

# Postgraduate Certificate

## Interventional Procedures in Upper Limb Arteries



## Postgraduate Certificate Interventional Procedures in Upper Limb Arteries

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

Website: [www.techtute.com/us/medicine/postgraduate-certificate/interventional-procedures-upper-limb-arteries](http://www.techtute.com/us/medicine/postgraduate-certificate/interventional-procedures-upper-limb-arteries)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 16*

05

Methodology

---

*p. 20*

06

Certificate

---

*p. 28*

# 01

# Introduction

Interventional Procedures in Upper Limb Arteries is continually incorporating procedures and technologies that are transforming the way specific pathologies are approached and providing better chances of recovery for patients. At the same time, Angiologists and Vascular Surgeons need to keep up to date with all these innovations, but find it difficult to find programs that allow them to reconcile their update with their job functions. Therefore, TECH has included in its academic catalog a university program that covers the latest trends in the management of Vasospastic Disorders, Acute Ischemia, Aneurysms and Vascular Trauma in the Upper Limbs, among others. All through a 100% online methodology, without tight schedules, ideal for acquiring knowledge without having to leave aside other obligations.



“

*TECH has a 100% online methodology that will allow you to update your knowledge on Interventional Procedures in Upper Limb Arteries at your own pace”*

Raynaud's Phenomenon and Buerger's Disease (Thromboangiitis Obliterans) are two of the vasospastic disorders that most concern Angiologists and Vascular Surgeons. Since both pathologies affect the small and medium vessels of the limbs of the human body, the priority of medical sciences has been to perfect the strategies to deal with their management. This is why advanced pharmacological therapies have been applied in many patients and even interventional procedures such as sympathectomy are used. However, all these treatments involve complexities and health professionals must be up to date in order to determine which one is best suited to each patient's condition.

In response to this demand, TECH provides physicians with a complete update on these therapeutic innovations. This is the purpose of this program that integrates topics such as the most disruptive endovascular techniques for the general management of vasospastic disorders and acute ischemia. It also covers the management of Aneurysms and Vascular Trauma in the Upper Limbs, as well as the Upper Thoracic Operculum Syndrome (TOS). At the same time, this academic pathway stands out for offering an exhaustive analysis on the integration of Artificial Intelligence in the selection of treatments for vascular pathologies and to achieve better results after interventions.

On the other hand, the program has a disruptive 100% online methodology and its contents are taught from a Virtual Campus where explanatory videos, infographics and other multimedia resources abound. Likewise, the university program is supported by the Relearning system, in which TECH is a pioneer, to facilitate the assimilation of concepts in a gradual and flexible way, without having to memorize them. In addition, physicians can organize their study schedules in a personalized way, according to their other obligations and needs.

This **Postgraduate Certificate in Interventional Procedures in Upper Limb Arteries** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of practical cases presented by experts in Angiology and Vascular Surgery
- ♦ 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 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



*Thanks to the disruptive therapeutic procedures that you will analyze in this program, you will be able to reduce the need for more invasive interventions in your patients"*

“

*The innovative Relearning system, implemented in this program, allows you to consolidate complex concepts in a practical and comfortable way, without having to memorize them"*

The program's teaching staff includes professionals from the sector who contribute their work experience to this specializing 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 course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*You will have complementary readings, detailed videos and self-assessment tests to reinforce all your clinical competencies.*

*Join this program now and be part of the academic community of TECH, the best digital university in the world according to Forbes magazine.*



# 02 Objectives

Minimizing risks and complications associated with pathologies in the Upper Extremity Arteries is one of the goals that physicians who complete this TECH academic pathway will achieve. This program has been designed for specialists to expand their theoretical knowledge and practical skills based on the latest scientific evidence and the most disruptive procedures. After completing the 6 weeks of specialization offered by the program, they will be ready to master the management of Vasospastic Disorders and Acute Ischemia.







“

*You will delve into the integration of Artificial Intelligence in vascular image analysis and its importance for treatment selection as a significant advance in personalized medicine”*



## General Objectives

---

- ◆ Develop the technical skills necessary to accurately perform and analyze angiographic studies
- ◆ Promote an appreciation of the importance of multidisciplinary teamwork in the interpretation and management of vascular angiographic results
- ◆ Acquire skills to apply techniques such as angioplasty, Stent placement, and other minimally invasive procedures
- ◆ Determine the procedures and protocols for performing and interpreting computed tomography angiography (CTA) in the context of vascular interventional procedures



*Get up to date on Interventional Procedures in Upper Thoracic Operculum Syndrome from this intensive university program"*





## Specific Objectives

---

- Determine the indications for Interventional Procedures in arteries in the upper extremity, including stenosis, occlusions and dissections
- Establish the imaging techniques used in the diagnosis and follow-up of upper extremity artery disease, such as computed tomography arteriography (CTA) and Doppler ultrasonography
- Examine therapeutic options for Stenosis and Occlusions in arteries in the upper limbs, including balloon angioplasty and Stenting
- Explore embolectomy and thrombectomy techniques used in the treatment of acute occlusions in these arteries

# 03

## Course Management

Medical excellence in Interventional Procedures in Upper Limb Arteries requires teachers with an excellent command of the latest trends and tools in this field. For this reason, TECH has formed a first class teaching staff which includes Angiologists and Vascular Surgeons with extensive experience in the field. These specialists also maintain close professional ties with highly prestigious hospitals. Therefore, based on their experiences, these experts have developed an academic itinerary that will guide graduates towards a more updated clinical practice and reduce the risks for their patients.



“

*You will have the academic guidelines of a highly specialized teaching staff in Vascular Interventional Procedures"*

## Management



### Dr. Del Río Solá, María Lourdes

- Chief from the Vascular Angiology and Surgery Service at the Valladolid University Clinical Hospital
- Specialist in Angiology and Vascular Surgery
- European Board in Vascular Surger
- Academic Correspondent of the Royal Academy of Medicine and Surgery
- Full Professor at the European University Miguel de Cervantes
- Associate Professor in Health Sciences at the University of Valladolid



# 04

## Structure and Content

This TECH program will guarantee physicians an exhaustive specialization in Vascular Interventional Procedures based on its extensive syllabus. The syllabus includes disruptive aspects such as endovascular techniques for the approach of Vasospastic Disorders and Acute Ischemia. On the other hand, it also delves into the management of Vascular Trauma in the Upper Limbs through minimally invasive procedures and with a focus on preserving the function and structure of the organs. In addition, the program features an unparalleled, 100% online methodology that includes the innovative Relearning system.







“

*To complete this program you will only need a device with an Internet connection thanks to the 100% online mode of study offered by TECH”*

## Module 1. Interventional Procedures in the Arteries of the Upper Limbs

- 1.1. Collateral Routes for Vascular Interventional Procedures
  - 1.1.1. Collateral Circulation in the Upper Limbs
  - 1.1.2. The Collateral Veins in Case of Arterial Occlusion
  - 1.1.3. Clinical Evaluation and Diagnosis of the Collateral Circulation
- 1.2. Imaging in the Diagnosis and Follow-Up of Upper Extremity Arteries
  - 1.2.1. Imaging Methods in the Study of the Arteries of the Upper Limbs
  - 1.2.2. Interpretation of Radiologic Findings in Vascular Imaging
  - 1.2.3. Imaging in Diagnosis and Follow-up of Upper Extremity Arteries
- 1.3. Interventional Procedures in Vasospastic Disorders
  - 1.3.1. Vasospastic Disorders
  - 1.3.2. Differential Diagnosis
  - 1.3.3. Treatment and Symptom Management Strategies
- 1.4. Interventional Procedures in Chronic Ischemia
  - 1.4.1. Associated Risk Factors
  - 1.4.2. Diagnosis of Chronic Ischemia in Lower Limbs
  - 1.4.3. Therapeutic Options for the Management of Chronic Ischemia
- 1.5. Interventional Procedures in Acute Ischemia
  - 1.5.1. Acute Ischemia in the Upper Limbs
  - 1.5.2. Urgent Diagnostic Evaluation and Treatment Prioritization
  - 1.5.3. Strategies for Revascularization and Management in the Acute Phase
- 1.6. Interventional Procedures in the Upper Thoracic Operculum Syndrome
  - 1.6.1. Pathophysiologic Mechanisms of the Upper Thoracic Operculum Syndrome
  - 1.6.2. Differential Diagnosis
  - 1.6.3. Conservative Treatment and Surgical Options
- 1.7. Interventional Procedures in Aneurysms
  - 1.7.1. Surgical Indication of Aneurysms in the Arteries of the Upper Limbs
  - 1.7.2. Diagnostic Imaging and Assessment of the Risk of Rupture
  - 1.7.3. Endovascular Therapeutic Management and Long-term Follow-up





- 1.8. Interventional Procedures in Vasculitis and Fibromuscular Dysplasia
  - 1.8.1. Vasculitis and Fibromuscular Dysplasia
  - 1.8.2. Imaging Findings
  - 1.8.3. Endovascular Therapeutic Management and Prognosis
- 1.9. Interventional Procedures in Vascular Trauma
  - 1.9.1. Traumatic Injuries to the Arteries of the Upper Limbs
  - 1.9.2. Evaluation and Diagnosis of Traumatic Arterial Injuries
  - 1.9.3. Urgent Management and Postoperative Rehabilitation after Endovascular Treatment of Arterial Traumatic Injuries
- 1.10. Use of Artificial Intelligence in Interventional Procedures in the Arteries of the Upper Limbs
  - 1.10.1. AI Applications in Vascular Image Analysis
  - 1.10.2. Outcome Prediction and Treatment Selection
  - 1.10.3. Integration of AI in Endovascular Procedures

“

*A program without hermetic schedules in which you will be able to individually establish when and where to develop the updating of your medical skills"*

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 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

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

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.*





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

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

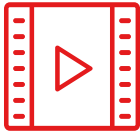
*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

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

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



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



#### Study Material

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

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### Surgical Techniques and Procedures on Video

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



#### Interactive Summaries

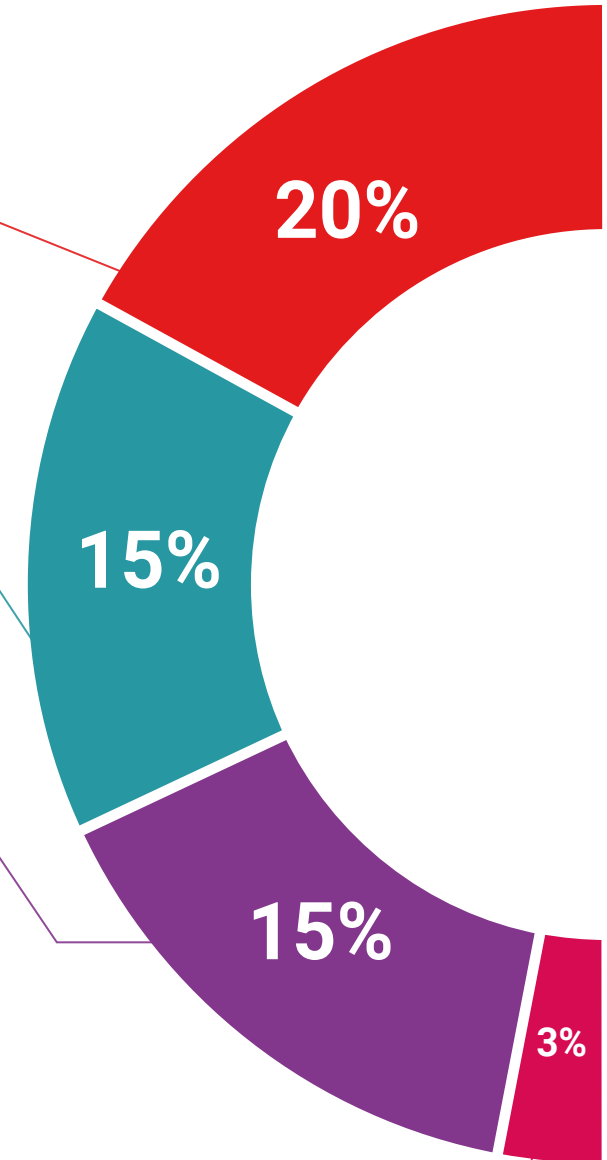
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

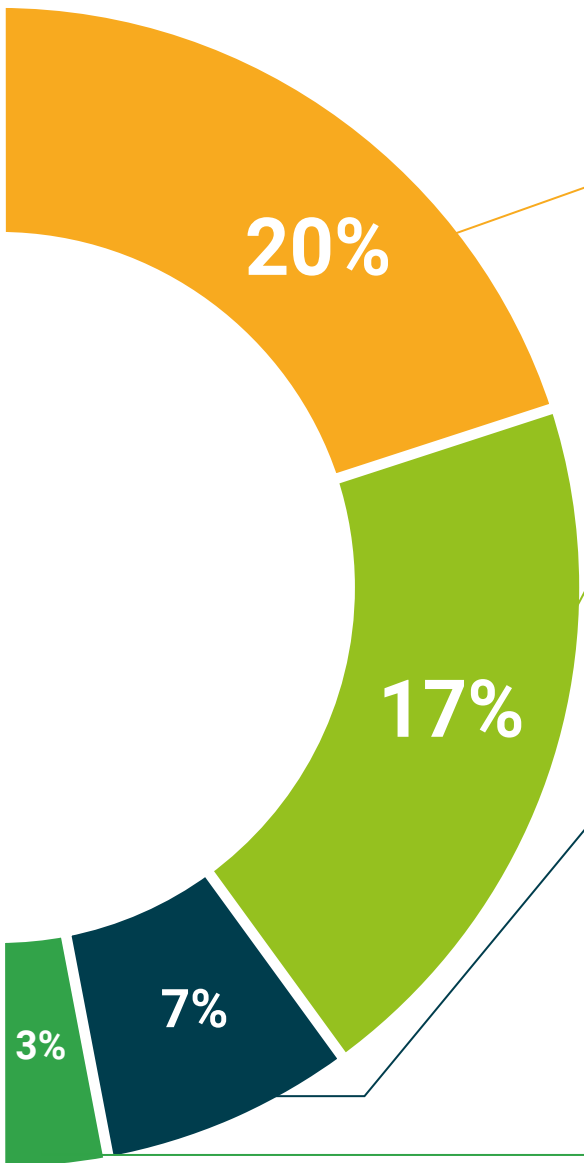
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

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





**Expert-Led Case Studies and Case Analysis**

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



**Testing & Retesting**

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



**Classes**

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



**Quick Action Guides**

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



# 06 Certificate

The Postgraduate Certificate in Interventional Procedures in Upper Limb Arteries guarantees, in addition to the most accurate and up-to-date knowledge, access to a Postgraduate Certificate issued by TECH Global University.



“

*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 **Postgraduate Certificate in Palliative Care** 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 Interventional Procedures in Upper Limb Arteries**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**





**Postgraduate Certificate**  
Interventional Procedures in  
Upper Limb Arteries

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

# Postgraduate Certificate

## Interventional Procedures in Upper Limb Arteries

