

# Postgraduate Certificate

## Aortic Pathology





## Postgraduate Certificate Aortic Pathology

- » 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/aortic-pathology](http://www.techtute.com/us/medicine/postgraduate-certificate/aortic-pathology)

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# 01

# Introduction

Nowadays, great progress has been made in the diagnosis of aortic diseases and the possible causes are known, such as hypertension, pathologies associated with the valve, cholesterol and smoking, the family component, etc., which imply a high probability of developing an ailment. Today medicine has enough resources to attempt to optimize the problems that a patient may have and to try to raise awareness to know that it is much better to prevent than to cure. Therefore, this program aims to provide the physician with an update from different points of view on the Pathology of the Aorta, as well as the main therapeutic options for its treatment, perfecting their techniques and skills in dealing with this type of cases. A 100% online update led by expert cardiac surgeons and the most innovative methodology in today's university environment.





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*You will learn in depth about the Pathology of the Aortic Artery, as well as the main therapeutic options for its treatment”*

Over the years, multiple treatments and surgical techniques have been developed that minimize the aggression to the heart and the organism, which considerably improves the patient's quality of life, as well as the development and effective evolution of the processes. This is one of the main objectives in the mission of all physicians working in this branch of medicine.

Acute aortic pathology is a critical clinical situation whose prognosis usually depends on an accurate and prompt diagnosis and early treatment. Surgical indication is reserved for patients with failure of medical treatment with persistent pain, signs of progression, involvement of other body systems such as renal failure, visceral ischemia, etc. As in all high-risk surgery, it is very important to evaluate the contraindications, both the general ones for all cardiac surgery and those specific to this pathology, such as severe neurological involvement (preoperative hemiplegia or paraplegia), acute renal failure, established mesenteric ischemia, etc.

Being a subject of important study, the directors of this program propose the most specific content starting with some notions of anatomy and physiology of the aortic root, given its involvement in the functioning of the aortic valve and its importance in the techniques of aortic valve preservation. Later on, the main pathologies of the aortic artery by segments and acute aortic syndrome with its main surgical options will be discussed. Concluding with the different percutaneous treatment options.

For this purpose, TECH has a teaching staff with the most prestigious background in the area of cardiology. Their innumerable experiences provide this refresher program with a high academic level. All of this, through a completely online study system, which provides flexibility to the practitioner by being able to connect from any device and adjusting the schedule of your choice, obtaining the degree in 6 weeks.

The contents are available from day one, 24 hours a day, and are adjusted to an innovative methodology of an iterative nature the Relearning. This method is characteristic of TECH's programs and has benefited millions of students around the world. The practical nature provides dynamism and a better understanding of the concepts, which can be downloaded for offline consultation.

This **Postgraduate Certificate in Aortic Pathology** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ The development of practical cases presented by experts in cardiology
- ♦ 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



*During the development of this Diploma you will be guided by experts in cardiology who, through their own experience, will provide you with the most advanced knowledge”*

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*In the virtual campus you will find various study tools, such as digital libraries, didactic audiovisual material and meeting rooms, where you will even interact with other specialists in the field”*

The program's teaching staff includes professionals from the sector 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 professional 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, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

*TECH's platform has been designed to offer a virtual campus where students can access their classes quickly, securely and reliably.*

*Delves into the main pathologies of the Aortic Artery by segments and acute aortic syndrome.*



# 02 Objectives

The objective of this Postgraduate Certificate in Aortic Pathology is to deepen in all the most updated knowledge and studies on the area and to master the main therapeutic options for its treatment. So that the specialist can perform in an up-to-date, safe and cutting-edge way.





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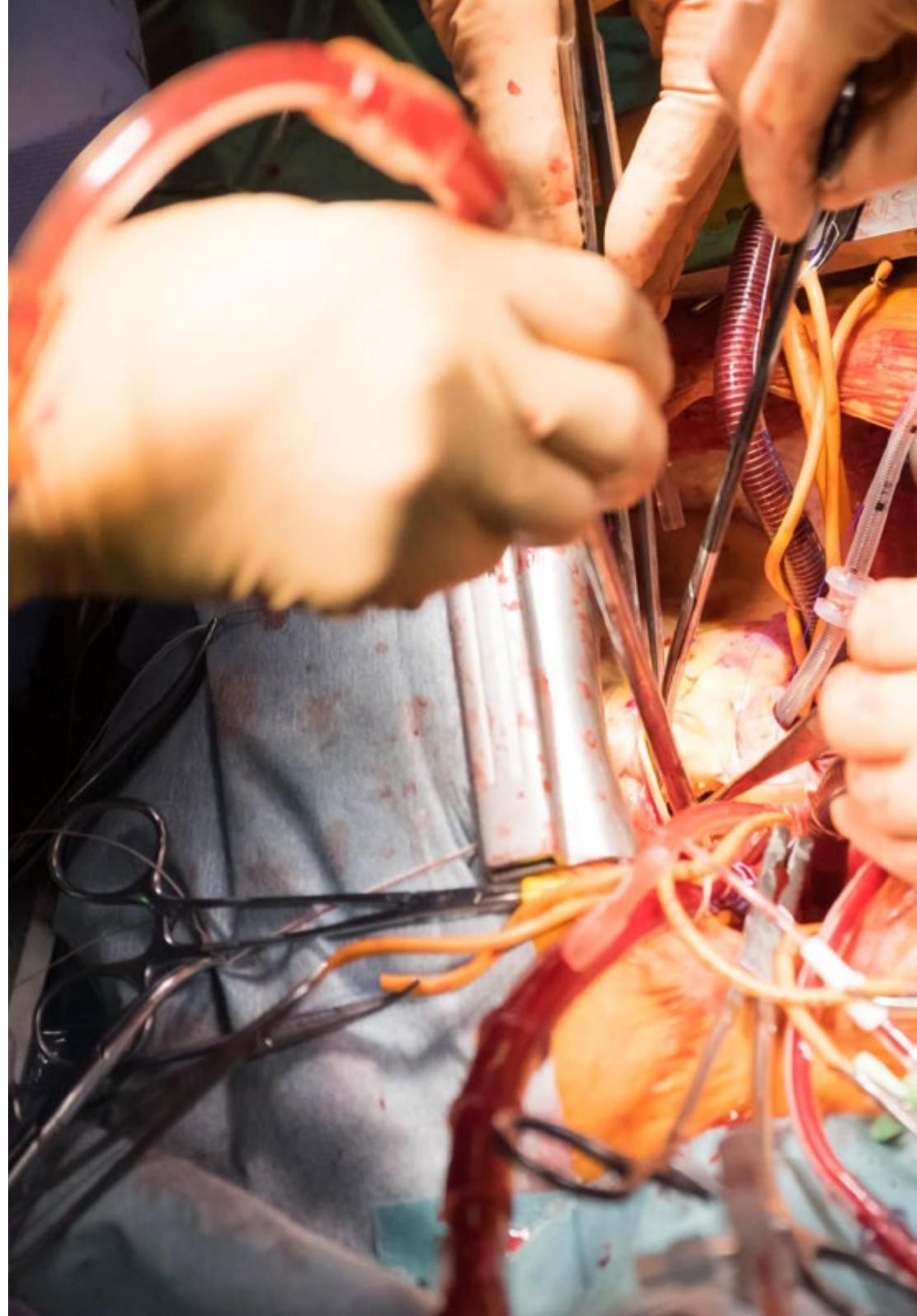
*Open yourself to new opportunities and experiences with an update program that has everything about Aortic Pathology”*

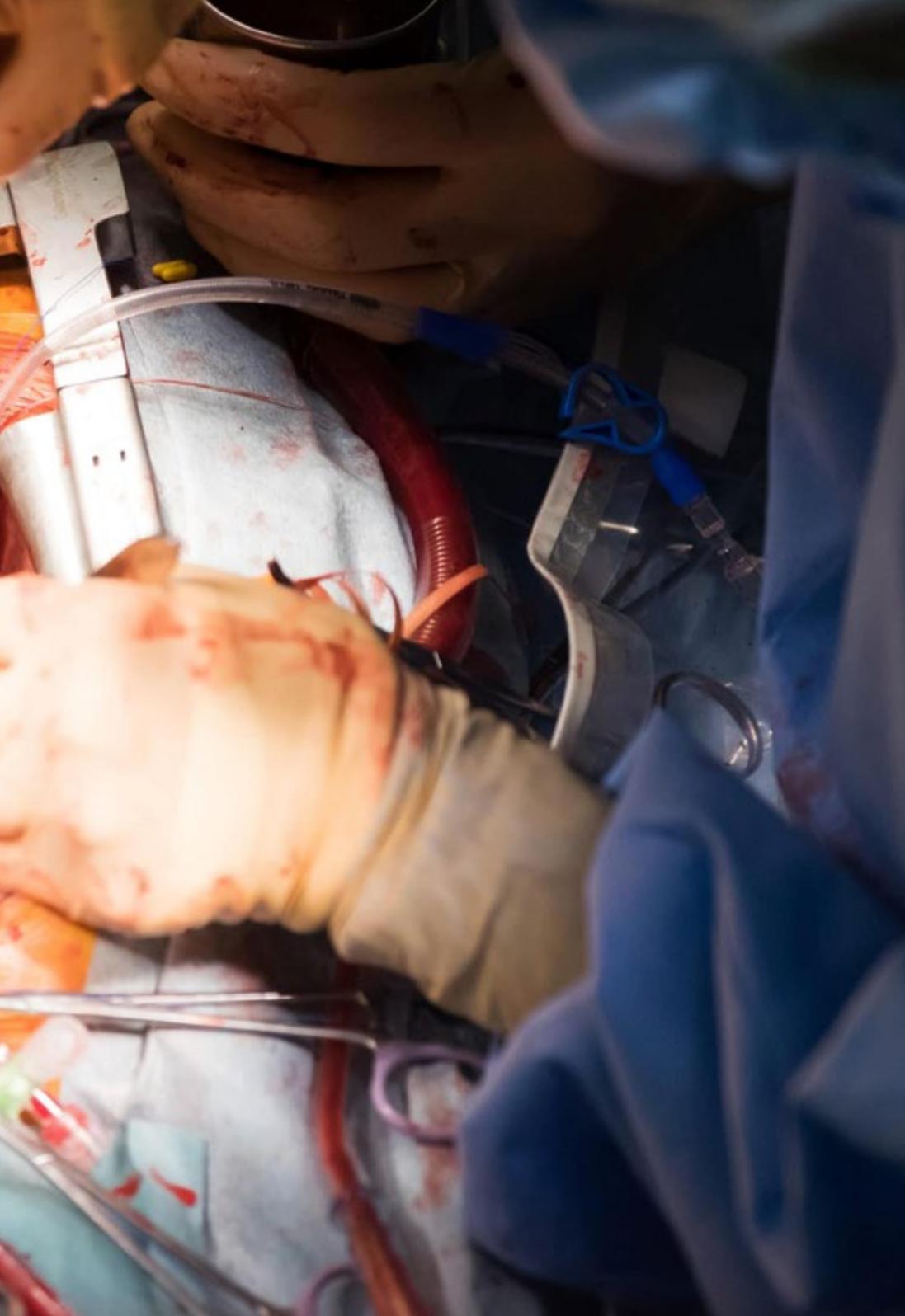


## General Objectives

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- ♦ Analyze the importance of new technologies involved in the management and control of cardiac pathologies and imaging techniques
- ♦ Obtain the necessary knowledge to improve patient recovery, avoid complications and reduce mortality
- ♦ Obtain the most updated knowledge to approach aortic pathology from a comprehensive and surgical point of view, as appropriate to aortic pathology
- ♦ Deepen the treatment of aortic pathology to improve the patient's quality of life





## Specific Objectives

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- Deepen the notions of anatomy and physiology of the aortic root, given its involvement in the functioning and preservation of the aortic valve
- Learn more about surgical treatment techniques for acute aortic syndrome
- Review the main pathologies of the aorta artery by segments
- Observe the implications of acute aortic syndrome with its main surgical options
- Check different percutaneous treatment options

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*Your goal is to become more expert and TECH has what is required to do so. Start now”*

03

# Course Management

The Postgraduate Certificate Aortic Pathology is directed by physicians specialized in Cardiology with an extensive curriculum, and who currently hold important positions in prestigious hospitals in the country. This gives a deep experiential sense to the content of this program. Their professional and human qualities allow us to give that touch of warmth and closeness within a totally virtual environment, thanks to the resources TECH has available for this purpose.





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*Decades of experience, global visions of medicine and scientific contributions of proven case studies, concur in the direction of this program”*

## International Guest Director

With pioneering contributions in the field of **cell therapy for cardiovascular diseases**, Dr. Philippe Menasché is considered one of the most prestigious surgeons in the world. The researcher has been awarded several prizes such as the **Lamonica of Cardiology laureates of the French Academy of Sciences** and the **Matmut for Medical Innovation**, as well as the **Earl Bakken Award** for his scientific achievements.

His work has established him as a reference in the understanding of **Heart Failure**. In relation to this pathology, he stands out for having participated in the **first intramyocardial transplant of autologous skeletal myoblasts**, marking a true therapeutic milestone. He has also led clinical trials on the use of **cardiac progenitors** derived from **human embryonic stem cells**, as well as the application of **tissue therapy** combined with these progenitors in patients with **terminal heart disease**.

His research has also revealed the **crucial role of paracrine signals in cardiac regeneration**. As a result, his team has succeeded in developing cell therapy strategies based exclusively on the **use of the secretome**, with the aim of optimizing the clinical effectiveness and transmissibility of these procedures.

At the same time, this specialist maintains an active work as a surgeon at the **European Hospital Georges Pompidou**. In this institution, he also directs the **Inserm 970 Unit**. On the other hand, in the academic field, he is a professor in the **Department of Biomedical Engineering** at the University of Alabama at Birmingham, as well as at the University of Paris Descartes.

He holds a **PhD in Medical Sciences** from the Faculty of Paris-Orsay. He has also served as Director of the **French National Institute of Health and Medical Research** and, for almost two decades, he managed the **Biosurgical Research Laboratory of the Carpentier Foundation**.



## Dr. Menasché, Philippe

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- ♦ Director of the National Institute of Health and Medical Research (INSERM), Paris, France
- ♦ Clinical Surgeon in the Heart Failure Unit of the European Hospital Georges Pompidou, Paris, France
- ♦ Regenerative Therapies for Heart and Vascular Diseases Team Leader
- ♦ Professor of Thoracic and Cardiovascular Surgery at the University Paris Descartes
- ♦ Academic Consultant to the Department of Biomedical Engineering at the University of Alabama at Birmingham
- ♦ Former Director of the Biosurgical Research Laboratory of the Carpentier Foundation
- ♦ Doctor of Medical Sciences from the Faculty of Paris-Orsay
- ♦ Member of: National Council of Universities, Medical and Scientific Council of the Agency for Biomedicine, Working Group on Regenerative and Reparative Cardiovascular Medicine of the European Society of Cardiology

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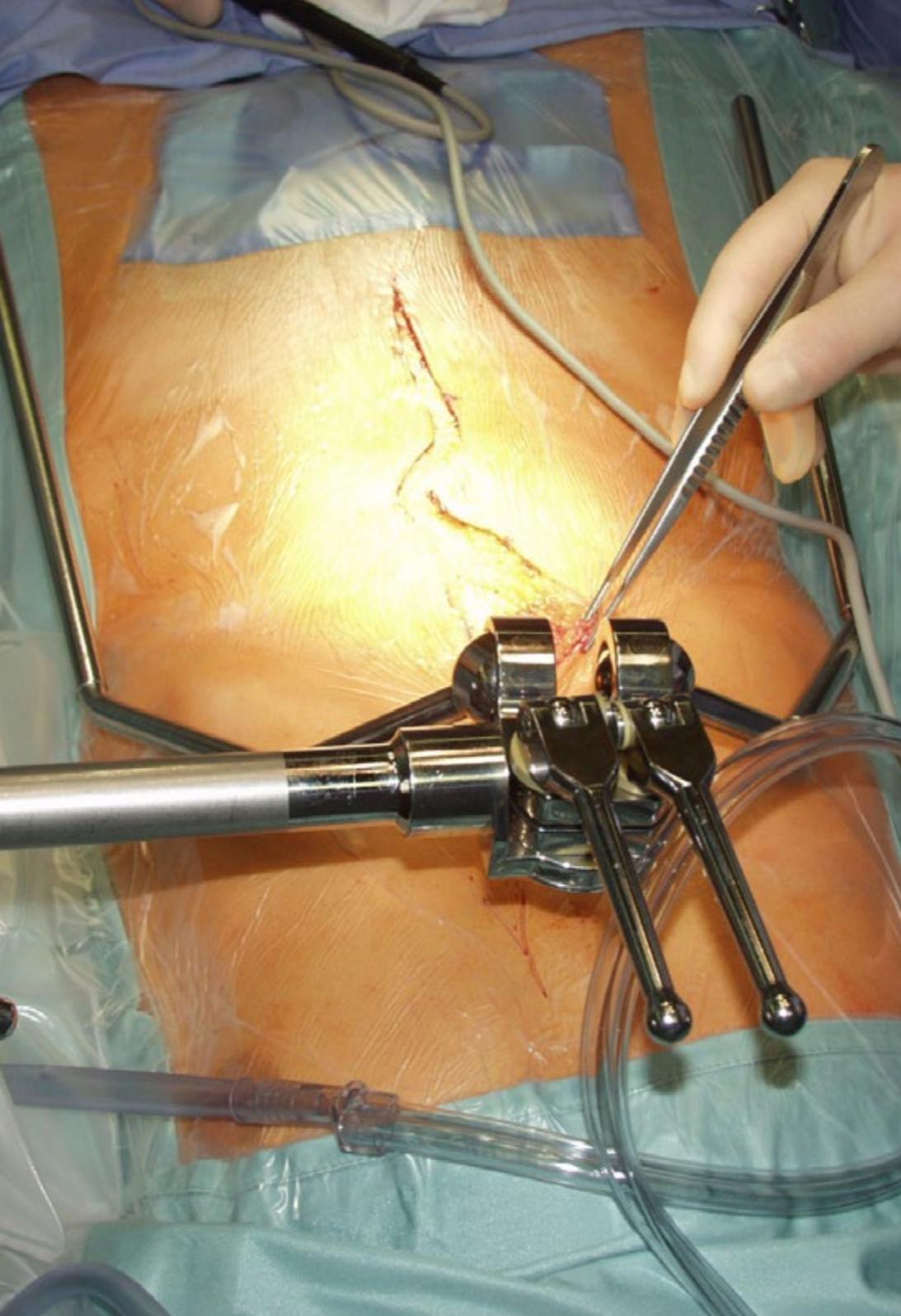
*Thanks to TECH you will be able to learn with the best professionals in the world"*

## Management



### Dr. Rodríguez-Roda, Jorge

- ◆ Chief of Cardiovascular Surgery Service at the Ramon and Cajal University Hospital
- ◆ Cardiac Surgeon of the Cardiac Surgery Unit of the Hospital Madrid Monteprincipe
- ◆ Clinical Professor in the Department of Surgery, University of Alcalá de Henares
- ◆ Care Coordinator of the Cardiovascular Surgery Service of the Gregorio Marañón General University Hospital
- ◆ Assistant Physician of Cardiovascular Surgery at Gregorio Marañón General University Hospital, Hospital Central de la Defensa Gómez Ulla and Hospital del Aire
- ◆ Resident physician of the Cardiovascular Surgery, specialty in the Cardiovascular and Thoracic Surgery Service Puerta de Hierro University Hospital. Madrid
- ◆ Medical Officer in the Military Health Corps of Spain
- ◆ Degree in Medicine and Surgery from the Complutense University of Madrid
- ◆ Executive Master's Degree in Healthcare Organization Management ESADE
- ◆ Healthcare Organization Leadership Program at Georgetown University
- ◆ Resident Medical Intern in the specialty of Cardiovascular Surgery in the Department of Cardiovascular and Thoracic Surgery, Puerta de Hierro Autonomous University Hospital of Madrid
- ◆ Diploma of Advanced Studies (DEA) of the Department of Surgery of the Faculty of Medicine of the Complutense University of Madrid
- ◆ General Practitioner in the Spanish National Health System and in the Public Social Security Systems of the Member States of the European Communities



## Professors

### Dr. Pedraz Prieto, Álvaro

- ◆ Facultative Area Specialist in General Surgery Gregorio Marañón General University Hospital
- ◆ Facultative Area Specialist in General Surgery Montepríncipe Hospital
- ◆ Collaborating Physician in Practical Teaching, Department of Surgery from the School of Medicine. Complutense University of Madrid
- ◆ Guest "Observer" in the cardiovascular surgery service. Icahn School of Medicine at Mount Sinai
- ◆ Degree in Medicine. University of Salamanca
- ◆ Master's Degree in Research Methodology in Health Sciences. University of Salamanca
- ◆ Specialist in Cardiovascular Surgery General University Hospital

# 04

## Structure and Content

With TECH's study system, the investment of time to understand the contents is less, since its technique allows a progressive and natural updating of knowledge. This is Relearning, an innovative methodology that facilitates learning and understanding through the repetition of concepts throughout the syllabus. A program designed to offer quality and ease to the student, with a 100% online study system where the health professional will have a variety of written and audiovisual formats such as research articles and interactive summaries of each unit.



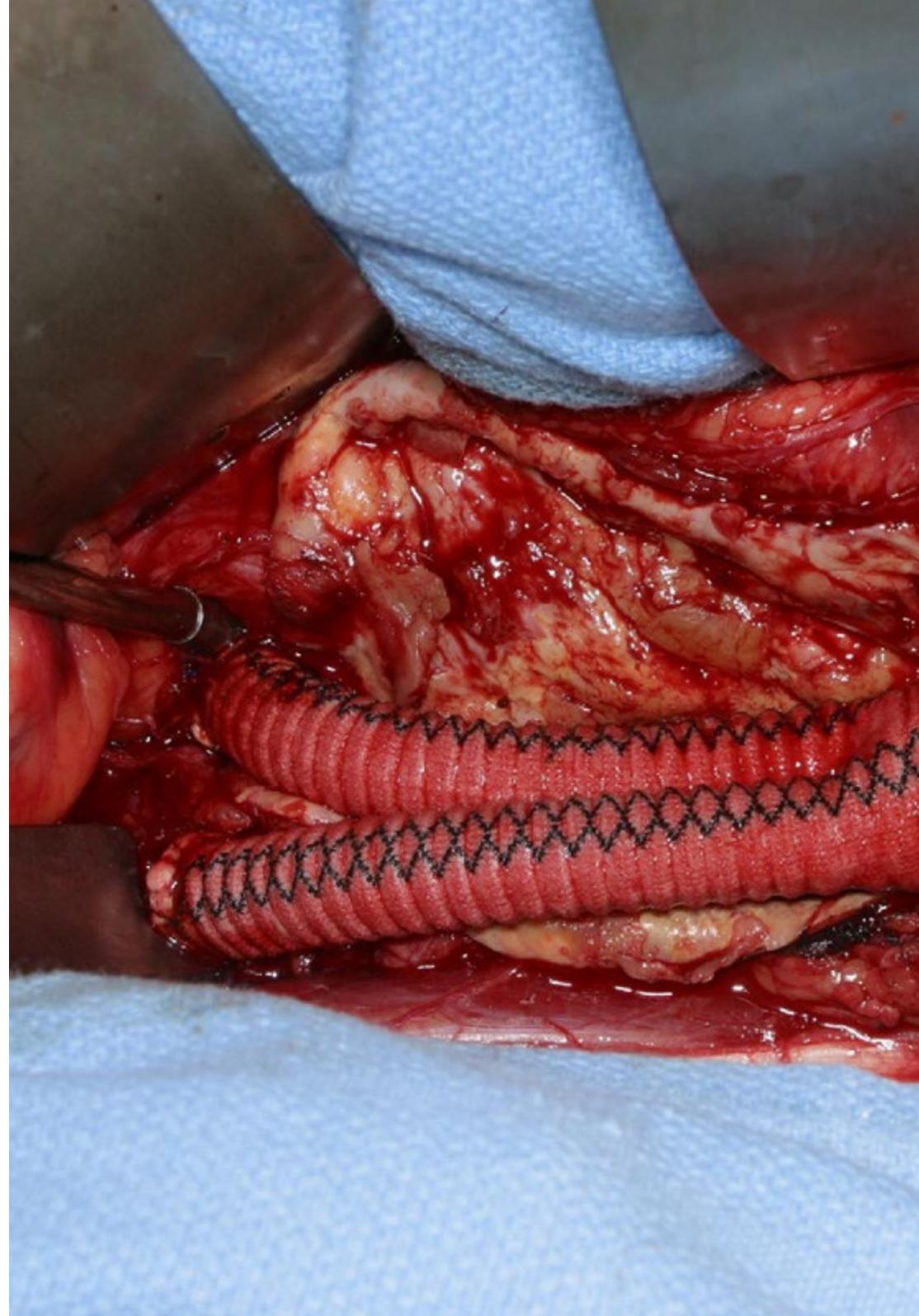


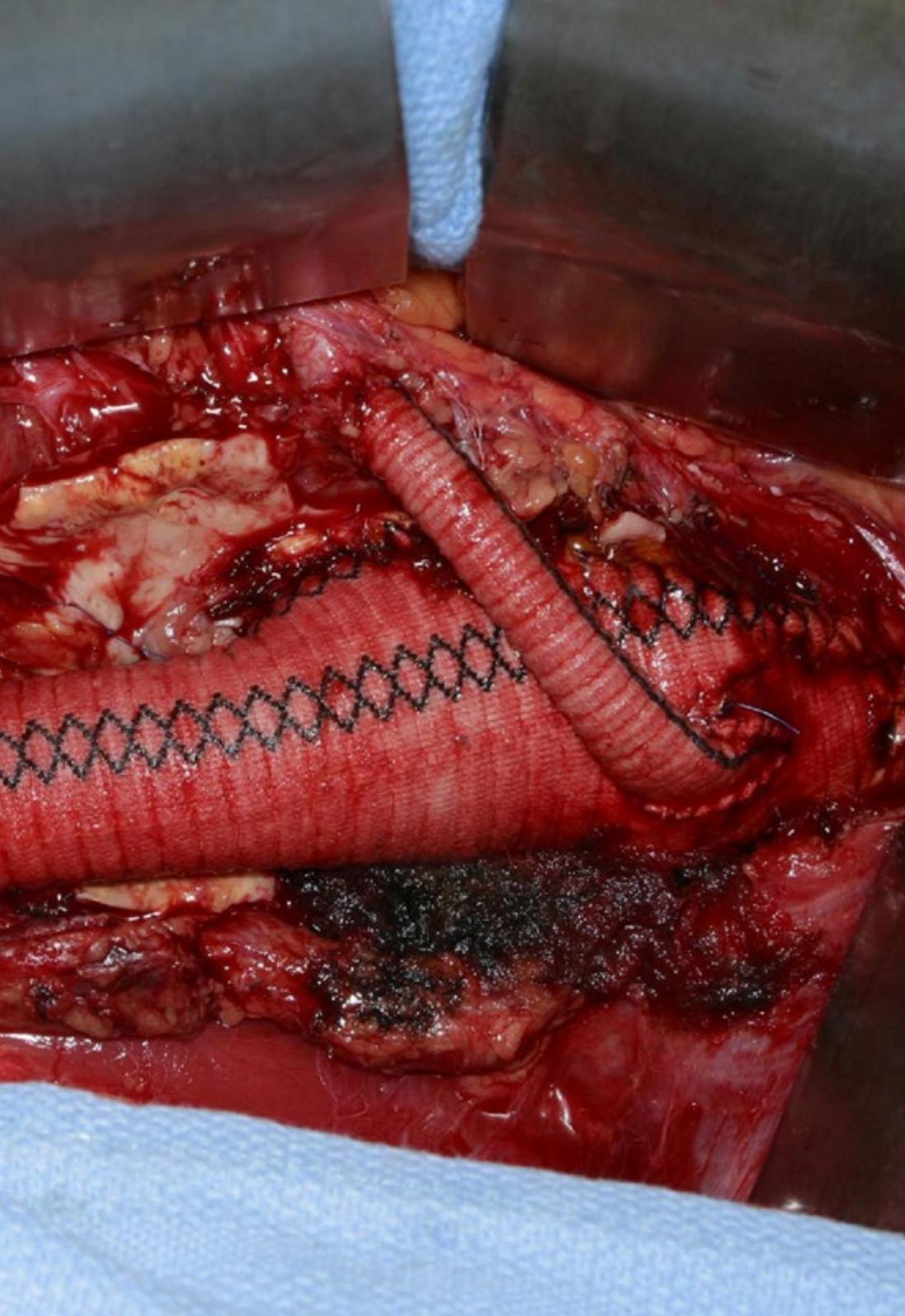
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*Advance at your own pace, organize your study schedule according to your current agenda. Learn about the most innovative study methodology: Relearning”*

## Module 1. Aortic Pathology

- 1.1. Anatomy and Function of the Aortic Root
- 1.2. Pathology and Treatment of the Aortic Root
- 1.3. Thoracic Aortic Aneurysm
  - 1.3.1. Etiopathogenesis
  - 1.3.2. Natural History
  - 1.3.3. Treatment
- 1.4. Thoraco-Abdominal Aneurysm
- 1.5. Acute Aortic Syndrome
  - 1.5.1. Classification
  - 1.5.2. Diagnosis
- 1.6. Surgical Treatment of Acute Aortic Syndrome
- 1.7. Adjuvant Techniques in the Surgical Treatment of Acute Aortic Syndrome
- 1.8. Aortic Arch Surgery
- 1.9. Percutaneous Treatment
- 1.10. Aortitis





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*TECH provides you with the multimedia resource you need to easily understand the contents. A 100% online program for you to avoid wasting time. Enroll now”*

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.





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*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.

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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 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 Aortic Pathology 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 program will allow you to obtain your **Postgraduate Certificate in Aortic Pathology** 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 Certificate in Aortic Pathology**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**





## Postgraduate Certificate Aortic Pathology

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

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