



Medical and Radiation Oncology Applied to Ocular Oncology

» Modality: online

» Duration: 6 months

» Certificate: TECH Global University

» Credits: 18 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-medical-radiation-oncology-applied-ocular-oncology

# Index

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Certificate





### tech 06 | Introduction

Although it is a little known specialty, eye tumors are relatively frequent and can have serious consequences if not detected and treated in time. In this sense, Medical Oncology and Radiotherapy are two key tools in the treatment of ocular tumors, as they allow them to be tackled effectively and minimize side effects for the patient. Radiotherapy, for example, is used to destroy cancer cells or prevent their growth, while Medical Oncology focuses on the use of drugs and systemic therapies to combat cancer.

For this reason, this Postgraduate Diploma has been designed to provide the student with a complete and updated preparation in Radiotherapy and Medical Oncology applied to Ocular Oncology. In addition, specific treatments for the most frequent ocular tumors are addressed, including uveal melanoma, ocular lymphoma, retinoblastoma, ocular metastases and benign pathology.

Likewise, the pedagogical methodology used in this program is Relearning, which is based on learning through the reiteration of concepts and problem solving. In addition, it is a 100% online format that offers flexibility to organize academic resources and adapt to the needs of each student, so there will be no problem when it comes to combining it with personal or professional obligations.

This Postgraduate Diploma in Medical and Radiation Oncology Applied to **Ocular Oncology** contains the most complete and up-to-date scientific program on the market. The most important features include:

- The development of case studies presented by medical experts focused on Medical and Radiation Oncology Applied to Ocular Oncology
- Graphic, schematic, and 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



Register now and learn more about ocular tumors associated with the most common hereditary syndromes"



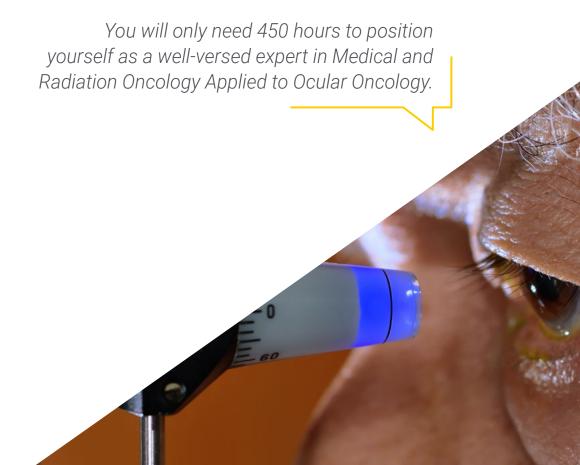
Get updated on the psychological, emotional and behavioral responses of ocular oncologic pathology in the patient"

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

Its multimedia content, developed with the latest educational technology, will provide the professionals with situated and contextual learning, i.e., a simulated environment that will provide an immersive education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professionals must try to solve the different professional practice situations that are presented throughout the academic course. This will be done with the help of an innovative system of interactive videos made by renowned experts.

Benefit from the advantages of upgrading with the world's largest online university and consult dynamic interactive outlines or self-assessment exercises.





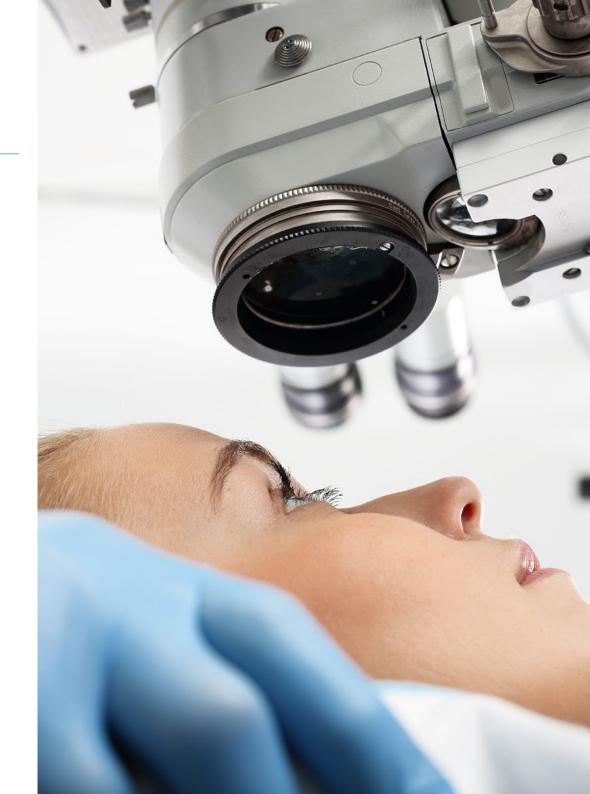


### tech 10 | Objectives



### **General Objectives**

- Update knowledge on the different tumors that can affect the eye and its appendages
- Deepen in the diagnostic-therapeutic approach of ocular neoplasms
- Delve into the main common characteristics of ocular neoplasms
- Deepen in the different tumor lesions that can affect the eyelids, the lacrimal drainage pathway and the orbit
- Investigate the different types of tumors that can be located on the ocular surface, cornea and conjunctiva
- Delve into the most recent research in Oncological Ophthalmology





#### Module 1. Medical Oncology Applied to Ocular Oncology

- Describe the basic principles and mechanisms of pharmacological action in the clinical practice of Medical Oncology
- Provide the most current knowledge for the diagnosis, treatment and follow-up of patients with the most frequent ocular tumors
- Deepen in the area of the most prevalent ocular tumors: melanomas, lymphomas and carcinomas
- Delve into the possible ocular toxicities that can be produced by the different systemic treatments used in Medical Oncology
- Deepen in the different tumors that can produce ocular metastasis, with special emphasis on their treatment
- Delve into the ocular tumors associated with the most frequent hereditary syndromes

#### Module 2. Radiation Oncology Applied to Ocular Oncology

- Provide the most advanced knowledge for the diagnosis, treatment and follow-up of patients with ocular oncology disease
- Deepen in the methodology of clinical and pathological classification of ocular tumor pathology
- Update knowledge in the area of tumor radiobiology
- Delve into the types of radiation beams used for the treatment of ocular pathology
- Deepen in the principles for the simulation and design of radiotherapy treatments
- Investigate the principles of radiation protection applied to radiotherapy treatments

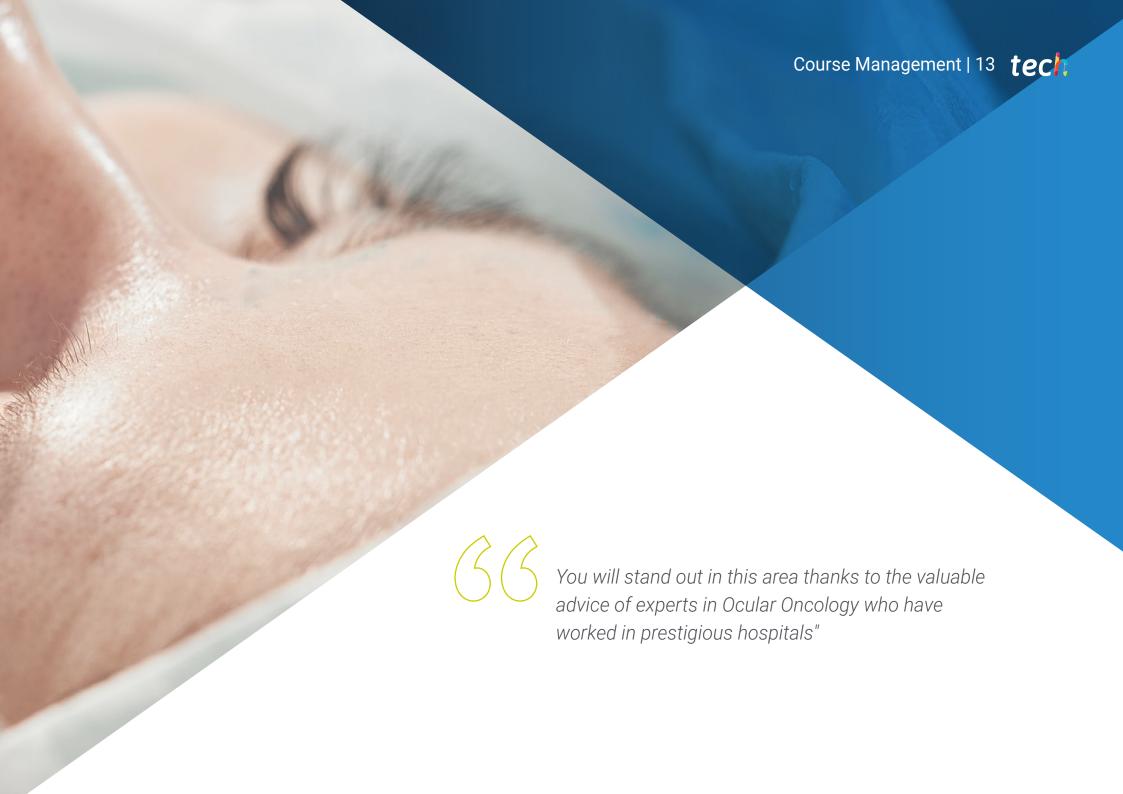
#### Module 3. Psychiatric and Psychological Aspects of Ocular Oncology

- Deepen the psychological, emotional and behavioral responses of ocular oncologic pathology in the patient, his family and social environment
- Describe the management of information during the diagnostic and therapeutic process
- Identify the appearance of anxious-depressive clinical symptoms that need to be addressed by specialists in Clinical Psychology and/or Psychiatry, and to differentiate them from normal adaptive reactions
- Delve into the importance of teamwork and professional care involved in the multidisciplinary approach to ocular oncologic pathology



Delves into the principles for the simulation and design of radiation therapy treatments for ocular oncology"





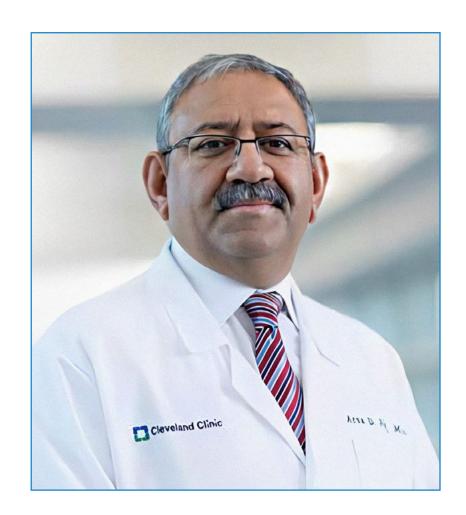
#### Chef d'orchestre invité international

Dr. Arun Singh is a true international eminence in Ophthalmic Oncology, a field to which he has dedicated more than three decades of his professional career. His career has been focused on research and treatment of eyelid and conjunctival tumors. He has also delved into pathologies such as Retinoblastoma and Uveal Melanoma.

For his exceptional clinical career, this expert has been recognized by both the Royal College of Ophthalmologists in the United Kingdom and the American Board of Ophthalmology in the United States. In addition, he has received a Career Achievement Award. These distinctions, which underline his excellence, are also endorsed by his prolific scientific work, with more than 160 articles in journals of high academic impact.

Another of his important contributions to this medical specialty has been the book Clinical Ophthalmic Oncology, considered an essential reference text for experts and professionals in training. His work as Editor of the prestigious British Journal of Ophthalmology is also noteworthy.

His excellent healthcare praxis has allowed him to take on challenges such as leading the Department of Ophthalmic Oncology at the Cleveland Clinic in Ohio, USA. From that position he has dedicated extensive efforts to the study of other ocular pathologies and, in turn, collaborates with the Pediatric Program of Uncommon Cancers and Blood Diseases. As for his training, Dr. Singh began his medical education in India, at the Jawaharlal Institute and Mandras University. Subsequently, he developed internships and fellowships at the University of Florida, as well as completed his internship at St. Luke's Hospital in Bethlehem. He completed his specialization in Ocular Oncology at Wills Eye Hospital in Philadelphia. He has also been linked to highly reputable international organizations such as the Association for Research in Vision and Ophthalmology.



### Dr. Arun Singh

- · Director, Department of Ophthalmic Oncology, Cleveland Clinic, Ohio, USA
- · Editor of the British Journal of Ophthalmology
- · Editor of the academic book Clinical Ophthalmic Oncology
- · Specialist in Ophthalmology from the University of Florida
- · Internships at Watford General and St. Luke's Hospitals, Watford, Florida
- · Graduate of Medicine and Surgery from the Jawaharlal Institute and the University of Mandras
- · Member of:
- · International Association for Research in Vision and Ophthalmology
- · International Society of Ocular Oncology
- · American Academy of Ophthalmology
- · Royal College of Ophthalmologists of London, UK
- · Royal College of Surgeons of Edinburgh, UK



Grâce à TECH, vous pourrez apprendre avec les meilleurs professionnels du monde"

#### Management



#### Dr. Garrido Hermosilla, Antonio Manuel

- Medical Specialist in Ophthalmology
- Specialist in the Ophthalmology Service of the Virgen Macarena University Hospital
- Specialist in Oculoplasty-Orbit and Ocular Oncology Units
- Specialist in National Reference Units (CSUR) for Adult and Childhood Intraocular Tumors
- Co-coordinator of Andalusian Reference Units (UPRA) for the Integral Management of the Anophthalmic Cavity and for Graves' Orbitopathy
- Tutor for Ophthalmology Interns



#### Dr. Relimpio López, María Isabel

- Coordinator of the Adult Intraocular Tumors Unit at the CSUR of the Hospital Virgen Macarena
- Specialist Area Physician (FEA) in the Ophthalmology Service at the University Hospital Virgen Macarena (HUVM)
- Specialist in the Retina and Ocular Oncology Units of the HUVM
- Coordinator of the National Reference Unit (CSUR) for Adult Intraocular Tumors
- Specialist in the National Reference Unit (CSUR) for Childhood Intraocular Tumors
- Ophthalmologist in the European Network ERN-PaedCan for Retinoblastoma
- PhD in Medicine, University of Seville
- Clinical Tutor of Ophthalmology, Medical Degree, University of Seville

#### **Professors**

#### Dr. Míguez Sánchez, Carlos

- Head of the Radiation Oncology Department of the Virgen Macarena University Hospital
- Medical Director of the Clinical Management Unit of the Virgen Macarena University Hospital
- Collaborator of the National Reference Unit for Adult Intraocular Tumors
- Radiation Oncologist at the Virgen Macarena University Hospital
- PhD in Medicine, University of Seville

#### Dr. Terrón León, José Antonio

- Head of Radiological Protection at the Virgen Macarena University Hospital
- Specialist in Radiophysics at Virgen Macarena University Hospital
- Collaborator of the National Reference Units for Intraocular Tumors of the Adult and Childhood Intraocular Tumors
- PhD in Medical Physics, University of Seville
- Degree in Physical from the University of Seville
- Member of the European Network ERN-PaedCan for Retinoblastoma

#### Dr. Álamo de la Gala, María del Carmen

- Medical Oncologist at the Virgen Macarena University Hospital
- Medical Oncologist at the Medical Oncology Department of the Virgen Macarena University Hospital
- Collaborator of the National Reference Unit for Adult Intraocular Tumors
- Member of the Andalusian Society of Medical Oncology

#### Dr. Carrasco Peña, Francisco de Asís

- Section Chief at the Oncology Department of the Virgen Macarena University Hospital
- Collaborator of the National Reference Unit for Adult Intraocular Tumors
- PhD in Medicine, University of Seville

#### Dr. Sevilla Ortega, Lourdes

- Medical Specialist at Virgen Macarena University Hospital
- Medical Specialist at the Medical Oncology Department of the Virgen Macarena University Hospital
- Researcher on Colorectal Cancer and Breast Cancer pathologies
- Member of the Spanish Society in Medical Oncology

#### Dr. Nogales Fernández, Esteban

- Medical Oncologist at the Virgen Macarena University Hospital
- Medical Oncologist at the Medical Oncology Department of the Virgen Macarena University Hospital
- Collaborator of the National Reference Unit for Adult Intraocular Tumors
- Degree in Medicine, University of Seville

#### Dr. Saavedra Bejarano, Jonathan

- Radiation Oncologist at the Virgen Macarena University Hospital
- Collaborator of the National Reference Unit for Adult Intraocular Tumors
- PhD in Medicine, University of Seville

#### D. Baeza Monedero, Carlos Juan

- Specialist in the Hospital Radiophysics Service of the Virgen Macarena University Hospital
- Specialist in the Hospitalary Radiophysics Service of the Virgen del Rocío University Hospital
- Collaborator of the National Reference Unit for Adult Intraocular Tumors
- Graduate in Physical Sciences from the Complutense University of Madrid

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#### D. Gallego Castro, Mario

- Specialist in Hospital Radiophysics Service of the Virgen Macarena University Hospital (HUVM)
- Collaborator of the National Reference Unit (CSUR) for Adult Intraocular Tumors
- Graduate in Physical Sciences from the University of Granada

#### Dr. Márquez González, Irene

- Psychiatrist in the Mental Health Clinical Management Unit of the Virgen Macarena University Hospital (HUVM)
- Psychiatrist at the Mental Health Liaison and Interconsultation Unit of HUVM
- Degree in Medicine from the University of Seville

#### Ms. Polo Fernández, Ana Isabel

- Clinical Psychology at Virgen Macarena University Hospital
- Psychiatrist in the Mental Health Clinical Management Unit of the Virgen Macarena University Hospital (HUVM)
- Psychiatrist at the Mental Health Liaison and Interconsultation Unit of HUVM
- Specialist in Clinical Psychology
- Degree in Psychology





### Course Management | 19 tech

#### Ms. Velasco Barbancho, Elena

- Clinical Psychology at Virgen Macarena University Hospital
- Psychiatrist in the Mental Health Clinical Management Unit of the Virgen Macarena University Hospital (HUVM)
- Psychiatrist at the Mental Health Liaison and Interconsultation Unit of HUVM
- Specialist in Clinical Psychology
- Degree in Psychology



Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"





### tech 22 | Structure and Content

#### Module 1. Medical Oncology Applied to Ocular Oncology

- 1.1. Systemic Treatment in Ocular Tumors
  - 1.1.1. Introduction
  - 1.1.2. Chemotherapy Mechanism of Action
  - 1.1.3. Mechanism of Action of Immunotherapy and Other Targeted Therapies
- 1.2. Localized Uveal Melanoma
  - 1.2.1. Adjuvant Systemic Treatment
  - 1.2.2. New Molecules
  - 1.2.3. Monitoring
- 1.3. Metastatic Uveal Melanoma I
  - 1.3.1. Chemoembolization of Hepatic Metastases
  - 1.3.2. Radiofrequency
  - 1.3.3. Other Local Techniques
- 1.4. Metastatic Uveal Melanoma II
  - 1.4.1. Immunotherapy
  - 1.4.2. Chemotherapy
  - 1.4.3. New Drugs
- 1.5. Ocular Lymphoma
  - 1.5.1. General Treatment Indications
  - 1.5.2. Chemotherapy
  - 1.5.3. Others
- 1.6. Palpebral Carcinomas
  - 1.6.1. Basal Cell Carcinoma
  - 1.6.2. Squamous Cell Carcinoma
  - 1.6.3. Others
- 1.7. Conjunctival Melanoma
  - 1.7.1. Diagnosis
  - 1.7.2. Treatment
  - 1.7.3. Monitoring
- 1.8. Ocular Toxicity Associated with Oncological Treatment
  - 1.8.1. Anti- EGFR Drugs
  - 1.8.2. BRAF and MEK Inhibitors
  - 1.8.3. Immuno-checkpoints

- 1.9. Ocular Metastases
  - 1.9.1. General Aspects
  - 1.9.2. Breast Cancer
  - 1.9.3. Cancer Lung and Others
- 1.10. Ocular Tumors Associated with Hereditary Syndromes
  - 1.10.1. General Considerations
  - 1.10.2. Neurofibromatosis
  - 1.10.3. Others

#### Module 2. Radiation Oncology Applied to Ocular Oncology

- 2.1. Radiobiology
  - 2.1.1. Biological Radiation Injury
  - 2.1.2. Molecular Mechanisms
  - 2.1.3. The "5 R's" of Radiotherapy
- 2.2. Radiophysics I
  - 2.2.1. Magnitudes and Units of Measurement
  - 2.2.2. Interaction of Radiation with Matter
  - 2.2.3. External Radiotherapy Beams and Encapsulated Sources
- 2.3. Radiophysics II
  - 2.3.1. Dosimetry of Beams and Sources: Quality Control
  - 2.3.2. Treatment Design
  - 2.3.3. Treatment Volumes and Organs at Risk
- 2.4. Radiophysics III
  - 2.4.1. Radiation Protection: General Principles
  - 2.4.2. Regulations and Legislation
  - 2.4.3. Operational Radiation Protection
- 2.5. Special Treatment Techniques: Brachytherapy
  - 2.5.1. Fundamentals
  - 2.5.2. Methodology
  - 2.5.3. General Treatment Indications
- 2.6. Uveal Melanoma
  - 2.6.1. Diagnosis
  - 2.6.2. Treatment
  - 2.6.3. Monitoring

### Structure and Content | 23 tech

- 2.7. Ocular Lymphoma
  - 2.7.1. Diagnosis
  - 2.7.2. Treatment
  - 2.7.3. Monitoring
- 2.8. Retinoblastoma
  - 2.8.1. Diagnosis
  - 2.8.2. Treatment
  - 2.8.3. Monitoring
- 2.9. Ocular Metastases
  - 2.9.1. General Aspects
  - 2.9.2. Breast Cancer
  - 2.9.3. Lung Cancer
- 2.10. Benign Pathology
  - 2.10.1. Local Therapies: general
  - 2.10.2. Thyroid Ophthalmopathy or Graves' Orbitopathy
  - 2.10.3. Hemangiomas

#### Module 3. Psychiatric and Psychological Aspects of Ocular Oncology

- 3.1. Psychological Responses to Cancer Illness
  - 3.1.1. Stress Factors
  - 3.1.2. Types of Personality
  - 3.1.3. Coping Styles
- 3.2. Emotional Responses to Cancer Illness
  - 3.2.1. Anxiety and Fear
  - 3.2.2. Sadness and Guilt
  - 3.2.3. Feeling of Shame
- 3.3. Mental Disorder in Cancer Patients
  - 3.3.1. Depression
  - 3.3.2. Anxiety
  - 3.3.3. Suicidal Behavior
  - 3.4. Psychological Approach
  - 3.4.1. Types
  - 3.4.2. Patients
  - 3.4.3. Family and Environment Social

- 3.5. Psychopharmacological treatment
  - 3.5.1. Depression
  - 3.5.2. Anxiety
  - 3.5.3. Delirium
- 3.6. Key Aspects of Teamwork for Comprehensive Care
  - 3.6.1. Professional Care
  - 3.6.2. Accompaniment
  - 3.6.3. Importance of Nursing Personnel
- 3.7. Interpersonal Communication in Oncological Processes
  - 3.7.1. Professional Skills
  - 3.7.2. How to give bad news
  - 3.7.3. Patient Autonomy
- 3.8. Specific Aspects in Children and Adolescents
  - 3.8.1. Information
  - 3.8.2. Coping
  - 3.8.3. Family Approach
- 3.9. Maladaptive Behavior in Oncology Patients
  - 3.9.1. Therapeutic Non-compliance
  - 3.9.2. Psychological Factors
  - 3.9.3. Interventions
- 3.10. Psychological Intervention in Patients With Ocular Enucleation
  - 3.10.1. Grief
  - 3.10.2. Individual Intervention
  - 3.10.3. Family Approach





### tech 26 | Methodology

#### 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.



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 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 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.



### Methodology | 29 tech

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





#### **Additional Reading**

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

#### **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 their goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts.

The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### **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.









### tech 34 | Certificate

This program will allow you to obtain your **Postgraduate Diploma in Medical and Radiation Oncology Applied to Ocular Oncology** endorsed by **TECH Global University**, the world's largest online university.

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

This **TECH Global University** 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 Diploma in Medical and Radiation Oncology Applied to Ocular Oncology

Modality: online

Duration: 6 months

Accreditation: 18 ECTS



Mr./Ms. \_\_\_\_\_, with identification document \_\_\_\_\_ has successfully passed and obtained the title of:

### Postgraduate Diploma in Medical and Radiation Oncology Applied to Ocular Oncology

This is a program of 450 hours of duration equivalent to 18 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024



health confidence people education information tutors guarantee accreditation teaching institutions technology learning



## Postgraduate Diploma

Medical and Radiation Oncology Applied to Ocular Oncology

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- » Credits: 18 ECTS
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Medical and Radiation Oncology Applied to Ocular Oncology

