Postgraduate Diploma
Orphan, Agnostic Tumors and Tumors of Unknown Primary

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Postgraduate Diploma

Orphan, Agnostic Tumors and Tumors of Unknown Origin

- 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-orphan-agnostic-tumors-turmos-unkown-primary

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Introduction

The importance of studying cancers of Unknown Primary and rare cancers lies in their paradoxically high frequency if the data is taken as a whole, since one out of every five tumors diagnosed every day is a rare tumor, having a higher mortality compared to common cancers. For this reason, it is necessary to have specialists in this type of pathology in order to offer more effective treatments, which is why TECH has created this program. It is a curriculum developed by professionals of recognized national and international prestige who have poured their knowledge and experience to provide students with the necessary tools on their way to professional excellence within the most unknown oncology.

Specialize in the diagnosis and treatment of this type of tumors and reduce the number of deaths due to this cause with the help of the best experts"

The concept of cancer of Unknown Primary encompasses a wide range of situations. In general, it refers to tumors that are diagnosed at a metastatic stage, in which, after a correct diagnostic process, we cannot elucidate the origin of the primary tumor. They represent 3-5% of all tumors diagnosed and are the tenth most common type of tumor in developed countries.

For adults, a cancer is considered rare when its annual incidence is less than 6 cases per 100,000 people. It is estimated that they account for up to 24% of cancers diagnosed in the European Union and about 20% of cancers diagnosed in the United States.

It must be taken into account that this is an area of great research. Therefore, the evolution of molecular diagnostic techniques has made it possible to detect new genomic alterations, which are likely to cause a tumor phenotype, as well as to have greater precision in the detection of those already known. Currently, the diagnostic accuracy achieved with next-generation sequencing (NGS) techniques has made possible a paradigm shift in cancer treatment, opening the door to the choice of treatment based on a particular biomolecular alteration, rather than the type and location of the tumor, a concept known as tumor-agnostic treatment.

In this program, the student is trained to recognize the different entities that make up this group of pathologies: uncommon, rare and ultra-rare cancer; orphan tumors; agnostic tumors; and cancer of Unknown Primary. This Postgraduate Diploma allows the student to approach precision medicine in the context of uncommon tumors, agnostic treatments and cancer of Unknown Primary, through the resolution of problems by means of different clinical experiences with precision medicine and will be able to apply genomics in the diagnosis and treatment of this type of tumors.

Students will be able to complete the program at their own pace, without being subject to fixed schedules or the travel involved in classroom teaching, so they can combine it with the rest of their daily obligations.

This **Postgraduate Diploma in Orphan, Agnostic Tumors and Tumors of Unknown Primary** contains the most complete and up-to-date scientific program on the market. Its most notable features are:

- Case studies presented by experts in oncology
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional development.
- New developments in the treatment of Orphan, Agnostic Tumors and Tumors of Unknown Primary.
- Practical exercises where the self-assessment process can be carried out to improve learning
- Its special emphasis on innovative methodologies in the diagnosis and treatment of Orphan, Agnostic and Tumors of Unknown Primary.
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection work.
- Content that is accessible from any fixed or portable device with an Internet connection

You will know how to apply the knowledge learned to clinical and research problem solving in the field of rare pathology"

You will develop the necessary judgment to use molecular tools efficiently and safely, which will allow you to detect patients carrying their mutations"

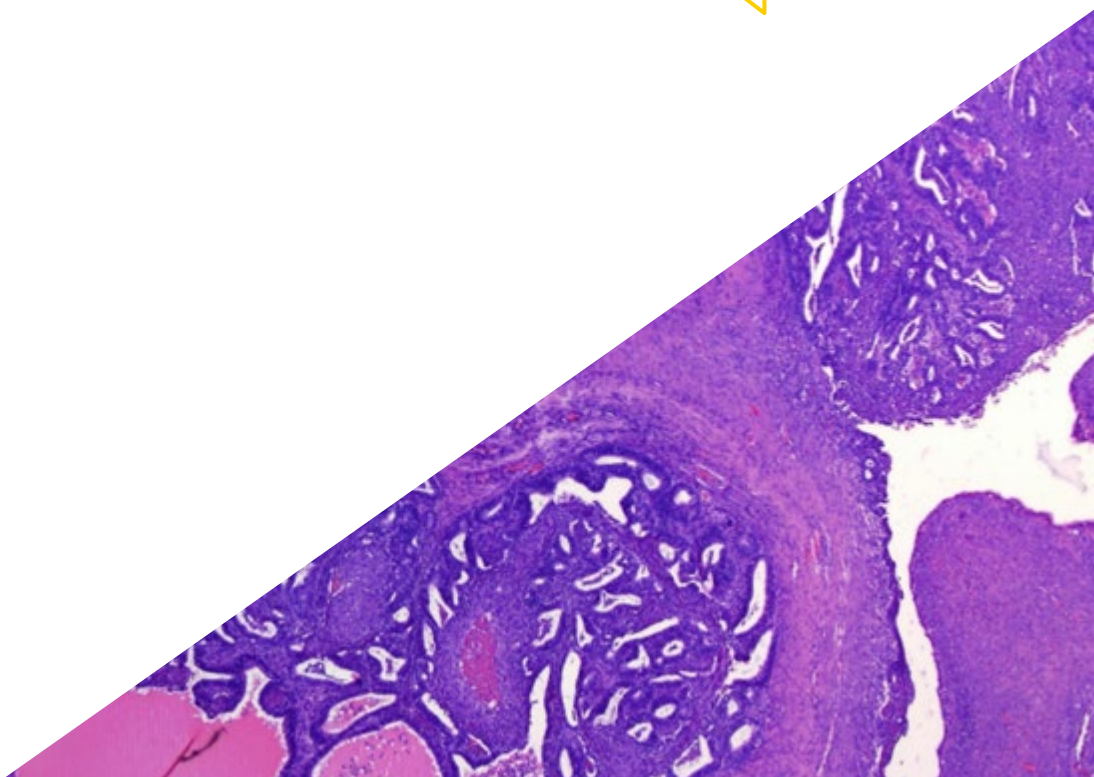
In this TECH program you will delve into the development of numerous agnostic treatments in various pathologies.

You will learn how to use molecular tools in the context of this pathology with success and rigor.

The teaching staff includes professionals from the Oncology sector, who bring their experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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

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



02

Objectives

The program in Orphan, Agnostic Tumors and Tumors of Unknown Primary is aimed at facilitating the medical professional's performance with the latest advances and most innovative treatments in the sector. It will allow the student to delve into a field of medicine that needs qualified professionals to carry out the relevant research on these ailments that occur in a small part of the world's population. There, the program has been developed by a team of experts with contents that will enable the future graduate to reach the proposed objectives. For this reason, TECH has established a series of general and specific objectives for the satisfaction of future graduates, as follows:

You will gain in-depth knowledge about biobanks and their role in clinical research, a vital issue in these cases"

General Objectives

- Acquire concepts and knowledge regarding the epidemiology, clinical, diagnosis and treatment of rare tumors, agnostic diagnoses and cancers of Unknown Primary
- Know how to apply the diagnostic algorithms and evaluate the prognosis of this pathology
- Be able to integrate knowledge and face the complexity of formulating clinical and diagnostic judgments based on the available clinical information
- Know how to apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to the area of study
- Know how to establish complex therapeutic plans in the context of the pathology in question Have a deeper knowledge of specific treatment networks, reference centers, clinical trials
- Incorporate new technologies into daily practice, knowing their advances, limitations and future potential
- Acquire knowledge about molecular biology tools for the study of these tumors
- Have thorough knowledge and use Tumor Registries
- Know and use the face-to-face or virtual Molecular Committees
- Understand fundamental aspects of biobank operation
- Specialize in interprofessional relationship tools for the treatment of orphan, agnostic and cancer of unknown primary and to access expert networks in the different pathology groups
- Know how to apply knowledge to solve clinical and research problems in the area of rare pathology
- Know how to communicate conclusions, knowledge, and supporting arguments to specialized and non-specialized audiences in a clear and unambiguous way
- Acquire the learning skills to enable further studying in a largely self-directed or autonomous manner
- Possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context
- Understand the social responsibility due to rare diseases

Enter one of the most creative and exciting areas in the world of gastronomy with the background of a complete professional, qualified to successfully lead any project"

Specific Objectives

Module 1. The Reality of Orphan, Agnostic Tumors and Tumors of Unknown Primary

- Be able to place the entities under study in an epidemiological context, to know their incidence and prevalence, as well as the trend of the rates at European level.
- Delve into the survival data at European level and the causes of the survival

  of the differences in survival between rare tumors and reference tumor pathology.
- Gain an in-depth understanding of aspects related to precision medicine in the context of rare tumors, agnostic treatments and cancer of Unknown Primary
- Handle the different models of care for rare tumors, as well as concepts in their field such as tumor registries, expert networks, reference units and tumor *board review*
- Acquire training on biobanks and their role in clinical research
- Become familiar with the methodological aspects of low incidence tumor research
- Specialize in the European framework of legislation in relation to low incidence tumors, the role of regulatory agencies and the particularities of access to drugs.

  to drugs
- Be aware of the implications of all this in the patient's experience, as well as the repercussions of the disease at the psychological and social level

Module 2. Agnostic Tumors

- Become familiar with the concept of agnostic diagnosis
- Delve into the new paradigm in cancer treatment, opening the door to the choice of treatment based on a particular biomolecular alteration, over and above the type and location of the tumor, a concept known as tumor agnostic treatment.
- Gain knowledge about one of the most important biomarkers detected is the NTRK fusion gene, which appears in a wide variety of tumor types in both adult and pediatric patients
- Provide the student with the necessary judgment to use molecular tools efficiently and safely to detect patients carrying their mutations
- Manage the approach to tumors with microsatellite instability
- Delve into the development of numerous agnostic treatments in various pathologies.

Module 3. Cancers of Unknown Primary

- Delve into the concept of cancer of Unknown Primary
- Know in depth its modes of presentation and the tests that should be performed in targeted manner
- Acquire the skills for the approach of this disease and the collaboration to optimize the survival of these patients
- Know how use molecular tools in the context of this pathology
- Manage the peculiar aspects of its research approach: *basket* and *umbrella* essays

03

Course Management

TECH counts on renowned professionals so that the student acquires a solid knowledge in the field of work. Therefore, this curriculum has a syllabus that covers the different oncological treatments and their effects, which will offer the best tools for the professional in the development of their work skills. In addition, other experts of recognized prestige participate in its design and elaboration, completing the program in an interdisciplinary way, providing a broad and complete vision on the approach to orphan, agnostic and tumors of Unknown Primary.

The best teachers are at the best university: TECH. Don't think twice and specialize with the medical elite"

Management

Dr. Beato, Carmen

- Medical Oncologist at University Hospital Virgen Macarena. Unit of Urological Tumors, Infrequent and of Unknown Primary
- Expert in Immuno-Oncology
- Master's Degree in Palliative Care
- Expert in Clinical Trials
- Member of the Spanish Group on Orphan and Infrequent Tumors (GETHI)
- Secretary Spanish Group for Cancer of Unknown Primary (GECOD)

Professors

Dr. García-Donas Jiménez, Jesús

- Oncologist Urological, Gynecological and Dermatological Tumors Unit.
- Director of the Translational Oncology Laboratory
- Expert in Immuno-Oncology
- Clara Campal Comprehensive Oncology Center
- Treasurer of the Spanish Group of Orphan and Infrequent Tumors (GETHI)

Dr. Fernández Pérez, Isaura

- Oncologist Breast, Gynecologic Cancer of Unknown Primary and Central Nervous System Unit. University Hospital Complex in Vigo-Hospital Álvaro Cunqueiro
- Member of the Spanish Group for Cancer of Unknown Primary (GECOD)

Dr. Calero Domínguez, Raquel

- PhD in Psychology Medicine from the UCM
- General Health Psychologist
- Expert in Psycho-oncology and Palliative Care
- Head of Psychology MAPFRE Medical Center

Dr. De las Peñas Bataller, Ramón

- Castellón Provincial Hospital Consortium. Central Nervous System Tumors Unit, Lung, Sarcomas and Uncommon Tumors Unit

04

Structure and Content

The structure of the contents of this Postgraduate Diploma has been designed based on the requirements demanded by medicine on the specialization in Orphan, Agnostic Tumors and Tumors of Unknown Primary, a field still little studied and in need of qualified experts. This is an essential program for any medical professional who wants to do research in this field, the study of which is of vital importance to achieve improvements in patients and greater knowledge of the incidence of oncological treatments. Therefore, the content of the program has been structured in such a way that it includes all the necessary information for the student on their way to medical excellence oriented to this field, counting on the advances of the new technologies applied in medicine and the latest updates in the sector, successfully advancing in their academic career.

In this TECH program you will delve into the application of genomics in the diagnosis and treatment of rare tumors"

Module 1. The Reality of Orphan, Agnostic Tumors and Tumors of Unknown Origin

1.1. Low Incidence Cancer
- 1.1.1 Uncommon, Rare and Ultrare Cancer
- 1.1.2 Orphan Tumors
- 1.1.3 Agnostic Tumors
- 1.1.4 Cancers of Unknown Primary

1.2. Epidemiology of Uncommon Cancer
- 1.2.1 Incidence and Prevalence of Uncommon Tumors
- 1.2.2 Trend of Rates at European and National Level.

1.3. Survival in Rare Tumors
- 1.3.1 Survival Data at European and National Level
- 1.3.2 Causes of Differences in Survival

1.4. Precision Medicine and Rare Tumors
- 1.4.1 Precision Medicine
- 1.4.2 Rationale for Precision Medicine in Uncommon Tumors
- 1.4.3 Clinical Experiences with Precision Medicine in Uncommon Tumors
- 1.4.4 Application of Genomics in the Diagnosis and Treatment of Rare Tumors

1.5. Models of Care for Uncommon Tumors
- 1.5.1 Tumor Registers
- 1.5.2 Expert Networks
- 1.5.3 Reference Units
- 1.5.4 Tumor *Board Review*

1.6. Role of the Biobank in Clinical Research
- 1.6.1 Biobanks
- 1.6.2 Legislative Regulation
- 1.6.3 The Biobank in the Management of Uncommon Tumors

1.7. Methodological Aspects of Clinical Research in Uncommon Tumors
- 1.7.1 Importance of Clinical Research in Uncommon Tumors
- 1.7.2 Research Difficulties in Uncommon Tumors
- 1.7.3 New Models of Clinical Trials
- 1.7.4 Bayesian Inference
- 1.7.5 Nanoscience Applied to Rare Tumors or Bioinformatics and New Mathematical Models for the Study of Rare Tumors

1.8. Legislation
- 1.8.1 European Framework
- 1.8.2 Regulatory Agencies

1.9. Access to Drugs
- 1.9.1 Access to Drugs
- 1.9.2 *Off*-Label Therapies

1.10. Psychological and Social Aspects of Low-Incidence Tumors
- 1.10.1 Psychological Aspects of this Spectrum of Pathology
- 1.10.2 Social Issues Affecting the Uncommon Cancer Patient

Module 2. Agnostic Tumors

2.1. Concept of Agnostic Treatment: New Entities in Oncology
- 2.1.1 Concepts
- 2.1.2 Agency-Approved Agnostic Treatments
- 2.1.3 Agnostic Treatments under Development

2.2. Neurotrophic Tyrosine Receptor Kinase (NTRK) Family
- 2.2.1 NTRK Structure and Function
- 2.2.2 Algorithm for Identifying Patients with TRK Fusions
- 2.2.3 Clinical Spectrum of NTRK-Fused Tumors

2.3. Treatment with NTRK Inhibitors
- 2.3.1 General Aspects
- 2.3.2 Indications
- 2.3.3 Pivotal Test Results
- 2.3.4 Results in Clinical Practice
- 2.3.5 Toxicity of NTRK Inhibitors

2.4. Tumors with Microsatellite Instability
- 2.4.1 Significance of Microsatellite Instability
- 2.4.2 Algorithm for Identifying Patients with Microsatellite Instability
- 2.4.3 Clinical Spectrum of Unstable Tumors

2.5. Treatment of Tumors with Microsatellite Instability
- 2.5.1 General Aspects
- 2.5.2 Indications
- 2.5.3 Pivotal Test Results
- 2.5.4 Results in Clinical Practice

2.6. Towards Agnostic Treatment of Thoracic and Head Neck Tumors

2.6.1 General Aspects
2.6.2 Indications and Results
2.6.3 Toxicity
2.7. Towards Agnostic Treatment in Digestive Tumors
2.7.1 General Aspects
2.7.2 Indications and Results
2.7.3 Toxicity
2.8. Towards Agnostic Treatment in Urologic and Gynecologic Tumors
2.8.1 General Aspects
2.8.2 Indications and Results
2.8.3 Toxicity
2.9. Towards Agnostic Treatment in CNS Tumors
2.9.1 General Aspects
2.9.2 Indications and Results
2.9.3 Toxicity
2.10. The Development of Agnostic Treatment in Other Tumors
2.10.1 General Aspects
2.10.2 Indications and Results
2.10.3 Toxicity

Module 3. Cancers of Unknown Primary

3.1. Introduction and Epidemiology of Cancers of Unknown Primary
3.1.1 Incidence
3.1.2 Prevalence
3.1.3 Prognosis
3.1.4 Risk Factors
3.2. Clinical Spectrum of the Disease
3.2.1 Classification
3.2.2 Subgroups of Patients According to their Presentation
3.3. Anatomopathological Aspects of the Disease
3.3.1 General Considerations
3.3.2 Histology
3.3.3 Recommended Immunohistochemical Profile
3.4. Diagnosis of Cancers of Unknown Primary
3.4.1 Recommended Diagnostic Tests
3.4.2 Role of PET-CT
3.4.3 Diagnostic Algorithm
3.5. Cancer of Unknown Primary in the Molecular Era
3.5.1 Paradigm Shift
3.5.2 Molecular Profiles Oriented to Anatomical Origin
3.5.3 Molecular Profiling Aimed at Identifying Genomic Alterations
3.6. Classic Treatment for Cancers of Unknown Primary
3.6.1 Good Subgroup Prognosis
3.6.2 Poor Subgroup Prognosis
3.7. Targeted Therapy in the Molecular Era
3.7.1 Paradigm Shift: From Clinical to Molecular Biology
3.7.2 Molecular Profiles Oriented to Tumor Origin
3.7.3 Molecular Profiles Oriented to Therapeutic Targets
3.8. Clinical Trials: New Designs
3.9. Role of Tumor Registers Clinical and Molecular Committees
3.9.1 Tumor Registers
3.9.2 Biobanks
3.9.3 Clinical and Molecular Committees
3.10. Guide Recommendations

Master target-oriented treatment in the molecular era with this TECH program"

05

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: ***Relearning***.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the ***New England Journal of Medicine*** have con Aspect red it to be one of the most effective.

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH, we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.

According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method.

The effectiveness of the method is justified by four fundamental achievements:

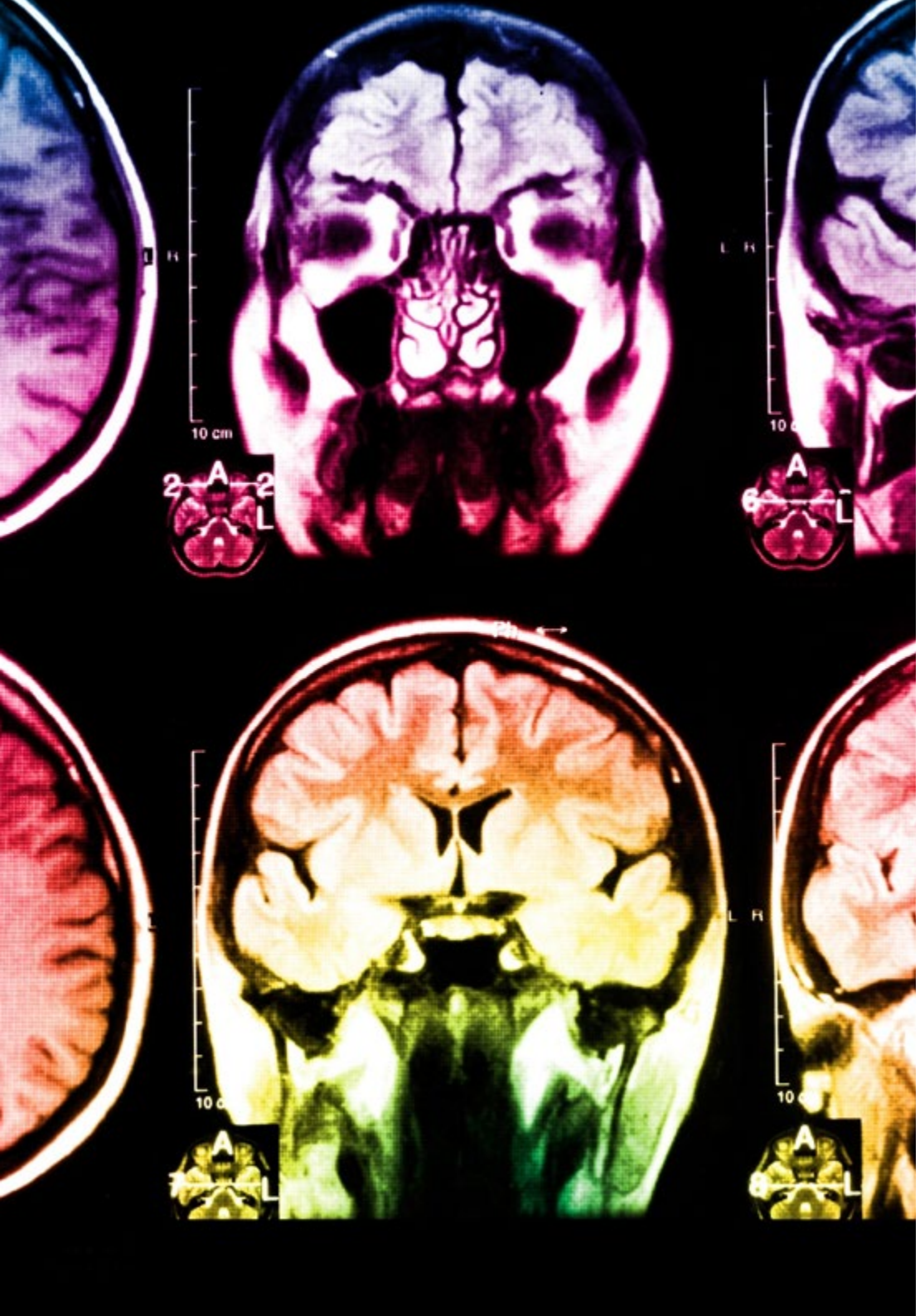
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.

This program offers the best educational material, prepared with professionals in mind:

Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then adapted in 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.

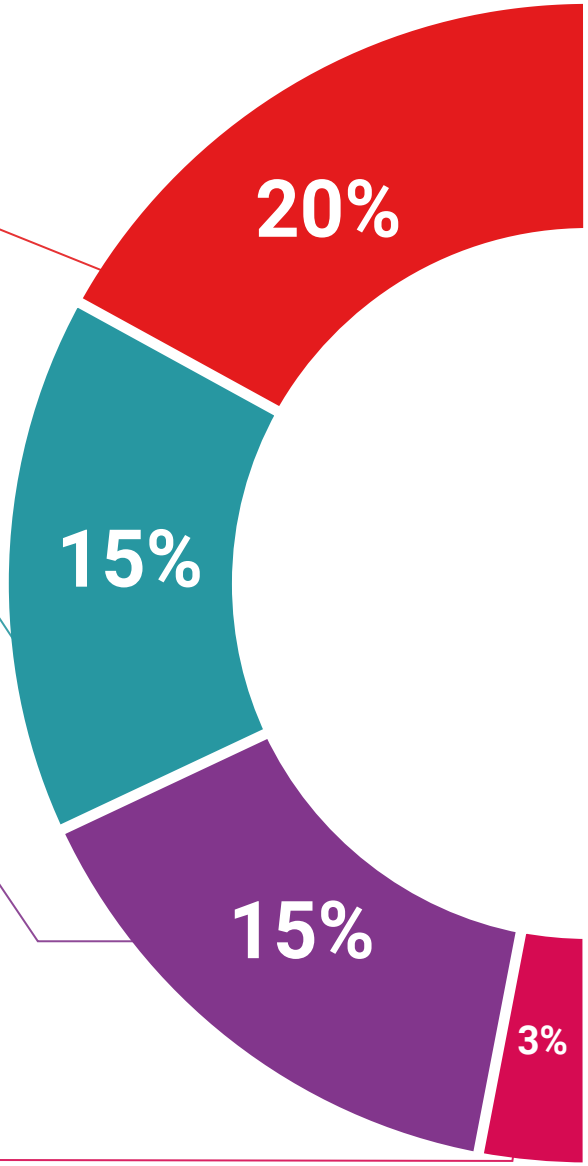
Interactive Summaries

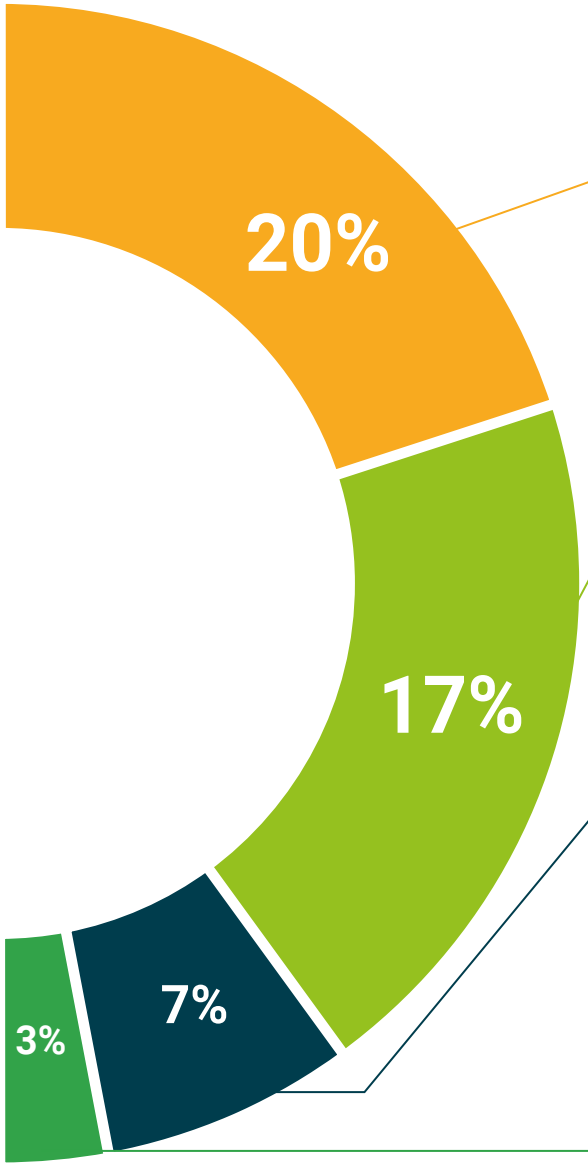
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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.

06

Certificate

The Postgraduate Diploma in Orphan, Agnostic Tumors and Tumors of Unknown Primary guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global University.

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"

This program will allow you to obtain your **Postgraduate Diploma in Orphan, Agnostic Tumors and Tumors of Unknown Primary** 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.

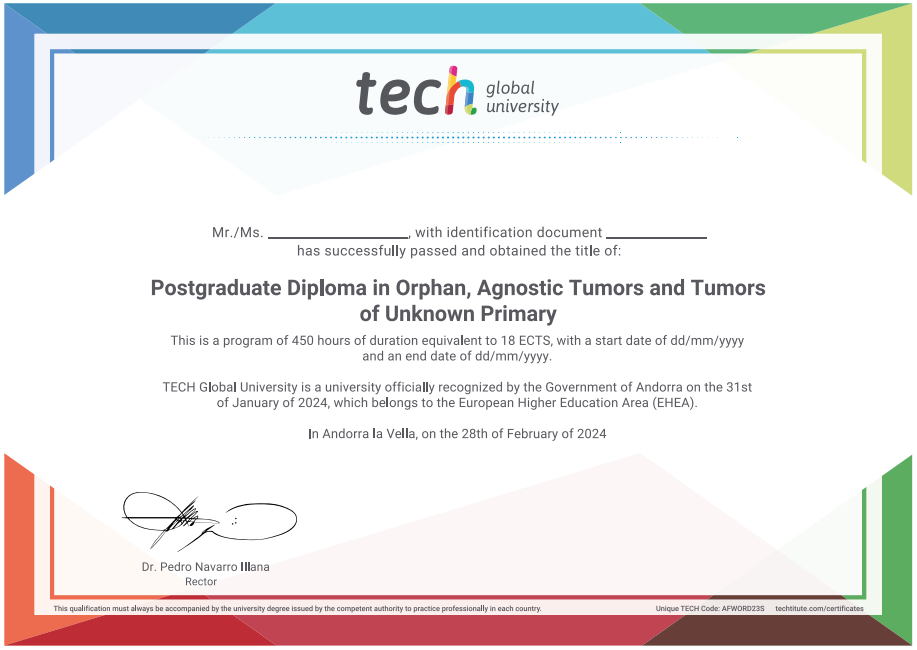
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Orphan, Agnostic Tumors and Tumors of Unknown Primary**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**


tech global university

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

Postgraduate Diploma in Orphan, Agnostic Tumors and Tumors of Unknown Primary

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

Dr. Pedro Navarro Illana
Rector

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 diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

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