological University**
17 ECTS Credits
Teaching Hours: **425 hours.**

Postgraduate Diploma

Radiotherapy Treatment of Tumors of the Central Nervous System and ENT

tech *technological university*