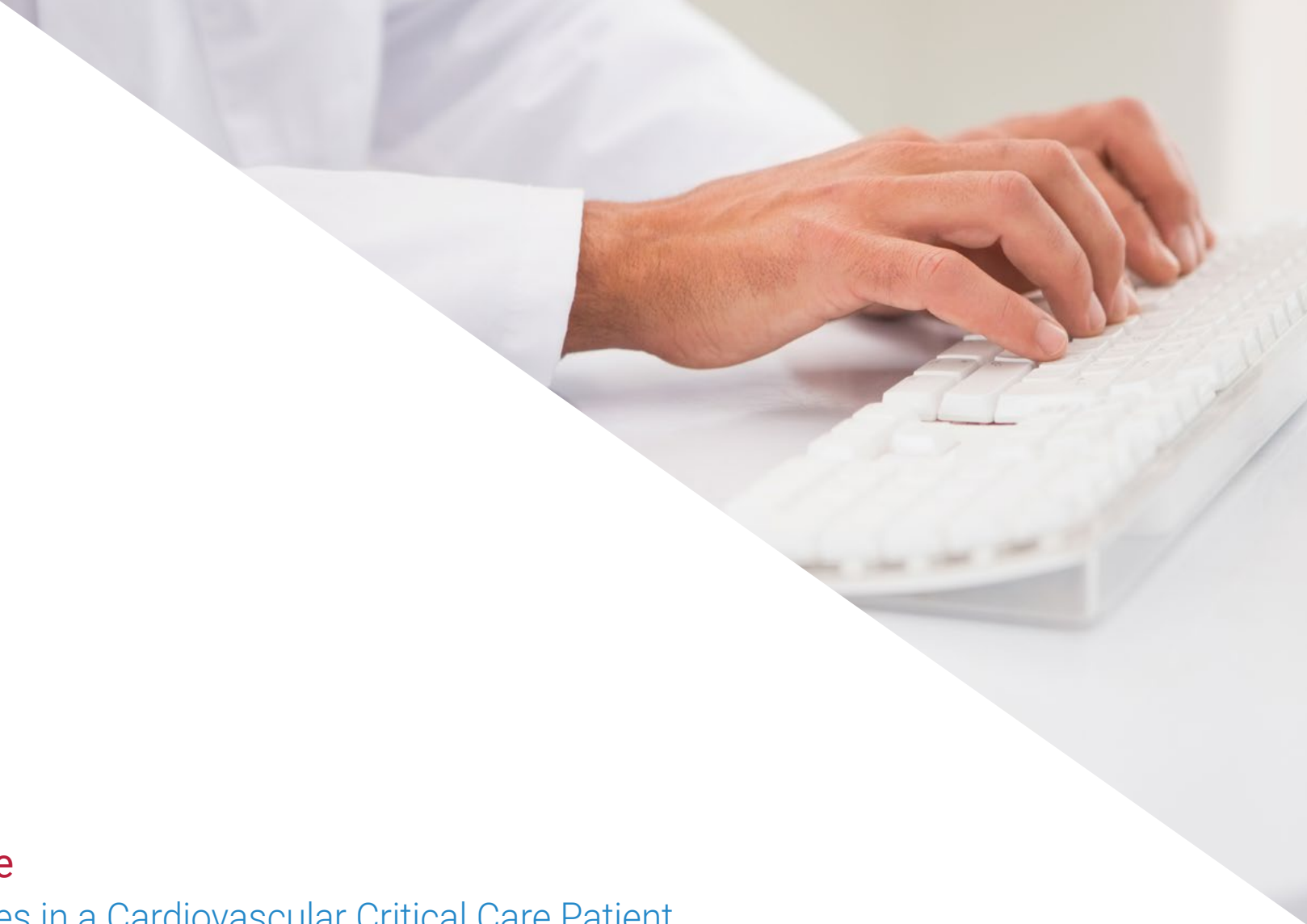


# Postgraduate Certificate

Procedures and Techniques in a  
Cardiovascular Critical Care Patient



## Postgraduate Certificate

### Procedures and Techniques in a Cardiovascular Critical Care Patient

- » Modality: online
- » Duration: 2 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/medicine/postgraduate-certificate/procedures-techniques-cardiovascular-critical-care-patient](http://www.techtitute.com/us/medicine/postgraduate-certificate/procedures-techniques-cardiovascular-critical-care-patient)

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# 01

# Introduction

Acute cardiovascular pathology consists of a group of diseases that frequently require complex, on-the-spot decision making and with great repercussions for the patient's prognosis. The monitoring of patients with cardiovascular pathology in a critical situation is a very common occurrence, both in emergency departments as well as coronary units, ICU and in post-surgery patients with underlying heart disease.







“

*Improve your knowledge in procedures and techniques in the cardiovascular critical care patient through this program, where you will find the best didactic material with real clinical cases. Learn here about the latest advances in the specialty to be able to perform a quality medical practice".*

This Postgraduate Certificate in the field of cardiology is one of the areas of great research activity, which leads to the frequent emergence of new studies, reviews, clinical practice guidelines, etc. that modify or should modify the management of patients with acute heart disease. Updating in this area is essential for non-cardiologists who work in a setting where they have to treat this patient profile, for cardiologists who are not in day-to-day contact with the acute patient, but need to be competent in it, or for cardiologists interested in developing specific training in it.

The program of this Postgraduate Certificate is clearly structured, which allows an orderly approach to each topic for the student. The modules are divided in a simple way, focusing on each one of the main groups of acute heart disease. They are taught by professionals who combine their high academic skill level with their teaching experience and their dealings with critical cardiology patients. The learning tools available to the student and the texts are fully updated and oriented to the development of competencies directly applicable in clinical practice.

The structure of the Postgraduate Certificate brings together both more theoretical content and updating in diagnosis and medical management, as well as other contents aimed at facilitating the acquisition of practical skills by students. One module of the postgraduate diploma is entirely dedicated to the development of practical skills and mastery of essential techniques in the management of the critically ill cardiovascular patient. A second module is focused on developing the essential skills for performing and interpreting echocardiograms (ECG), and their correlation with the patient's clinical situation, to make decisions on the treatment and management of the patient.

The program is aimed at encouraging and enabling the development of essential skills in the management of a patient with acute heart disease. The student profile that will benefit from taking this Postgraduate Certificate is that of those who need training or updating in the management of this type of patient, mainly intensivists or anesthesiologists who handle patients with heart disease, cardiologists who do not have daily contact with acute patients but who need to be up to date in their management because they are on call, or cardiologists interested in deepening and perfecting their skills in the management of patients with critical heart disease.

This **Postgraduate Certificate in Procedures and Techniques in the Cardiovascular Critical Care Patient** contains the most complete and up to date scientific program on the market. The most important features of the Postgraduate Certificate are:

- ♦ Development of more than 75 clinical cases presented by experts in procedures and techniques in the cardiovascular critical care patient. The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional.
- ♦ Update on procedures and techniques in the cardiovascular critical care patient.
- ♦ It contains practical exercises where the self-evaluation process can be carried out to improve learning
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course.
- ♦ With special emphasis on evidence-based medicine and research methodologies in procedures and techniques in the cardiovascular critical care patient.
- ♦ All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments.
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*Update your knowledge through the Postgraduate Certificate program in Procedures and Techniques in the Cardiovascular Critical Care Patient".*

“

*This Postgraduate Certificate may be the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in procedures and techniques in the cardiovascular critical care patient, you will obtain a Postgraduate Certificate from TECH - Technological University".*

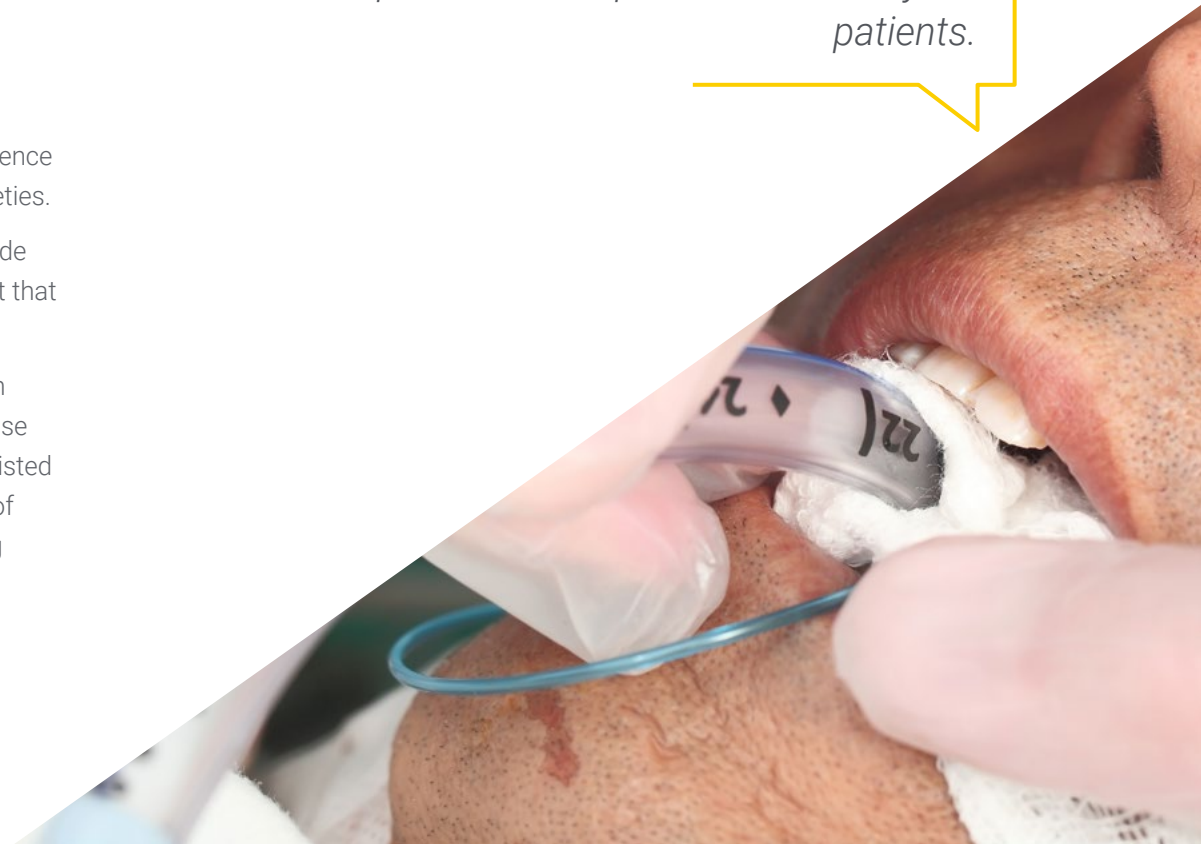
Its teaching staff includes professionals belonging to the field of procedures and techniques in cardiovascular critical care patients, who contribute their work experience to this training, as well as renowned specialists belonging to leading scientific societies.

The multimedia content developed with the latest educational technology will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive training program to train in real situations.

The design of this program is based on problem-based learning, by means of which the physician must try to solve the different professional practice situations that arise throughout the Postgraduate Certificate. For this purpose, the physician will be assisted by an innovative interactive video system created by renowned experts in the field of cardiovascular critical care procedures and techniques and with extensive teaching experience.

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

*Take the opportunity to learn about the latest advances in procedures and techniques in the cardiovascular critical care patient and improve the care of your patients.*

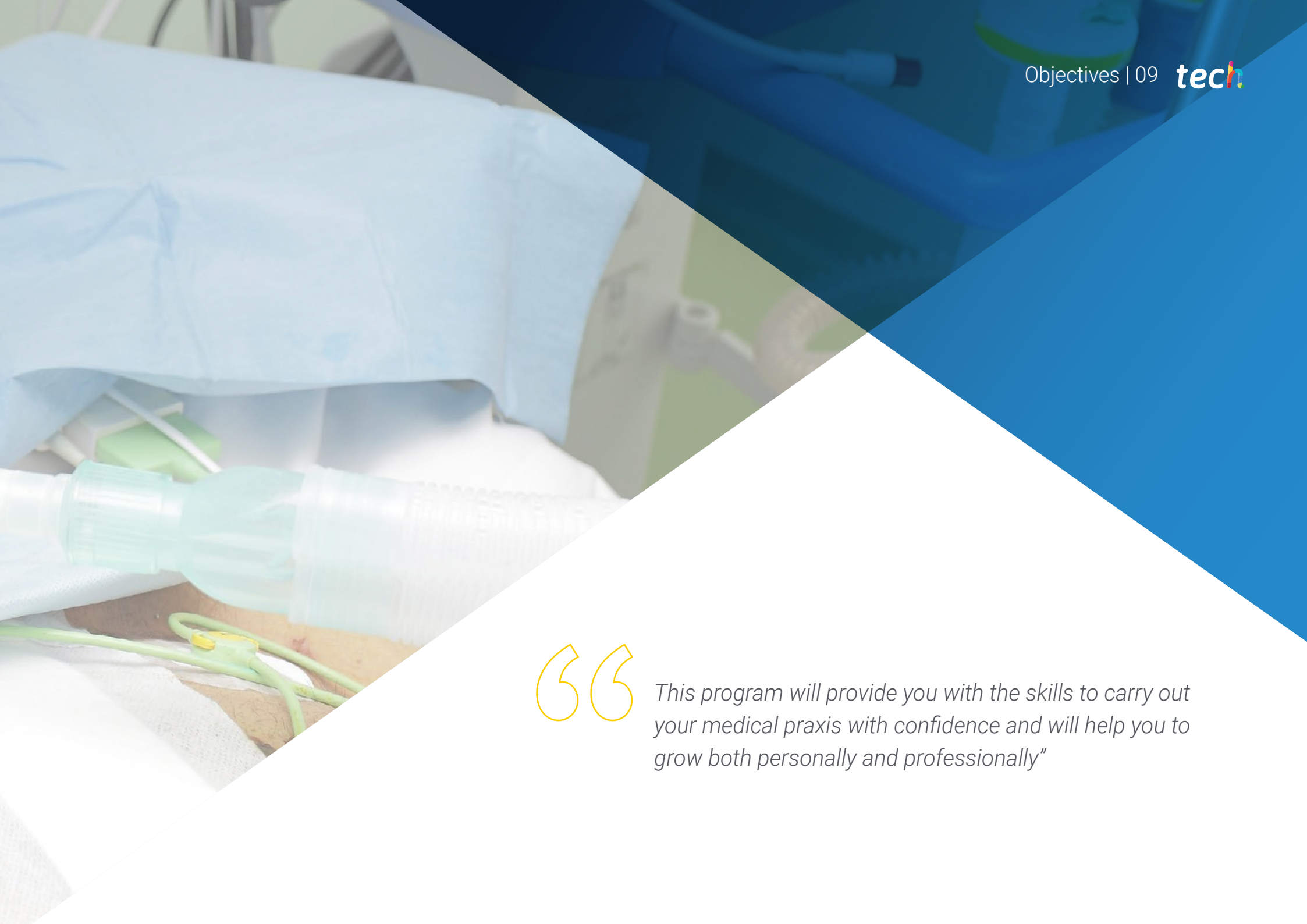


# 02 Objectives

The **Postgraduate Certificate in Procedures and Techniques in the Critical Care Cardiovascular Patient** is aimed at facilitating the physician's actions in all types of patients with serious cardiovascular conditions.







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*This program will provide you with the skills to carry out your medical praxis with confidence and will help you to grow both personally and professionally”*

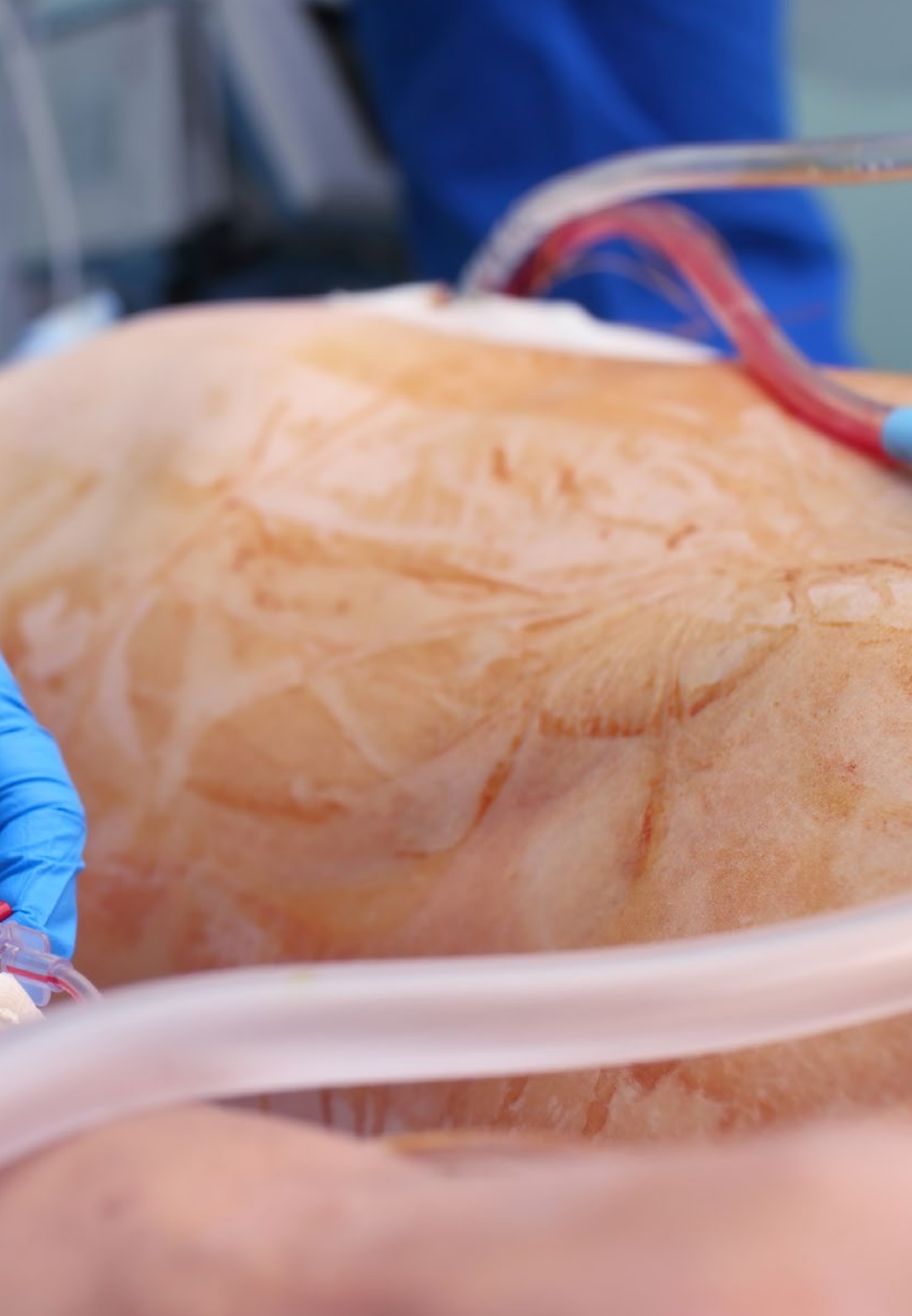


## General Objectives

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- Handle with ease the diagnostic arsenal available in a tertiary center for the management of critically ill cardiovascular patients.
- Identify a patient in a serious or potentially serious short-term situation due to cardiovascular problems.
- Explain the indications for treatment and therapeutic options in critically ill cardiovascular patients.
- Lead a group attending to urgent or emergency situation caused by acute cardiovascular problems and guide fellow colleagues in the treatment of critical patients.



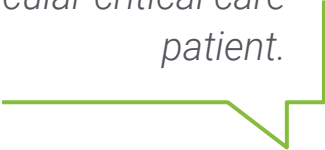


## Specific Objectives

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- Identify a pericardial effusion and establish the indication for percutaneous puncture to evacuate it.
- Apply a systematic order to proceed with orotracheal intubation.
- Apply a systematic order to proceed with pericardiocentesis.
- Apply a systematic order for intra-aortic balloon counterpulsation implantation.
- Apply a systematic order for intra-aortic balloon counterpulsation implantation.

*Update your knowledge through the program in procedures and techniques in the cardiovascular critical care patient.*





03

# Course Management

The program's teaching staff includes leading specialists in procedures and techniques for patients in critical cardiovascular care who contribute their experience to this training. In addition, other specialists of recognized prestige participate in its design and elaboration, completing the program in an interdisciplinary manner.





“

*Learn from leading professionals, the latest advances in procedures in the field of procedures and techniques in the cardiovascular critical care patient”.*

## Management



### **Dr. Rodríguez Muñoz, Daniel**

- ♦ Specialist Cardiologist in Electrophysiology and Arrhythmias at Ramón y Cajal University Hospital.
- ♦ PhD in Health Sciences, University of Alcalá.
- ♦ Master's Degree in Pacemakers, Defibrillators and Resynchronization.
- ♦ Master's Degree in Medical Education.
- ♦ Master's Degree in Diagnostic and Therapeutic Cardiac Electrophysiology.
- ♦ Fellow of the European Society of Cardiology (FESC)
- ♦ Member of the European Heart Rhythmia Association (EHRA)
- ♦ Member of the Spanish Society of Cardiology (SEC).
- ♦ Member of the Arrhythmia and Electrophysiology Section of the SEC.



### **Dr. Zamorano Gómez, José Luis**

- ♦ Head of the Cardiology Services. Ramón y Cajal University Hospital Madrid
- ♦ Doctor of Medicine- Cum Laude.
- ♦ Executive Management and Health Resources (ESADE, Madrid)
- ♦ National Qualification Professor of Medicine.
- ♦ Member of the First European Echocardiography Accreditation Committee of the European Association of Echocardiography.
- ♦ Honorary Fellow American Society of Echocardiography.
- ♦ Chairman of the Clinical Guidelines Committee of the European Society of Cardiology.
- ♦ Chairman National Cardiovascular Panel FIS, Instituto Carlos III
- ♦ Member of the Editorial Board of the Spanish Society of Cardiology Journal .
- ♦ Member of the Editorial Board of the Journal of Echocardiography.
- ♦ Member of the Editorial Board of the American Society of Echocardiography.
- ♦ Member of International Relations Task Force of the American Society of Echocardiography.
- ♦ Associate Editor of the European Heart Journal Cardiovascular Imaging.
- ♦ Author of more than 20 books, more than 500 articles in scientific journals and more than 400 communication in National and International Conferences.
- ♦ Impact Factor > 1500. IH 84. Citations > 40000

## Professors

### **Dr. Castillo Orive, Miguel**

- ♦ Cardiology Specialist in Hospitalization Unit and Cardio-diabetes Unit.
- ♦ Ramón y Cajal University Hospital Madrid

### **Dr. Sanmartín Fernández, Marcelo**

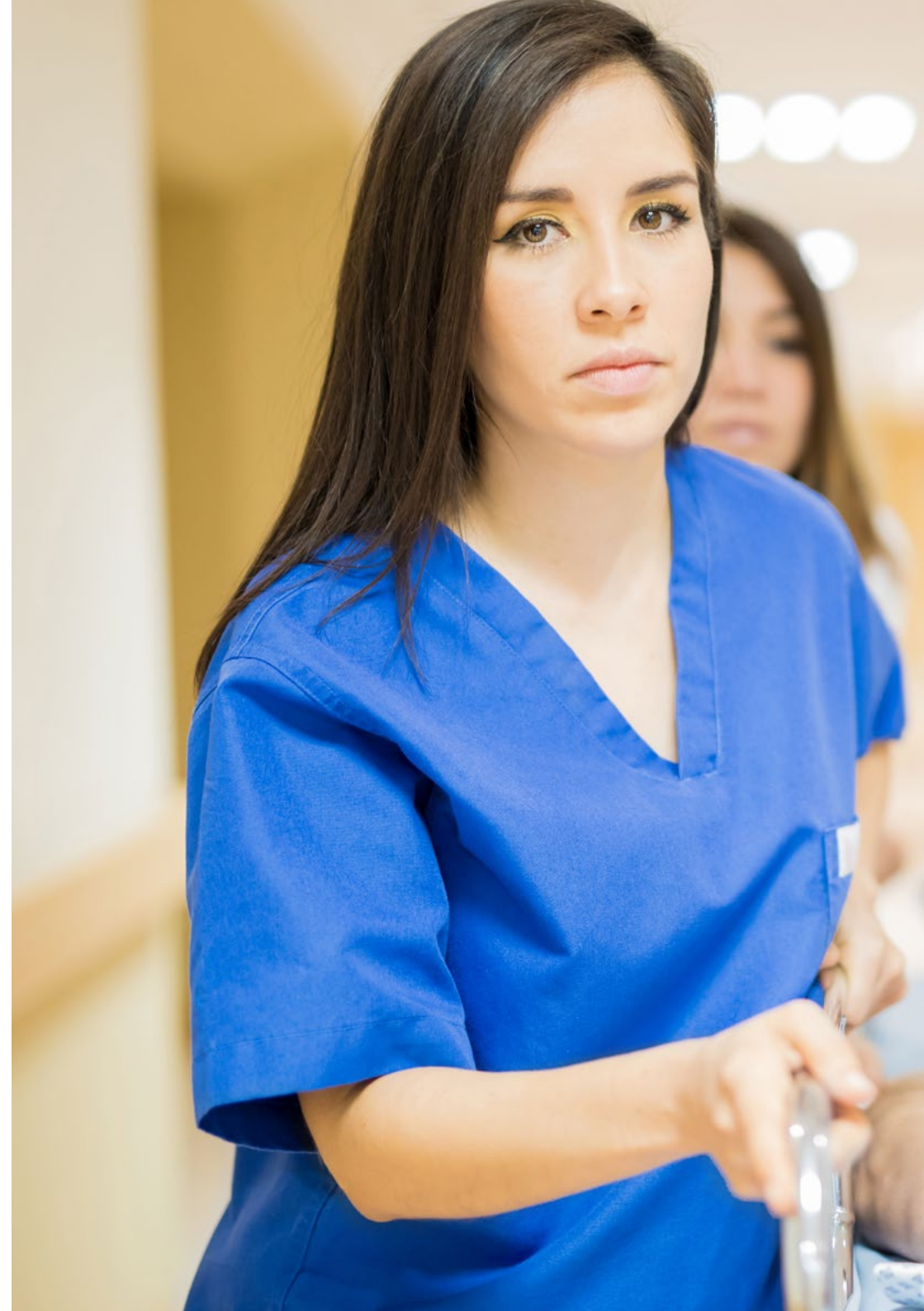
- ♦ Head of Acute Coronary Syndrome Department.
- ♦ Ramón y Cajal University Hospital Madrid

### **Dr. Sionis Green, Alessandro**

- ♦ Head of Cardiac Intensive Care Unit, Cardiology Department.
- ♦ Santa Creu and Sant Pau Hospital Barcelona

### **Dr. Fernández-Golfín Lobán, Covadonga**

- ♦ Cardiac Imaging Unit Coordinator.
- ♦ Ramón y Cajal University Hospital Madrid







“Update your knowledge through the program in procedures and techniques in the cardiovascular critical care patient.”

# 04

## Structure and Content

The structure of the contents has been designed by a team of professionals from the best hospitals and universities in Spain, aware of the relevance of current training to intervene in the diagnosis, treatment and follow-up of procedures and techniques in patients under critical cardiovascular care, and committed to quality teaching through new educational technologies.



“

*This Postgraduate Certificate in Procedures and Techniques in the Cardiovascular Critical Care Patient contains the most complete and up to date scientific program on the market".*



**Module 1.** Procedures and Techniques in a Patient in Cardiovascular Critical Care

- 1.1. Intubation and Invasive Mechanical Ventilation
  - 1.1.1. Orotracheal Intubation
    - 1.1.1.1. Available Tools and Technique
  - 1.1.2. Mechanical Ventilation
    - 1.1.2.1. Forms of Ventilation
    - 1.1.2.2. Adjustment Depending on the Hemodynamic and Respiratory Situation of the Patient
- 1.2. Pericardiocentesis
  - 1.2.1. Indications
  - 1.2.2. Technique
  - 1.2.3. Alternatives to Pericardial Drainage
- 1.3. Arterial and Central Venous Cannulation
  - 1.3.1. Indications
  - 1.3.2. Technique
- 1.4. Counterpulsation Balloon
  - 1.4.1. Indications
  - 1.4.2. Implantation Technique
- 1.5. Transient Pacemaker
  - 1.5.1. Indications
  - 1.5.2. Implantation Technique







“

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

05

# Methodology

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

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



“

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



## At TECH we use the Case Method

In a given situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is 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.

“

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

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

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



## Re-learning Methodology

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

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



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



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

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

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

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

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



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



#### Study Material

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

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



#### Latest Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



#### Interactive Summaries

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

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



#### Additional Reading

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





#### Expert-led Case Studies

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through the development of attention and the resolution of different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



#### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence in our difficult future decisions.



#### Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.





# 06 Certificate

The Postgraduate Certificate in Procedures and Techniques in the Cardiovascular Critical Care Patient guarantees you, in addition to the most rigorous and up to date training, access to a Postgraduate Certificate issued by TECH - Technological University.







“

*Successfully complete this training and receive your diploma without the hassle of travel or paperwork.”*

This **Postgraduate Certificate in Procedures and Techniques in the Cardiovascular Critical Care Patient** contains the most complete and up to date scientific program on the market.

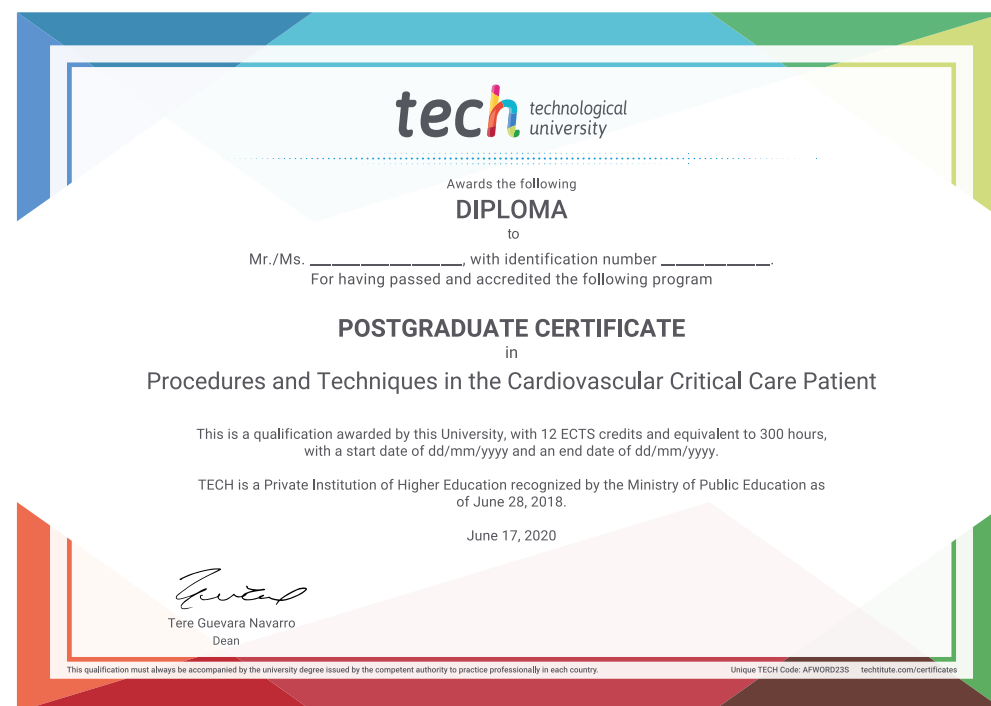
After the student has passed the evaluations, they will receive their corresponding Postgraduate Certificate issued by TECH - Technological University.

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

Title: **Postgraduate Certificate in Procedures and Techniques in the Cardiovascular Critical Care Patient**

ECTS: 12

Nº Hours: **300**



\*Apostille Convention. In the event that the student wishes to have their paper diploma Apostilled, TECH EDUCATION will make the necessary arrangements to obtain it at an additional cost of €140 plus shipping costs of the Apostilled diploma.

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



## Postgraduate Certificate

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Techniques in a  
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