

# Postgraduate Certificate

## Infections in the Oncological Process





## Postgraduate Certificate Infections in the Oncological Process

- » Modality: Online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Accreditation: 4 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/medicina/curso-universitario/infecciones-proceso-oncologico](http://www.techtitute.com/medicina/curso-universitario/infecciones-proceso-oncologico)

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Certificate

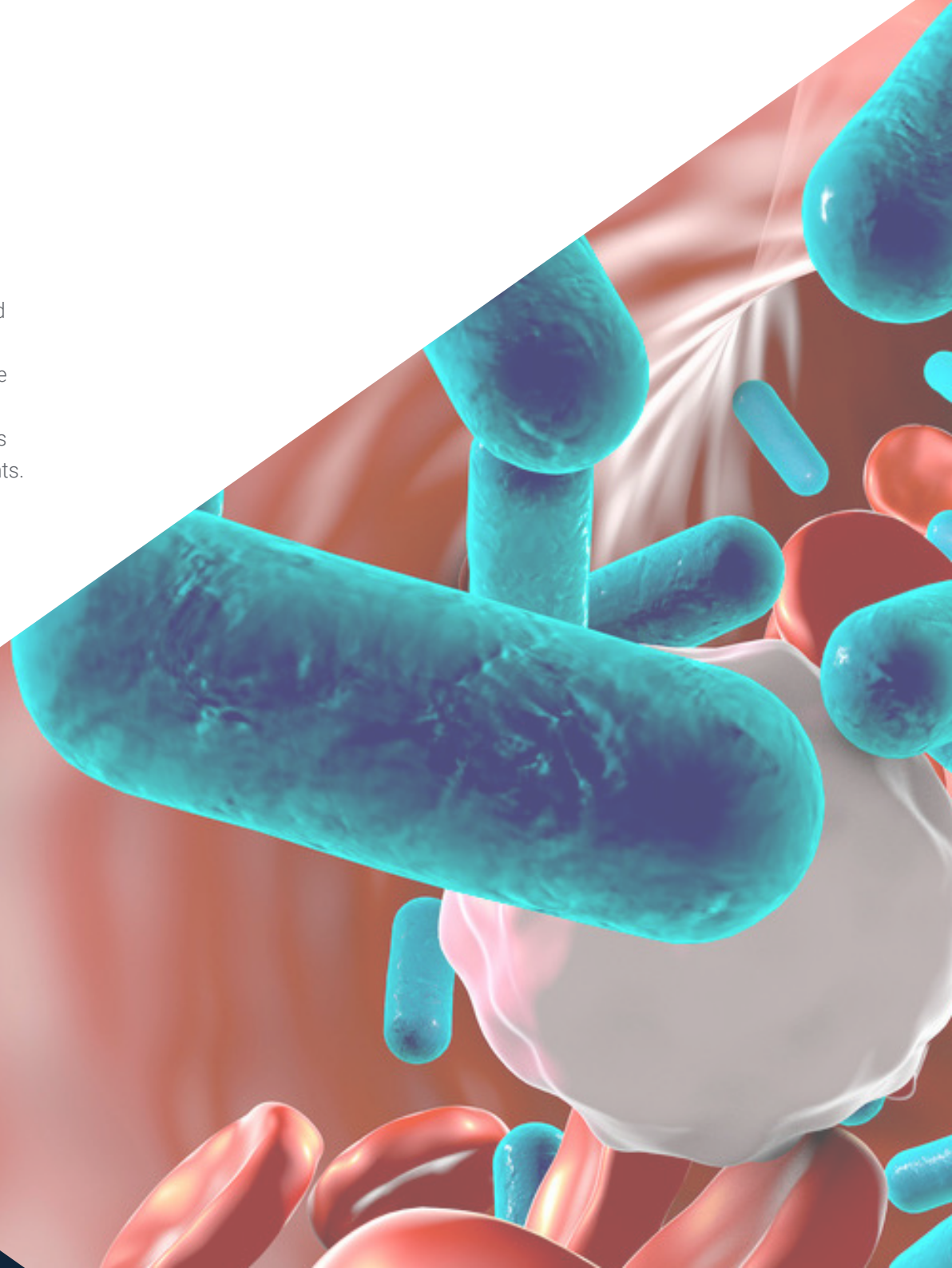
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# 01

# Introduction

Infections that occur in Cancer patients are one of the main causes of morbidity and mortality in these patients. For this reason, it is important to continuously update specialists on the main complications that can occur in each case, depending on the cancer process, and the best way to combat them. For this reason, this program is an excellent tool through which physicians will be updated on the different infections susceptible to arise in oncological patients, as well as immunosuppression in patients. To this end, the general structure of the immune system and its response will be analyzed. All this, from home and with referents in this area at their complete disposal.





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*The Postgraduate Certificate you needed for a high preparation in the range of infections that an oncology patient can contract”.*

The American Cancer Society warns that people who have Cancer, or who are undergoing cancer treatment, tend to have a higher risk of contracting an infection. These infections may even be more serious than in individuals who do not have Cancer. This fact makes it even more important for patients and their caregivers to know the signs of infection and to seek help early. In this respect, specialist physicians and their advisory role play a transcendental role.

For this reason, medical professionals should take advantage of the opportunities for updating that arise in areas such as this, and this Postgraduate Certificate is the perfect option. Through it, they will delve into the infections that appear in the oncological process, examining, mainly, the problems derived from the different types of Cancer patients with Sepsis.

Additionally, physicians will be able to delve into the relationship between Cancer and the different microorganisms that cause infections, as well as in those bacteria that have become allies of oncological patients. Likewise, the certificate will also determine the necessary tools to establish the causes of a possible infection in these scenarios.

All this and more can be performed by the specialist physician at home. In this sense, they will not have to submit to fixed schedules in order to be able to perfectly combine the Postgraduate Certificate with their professional activity; in fact, with a simple Internet connection they will have unlimited access to the largest virtual catalog of resources on this field that exists in the market.

This Postgraduate Certificate in Infections in the Oncological Process contains the most complete and updated scientific program in the market. The most outstanding features of the Postgraduate Certificate are:

- ♦ The development of practical cases presented by experts in Infections in the Oncological Process.
- ♦ The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out 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.



*Do you want to delve deeper into how cells and cytokines act against infectious agents? All you have to do is enroll!"*

“

*Thanks to this program, you will go through different conditions of the immunocompromised patient with Sepsis to perfect your decision making in consultation”.*

The program’s teaching staff includes professionals from the field 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, through which the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

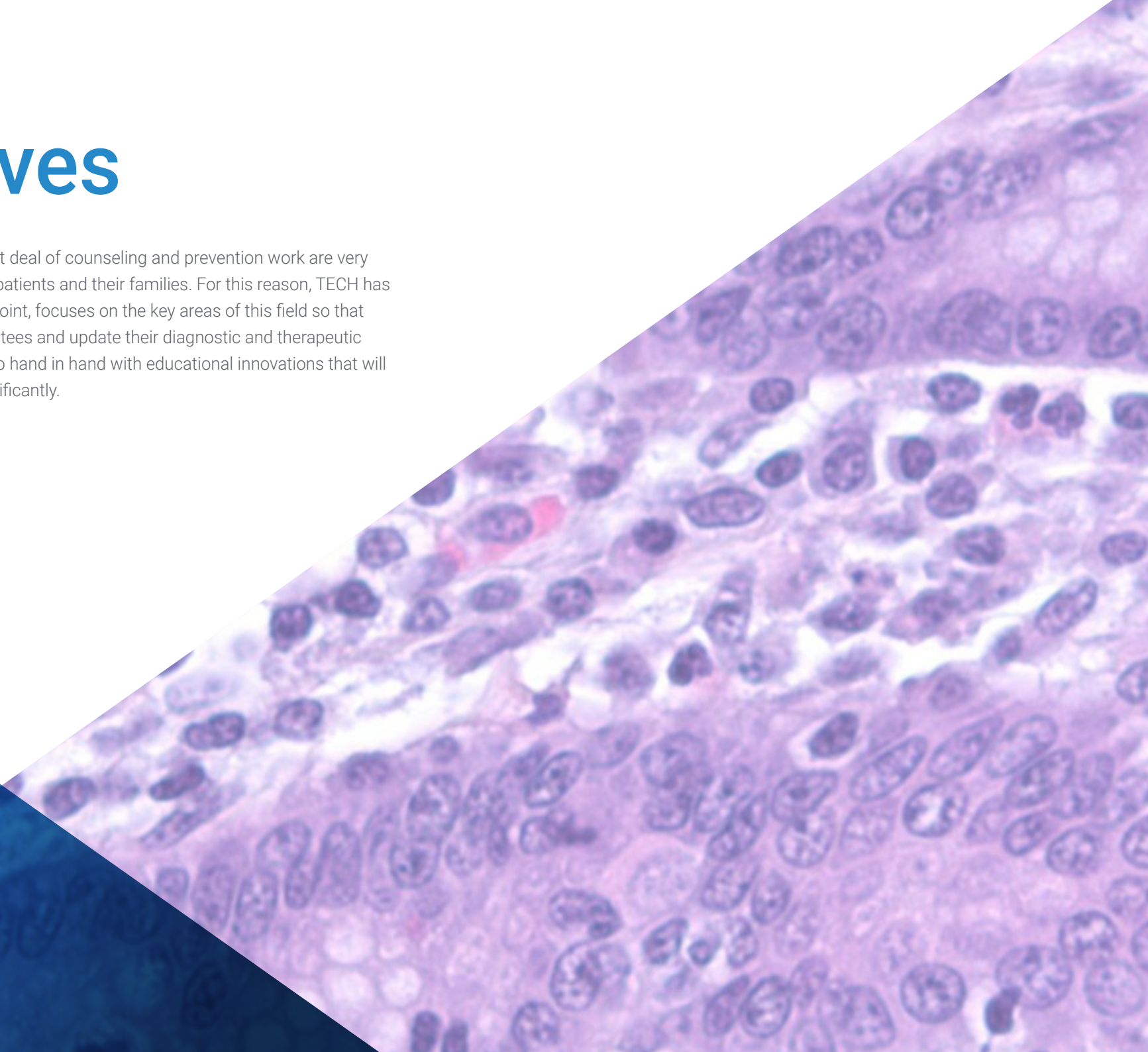
*You will determine the most common causes of infection in oncology patients undergoing transplantation, developing an important preventive work.*

*Get updated on the complex interrelationships between infections and the different types of immunosuppression to make a difference in this field.*



# 02 Objectives

Effective medical action and a great deal of counseling and prevention work are very common demands from oncology patients and their families. For this reason, TECH has designed a program that, point by point, focuses on the key areas of this field so that specialists can develop with guarantees and update their diagnostic and therapeutic capabilities. Additionally, it will do so hand in hand with educational innovations that will boost their academic progress significantly.





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*If you achieve the objectives of the program, you will be an expert in the relationship between cancer and microorganisms, analyzing oncogenesis and the characteristics of infections”.*



## General Objectives

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- ♦ Gain in-depth knowledge of key aspects of Infectious Diseases
- ♦ Manage prevention, diagnosis and treatment of infectious diseases
- ♦ Delve into a multidisciplinary and integrative approach that facilitates the control of these pathologies
- ♦ Acquire competences related to the area of Clinical Infectious Diseases and Advanced Antibiotics Therapeutics.
- ♦ Be able to apply the latest technological innovations in order to establish an optimal management in the diagnosis



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





## Specific Objectives

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- Identify the general structures of the immune system
- Establish the common responses of the immunological system when faced with viral and bacterial infections
- Explain the complex interrelationships between infections and different types of immunosuppression.



*Your performance will be decisive thanks to your update on the bacteria allied against Cancer, becoming essential actors that will benefit the patient's process".*

03

# Course Management

For this degree, TECH has incorporated a teaching team of authentic references in the area of infectious diseases in the oncological process, in this sense, specialists in Microbiology and Parasitology, among other fields, will advise the student and closely supervise their evolution throughout the Postgraduate Certificate. Also, thanks to TECH's advanced Virtual Campus, the interaction between teacher and student will be fluid and any doubt can be solved in this platform.



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*Specialists in infectious diseases, Microbiology and Parasitology will watch over your academic progress throughout the program”.*

## Management



### Dr. Díaz Pollán, Beatriz

- ◆ Specialist in internal medicine with experience in infectious diseases
- ◆ Area Specialist, Department of Internal Medicine, Infectious Diseases Unit, La Paz University Hospital
- ◆ Associate Physician, Department of Internal Medicine, Infectious Diseases Unit, San Carlos Hospital
- ◆ Associate Researcher in several research projects
- ◆ Author of dozens of scientific articles on Infectious Diseases
- ◆ Master's Degree in Infectious Diseases and Antimicrobial Therapy from CEU Cardenal Herrera University
- ◆ Specialist in community and non-transmissible infections from the CEU Cardenal Herrera University
- ◆ Specialist in Infectious Diseases and Chronic and Imported Infectious Diseases from CEU Cardenal Herrera University.
- ◆ Member of the Spanish Society of Infectious Diseases and Clinical Microbiology.

## Professors

### Dr. Rico Nieto, Alicia

- ◆ Microbiology and Parasitology Specialist and Infectious Diseases Expert
- ◆ Assistant Physician, Infectious Diseases Unit, La Paz University Hospital, Madrid
- ◆ Specialist in Microbiology at La Paz University Hospital, Madrid
- ◆ Researcher at the Research Institute of the La Paz University Hospital, Madrid
- ◆ Author of numerous scientific publications
- ◆ Member of the Board of Directors of the Osteoarticular Infection Study Group and the Spanish Society of Infectious Diseases and Clinical Microbiology.

### Dr. Loeches Yagüe, María Belén

- ◆ Associate Physician of the Infectious Diseases Unit at the General University Hospital of La

Paz, Madrid

- ◆ Doctorate in Medicine from the Autonomous University Madrid
- ◆ Degree in Medicine from the Complutense University of Madrid
- ◆ Master in Theoretical and Practical Learning in Infectious Diseases from the Complutense University of Madrid
- ◆ Specialized training in Microbiology and Infectious Diseases, Gregorio Marañón General University Hospital,
- ◆ Professor of Infectious Diseases, Infanta Sofía University Hospital, Madrid

### Dr. Arribas López, José Ramón

- ◆ Section Chief of the Infectious Diseases and Clinical Microbiology Unit of the Internal

Medicine Department of the La Paz University Hospital

- ♦ Coordinator of the High Level Isolation Unit at the Hospital La Paz - Carlos III
- ♦ Director of the Research Institute of La Paz University Hospital (IdiPAZ)
- ♦ Director of La Paz University Hospital's Foundation
- ♦ Doctor in the Infectious Diseases Unit at Barnes Hospital in the USA
- ♦ Doctor of Medicine, UAM
- ♦ Member of the Inter-Ministerial Committee for the Management of the Ebola Crisis

#### **Dr. Branches Ramos, Juan Carlos**

- ♦ Internal Medicine Specialist
- ♦ Assistant Physician of the Infectious Diseases Unit of La Paz University Hospital, Madrid
- ♦ Intern at the University Hospital Sanitas La Zarzuela Madrid.
- ♦ PhD in Medicine and Surgery from the University of Alcalá de Henares
- ♦ Master's Degree in Infectious Diseases in Intensive Care from the Foundation University-Business Foundation of the University of Valencia

#### **Dr. Mora Rillo, Marta**

- ♦ Internal Medicine Specialist at La Paz University Hospital, Madrid.
- ♦ Clinical Researcher in Infectious Diseases

- ♦ Author of various scientific articles on Infectious Diseases
- ♦ Collaborating Teacher in university studies of Medicine
- ♦ Doctorate in Medicine from the Autonomous University Madrid
- ♦ Master's Degree in Infectious Diseases in Intensive Care by the University of Valencia
- ♦ Master's Degree in Tropical and Health Medicine, Autonomous University of Madrid
- ♦ University Expert in Emerging and High Risk Virus Pathology from the Autonomous University of Madrid



*Take the step to catch up on the latest developments in Infections in the Oncological Process"*

# 04

# Structure and Content

100 hours is the time needed to excel in the infectious pathologies associated with Oncology. Distributed over 6 weeks, students will delve into contents that incorporate the most comprehensive vision that exists in this field. In fact, the concepts to be analyzed will be presented in a variety of multimedia formats, such as interactive summaries, case studies, video medical procedures or complementary readings. In this way, their educational experience will be very dynamic, facilitating their academic performance and saying goodbye to memorization.



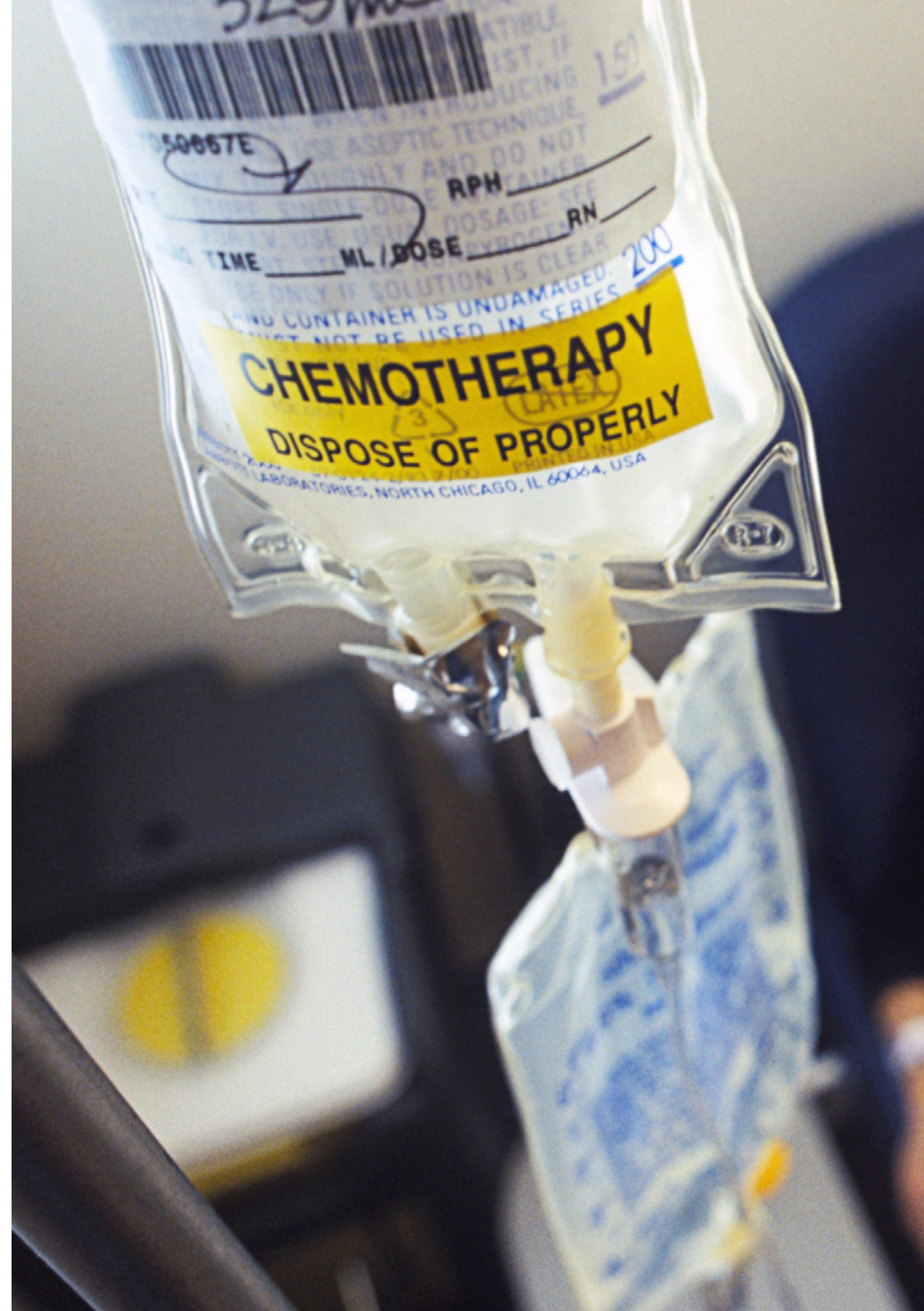


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*Hepatitis B and C Virus, Human Papilloma Virus, Epstein-Bar Virus, etc. All the viruses that can be associated with the oncological process are included in this syllabus”.*

## Module 1. Cancer and Immunosuppression

- 1.1. The Innate and Adaptive Immune Response
  - 1.1.1. Cells and Cytokines in Response to Infectious Agents
  - 1.1.2. Characteristics of the Innate Immune Response
- 1.2. Immunosuppression in Different Conditions in Patients with Sepsis
  - 1.2.1. The Role of Cytotoxics in Immunosuppression
  - 1.2.2. The Role of Cytotoxics in Immunosuppression
  - 1.2.3. Infection in Transplant Patients
- 1.3. The Oncohematological Patient with Sepsis
  - 1.3.1. Medullary Aplasia
  - 1.3.2. Neutropenia
  - 1.3.3. Infections in Patients with Cancer
- 1.4. The Diabetic Patient with Sepsis
  - 1.4.1. The Immune System in Diabetes Mellitus
  - 1.4.2. Main Infections in the Diabetic Patient
- 1.5. Comprehensive Approach to the Immuno-Compromised Patient with Sepsis
  - 1.5.1. Diagnostic Considerations
  - 1.5.2. Therapeutic Measures
- 1.6. The Link Between Cancer and Micro-organisms
  - 1.6.1. Oncogenesis and Infection
  - 1.6.2. Virus and Cancer
    - 1.6.2.1. Epstein-Barr Virus
    - 1.6.2.2. Hepatitis B and C Virus
    - 1.6.2.3. Human Papillomavirus
    - 1.6.2.4. T-cell Lymphoma/Leukaemia Viruses
    - 1.6.2.5. Kaposi's Sarcoma-Associated Herpesvirus
- 1.7. Bacterias and Cancer
  - 1.7.1. Helicobacter Pylori
- 1.8. Parasites and Cancer
  - 1.8.1. Schistosoma Haematobium
  - 1.8.2. Opisthorchis Viverrini
- 1.9. Bacteria Allies Against Cancer





“*A unique update opportunity through a syllabus that comprehensively addresses the role of steroids and cytotoxics in Immunosuppression.*”

05

# Methodology

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

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



“

*Discover 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

In a given situation, what would you do? Throughout the program, they will be presented with multiple simulated clinical cases based on real patients, where they 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.

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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.



## Relearning Methodology

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

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 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 we have prepared 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.

*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 (we learn, unlearn, forget, and re-learn). Therefore, we balance each of these elements concentrically.

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



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



### Study Material

After a complex production process, we transform the best content into high-quality educational and audiovisual multimedia. We select the best syllabus and make it available to you. Everything you need to acquire in-depth knowledge of a discipline, from A to Z. Lessons written and chosen by specialists in each of the disciplines.



### Surgical techniques and clinical procedures on video

We bring you closer to the newest techniques, to the latest scientific advances, to the forefront of doctor news. All of this, first hand, and explained and detailed with precision to contribute to assimilation and a better understanding. And best of all, students can watch them as many times as they want.



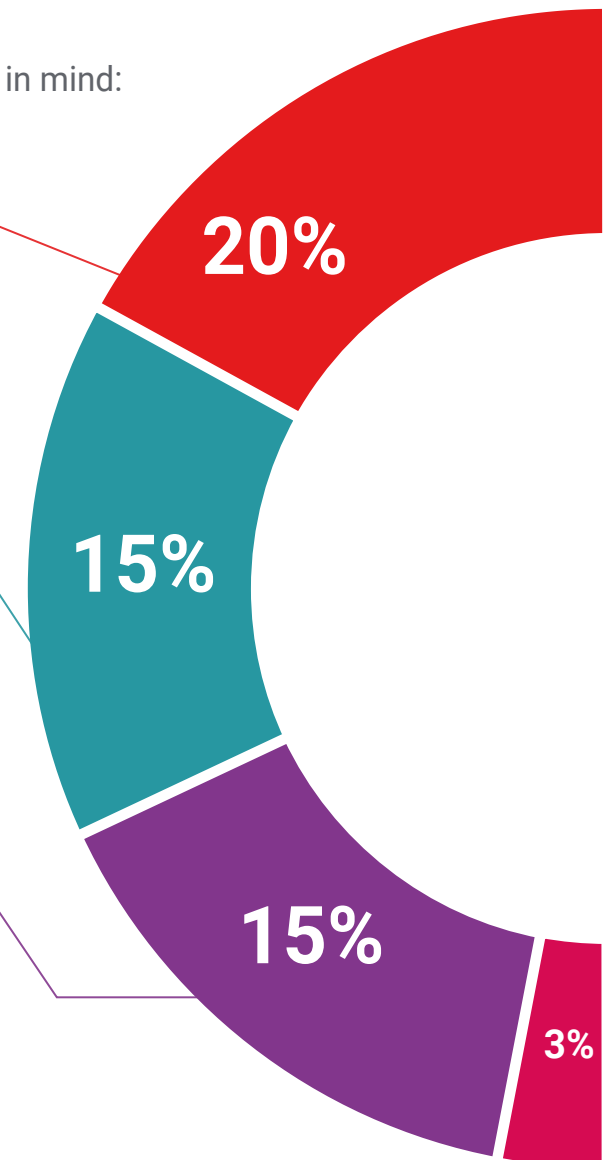
### Interactive Summaries

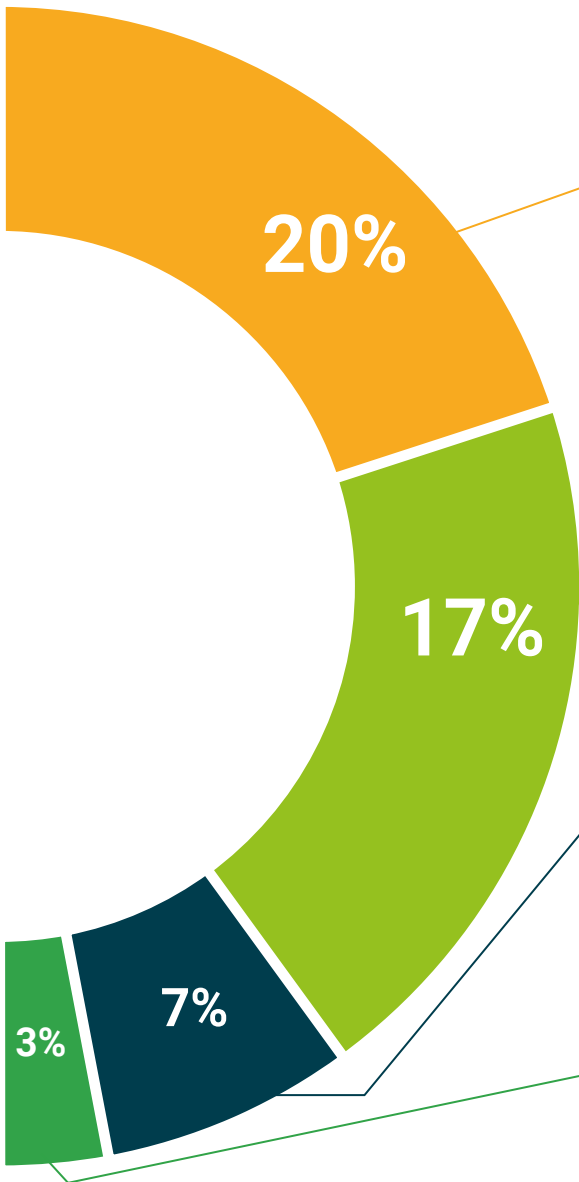
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge. This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



### Additional Reading

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





#### Expert-Led Case Studies and Case Analysis

Through the narratives of expert professionals, it is possible to acquire a high degree of understanding of the most frequent problematic situations. The professional's healthcare practice is not alien to the context in which it takes place. If we want to specialize ourselves to improve our professional practice, this program must be situated within the context in which it takes place.



#### Testing & Retesting

We periodically evaluate and re-evaluate your knowledge throughout this program through activities and evaluative exercises.



#### Classes

There is scientific evidence suggesting that observing third-party experts can be useful. Learning from an expert strengthens knowledge and recall, and generates confidence in our future difficult decisions.



#### Quick Action Guides

One of the most important functions of our team is to select those contents considered essential and present them in the form of worksheets or quick action guides to facilitate their understanding.



06

# Certificate

The Postgraduate Certificate in Infections in the Oncological Process guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



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

This private qualification will allow you to obtain a diploma for the **Postgraduate Certificate in Infections in the Oncological Process** 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** private qualification, 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 Certificate in Infections in the Oncological Process**

Modality: **online**

Duration: **6 weeks**

Accreditation: **4 ECTS**





**Postgraduate  
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Infections in the  
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