



# Postgraduate Certificate

# Brain Tumors in Pediatric Patients

Course Modality: Online
Duration: 2 months

Endorsed by: TECH Technological University

5 ECTS credits
Hours: 125

Website: www.techtitute.com/medicine/postgraduate-certificate/brain-tumors-pediatric-patients

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Certificate





# tech 06 | Introduction

In this way, we analyze the diagnostic and therapeutic management of both primary and metastatic brain tumors. We will discuss current technologies used for the resection of gliomas, such as awake craniotomy, fluorescence-guided surgery, neuronavigation, neuroendoscopy, among many others.

Another advance that we will see extensively comes from the hand of genomics whose advances have made it possible to learn that more than half of pediatric brain tumors have genetic abnormalities that could help in diagnosis or treatment, which is reflected in the recent decision of the World Health Organization to classify such tumors by genetic alterations, rather than by tumor type. Thus, precision medicine for pediatric brain tumors is now a reality, and possibly in the near future also for adult brain tumors.

Lastly, another topic that we will analyze in the Postgraduate Certificate, to highlight some relevant ones, and which is gaining ground in other tumors, is immunotherapy. Immunotherapy has shown promise for the treatment of glioblastoma multiforme. This is because glioblastoma multiforme exhibits powerful adaptive capabilities, a relative lack of immunogenicity, an immunosuppressive tumor microenvironment and intratumoral heterogeneity. Therefore, experts agree that immune-targeted therapies are likely to play a central role in improving the durability of treatment. To date, clinical trials of several vaccine therapies using autologous tumor antigens or specific tumor-associated antigenic peptides with adjuvants have been conducted to treat patients with high-grade gliomas. Therefore, immunotherapy, especially combination therapy, may be a promising strategy for the treatment of patients with brain tumors.

In short, many concepts are currently being investigated that we hope will have a positive influence on the therapeutic treatment of metastatic and primary tumors of the central nervous system, and which we will present since many have already been integrated into routine clinical practice and others will soon form the panoply of options in the broad diagnostic or therapeutic arsenal that we have today.

This **Postgraduate Certificate in Brain Tumors in Pediatric Patients** contains the most complete and up-to-date scientific program on the market. The most important features of the Postgraduate Certificate are:

- More than 75 clinical cases presented by experts in Brain Tumors in Pediatric Patients
- 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
- Diagnostic and therapeutic innovations on evaluation, diagnosis and intervention in Brain Tumors in Pediatric Patients. It contains practical exercises where the self-evaluation process can be carried out to improve learning
- Iconography of clinical and diagnostic imaging tests
- With special emphasis on evidence-based medicine and research methodologies in Brain Tumors in Pediatric Patients
- With special emphasis on evidence-based medicine and research methodologies in Brain Tumors in Pediatric Patients
- 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





This Postgraduate Certificate university may be the best investment you can make when choosing a refresher program for two reasons: in addition to updating your knowledge in Brain Tumors in Pediatric Patients, you will obtain a qualification issued by TECH Technological University"

The teaching staff includes professionals from the field of Brain Tumors in Pediatric Patients, who bring their experience to this training program, as well as renowned specialists from leading scientific societies.

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

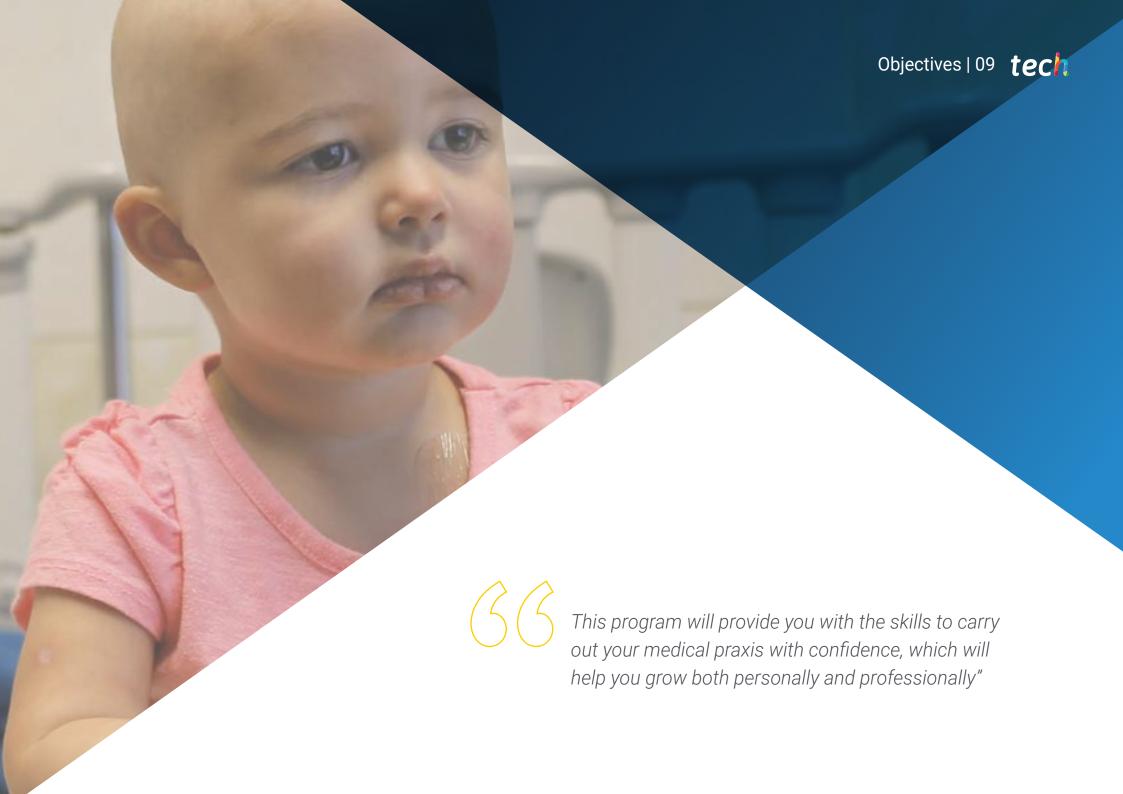
Problem-Based Learning underpins this program design, and the doctor must use it to try and solve the different professional practice situations that arise throughout the Postgraduate Certificate. For this purpose, the physician will be assisted by an innovative interactive video system created by renowned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

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

Take the opportunity to learn about the latest advances in Brain Tumors in Pediatric Patients and improve patient care.







# tech 10 | Objectives



# **General Objective**

• Create a global and updated vision of Brain Tumors in Pediatric Patients and all its aspects, allowing 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.



Make the most of the opportunity and take the step to get up-to-date on the latest developments in Brain Tumors in Pediatric Patients"



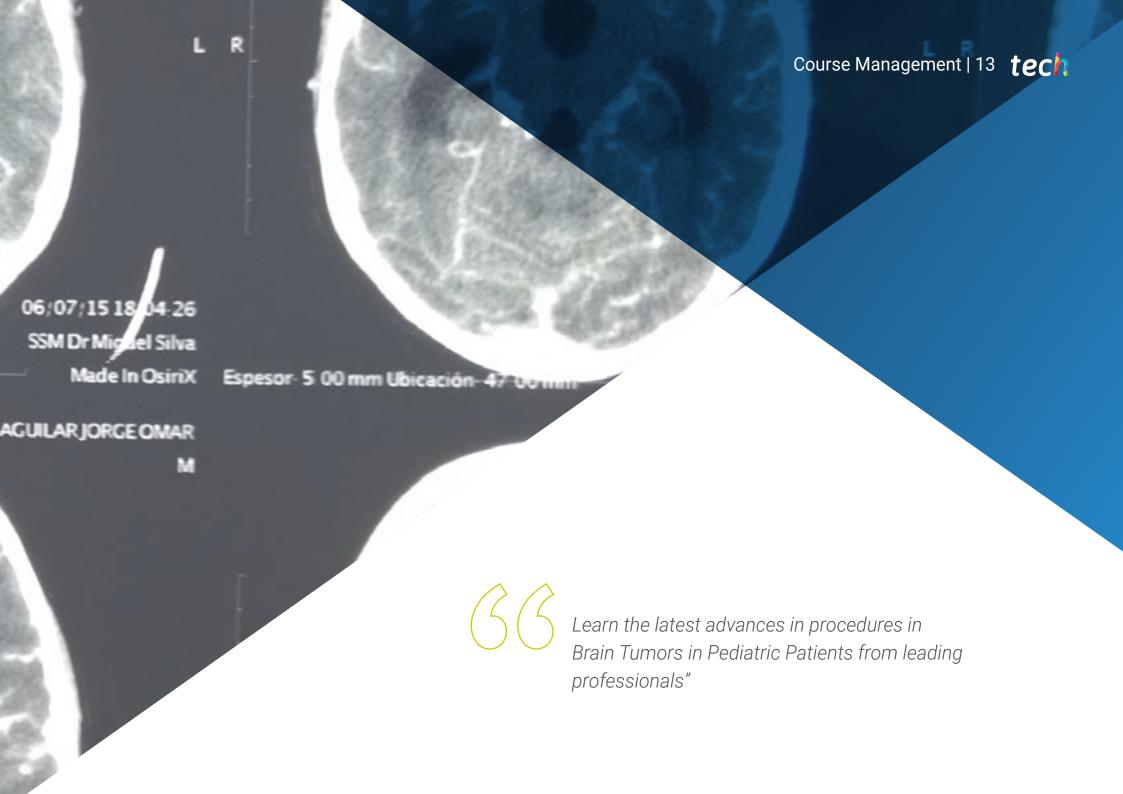


# **Specific Objectives**

- Explain how the development of magnetic resonance imaging technology has improved diagnostic accuracy supported by functional methods such as diffusion, spectroscopy, perfusion and the BOLD technique
- Learn about the utility of multi-tracer PET-MRI imaging in the management of neurooncology patients, both in the characterization of primary injuries and during the follow-up of treated tumors
- Describe the utility of nuclear medicine in the diagnosis of neurological complications of oncological treatments that characterize multiple clinical entities and continue to be an important problem, especially in patients with longer life expectancy







# tech 14 | Course Management

### Management



### Dr. Oruezábal Moreno, Mauro Javier

- Head of the medical Oncology Service at La Paz University Hospital since 2017
- Research Fellow at University of Southampton (2016-present)
- Professional Master's Degree in Bioinformatics and Biostatistics UOC-UB (2016-present)
- Professional Master's Degree in Bioinformatics Analysis by the Pablo de Olavide University (2015-2016)
- Doctor of Medicine from the Complutense University of Madrid Outstanding Cum Laude Qualification (2002)
- Member of the Spanish Society of Medical Oncology and GEINO Group (Spanish Research Group in Neuroncology)
- Specialist (MIR) in Medical Oncology, University Hospital San Carlos of Madrid (2000)
- Degree in Medicine and Surgery, University of Navarra (1995)



### Dr. Perez Martínez, David

- Head of the Neurology Department of the 12 de Octubre University Hospital
- · Associated Professor in Medicine at the Complutense University of Madrid(2012-present)
- Director of Neurowikia.com portal (2010-present)
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- University Expert in Evidence-Based Medicine by the UNED (2007
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### Management



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- Professional Master's Degree in Medical Management and Clinical Management from the National School of Health (2012-2013)
- Doctor of Medicine from the Autonomous University Madrid. Outstanding Doctoral Thesis Award. (2004)
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# tech 26 | Structure and Content

### Module 1. Brain Tumors in Pediatric Patients

- 1.1. Brain Tumors in the First Decades of Life
  - 1.1.1. Epidemiology
  - 1.1.2. Histology and Prognostic Considerations
- 1.2. Brain Tumors in the First Decades of Life
  - 1.2.1. Surgery Considerations
  - 1.2.2. Perioperative Management
- 1.3. Oncologic Treatment in Primary CNS Tumors in Childhood
- 1.4. Neuro-Oncologic Complications in Children with Systemic Cancer

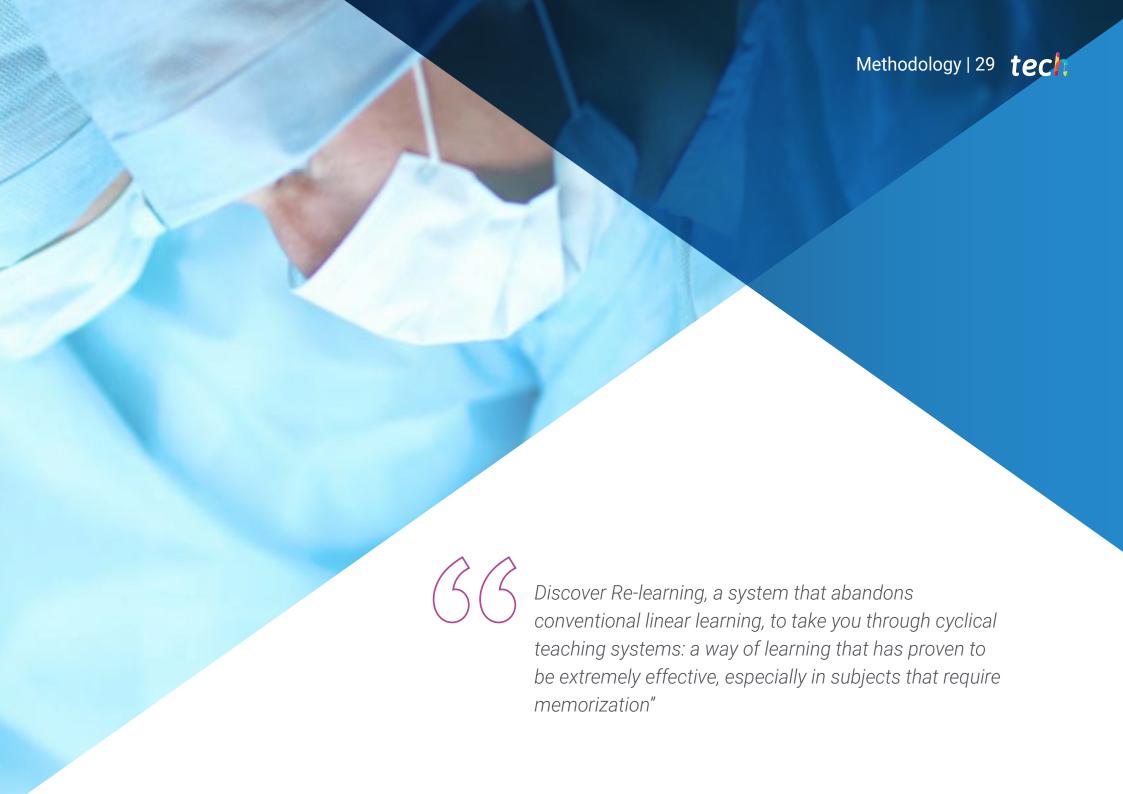






A unique, key, and decisive training experience to boost your professional development"





# tech 30 | Methodology

### 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 an abundance of 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.



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:

- 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.
- 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.



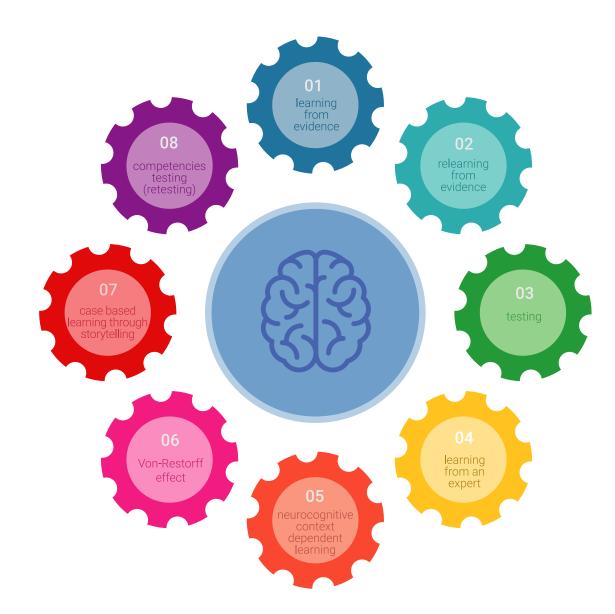


### **Re-learning Methodology**

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-theart software to facilitate immersive learning.





## Methodology | 33 tech

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.

# tech 34 | Methodology

In this program you will have access to the best educational material, prepared with you 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 really 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**

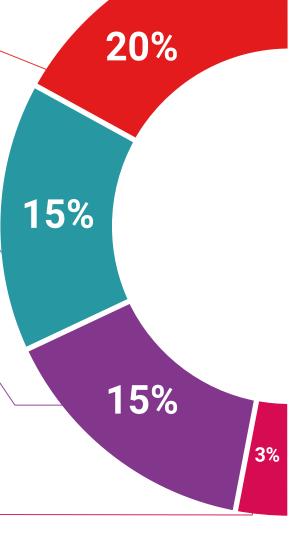
We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



### **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% 17% 7%

### **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 & Retesting**

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.





### **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.







# tech 38 | Certificate

This **Postgraduate Certificate in Brain Tumors in Pediatric Patients** contains the most complete and up-to-date scientific program on the market.

After the student has passed the evaluations, they will receive their corresponding certificate issued by **TECH Technological University by tracked mail**.

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

Title: Postgraduate Certificate in Brain Tumors in Pediatric Patients

ECTS: 5

Number of Hours: 125



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



# Postgraduate Certificate

Brain Tumors in **Pediatric Patients** 

Course Modality: Online

Duration: 2 months

**Endorsed by: TECH Technological University** 

5 ECTS credits

Hours: 125

