Postgraduate Diploma

Arrhythmias and Electrophysiology

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Postgraduate Diploma
Arrhythmias and Electrophysiology

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

Website: www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-arrhythmias-electrophysiology

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01

Introduction

Cardiac problems affect a high percentage of the population and are one of the main causes of death worldwide. Among the different disorders that a patient may suffer from are arrhythmias. A team of specialists in Electrophysiology and Heart Failure has brought together in this program the necessary resources so that the graduate can keep up to date with the latest news and advances in the field of Tachyarrhythmias and Atrial Fibrillation. All this with TECH's commitment to offer a comfortable learning, adapted to the current industry, with quality content and a 100% online format.

A syllabus that addresses Atrial Fibrillation and Tachyarrhythmias in depth, from diagnosis to treatment"

Although heart failure remains one of the leading causes of death in the world, advances in the field of cardiology, specifically in the pathologies and disorders caused by arrhythmias, have made it possible to save millions of lives. The development of new techniques and treatments, linked to early and quality diagnosis, has made everyday life easier for millions of patients.

For this reason, and due to the continuous evolution of this branch of medicine, specialists need to constantly update their knowledge to stay at the forefront of the industry. This Postgraduate Diploma in Arrhythmias and Electrophysiology, focused on Atrial Fibrillation and Tachyarrhythmias, both ventricular and supraventricular, is the result of this need.

A program created and directed by experts in Electrophysiology and Heart Failure that covers everything from contextualization (types, pathologies, symptomatology, etc.) to diagnosis and treatment.

This program has a clear vocation to focus on the clinical management of the problems most frequently encountered in the daily practice of cardiologists in general. For this reason, the teaching team, following the methodology that defines TECH, proposes the learning of the content through real and practical cases in which the student will be able to put into practice what they have learned.

In addition, studying this fully online educational program, accessible from any device and with complete content from the very first moment, will allow you to continue developing your professional career while following the steps to become an expert in the field.

This **Postgraduate Diploma in Arrhythmias and Electrophysiology** 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 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

Become an expert in Tachyarrhythmias and Arterial Fibrillation in only 6 months with TECH"

Update your knowledge and keep up to date with the most innovative aspects of cardiological processes involving cardiac rhythm disorders"

A comprehensive approach to arrhythmias by specialists in Electrophysiology and Heart Failure.

Learn through real clinical scenarios: general or concrete, but mostly frequent.

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

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Objectives

The main objective of this Postgraduate Diploma is for the student to acquire the necessary skills to diagnose and treat Tachyarrhythmias and Atrial Fibrillation problems. A detailed, up-to-date program with which you will learn about the latest techniques, strategies and procedures used in this branch of cardiology. In addition, TECH provides the graduate with a set of didactic and informative tools to make this academic stage an enriching and unique experience.

Keep up to date with the latest techniques and strategies and offer your patients a service that is up to the task"

General Objectives

- Update general knowledge as well as the most innovative aspects of cardiological processes involving cardiac rhythm disorders
- Delve into the clinical management and indications of the different procedures performed for the diagnosis and treatment of these cardiac conditions
- Delve into the diagnosis and treatment of arrhythmias based on clinical and electrocardiographic aspects, as well as invasive techniques and electrophysiological studies
- Broaden knowledge in the operation, monitoring and implantation technique of the main implantable devices used for the treatment of arrhythmias
- Delve into the problems in cardiac rhythm disorder that can arise across the spectrum of patients
- Achieve a mastery of the rhythm disorder problems present in the various scenarios faced by the cardiologist in his or her routine clinical practice

Specific Objectives

Module 1. Supraventricular Tachyarrhythmias

- Know the definition and types of Supraventricular Tachyarrhythmias. Understand the differential diagnosis between these types
- Understand the management of these arrhythmias in the acute (emergency) and chronic (consultation) setting
- Review the main aspects of the electrophysiological study of these arrhythmias
- In-depth study of the epidemiology, clinical presentation, characteristics of the electrophysiological study and ablation techniques in the 4 main types of supraventricular tachyarrhythmias (nodal reentrant tachycardia, AV reentrant tachycardia, common atrial flutter and focal atrial tachycardia)

Module 2. Ventricular Tachyarrhythmias

- Review the key aspects of its diagnostic process, with a clinical and electrocardiographic approach. Review the electrocardiographic differential diagnosis between wide QRS tachycardias
- Know the approach to these arrhythmias in the acute (emergency) and chronic (consultation) setting
- Review the pharmacological treatment of these arrhythmias
- In-depth study of the specific electrophysiological study of these arrhythmias, as well as the therapeutic approach using ablation techniques
- Review the knowledge of ventricular extrasystoles, from their mechanisms and initial approach, to therapeutic strategies, including specific electrophysiological study

Module 3. Atrial Fibrillation

- Review the importance of Atrial Fibrillation: epidemiology and socioeconomic impact
- Review the main clinical aspects and initial diagnostic approach
- A detailed update on the complete management of Atrial Fibrillation, starting with the prevention of Thromboembolism and continuing with the clinical management strategy
- Delve into the Atrial Fibrillation ablation technique: indication, evidence, technique and expected results. Review the future of this technique
- Review the particularities of AF in other specific contexts and anticoagulation therapy in the patient with ischemic heart disease

Our teachers will guide you to achieve the goals you set when you decided to take this Postgraduate Diploma"

03

Course Management

In order to offer a complete and quality academic experience, TECH has selected for this Postgraduate Diploma a group of highly qualified cardiologists, specialized in Electrophysiology and Heart Failure. This selection of professionals with extensive experience in the sector will contribute their own perspective to the content, making this program a unique opportunity to broaden your knowledge with experts in the field.

A program with a team of specialized teachers committed to the student's improvement. Ask your questions and continue learning"

International Guest Director

Awarded the "Outstanding Patient Experience Award" on multiple occasions for his excellence in patient care, Dr. Konstantinos Aronis has become a prestigious **Cardiac Electrophysiologist**. In this sense, his clinical specialty is based on the **Invasive Management of Arrhythmias** in patients suffering from **Adult Congenital Heart Disease**.

He has developed his professional work in health institutions of international reference, including the **Johns Hopkins Hospital** in Maryland or the **Beth Israel Deaconess Medical Center** in Massachusetts. In this way, he has contributed to optimizing the quality of life of numerous individuals suffering from diseases ranging from **Atrial Fibrillation** or **Ventricular Tachycardia** to **Structural Malformations of the heart**. To do so, he has employed a variety of advanced technological tools such as **Computational Modeling, Holder Monitors** and even **Magnetic Resonance Imaging**.

Among his main contributions, he has promoted the **Complex Ablation Program for Congenital Heart Diseases**. This has consisted in the use of **computed tomography** images to create **3D printed models** of hearts with complicated anatomies, which has made it possible to plan medical interventions with greater precision and efficiency. It has also carried out the first **intraoperative excision** for **Atrial Tachycardia**, performing the procedure in real time during cardiac surgery. This innovation made it possible to address cardiac rhythm disturbances that could not be treated conventionally without damaging nearby critical structures.

On the other hand, he balances this work with his role as a **Clinical Researcher** in Cardiac Electrophysiology. In fact, he has published numerous **scientific articles** in high-impact specialized journals. His clinical findings have contributed to the advancement of the knowledge of health professionals in areas such as **Atrial Fibrillation, Resynchronization** therapies or personalized **Cardiac Prototypes**.

Dr. Aronis, Konstantinos

- Physician at Johns Hopkins Hospital, Maryland, United States
- Cardiovascular Disease and Clinical Cardiac Electrophysiology Investigator at Johns Hopkins Hospital
- Translational Investigator at Beth Israel Deaconess Medical Center, Massachusetts
- Internal Medicine Residency at Boston University Medical Center, Massachusetts
- Internship in Computational Electrophysiology at the Institute of Computational Medicine at Johns Hopkins Hospital
- Doctorate in Internal Medicine, University of Patras
- Degree in Medical Sciences from the University of Patras
- American College of Cardiology
- American Heart Association
- Heart Rhythm Society

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

Management

Dr. Jiménez Sánchez, Diego

- Assistant specialist in Cardiology at the University Hospital El Escorial
- Attending Doctor Specialist at Unit of the Puerta De Hierro University Hospital
- Degree in Medicine and Surgery from the Autonomous University of Madrid
- Residency in the specialty of Cardiology at the Puerta de Hierro University Hospital
- Fellowship in electrophysiology at the Arrhythmia Unit of the Puerta de Hierro University Hospital
- Master's Degree in Diagnostic and Therapeutic Cardiac Electrophysiology at San Pablo CEU University

Dr. Vázquez López-Ibor, Jorge

- Assistant Cardiology Specialist at University Hospital El Escorial
- Assistant Cardiology Specialist at the Heart Failure Unit of the Puerta de Hierro Hospital
- Degree in Medicine and Surgery from the Complutense University of Madrid
- Residency in the specialty of Cardiology at the Puerta de Hierro University Hospital
- Theoretical and practical Master in Critical and Advanced Heart Failure (MICCA) at the Gregorio Marañón Hospital
- Theoretical and practical training in Cardiovascular Research at the National Center for Cardiovascular Research (CNIC)
- Fellowship in Advanced Heart Failure, Heart Transplantation and Pulmonary Hypertension at the Puerta de Hierro University Hospital

Dr. Castro Urda, Víctor

- Assistant Specialist in the Arrhythmia Unit of the Cardiology Service of the Puerta de Hierro Hospital
- Degree in Medicine and Surgery from the Complutense University of Madrid
- Residency in the specialty of Cardiology at the Puerta de Hierro University Hospital
- Internship at the Electrophysiology and Cardiology Department of the Hospital UZ Brussel, Belgium
- Master in Diagnostic and Therapeutic Cardiac Electrophysiology at the Complutense University of Madrid

Professors

Dr. Sánchez García, Manuel

- Area Specialist in the Electrophysiology and Cardiac Stimulation Unit of the Cardiology Service of Salamanca University Health Care Complex
- Degree in Medicine and Surgery from the Complutense University of Madrid
- Residency in the specialty of Cardiology at the Puerta de Hierro University Hospital
- Fellowship in Electrophysiology and Arrhythmias at the Arrhythmia Unit of the Puerta de Hierro University Hospital
- University Master in Diagnostic and Therapeutic Cardiac Electrophysiology at San Pablo CEU University

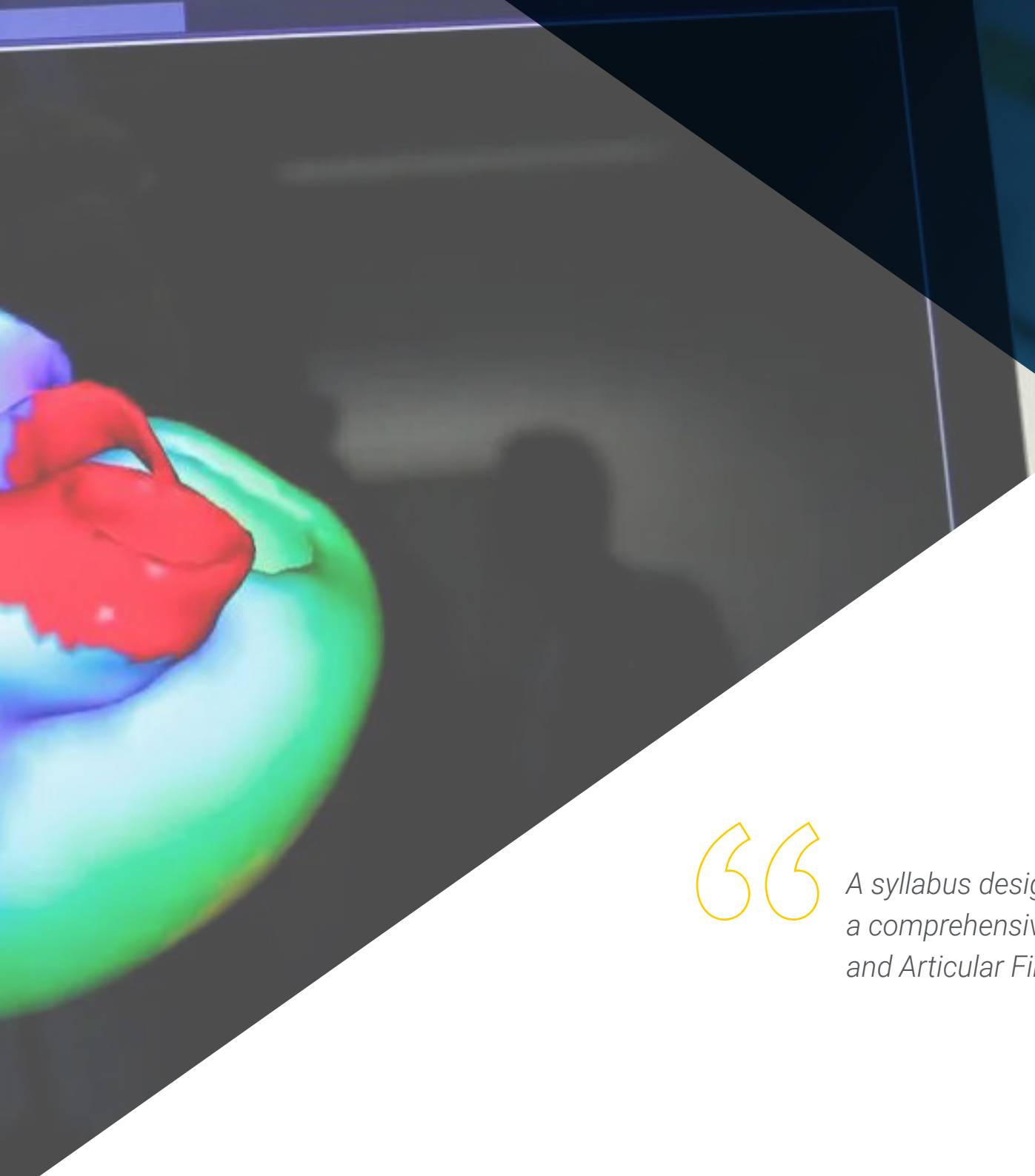
Dr. García-Izquierdo Jaén, Eusebio

- Assistant Specialist in the Arrhythmia Unit of the Cardiology Service of the Puerta de Hierro Hospital
- Graduated in Medicine at the Complutense University of Madrid
- Residency in the specialty of Cardiology at the Puerta de Hierro University Hospital
- Fellowship in electrophysiology at the Arrhythmia Unit of the Puerta de Hierro University Hospital
- Clinical researcher of the AORTASANA Project
- Master's Degree in diagnostic and therapeutic cardiac electrophysiology at San Pablo CEU University

04

Structure and Content

The program of this Postgraduate Diploma has been designed taking into account: the criteria of the teaching team and the most modern and up-to-date information based on cardiac rhythm disorders. For this reason, the graduate will find in this program, content with a strong innovative and practical component and a clear vocation to focus on the clinical management of the problems most frequently encountered in the day-to-day work of cardiologists in general.



A syllabus designed by cardiologists that offers a comprehensive approach to Tachyarrhythmias and Articular Fibrillation"

Module 1. Supraventricular Tachyarrhythmias

1.1. Supraventricular Tachycardia
1.2. Types of Supraventricular Tachyarrhythmias. Clinical Differential Diagnosis
1.3. Acute Management of Supraventricular Tachycardia. View from the Emergency Department
  1.3.1. Clinical Presentation
  1.3.2. Complementary Tests
  1.3.3. Therapeutic Maneuvers and Pharmacological Treatment
  1.3.4. Discharge Treatment
1.4. Chronic Management of Supraventricular Tachycardia. View From the Consultation Room
1.5. Pharmacological Treatment of Supraventricular Tachycardia
1.6. Electrophysiological Study of Supraventricular Tachycardia
  1.6.1. Indications
  1.6.2. Description and Maneuvers
1.7. Nodal Re-entrant Tachycardia
  1.7.1. Epidemiology
  1.7.2. Clinical Peculiarities
  1.7.3. Findings in Electrophysiological Study
  1.7.4. Ablation
1.8. AV Re-entrant Tachycardia (Accessory Pathway)
  1.8.1. Epidemiology
  1.8.2. Clinical Peculiarities
  1.8.3. Findings in Electrophysiological Study
  1.8.4. Ablation
1.9. Common Atrial Flutter
  1.9.1. Epidemiology
  1.9.2. Clinical Peculiarities
  1.9.3. Findings in Electrophysiological Study
  1.9.4. Ablation
1.10. Other Macroreentrant Tachycardias
1.11. Focal Atrial Tachycardia
  1.11.1. Epidemiology
  1.11.2. Clinical Peculiarities
  1.11.3. Findings in Electrophysiological Study
  1.11.4. Ablation

Module 2. Ventricular Tachyarrhythmias

2.1. Ventricular Tachycardias
  2.1.1. Mechanisms and Pathogenesis of Ventricular Tachycardias
  2.1.2. Types of Ventricular Tachycardias
2.2. Idiopathic Ventricular Tachycardia
2.3. Clinical and Electrocardiographic Diagnosis
2.4. Electrocardiographic Differential Diagnosis Between Wide QRS Tachycardias
2.5. Acute Management of Ventricular Tachycardia. Vision from the Emergency Department and the Critical Patient
  2.5.1. Clinical Presentation
  2.5.2. Complementary Tests
  2.5.3. Therapeutic Maneuvers and Pharmacological Treatment
  2.5.4. Discharge Treatment
2.6. Chronic Management of Supraventricular Tachycardia. View From the Consultation Room
2.7. Pharmacological Treatment in Ventricular Tachycardia
2.8. Electrophysiological Study and Ablation of Ventricular Tachycardia
2.9. Ventricular Extrasystole
  2.9.1. Mechanisms of Genesis of Ventricular Extrasystole.
  2.9.2. Clinical Management
  2.9.3. Therapeutic Strategy
2.10. Ventricular Extrasystole. Study and Ablation

Module 3. Atrial Fibrillation

3.1. Importance of Atrial Fibrillation
  3.1.1. Epidemiology of Atrial Fibrillation
  3.1.2. Socioeconomic Impact of Atrial Fibrillation
3.2. Atrial Fibrillation in the Clinic
  3.2.1. Clinical Presentation and Symptomatology
  3.2.2. Initial Diagnostic Study
3.3. Assessment of Thromboembolic and Hemorrhagic Risk
  3.3.1. Anticoagulant Treatment. Clinical Evidence
  3.3.2. Direct Acting Anticoagulants
  3.3.3. Vitamin K Antagonists
  3.3.4. Auricle Closure
3.4. Clinical Management of Atrial Fibrillation
  3.4.1. Rate Control Strategy
  3.4.2. Rhythm Control Strategy
3.5. Atrial Fibrillation Ablation
  3.5.1. Indications
  3.5.2. Evidence of Efficacy
3.6. Atrial Fibrillation Ablation
  3.6.1. Atrial Fibrillation Ablation Techniques
  3.6.2. AF Ablation Results
  3.6.3. Possible Complications of AF Ablation
3.7. Monitoring after Atrial Fibrillation Ablation
3.8. Future Prospects for Atrial Fibrillation Ablation
3.9. AF in Specific Contexts: Postoperative Period, Intracranial Hemorrhage, Pregnancy, Athletes
3.10. Anticoagulant Therapy in Patients with Ischemic Heart Disease
3.11. Implications and Management of AHREs and Subclinical AF

With this program you will expand your knowledge, which will give you the confidence you need to diagnose and treat"

05

Methodology

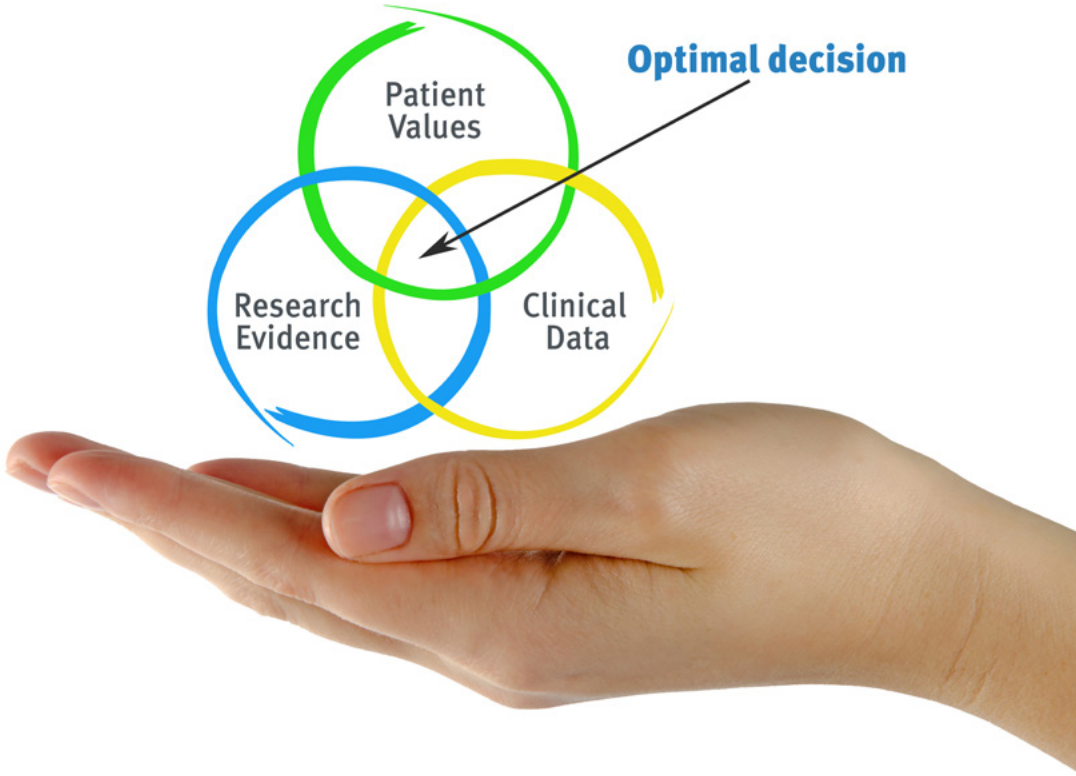
This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** 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:

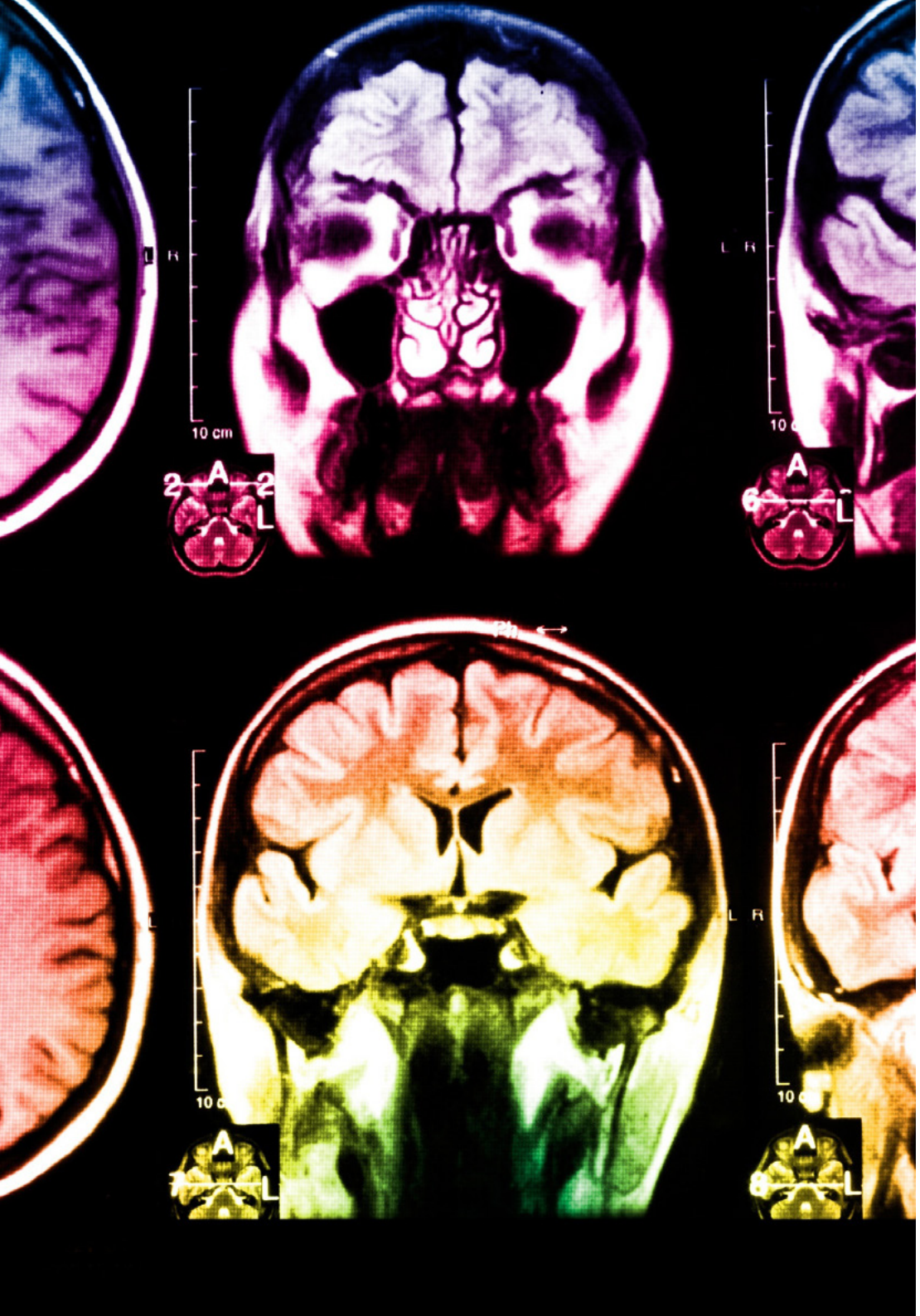
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better 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 adapted in 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.

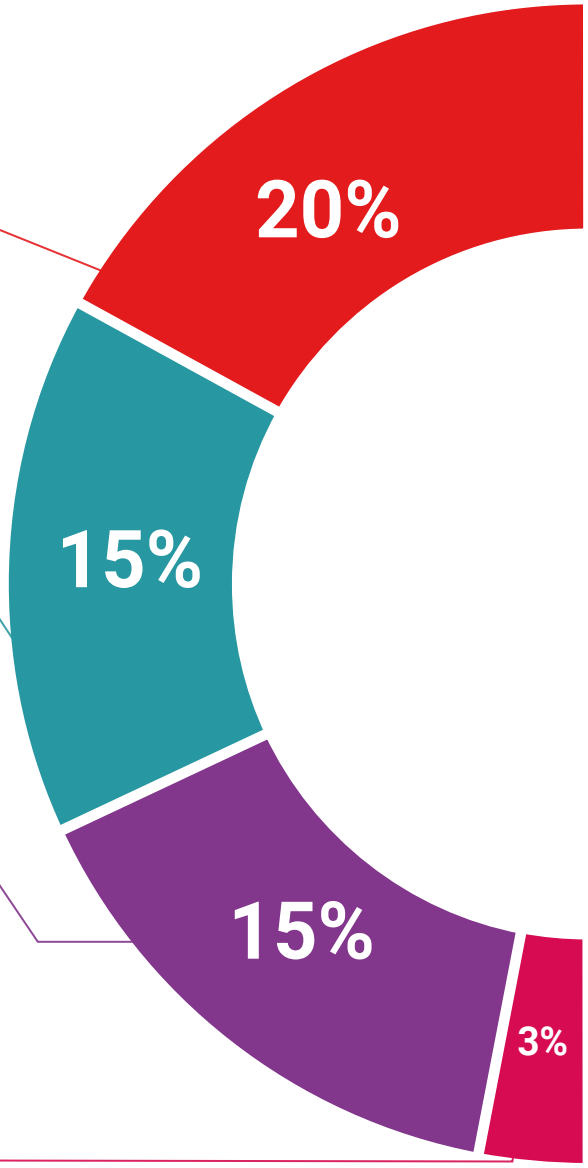
Interactive Summaries

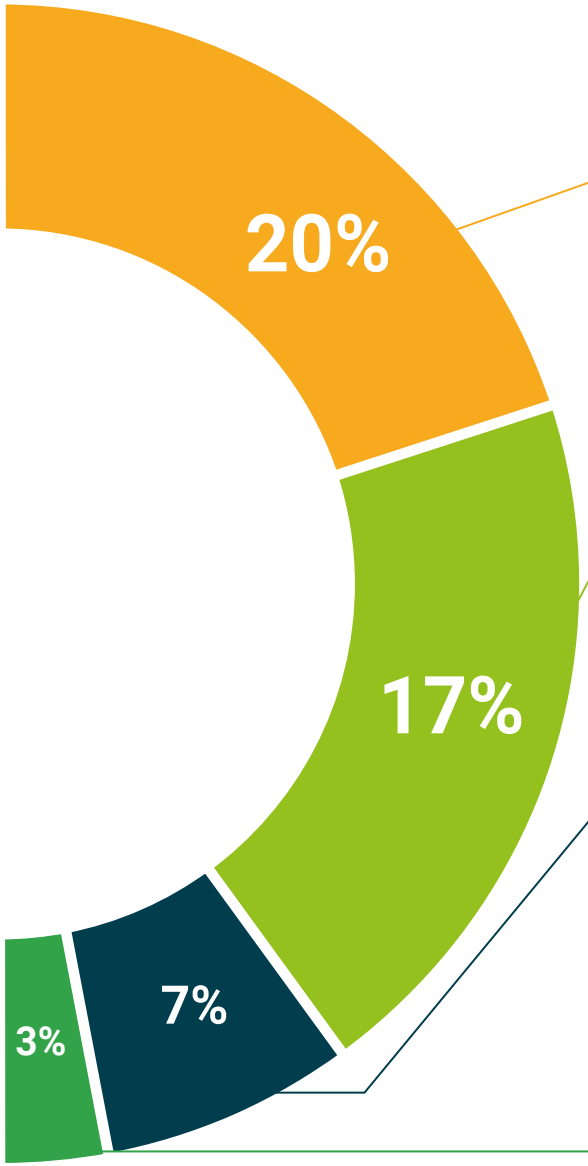
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Diploma in Arrhythmias and Electrophysiology guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma 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 Diploma in Arrhythmias and Electrophysiology** 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 Diploma in Arrhythmias and Electrophysiology**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**


tech global university

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

Postgraduate Diploma in Arrhythmias and Electrophysiology

This is a private qualification of 540 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

Dr. Pedro Navarro Illana
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

*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.

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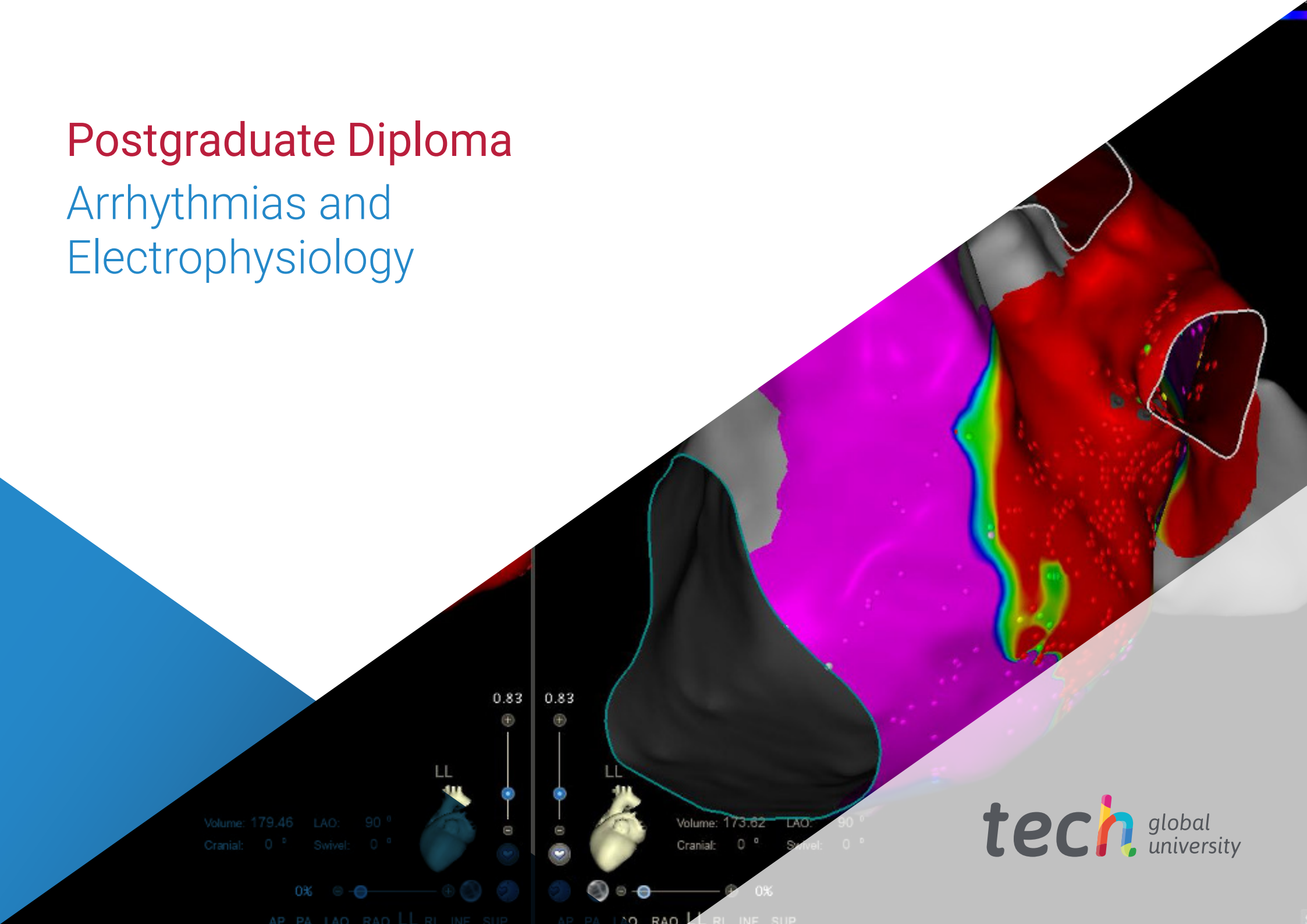

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