

# Postgraduate Certificate

## Skin Tumors





## Postgraduate Certificate Skin Tumors

Course Modality: **Online**

Duration: **2 months.**

Certificate: **TECH Technological University**

**11 ECTS Credits**

Teaching Hours: **275 hours.**

Website: [www.techtute.com/in/medicine/postgraduate-certificate/postgraduate-certificate-skin-tumors](http://www.techtute.com/in/medicine/postgraduate-certificate/postgraduate-certificate-skin-tumors)

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# 01

# Introduction

The numbers of skin tumors have multiplied in recent years. In Spain alone, there are around 4,000 cases of melanoma per year and more than 74,000 cases of non-melanoma skin cancer. Therefore, it is important to raise awareness among citizens to protect themselves from exposure to the sun, but also the advances in research and the training of professionals, which will allow early detection of possible diseases and more appropriate treatments. Precisely, in the program that we present on this occasion, professionals will specialize in skin tumors.





A close-up photograph of human skin, showing a scab on the left side. The skin is light brown with fine hairs. The scab is a light tan color and is peeling away from the skin. The background of the slide is split into three diagonal sections: a dark teal section at the top right, a blue section at the bottom right, and a white section at the bottom left.

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*Expand your training with us and you will see  
how you advance in your daily practice"*

Direct exposure to the sun is the main risk factor for skin cancer. This makes it extremely important to see a specialist as soon as we find any abnormal sign on our body, whether it is a mole, a spot or any other type of lesion. There are some skin tumors that grow very fast, so it is very important to have an early detection in order to achieve a cure.

Among the different types of skin cancer, melanomas are the least frequent and develop mainly in people with light skin and eyes and who have difficulty tanning. Therefore, it is important to use high sun protection to avoid sunburn, especially in childhood or adolescence, which can later lead to this type of disease.

Skin carcinomas are the most common skin tumors and are usually found in people over 50 years of age who have had continuous exposure to the sun throughout their lives.

This Postgraduate Certificate in Skin Tumors offers the possibility to specialize in this subject and will allow you to develop the competences, abilities and skills necessary for the performance of the profession, generating greater added value to your professional performance.

The online Postgraduate Certificate is prepared by medical professionals who have extensive experience in this pathology, and who provide students with their knowledge, experience and practical cases that give this Postgraduate Certificate the quality training it deserves.

This **Postgraduate Certificate in Skin Tumours includes** the most complete and up-to-date scientific program on the market. The most outstanding features of the University Course are:

- ♦ The development of practical cases presented by experts in Skin Tumors.
- ♦ The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional
- ♦ What's new in Skin Tumors
- ♦ Practical exercises where self-assessment can be used to improve learning.
- ♦ Special emphasis on innovative methodologies in Skin Tumours.
- ♦ 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



*Update your knowledge through the Skin Tumours Postgraduate Certificate".*

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*This Postgraduate Certificate may be the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in Skin Tumors, you will obtain a Postgraduate Certificate issued by TECH-Technological University”*

It includes in its teaching staff professionals belonging to the field of skin tumors, who pour into this training the experience of their work, in addition to recognized specialists belonging to reference 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 an immersive training program designed to train in real situations.

This program's design is based on problem-based learning, by means of which the professional must try to solve the different professional practice situations that arise during the course university. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned experts in the field of Skin Tumors. with extensive medical experience.

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

*Take the opportunity to learn about the latest advances in Skin tumours, and improve the training of your students.*





# 02 Objectives

This Postgraduate Certificate in Skin Tumors is oriented to facilitate the performance of the professional dedicated to medicine with the latest advances and newest treatments in the sector.







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*This Postgraduate Certificate is designed for you to update your knowledge in Skin Tumors., with the use of the latest medical technology and scientific advances to contribute to promote the health and quality of life of patients"*



## General Objective

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- ♦ The main goal of this training in Skin Tumors is to update the professional's knowledge on this subject, as well as the most advanced treatments and advances that are saving the lives of women affected by this disease.



## Specific Objectives

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- ♦ Recognize the characteristics of malignant neoplasms, their classification according to their histogenesis, as well as aspects related to their biological behavior.
- ♦ Acquire up-to-date knowledge on cancer epidemiological data worldwide
- ♦ Learn about screening methods in at-risk populations to diagnose cancerous lesions early.
- ♦ Recognize the environmental and occupational factors (mutagenic agents) that are directly and indirectly involved in cancer, and the carcinogenic capacity of some toxic substances found in food
- ♦ Relate DNA AND RNA viruses known to cause cancer in humans.
- ♦ Expose the mechanisms by which viruses are able to subjugate the normal activity of host cytoplasmic proteins, affecting key points in the control of the cell cycle, cell growth and differentiation, causing severe alterations in cell growth and cancer development.
- ♦ Recognize the role of H. pylori bacteria in the pathogenesis of gastric cancer
- ♦ Understand cancer as a genetic disease resulting from mutations that accumulate

in genes that are critical for the growth and development of somatic cells

- ♦ Describe the genes associated with cancer, and the importance of DNA analysis to identify individuals, detect predisposing gene polymorphisms, analyze mutations, and establish the diagnosis of cancer as a genetic disease
- ♦ Recognize the susceptibility genes involved in breast, lung, thyroid, colon, skin, bone, pancreatic, and neuroblastoma cancers, and by what mechanism they participate in tumorigenesis
- ♦ Know the symptoms and signs that are most frequently related to cancer, as well as the different systems for the staging of tumor disease and their importance
- ♦ Know the phases of the cell cycle, the critical control points, as well as the genes involved in its regulation
- ♦ Recognize the important role of cell cycle checkpoints and DNA repair systems in maintaining the fidelity and integrity of genome replication and repair, and regulating cell cycle dynamics.
- ♦ Explain the positive and negative feedback regulatory processes that contribute to cell cycle progression, and the significance of negative controls on cell cycle progression that are present during development, differentiation, senescence, and cell death, which play an important role in preventing tumorigenesis
- ♦ Identify the difference in gene expression between normal tissue and tumor tissue
- ♦ Know the stages involved in the transformation of a normal cell to a malignant cell
- ♦ Recognize the malignant phenotype as the result of a characteristic pattern of gene expression, alterations in the function of the human genome, leading to aberrant growth, dedifferentiation, invasion and metastasis
- ♦ Characterize the different genes involved in cell cycle regulation (growth-promoting genes, growth-inhibiting genes, genes that regulate apoptosis and genes that repair damaged DNA), and the mutations that alter them.
- ♦ Explain the key role that oncogenes may play in the development of cancer by directing mechanisms that lead to the development of neoplasms

- ♦ Know tumor suppressor genes as cytoplasmic components capable of reversing the tumor phenotype; proteins that control the cell cycle, proliferation, and differentiation
- ♦ Identify epigenetic aberrations (DNA methylation with silencing of gene expression, and histone modifications that can enhance or dampen expression), which contribute to the malignant properties of cells
- ♦ Recognize the role of epigenetic changes in malignant phenotype, including gene expression, control of differentiation, and sensitivity and resistance to anticancer therapy
- ♦ Know the genes and proteins associated with malignant diseases and their utility as tumor markers to define a particular entity, its diagnosis, staging, prognosis, and screening in the population
- ♦ Know and apply the different technologies used to analyze the gene expression profile of neoplasms to identify clinical and biological aspects that are difficult to determine by histopathological examination. Its principles, advantages, and disadvantages
- ♦ Explain the importance of gene expression profiling for the application of different treatment protocols and the response to them among histologically similar tumors
- ♦ Recognize the importance of gene expression profiling in the new classifications of malignant tumors associated with prognosis and response to treatment
- ♦ Acquire in-depth knowledge of cutaneous tumor pathology, learning and reviewing the morphological characteristics of the most frequent tumors
- ♦ Establish clinical-pathological correlation
- ♦ Sample management, , from sample collection and preservation, to conventional staining, immunohistochemistry, and special laboratory and molecular pathology techniques.



03

# Course Management

This program includes in its teaching staff experts of reference in Skin Tumors who will share in this training the experience of their work. In addition, other experts of recognized prestige participate in its design and elaboration, completing the program in an interdisciplinary way.





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*Learn about the latest advances in Skin tumor procedures from the leading experts in the field"*

## International guest conductor

With more than 4 decades of professional career in the area of Pathology, Dr. Ignacio Wistuba is considered an international reference in this complex medical field. This prestigious researcher leads the Department of Translational Molecular Pathology at MD Anderson Cancer Center. He is also Director of the Khalifa Institute for Cancer Personalization, linked to the University of Texas.

In parallel, he directs the Thoracic Molecular Pathology Laboratory, the SPORE Lung Tissue Bank and the Institutional Tissue Bank. In turn, he is Director of the Biorepository and Pathology Core Network at the Eastern Cooperative Oncology Group, in conjunction with the American College of Radiology Imaging Network (ECOG-ACRIN).

One of the main lines of work of this pathologist in recent years has been Genomic and Precision Medicine. His multiple investigations in this field have allowed him to address the origin and complexities of different types of tumors, their incidence and their relationship with specific characteristics of the DNA of individuals. Specifically, he has delved into these issues in relation to lung neoplasms.

On the other hand, Wistuba maintains active research collaborations with other specialists from different parts of the world. An example of this is his participation in an exploratory analysis of cytokine levels in pleural fluid associated with immunotherapeutic protocols with the University for Development in Chile. He is also a member of global teams that, orchestrated by the Australian Royal Prince Alfred Hospital, have investigated different predictive biomarkers of lung cancer.

Likewise, the pathologist has sustained a continuous education since his initial studies in distinguished Chilean universities. Proof of this are his postdoctoral research internships in renowned institutions such as the Southwestern Medical Center and the Simmons Cancer Center in Dallas.



## Dr. Wistuba, Ignacio

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- ♦ President of the Department of Translational Molecular Pathology, MD Anderson Cancer Center
- ♦ Director of the Division of Pathology/Laboratory Medicine at MD Anderson Cancer Center
- ♦ Specialty Pathologist in the Department of Thoracic/Head and Neck Medical Oncology at the
- ♦ University of Texas Medical Center
- ♦ Director, UT-Lung SPORE Tissue Bank
- ♦ Lung Cancer Pathologist for the Lung Cancer Committee at Southwestern Oncology Group (SWOG)
- ♦ Principal Investigator on several studies conducted by the Cancer Prevention and Research Institute of Texas
- ♦ Principal Investigator of the Translational Genomics and Precision Cancer Medicine Training Program at NIH/NCI
- ♦ Postdoctoral Fellow at the Hamon Center for Therapeutic Oncology Research Center
- ♦ Postdoctoral Fellow at Southwestern Medical Center and Simmons Cancer Center

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

## Management



### **Dr. Rey Nodar, Severino**

- ♦ Head of the Anatomy Pathology Department at Manises University Hospital, Synlab Pathology Europe. Valencia, Spain
- ♦ President of FORESC and FEBIP (Foundation for Sciences and Research USA/ Spanish Foundation for Training in Biomedical Sciences and Oncologic Pathology).
- ♦ Doctor Honoris Causa 2012 at Bircham International University, USA
- ♦ Chief Editor of Journal of Cancer and Tumor international
- ♦ Member of the Editorial Board of 6 international journals (topics related to oncopathology)
- ♦ Author: Glands Thyroid Pathology. Ed. Bubok 2012 y Endocrine Pathology. Text and Atlas. Ed. EdStudios, Spain, 2018
- ♦ Member of the New York Academy of Sciences (Sciences Academy of NY), 2011
- ♦ Integrand of the Power List 2019





04

# Structure and Content

The contents structure has been designed by the best professionals in Skin tumors, with extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied and diagnosed, and with extensive knowledge of new technologies applied to anatomopathological diagnosis.





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*This Postgraduate Certificate in Skin Tumours includes the most complete and up-to-date scientific program on the market”*

## Module 1. Cancer General Aspects. Risk factors

- 1.1. Introduction
  - 1.1.1. Overview of Malignant Neoplasms
    - 1.1.1.1. Nomenclature
    - 1.1.1.2. Features
    - 1.1.1.3. How Metastases Spread
    - 1.1.1.4. Prognostic Factors
  - 1.1.2. Epidemiology of Cancer
    - 1.1.2.1. Incidence
    - 1.1.2.2. Prevalence
    - 1.1.2.3. Geographical Distribution
    - 1.1.2.4. Risk factors
    - 1.1.2.5. Prevention
    - 1.1.2.6. Early Diagnosis.
  - 1.1.3. Mutagenic Agents.
    - 1.1.3.1. Environmental.
    - 1.1.3.2. Work
    - 1.1.3.3. Toxic Substances in Food
  - 1.1.4. Biological Agents and Cancer
    - 1.1.4.1. RNA Virus.
    - 1.1.4.2. DNA Virus.
    - 1.1.4.3. H. pylori
  - 1.1.5. Genetic Predisposition
    - 1.1.5.1. Genes Linked to Cancer
    - 1.1.5.2. Susceptibility of Genes
      - 1.1.5.2.1. Breast Tumors
      - 1.1.5.2.2. Lung Tumors
      - 1.1.5.2.3. Thyroid Tumors
      - 1.1.5.2.4. Colon Tumors
      - 1.1.5.2.5. Skin Tumors
      - 1.1.5.2.6. Bone Tumors
      - 1.1.5.2.7. Pancreatic Tumors
      - 1.1.5.2.8. Neuroblastoma.

- 1.1.6. Clinical Aspects of Malignant Neoplasms
  - 1.1.6.1. Introduction
- 1.1.7. Neoplastic Disease Staging
  - 1.1.7.1. Update

## Module 2. Molecular Basis of Cancer

- 2.1. Introduction to the Molecular Basis of Cancer
  - 2.1.1. Genes and the Genome
    - 2.1.1.1. The Main Cell Signaling Pathways
    - 2.1.1.2. Cell Growth and Proliferation
    - 2.1.1.3. Cell Death. Necrosis and Apoptosis
- 2.2. Mutations.
  - 2.2.1. Types of Mutations. Frameshift; Indels, Translocations, SNV; Missense, Nonsense, CNV, Driver vs. Passenger
    - 2.2.1.1. Mutagens.
      - 2.2.1.1.1. Biological Agents and Cancer
    - 2.2.1.2. Mutation Repair Mechanisms
    - 2.2.1.3. Mutations with Pathological and Non-Pathological Variants
- 2.3. Major Advances in Precision Medicine
  - 2.3.1. Tumor Biomarkers
  - 2.3.2. Oncogenes and Tumor Suppressor Genes
  - 2.3.3. Diagnostic Biomarkers.
    - 2.3.3.1. Resistance.
    - 2.3.3.2. Prognosis
    - 2.3.3.3. Pharmaco-Genomics
  - 2.3.4. Cancer Epigenetics
- 2.4. Main Techniques in the Molecular Biology of Cancer
  - 2.4.1. Cytogenetics and FISH (Fluorescence In Situ Hybridization)
  - 2.4.2. DNA Extract Quality
  - 2.4.3. Fluid Biopsy
  - 2.4.4. PCR as a Basic Molecular Tool
  - 2.4.5. Sequencing, NGS



## Module 3. Skin Tumors

- 3.1. Epidermal Tumors.
  - 3.1.1. Keratotic and Hyperplastic Lesions
    - 3.1.1.1. Epidermal Nevi.
    - 3.1.1.2. Viral Infections
    - 3.1.1.3. Acanthomas.
  - 3.1.2. Benign Neoplasms.
    - 3.1.2.1. Seborrheic Keratosis.
    - 3.1.2.2. Lichenoid Keratosis.
  - 3.1.3. Malignant Neoplasms.
    - 3.1.3.1. Actinic Keratosis.
    - 3.1.3.2. Bowen's Disease.
    - 3.1.3.3. Basal Cell Carcinomas.
    - 3.1.3.4. Squamous cell carcinoma
- 3.2. Adnexal Tumors
  - 3.2.1. Tumors with Sebaceous Differentiation
  - 3.2.2. Tumors with Follicular Differentiation
  - 3.2.3. Tumors with Glandular Differentiation
- 3.3. Cutaneous Lymphoid Infiltrates
  - 3.3.1. Lymphoid Hyperplasia.
  - 3.3.2. T-Cell Lymphomas.
  - 3.3.3. Mycosis Fungoides
  - 3.3.4. CD 30 + Lymphoproliferative Processes
  - 3.3.5. Primary Cutaneous T Lymphomas.
  - 3.3.6. Lymphomas
  - 3.3.7. Marginal Zone B lymphomas
  - 3.3.8. Follicular Center B Lymphomas
  - 3.3.9. Diffuse Large B-cell Lymphoma
- 3.4. Melanocytic Tumors
  - 3.4.1. Lentigo.
  - 3.4.2. Dermal Melanosis and Melanocytosis
  - 3.4.3. Melanocytic Nevi.
  - 3.4.4. Melanoma
- 3.5. Mesenchymal Tumors
  - 3.5.1. Vascular Tumours.
  - 3.5.2. Adipose Tissue Tumors
  - 3.5.3. Tumors and Fibrous Proliferations
  - 3.5.4. Muscular and Osteocartilaginous Tumors
- 3.6. Neural and Neuroendocrine Tumors
  - 3.6.1. Peripheral Nerve Tumors
  - 3.6.2. Neuroendocrine Tumors
    - 3.6.2.1. Neuroectodermal Tumor.
    - 3.6.2.2. Merkel Cells Carcinoma



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

05

# Methodology

This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

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



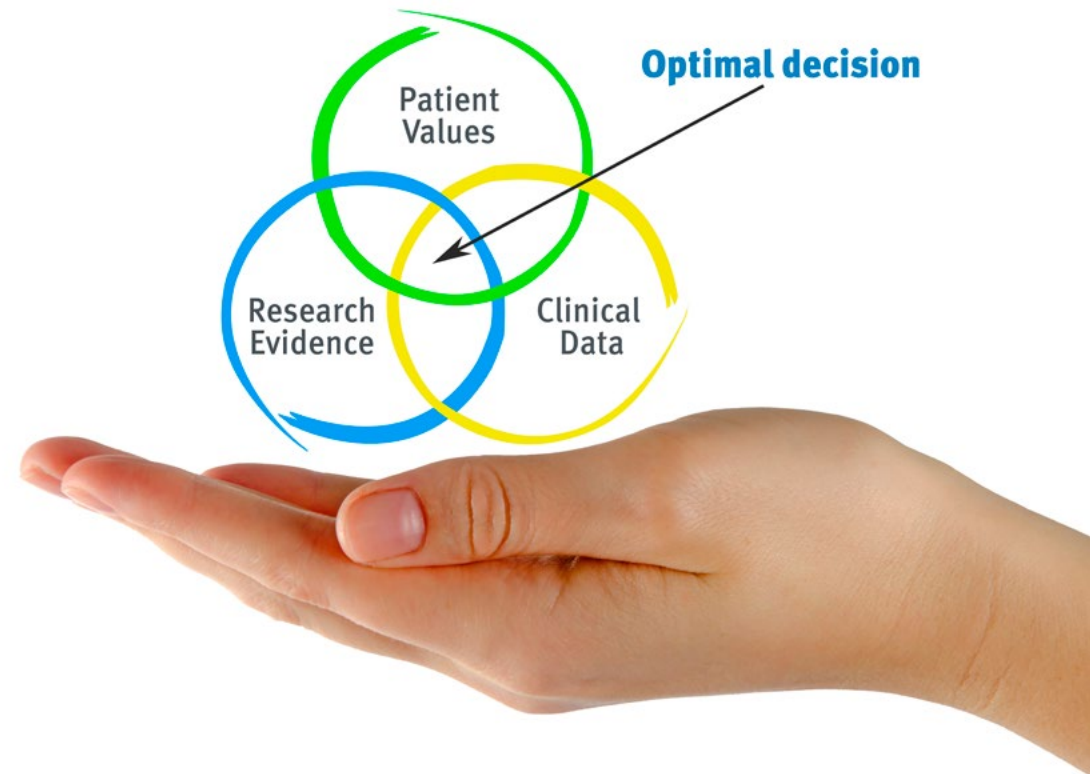
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*Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

In a given situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

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



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



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

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

1. Students who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our University is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.



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



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

With this methodology we have trained more than 250,000 physicians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

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

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



In this program you will have access to the best educational material, prepared with you in mind:



#### Study Material

All 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.

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

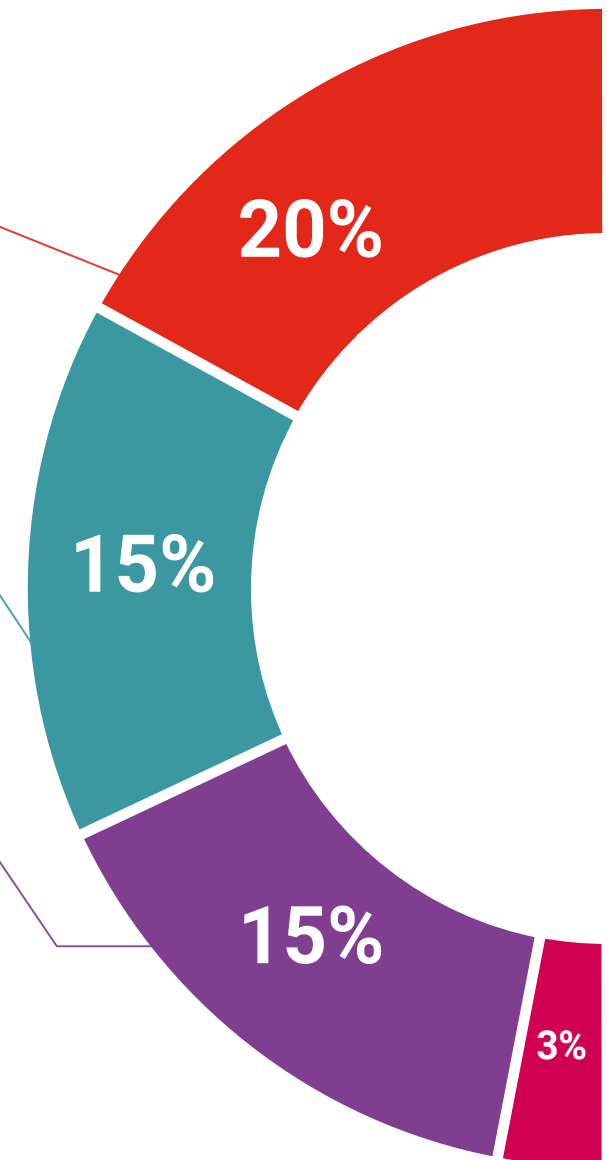
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

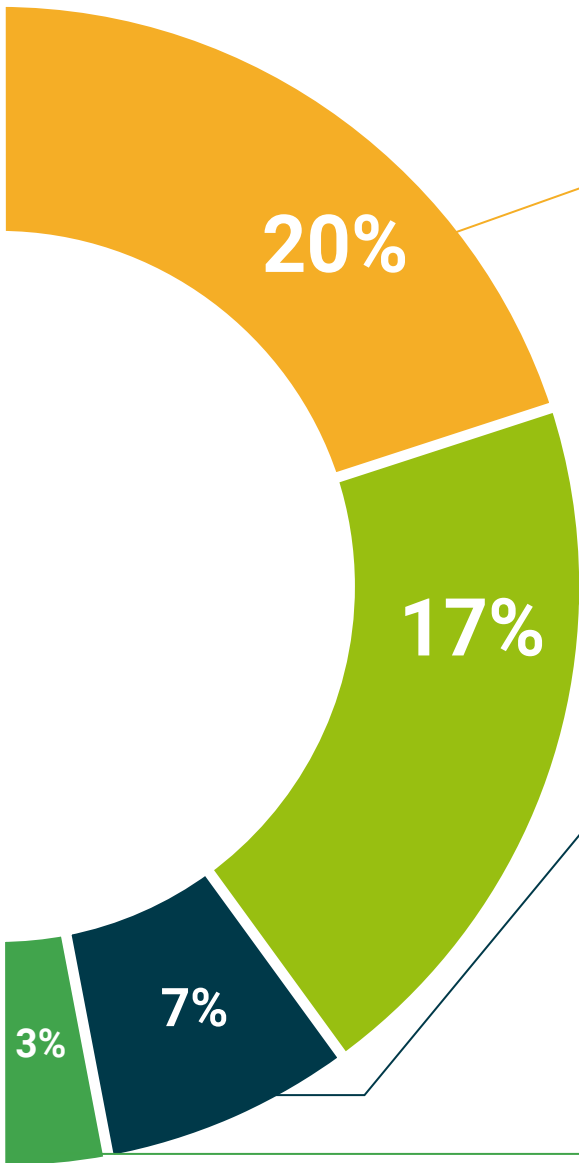
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



#### Additional Reading

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





**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 future difficult 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.





06

# Certificate

The **Postgraduate Certificate in Skin Tumours** guarantees you, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate issued by **TECH Technological University**.



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*Successfully complete this training and receive your university degree without travel or laborious paperwork”*

This **Postgraduate Certificate in Skin Tumours** includes the most complete and up-to-date scientific program on the market.

After students have passed the assessments, they will receive by certified mail their **Postgraduate Certificate** issued by **TECH Technological University**.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labour exchanges, competitive examinations, and professional career evaluation..

Title: **Postgraduate Certificate in Skin Tumors**

ECTS: **11**

Official Number of Hours: **275**





health future  
confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present quality  
development language  
virtual classroom



## Postgraduate Certificate Skin Tumors

Course Modality: Online

Duration: 2 months.

Certificate: TECH Technological University

11 ECTS Credits

Teaching Hours: 275 hours.

# Postgraduate Certificate

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