## Postgraduate Diploma Lymphatic Diseases





### Postgraduate Diploma

### Lymphatic Diseases

» 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-lymphatic-diseases

# Index

> 06 Certificate

> > p. 30





### tech 06 | Introduction

Scientific research carried out in the field of Vascular Surgery has found up to date mechanisms for the management of Lymphatic Diseases. Therefore, sophisticated laparoscopic techniques or advanced proton therapies can be excellent allies to treat Hodgkin's Lymphoma more effectively, helping to ensure the welfare of patients. Consequently, given the constant evolution in this branch of medicine, being up to date in this area is essential for surgeons.

For this reason, TECH has opted to design this program, which will provide the specialist with the most up to date knowledge regarding the approach to Lymphatic Diseases. Throughout this educational period, professionals will be able to detect the latest scientific evidence on the causes of the contraction of these conditions and their main risk factors. In addition, they will learn in depth about the latest surgical treatments for these diseases, as well as the protocols for the follow-up of patients.

Since this very complete program is developed by means of a 100% online methodology, students will be able to combine their excellent update with their personal and professional obligations. Likewise, the program has been designed and developed by specialists who are actively working in the field of Vascular Surgery. For this reason, the didactic contents that they will provide you with will preserve a great harmony with the advances in the sector.

This **Postgraduate Diploma in Lymphatic Diseases** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Develop of practical cases presented by experts vascular surgery
- The 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



Delve into the recent advances in the causes and risk factors for the contraction of Lymphatic Diseases through this program"



Thanks to this TECH University of Technology program, you will delve into the latest surgical treatments for Lymphatic Diseases in only 450 hours"

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.

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 education programmed to learn in real situations.

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

The 100% online methodology of the Postgraduate Diploma in Lymphatic Diseases allows you to study from your own home and without time constraints.

Complete your desired professional update with leading specialists in the field of Vascular Surgery.







### tech 10 | Objectives



### **General Objectives**

- Learn about the structure and function of blood vessels, both arterial and venous, and the regulation of blood flow in the microcirculation
- Delve into the epidemiology and Risk Factors
- Update knowledge on the main risk factors for the development of vascular diseases and the strategies for primary and secondary prevention
- Gain in-depth understanding of the pathophysiology of vascular diseases
- Inquire into the different diagnostic methods
- Delve into the diagnostic techniques used in vascular pathology, including clinical examination and vascular semiology, imaging methods, laboratory diagnosis and study of vascular function and hemodynamics
- Explain the different research methods and advances in vascular pathology, especially those focused on vascular pathology, including the development of new drug therapies, genetics and genomics in vascular diseases, and the development of new imaging techniques for the diagnosis and follow-up of vascular diseases



Incorporate into your daily practice the latest advances in the management of Lymphatic Diseases"







### **Specific Objectives**

#### Module 1. Vascular Pathology

- Delve into the epidemiology of vascular diseases
- Delve into risk factors of vascular diseases
- Inquire into primary and secondary prevention of vascular diseases

#### Module 2. Lymphatic Diseases

- Delve into the anatomy and physiology of the lymphatic system, including the structure and function of lymphatic vessels, lymph nodes and lymphoid organs
- Describe the etiology and pathogenesis of lymphatic diseases, such as primary and secondary lymphedema, Castleman's disease and Hodgkin's disease, among others
- Delve into diagnostic techniques used in lymphatic diseases, including clinical evaluation, imaging tests, such as lymphography and MRI, and laboratory tests, such as lymph node biopsy
- Describe about the treatment options available for lymphatic diseases, including physical therapy, manual lymphatic drainage, compressive therapy, pharmacologic therapy, and surgery

#### Module 3. Pre- and post-operative care of the vascular patient

- Update comprehensive patient assessment procedures to determine if the patient is a candidate for vascular surgery, including a thorough evaluation of medical history, family history, medications, and lifestyle habits
- Be aware of preoperative protocols, including the performance of diagnostic tests, administration of medications and preparation of the surgical team
- Delve into the periodic assessment and monitoring of the patient's evolution after vascular surgery, including the identification and management of possible complications, such as infections, thrombosis or hemorrhages





### tech 14 | Course Management

#### Management



### Dr. Del Río Sola, María Lourdes

- Head of the Angiology and vascular surgery at Valladolids Clinical University Hospital
- Specialist in Angiology and Vascular Surgery
- European Board in Vascular Surger
- Permanent Correspondents of the Royal Academy of Medicine and Surgery
- Professor at Miguel de Cervantes European University
- Associate Teacher in Health Sciences, University of Valladolic

#### **Professors**

#### Dr. Martín Pedrosa, José Miguel

- Head of the Angiology and vascular surgery at Valladolids Clinical University Hospital
- Specialist in Angiology and Vascular Surgery
- PhD Cum Laude in Surgery from the University of Valladolid
- Member of Scientific Committee of the Endovascular Surgery Chapter of the Spanish Society of Angiology and Vascular Surgery (SEACV)

#### Dr. Cenizo Revuelta, Noelia

- Assistant Physician at the the Angiology and vascular surgery at Valladolid Clinical University Hospital
- Specialist in Angiology and Vascular Surgery(ACV)
- Tutor accredited by the University of Valladolid
- Tutor Coordinator of the LCA Teaching Unit of the Valladolid Clinical University Hospital
- Professor in charge of the subject "Medical Pathology" in the Degree of Dentistry of the European University Miguel de Cervantes (UEMC) of Valladolid
- Associate Professor at the University of Valladolid
- PhD Cum Laude and Extraordinary Award the Doctorate in Medicine and Surgery from from the University of Valladolid

#### Dr. Flota Medina, Cintia

- Assistant Physician at the the Angiology and vascular surgery at Valladolid Clinical University Hospital
- Specialist in the Angiology and vascular surgery at Valladolids Clinical University Hospital
- Postgraduate certificate in Vascular Duplexing
- Postgraduate certificate in Endovascular Procedures from the Anáhuac Mayab University
- Tutor accredited and Collaborating Professor at the University of Valladolid
- Certification and Recertification by the Mexican Board of Angiology and Vascular Surgery





### tech 18 | Structure and Content

#### Module 1. Vascular Pathology

- 1.1. Vascular Pathology
  - 1.1.1. Vascular Pathology
  - 1.1.2. Differences between vascular and cardiovascular diseases
  - 1.1.3. Types of vascular diseases
- 1.2. Vascular Pathology History
  - 1.2.1. Important milestones in the history of vascular pathology
  - 1.2.2. Evolution of treatments in Vascular Pathology
  - 1.2.3. Historical advances in the diagnosis of vascular diseases
- 1.3. Classification of Vascular Diseases
  - 1.3.1. Classification of Arterials Diseases
  - 1.3.2. Classification of Venous Diseases
  - 1.3.3. Classification of Lymphatic Diseases
- 1.4. Epidemiology of Vascular Diseases
  - 1.4.1. Prevalence of vascular diseases in the world
  - 1.4.2. Geographical distribution of vascular diseases
  - 1.4.3. Factors influencing the epidemiology of vascular diseases
- 1.5. Risk factors of vascular diseases
  - 151 Non-modifiable risk factors
  - 1.5.2. Modifiable risk factors
  - 1.5.3. Role of psychosocial factors in the risk of vascular disease
- 1.6. Public health impact of vascular disease
  - 1.6.1. Economic cost of vascular diseases
  - 1.6.2. Consequences of vascular diseases on the quality of life
  - 1.6.3. Focus on prevention and treatment to reduce the impact on public health
- 1.7. Importance of early diagnosis and treatment in vascular pathology
  - 1.7.1. Benefits of early Diagnostic in Vascular Pathology
  - 1.7.2. Strategies for the early diagnosis of vascular diseases
  - 1.7.3. Early treatment and its relationship to improved prognosis in vascular diseases





### Structure and Content | 19 tech

- 1.8. Role of the physician specializing in vascular pathology
  - 1.8.1. Training and specialization in Vascular Pathology
  - 1.8.2. Functions of the physician specialized in vascular pathology
  - 1.8.3. Importance of Interdisciplinary Work in Vascular Pathology
- 1.9. Interdisciplinarity in the approach to Vascular Pathology
  - 1.9.1. Teamwork in Vascular Pathology
  - 1.9.2. Roles of the different health professionals in the approach to vascular diseases
  - 1.9.3. Interdisciplinary coordination in the treatment and follow-up of patients with vascular diseases
- 1.10. Prevention of Vascular Diseases
  - 1.10.1. Primary prevention strategies in vascular diseases
  - 1.10.2. Secondary prevention strategies in vascular diseases
  - 1.10.3. Promotion of healthy lifestyles to prevent vascular diseases

#### Module 2. Lymphatic Diseases

- 2.1. Lymphatic Diseases
  - 2.1.1. Classification of Lymphatic Diseases: primary and secondary
  - 2.1.2. Definition and characteristics of primary lymphatic diseases
  - 2.1.3. Definition and characteristics of secondary lymphatic diseases
- 2.2. Etiology of Lymphatic Diseases
  - 2.2.1. Causes of primary Lymphatic Diseases: Genetic
  - 2.2.2. Causes of secondary lymphatic diseases: traumatic injuries, surgeries, infections
  - 2.2.3. Risk factors of Lymphatic Diseases: obesity, sedentary lifestyle, chronic diseases
- 2.3. Symptoms and Signs of Lymphatic Diseases
  - 2.3.1. Early Symptoms of Lymphatic Diseases
  - 2.3.2. Physical Signs of Lymphatic Diseases
  - 2.3.3. Advance Symptoms of Lymphatic Diseases

### tech 20 | Structure and Content

- 2.4. Diagnosis of Lymphatic Diseases: methods and techniques
  - 2.4.1. Diagnostic methods for lymphatic diseases: ultrasound, magnetic resonance imaging, biopsy
  - 2.4.2. Diagnostic techniques of Lymphatic Diseases: lymphatic contrast test, lymphography
  - 2.4.3. Assessment of the functional status of the lymphatic system: lymphatic flow measurement techniques
- 2.5. Medical treatment of Lymphatic diseases: lymphotonic drugs
  - 2.5.1. Lymphotonic drugs used in the treatment of Lymphatic Diseases: benzopyrones, diuretics, corticosteroids
  - 2.5.2. Side effects of lymphotonic drugs: hypotension, electrolyte disturbances, gastrointestinal disorders
  - 2.5.3. Medication interactions of lymphotonic drugs: anticoagulants, antihypertensives, diabetes medications
- 2.6. Rehabilitative treatment of lymphatic diseases: sclerosis, embolization
  - 2.6.1. Manual Lymphatic Drainage
  - 2.6.2. Pressure therapy
  - 2.6.3. Compression Therapy
- 2.7. Surgical Treatment of Lymphatic Diseases: dissection, anastomosis
  - 2.7.1. Types of surgeries used in the treatment of Lymphatic Diseases: lymph node dissection, lymphatic-venous anastomosis
  - 2.7.2. Advanced surgical techniques used in the treatment of Lymphatic Diseases: lymph node transplantation, lymphatic transfer
  - 2.7.3. Indications and contraindications of surgery in the treatment of Lymphatic Diseases
- 2.8. Management of Lymphedema
  - 2.8.1. Conservative treatment of lymphedema: skin care, compression, manual lymphatic drainage
  - 2.8.2. Pharmacologic treatment of lymphedema: diuretics, benzopyrones, corticosteroids
  - 2.8.3. Surgical treatment of Lymphedema: volume reduction surgery, vascularized transfer surgery

- 2.9. Vascular rehabilitation
  - 2.9.1. Vascular rehabilitation programs for patients with Lymphatic Diseases: resistance exercises, aerobic exercises, stretching
  - 2.9.2. Role of the occupational therapist in vascular rehabilitation: counseling on selfcare techniques, adaptations for home and work
  - 2.9.3. Benefits of vascular rehabilitation on the quality of life of patients with lymphatic diseases
- 2.10. Prognosis and Follow-up of lymphatic Diseases
  - 2.10.1. Factors influencing the prognosis of Lymphatic Diseases: type of disease, severity of disease, presence of comorbidities
  - 2.10.2. Methods of follow-up of Lymphatic Diseases: clinical evaluation, imaging tests, lymphatic function tests
  - 2.10.3. Patient's role in the follow-up of Lymphatic Diseases: symptom monitoring, treatment monitoring, lifestyle changes

#### **Module 3.** Pre- and post-operative care of the vascular patient

- 3.1. Preoperative evaluation: clinical history and physical examination
  - 3.1.1. Importance of the clinical history in the preoperative evaluation: obtaining information on medical history, medications, allergies, lifestyle, etc
  - 3.1.2. Physical examination in the preoperative evaluation: assessment of cardiovascular, respiratory and neurological function, measurement of blood pressure, auscultation of heart and lung sounds, etc
  - 3.1.3. Surgical risk assessment based on age, general health status, presence of chronic diseases, etc.
- 3.2. Preoperative evaluation: diagnostic tests and preparation of the patient
  - 3.2.1. Importance of the preoperative evaluation in surgical risk reduction
  - 3.2.2. Types of diagnostic tests used in the preoperative assessment and their relevance in clinical decision making
  - 3.2.3. Preparation of the patient for the preoperative evaluation and its influence on the safety and success of the surgical procedure

- 3.3. Postoperative care planning
  - 3.3.1. Assessment of postoperative care needs: patient dependency, pain level, nutritional needs, mobility, etc.
  - 3.3.2. Planning the transition from hospital to home: preparation of the home, follow-up by a physician or nurse, recommendations for recovery, etc.
  - 3.3.3. Long-term medical follow-up planning: follow-up appointments with surgeon, follow-up testing, lifestyle recommendations to maintain vascular health
- 3.4. Postoperative Monitoring and Control
  - 3.4.1. Importance of postoperative monitoring: early detection of complications, evaluation of treatment efficacy
  - 3.4.2. Postoperative monitoring techniques: monitoring of blood pressure, heart rate, respiratory rate, oxygenation, etc.
  - Management of postoperative complications: prevention of infections, pain control, management of arterial hypertension, treatment of renal insufficiency, etc.
- 3.5. Postoperative Pain Management
  - 3.5.1. Importance of postoperative monitoring: early detection of complications, assessment of treatment efficacy, monitoring of patient progress, etc
  - 3.5.2. Postoperative monitoring techniques: monitoring of blood pressure, heart rate, respiratory rate, oxygenation, etc.
  - 3.5.3. Management of postoperative complications: prevention of infections, pain control, management of arterial hypertension, treatment of renal insufficiency, etc.
- 3.6. Management of postoperative complications
  - 3.6.1. Post-Operation Infections
  - 3.6.2. Postoperative bleeding
  - 3.6.3. Venous thromboembolism
- 3.7. Care of Surgical Wounds
  - 3.7.1. Suture Techniques
  - 3.7.2. Use of bandages and dressings
  - 3.7.3. Assessment and prevention of surgical wound infection

- 3.8. Postoperative Nutrition and Hydration Management
  - 3.8.1. Types of Diets Post Surgery
  - 3.8.2. Routes of administration of nutrition and fluids
  - 3.8.3. Nutritional and Vitamin Supplements
- 3.9. Postoperative rehabilitation and physiotherapy
  - 3.9.1. Early mobilization exercises
  - 3.9.2. Muscle strengthening
  - 3.9.3. Physical therapy techniques to improve motor function
- 3.10. Long-Term Monitoring of the Vascular Patient
  - 3.10.1. Control of High Blood Pressure
  - 3.10.2. Assessment of Renal Function
  - 3.10.3. Monitoring progression of vascular disease and prevention of recurrence



A program that will allow you to be up to date in Gene Therapy and future trends in Vascular Pathology"





### tech 24 | 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 | 27 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.

### tech 28 | Methodology

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**

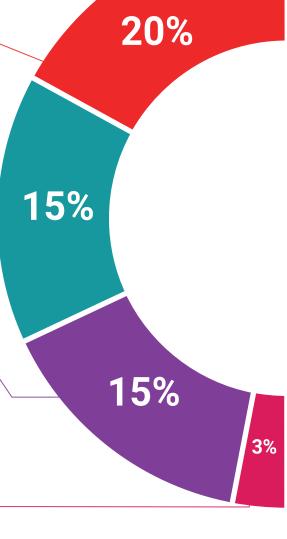
TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many 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.

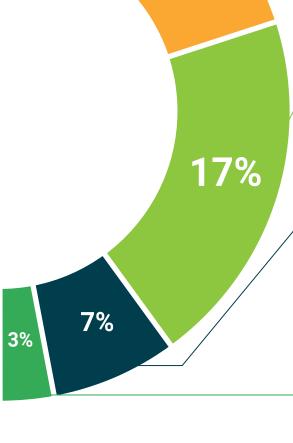
The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### **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 32 | Certificate

This program will allow you to obtain your **Postgraduate Diploma in Lymphatic Diseases** 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 Lymphatic Diseases

Modality: online

Duration: 6 months

Accreditation: 18 ECTS



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

#### Postgraduate Diploma in Lymphatic Diseases

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



<sup>\*</sup>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.

tech global university



## Postgraduate Diploma Lymphatic Diseases

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

