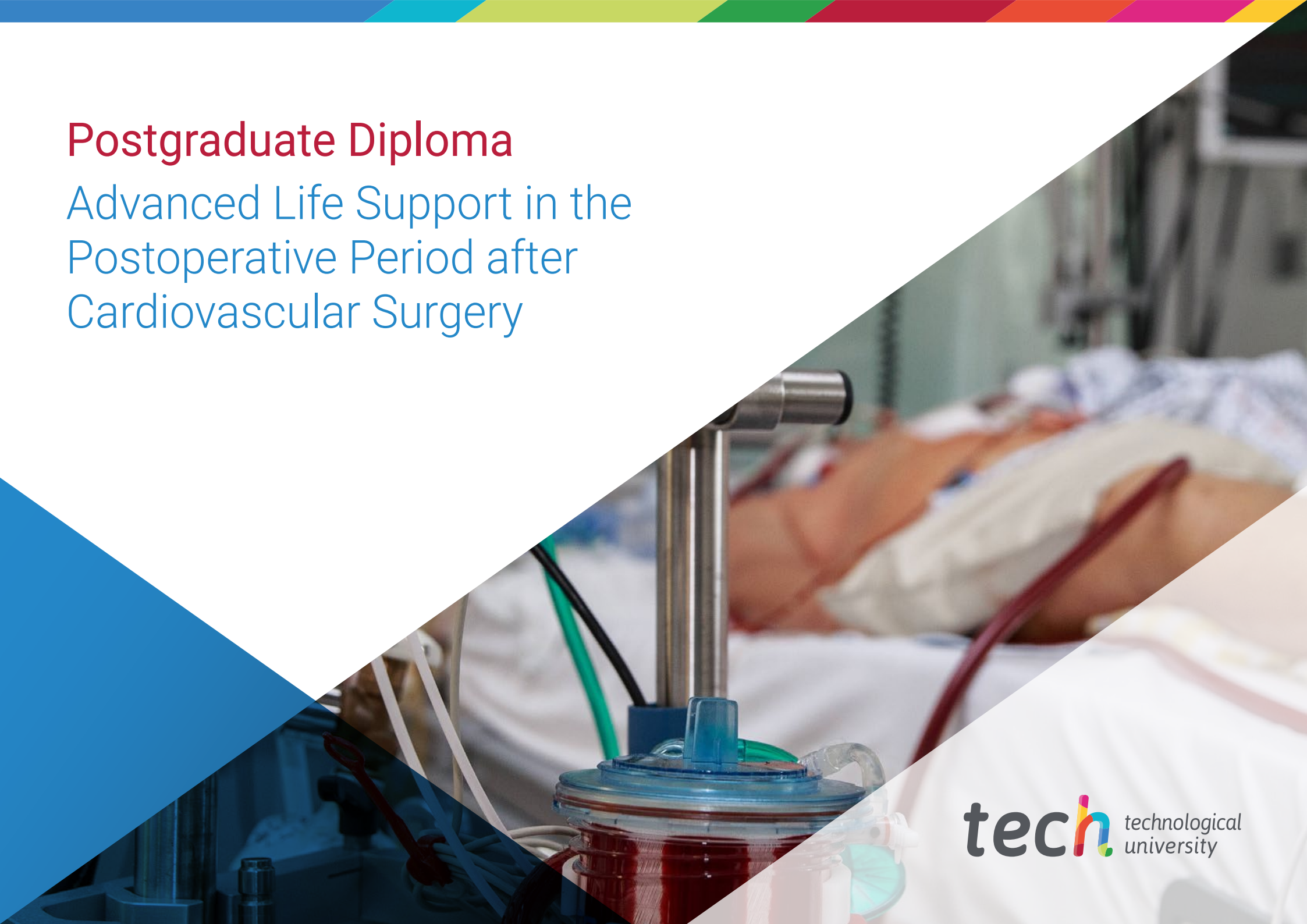
Postgraduate Diploma

Advanced Life Support in the Postoperative Period after Cardiovascular Surgery



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Postgraduate Diploma

Advanced Life Support in the Postoperative Period after Cardiovascular Surgery

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/pk/medicine/postgraduate-diploma/postgraduate-diploma-advanced-life-support-postoperative-period-cardiovascular-surgery**

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01

Introduction

Faced with the increasing complexity of medical care after cardiovascular procedures, an educational response for health professionals has arisen. This specialized program responds to the urgent need to acquire essential skills to evaluate and address critical situations in postoperative Cardiovascular Surgery patients. In a clinical scenario in constant evolution, the aim is to strengthen the clinical decision-making capacity through an approach adapted to current demands. This program is structured through an innovative methodology, 100% online, with a diversity of multimedia resources and the application of the *Relearning*method, providing an effective and flexible learning environment for graduates who seek to excel in Postoperative Cardiovascular Life Support.

Thanks to this complete program, you will master all the necessary competencies for Advanced Life Support in the Postoperative Period after Cardiovascular Surgery, with a 100% online methodology"

In today's complex health care scenario, postoperative cardiovascular surgery stands out as a critical area of care that requires specialized skills and knowledge. The increasing prevalence of cardiovascular procedures, together with the evolution of surgical techniques, has generated the need for highly qualified professionals. In this context, the present university program is presented as a comprehensive educational response to address the complexities inherent in the recovery of patients undergoing cardiac interventions.

This syllabus responds to the urgent demand for health professionals capable of managing critical situations specific to the Cardiovascular Postoperative period. In this way, the complexity of this scenario will be addressed, providing detailed knowledge in Monitoring and Advanced Life Support, highlighting the importance of a specialized approach.

From airway control to the interpretation of prognostic scales, the syllabus will cover fundamental aspects for an integral and effective care. In addition, it will focus on the practical application of neuromonitoring, hemodynamic and gas exchange monitoring, and ventilatory mechanics, offering a holistic approach to Postoperative Cardiovascular Care.

Within the framework of these specific challenges, the program consolidates itself as a unique opportunity for professionals who seek not only to understand the theoretical aspects, but also to apply effective strategies in clinical decision making. The demand for this type of specialization is supported by the complexity of current cardiac interventions and the critical need for high quality postoperative care.

Therefore, the methodology of the academic pathway will respond to the need for flexibility and efficiency in learning, being fully online. It will also adopt the innovative *Relearning*methodology, whose approach will focus on the repetition of key concepts to strengthen the fixation of knowledge and facilitate continuous learning.

This **Postgraduate Diploma in Advanced Life Support in the Postoperative Period after Cardiovascular Surgery** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Practice cases presented by experts in Advanced Life Support in the Postoperative Period after Cardiovascular Surgery
- The graphic, schematic, and practical content with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where the self-assessment process can be carried out 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

This Postgraduate Diploma will prepare you for current and future challenges in Critical Care. Enroll now!"

You'll study from the comfort of your home and update your knowledge online with TECH, the world's largest digital university"

The interactive summaries of each topic will allow you to consolidate each of the concepts in a more dynamic way. Bet on TECH!.

In just 6 months, you will give your career the boost it needs thanks to this exclusive TECH university program.

The program's teaching staff includes professionals from the sector who contribute their work experience to this program, as well as renowned specialists from leading societies and prestigious universities.

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

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

02

Objectives

The main objective of this specialized program is to qualify graduates to describe and detail the prognostic and risk scales used in Postoperative Cardiovascular Surgery (PCC). Through a direct and specialized approach, it will seek to provide professionals with the necessary tools to thoroughly understand and apply these scales, which will be essential for informed clinical decision making and improved patient care.

You will achieve your objectives thanks to TECH's didactic tools, among which the explanatory videos and interactive summaries stand out"

General Objectives

- Analyze the pathophysiology of CRP in pregnant women
- Establish the main causes of CPR in pregnant women
- Determine the BLS and ALS measures in pregnant women
- Assess the principles for the use of exceptional therapeutic systems: REBOA, ECMO
- Analyze and define the equipment for the practice of perimortem cesarean section
- Analyze epidemiological factors and outcomes of both pre-hospital and in-hospital care
- Determine the impact of biomechanics on the care of the severe trauma patient
- Analyze and develop the overall care of the severe trauma patient
- Establish the principles of special trauma care
- Develop the aspects that are immersed in the most important development and innovation programs in the world of CPR patient care
- Determine the basic actions that fall within the management models in the care of the CRA patient in particular and the critical patient in particular
- Analyze and put into practice the principles governing the prevention of CPA

Specific Objectives

Module 1. Advanced Life Support in the Critically Ill Patient

- Study airway control, ventilation control and circulation control
- Analyze the impact of pharmacology applied to CPR
- Study periparade arrhythmias
- Analyze potentially reversible causes
- Specify the impact of technification within the life support techniques

Module 2. Advanced Life Support in the Postoperative Period after Cardiovascular Surgery (CCV)

- Describe and detail the prognostic and risk scales used in the postoperative period of CVS
- Examine the risk of developing CRP in the setting of CVS
- Analyze the detailed elements of the CALS protocol
- Establish the principles defining VAS in the immediate postoperative period of VCC
- Specify the specific protocol for re-sternotomy during RCP

Module 3. Advanced Monitoring in the Critically Ill Patient

- Analyze the indications, implementation and interpretation of results in relation to neuromonitoring, hemodynamic monitoring and monitoring of gas exchange and ventilatory mechanics
- Examine the indications, set-up and interpretation of results in relation to renal function and homeostasis and control of the internal milieu
- Study and analyze the indications, set-up and interpretation of results in relation to sedation monitoring and multimodal monitoring
- Analyze the use of AI in monitoring the critically ill patient and in the anticipation of adverse effects

Forget about memorizing! With the Relearning methodology you will integrate the concepts in a natural and progressive way"

03

Course Management

TECH has assembled an exceptional faculty for this specialized program in the postoperative field of Cardiovascular Surgery. Each member of this select group of specialists has been carefully chosen for their extensive and recognized professional background in the field, ensuring that graduates benefit from the direct experience and in-depth knowledge of leading professionals. This careful selection, will ensure that students receive quality education, supported by leading experts in the discipline and providing a comprehensive practical and theoretical perspective to address the specific challenges of this clinical setting.

You will access a syllabus designed by a reputable cadre of faculty, which will ensure successful learning"

Management

Dr. Antonio Cardenas Cruz

- Head of the Intensive Care Medicine Department, Motril Hospital
- Director of the Clinical Unit of Critical Care and Emergency Management of the Poniente University Hospital
- Institute Director of Continuing Education of the Andalusian Society of Intensive Care Medicine and Coronary Universities
- Training Program Director for Life Support Trainers of the IAVANTE Line of the Progreso y Salud Foundation of the Consejería de Salud y Consumo de la Junta de Andalucía (Andalusian Regional Government)
- Training Program Director for Sedation the IAVANTE Line of the Progreso y Salud Foundation of the Consejería de Salud y Consumo de la Junta de Andalucía (Andalusian Regional Government)
- Head of Critical Care and Emergency Department, Hospital Universitario de Poniente
- Professor of Medicine
- Degree in Medicine and Surgery from the UGR
- PhD in Medicine and Surgery, UGR
- Specialist in Intensive Care Medicine

Professors

Mr. Bracero Jiménez, Antonio

- Nurse in the Intensive Care Unit at Reina Sofía University Hospital, Córdoba
- Specialist in Critical Patient Transport
- Coordinator and Teacher of modules in the Professional Master's Degree in Emergency Nursing and Emergencies
- Professional Master's Degree in Emergency Nursing, Catastrophes and Humanitarian Aid from the University of Seville
- University Diploma in Nursing at the University of Cordoba

Ms. Muñoz Caballero, María Ángeles

- Nurse of Intensive Care Unit at the Poniente University Hospital
- Official Master's Degree in Gender and Health from the Rey Juan Carlos University
- Graduate in Nursing from the University of Almeria
- Member of the CPR hospital commission

Dr. Noguero Iriarte, Paloma

- Specialist in Intensive Care Medicine
- Head of the Intensive Care Unit Service at the Riotinto Hospital
- Intensive Care Physician at the Valme Hospital
- Local Transplant Coordinator
- Coordinator of the Integrated Care Process Ictus
- Postgraduate Diploma in Ventilatory Techniques and Parameters in NIMV

Dr. Gómez Gallego, Guillermo

- Specialist in Intensive Care Medicine
- Expert Physician in the Area of Intensive Care Medicine at the Regional University Hospital of Malaga
- Chief of Service of Intensive Care Medicine at the Private Comprehensive Hospital Complex
- Intensive Care Physician at QuironSalud Malaga Hospital
- Specialist in Intensive Care Medicine at Hospital QuironSalud Marbella
- Intensive Care Physician at Gálvez Hospital
- External Rotation at Jackson Memorial Hospital in Miami
- Professional Master's Degree in Bioethics from the Andalusian School of Public Health
- Degree in Medicine and Surgery from the University of Granada
- Postgraduate Diploma in Non Invasive Mechanical Ventilation by the International University

Dr. Jiménez Conde, Carlos

- Specialist in Intensive Care Medicine
- Intensive Care Physician at the Juan Ramón Jiménez Hospital in Huelva
- Huelva Provincial Head of the CPR and CPR Working Group
- Tutor of Internal Resident Specialists at the Juan Ramón Jiménez Hospital in Huelva
- Secretary of the Cardiopulmonary Resuscitation Commission
- Professional Master's Degree in Research Methodology, University of Seville
- Professional Master's Degree in Principles And *Practice Of Clinical Research by Harvard Medical School*
- Professional Master's Degree in Infectious Diseases in Intensive Care by the Valencia University-Business
- Degree in Medicine from the University of Seville

04

Structure and Content

In this Postgraduate Diploma in Advanced Life Support in the Postoperative Period after Cardiovascular Surgery, graduates will be immersed in the detailed analysis of the fundamental prognostic and risk scales in this context. Therefore, the syllabus will focus on the detailed description of these tools, providing the specialists with a deep and specialized understanding of their application in the postoperative follow-up of Cardiovascular Surgery. This precise and detailed approach to the syllabus will ensure that healthcare professionals acquire the skills necessary for accurate assessment and informed decision making in critical postoperative clinical situations.

You will delve into the methodology for Life Support Plan assessment at the world's best digital university, according to Forbes"

Module 1. Advanced Life Support in the Critically Ill Patient

1.1. International Recommendations
- 1.1.1. CPR
- 1.1.2. Basic and Advanced CPR
- 1.1.3. Basic and Advanced Life Support

1.2. Advanced Life Support (ALS)
- 1.2.1. Airway
- 1.2.2. Ventilation
- 1.2.3. Circulation: Basic and Advanced Monitoring. Pharmacology

1.3. Advanced Arrhythmia Control
- 1.3.1. Pre-stop
- 1.3.2. CPR-inducing Rhythms
- 1.3.3. Post-arrest Rhythmias

1.4. Analysis of Potentially Reversible Causes
- 1.4.1. Analysis of Potentially Reversible Causes
- 1.4.2. 4 H
- 1.4.3. 4 T

1.5. Cardiopulmonary Resuscitation in Special Situations
- 1.5.1. Special Patients
- 1.5.2. Extreme Situations
- 1.5.3. Special Environments: Welfare and Non-Welfare Environments

1.6. Elements Associated with Life Support
- 1.6.1. Legal Aspects
- 1.6.2. Humanization in Life Support
- 1.6.3. Donation and Life Support

1.7. Image Support
- 1.7.1. Scientific Evidence
- 1.7.2. Echocardiography
- 1.7.3. Pulmonary Ultrasound Scan

1.8. Non-cognitive Aspects of Life Support
- 1.8.1. Humanization in Life Support
- 1.8.2. Support to Life Support Teams
- 1.8.3. Support to Family Members

1.9. Post CPR Syndrome
- 1.9.1. Post CPR Syndrome
- 1.9.2. Global Management of Post CPR Syndrome
- 1.9.3. Levels of Scientific Evidence Associated with Post CPR Syndrome Management

1.10. ERC 2021 Recommendations
- 1.10.1. Basic Life Support (BLS) Recommendations
- 1.10.2. Advanced Life Support (ALS) Recommendations
- 1.10.3. Algorithms of action for patients with CRP

Module 2. Advanced Life Support in the Postoperative Period after Cardiovascular Surgery (CCV)

2.1. Standardization of Initial Patient Care in the Immediate Postoperative Period of VCC
- 2.1.1. PCR in the Context of Cardiovascular Surgery (CCV)
- 2.1.2. Differential Factors
- 2.1.3. Development of the Advanced Life Support (ALS) Team for the Care of CRA in the Postoperative Period of CVS

2.2. Standardization of Severity
- 2.2.1. Standardization of Severity
- 2.2.2. Prediction and Prognosis Scales
- 2.2.3. Implementation of a Prevention Program

2.3. Advanced Life Support (ALS) in the patient in Cardiorespiratory Arrest in the Postoperative Period after Cardiovascular Surgery (CCV)
- 2.3.1. Advanced Life Support in Patients with CRP in Cardiovascular Surgery (CCV) Post-Operative Care
- 2.3.2. Factors Associated with Advanced Life Support (ALS)
- 2.3.3. Action Protocols

2.4. CALS Protocol
- 2.4.1. CALS Protocol
- 2.4.2. Distinguishing Features
- 2.4.3. Specific Actions

2.5. Cardiothoracic Emergencies
- 2.5.1. Cardiothoracic Emergencies
- 2.5.2. Analysis of the Main Emergencies: Prevention and Diagnosis
- 2.5.3. Therapeutic Actions

2.6. Monitoring
- 2.6.1. Basic Monitoring
- 2.6.2. Advanced Monitoring
- 2.6.3. Specific Monitoring Systems

2.7. Specific Complications
- 2.7.1. Hemorrhagic Complications
- 2.7.2. Mechanical Complications
- 2.7.3. Complications Derived from Rhythm Disturbances

2.8. Technification
- 2.8.1. Technification
- 2.8.2. Organ Support Systems
- 2.8.3. Actions to be Taken in the Event of CRP according to Organ Support Systems

2.9. Re-sternotomy Protocol
- 2.9.1. Re-sternotomy Protocol
- 2.9.2. Technical Resources
- 2.9.3. Human Resources: Resesternotomy Equipment

2.10. Ultrasound and Other Imaging Tests
- 2.10.1. Indications
- 2.10.2. Technical Resources
- 2.10.3. Specific Protocols

Module 3. Advanced Monitoring in the Critically Ill Patient

3.1. Monitoring in the Critically Ill Patient
- 3.1.1. Epidemiology: Impact of Monitoring on the Prognosis of the Critically Ill Patient
- 3.1.2. Physiological Basis
- 3.1.3. Pathophysiological Bases

3.2. Neuromonitoring
- 3.2.1. Indications
- 3.2.2. Neuromonitoring Systems
- 3.2.3. Multimodal Neuromonitoring

3.3. Electrical and Hemodynamic Monitoring
- 3.3.1. Indications for Monitoring
- 3.3.2. Electrical Monitoring Systems
- 3.3.3. Hemodynamic Monitoring Systems

3.4. Electrical and Hemodynamic Monitoring. Advanced and Personalized Monitoring: Precision Monitoring
- 3.4.1. Indications for Advanced and Personalized Monitoring
- 3.4.2. Advanced Electrical Monitoring Systems
- 3.4.3. Advanced Hemodynamic Monitoring Systems

3.5. Monitoring of Gaseous Exchange and Ventilatory Mechanics
- 3.5.1. Indications
- 3.5.2. Respiratory Monitoring Systems
- 3.5.3. Ventilatory Mechanics Monitoring Systems

3.6. Renal Function Monitoring
- 3.6.1. Indications
- 3.6.1. Renal Function Monitoring Systems
- 3.6.3. Monitoring of Renal Function in the Patient Subjected to Continuous Extrarenal Clearance Techniques

3.7. Tissue Perfusion Monitoring
- 3.7.1. Indications
- 3.7.2. Tissue Perfusion Monitoring Systems
- 3.7.3. Evaluation of the Available Scientific Evidence and Its Use in Clinical Practice

3.8. Sedation Monitoring
- 3.8.1. Indications
- 3.8.2. Sedation and Analgesia Monitoring Systems
- 3.8.3. Computerized Systems vs. Prediction Scales

3.9. Multimodal Monitoring
- 3.9.1. Applications
- 3.9.2. Prediction Systems
- 3.9.3. Pathophysiological and Technological Bases

3.10. Artificial Intelligence and Monitoring: Precision Monitoring and Prediction
- 3.10.1. Applications
- 3.10.2. Prediction Systems
- 3.10.3. Pathophysiological and Technological Bases

05

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

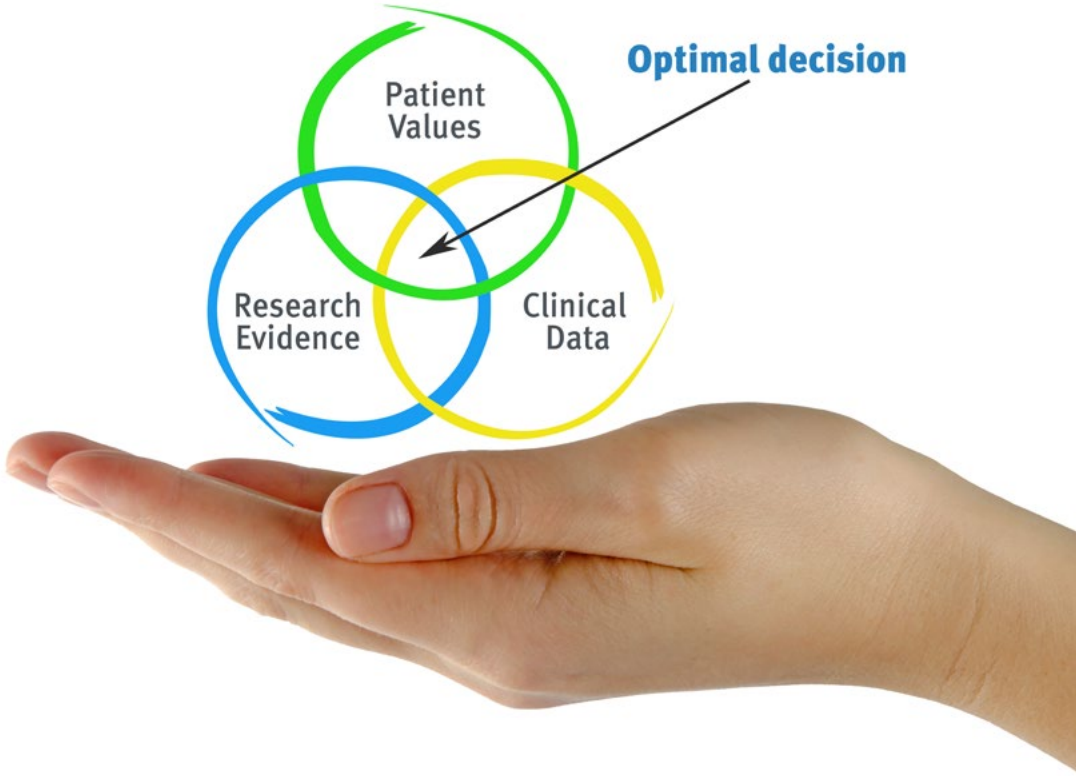
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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:

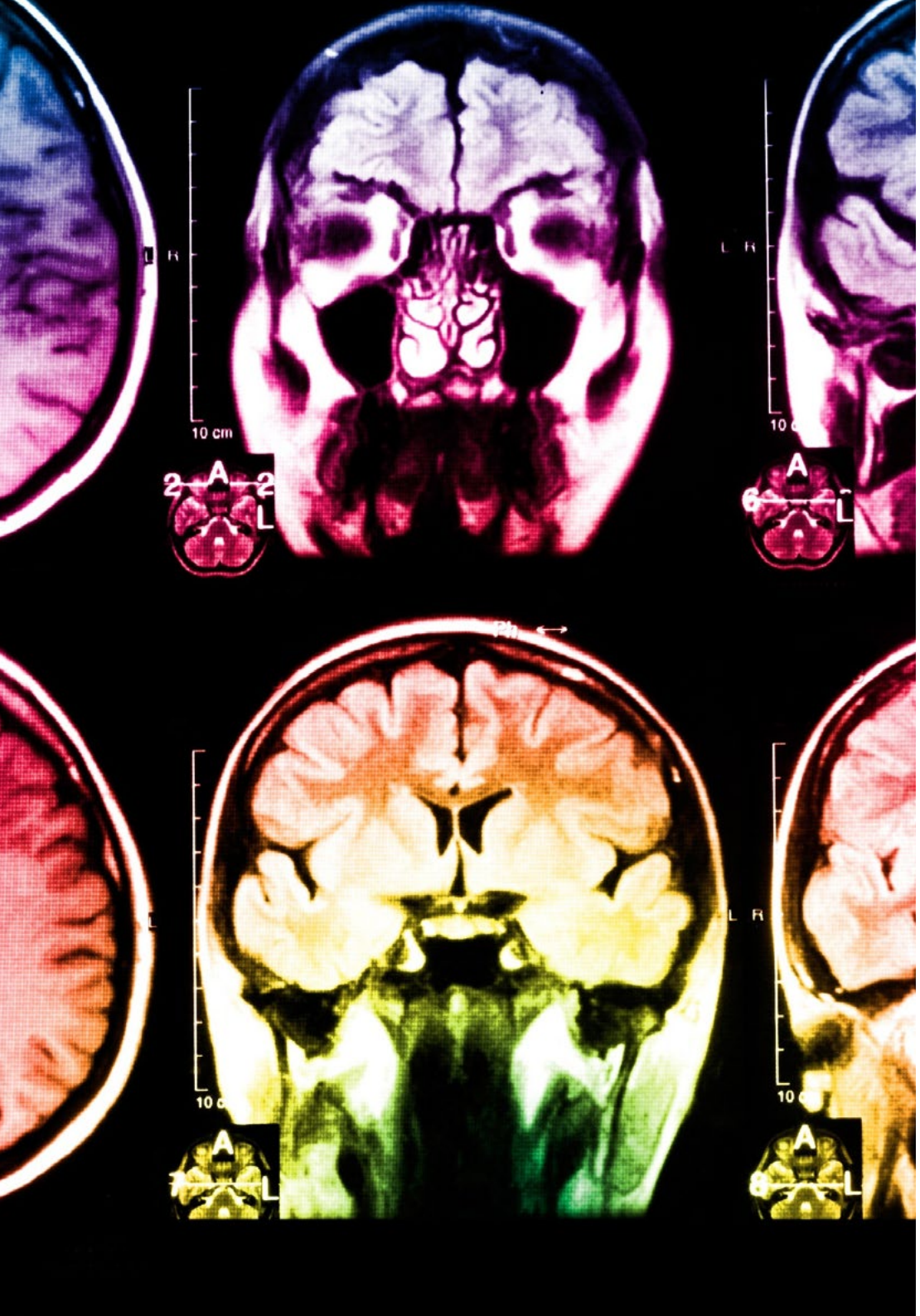
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better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

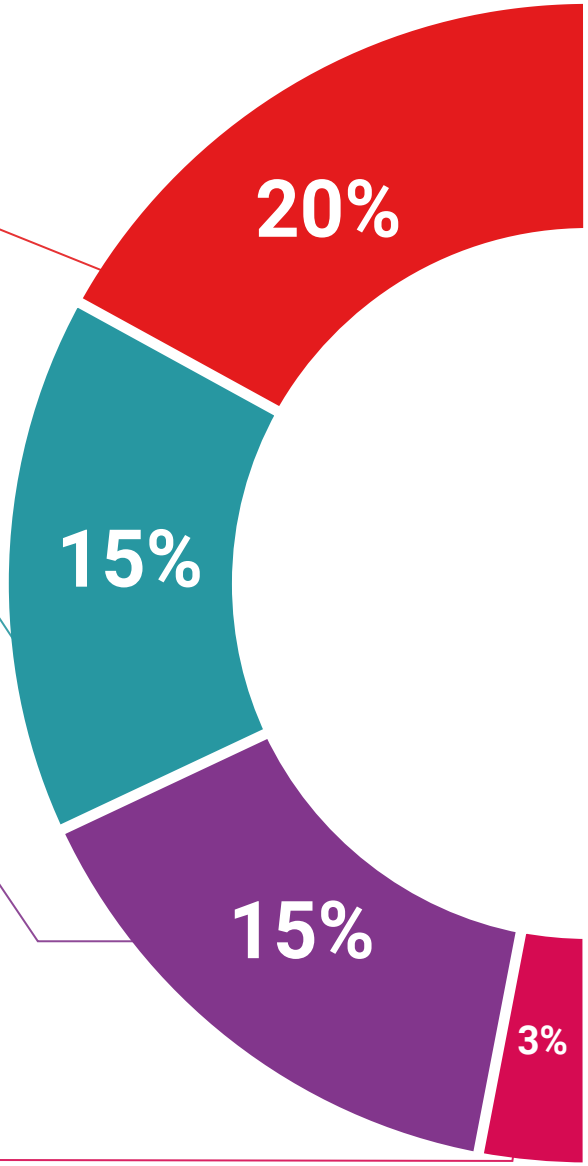
Interactive Summaries

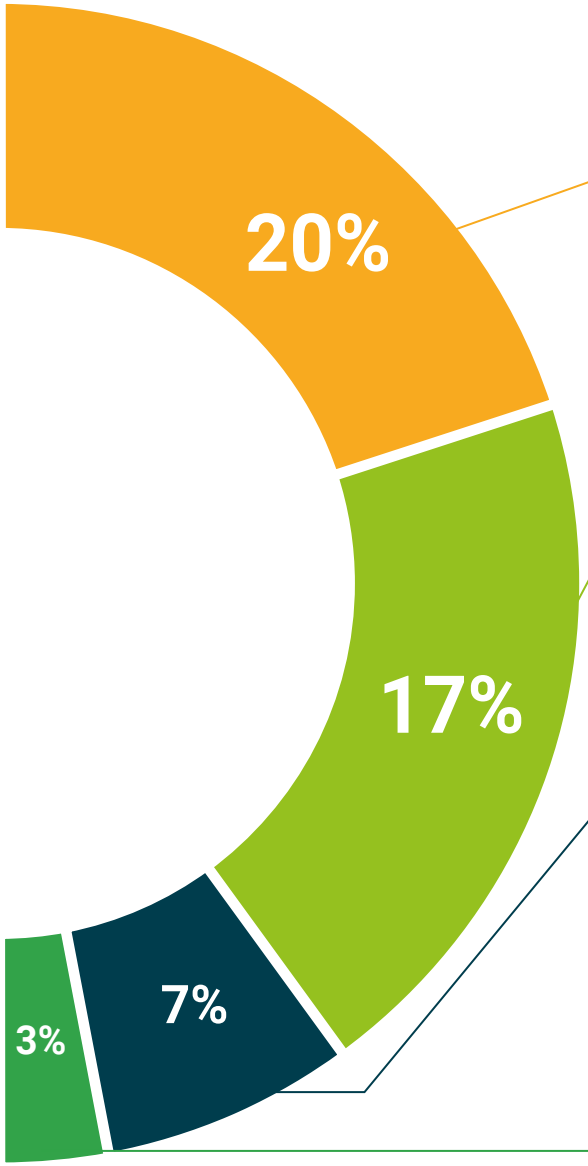
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Diploma in Advanced Life Support in the Postoperative Period after Cardiovascular Surgery guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"

This **Postgraduate Diploma in Advanced Life Support in the Postoperative Period after Cardiovascular Surgery** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery*.

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

Title: **Postgraduate Diploma in Advanced Life Support in the Postoperative Period after Cardiovascular Surgery**

Official Nº of Hours: **450 h.**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Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE DIPLOMA

in

Advanced Life Support in the Postoperative Period after Cardiovascular Surgery

This is a qualification awarded by this University, equivalent to 450 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
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 certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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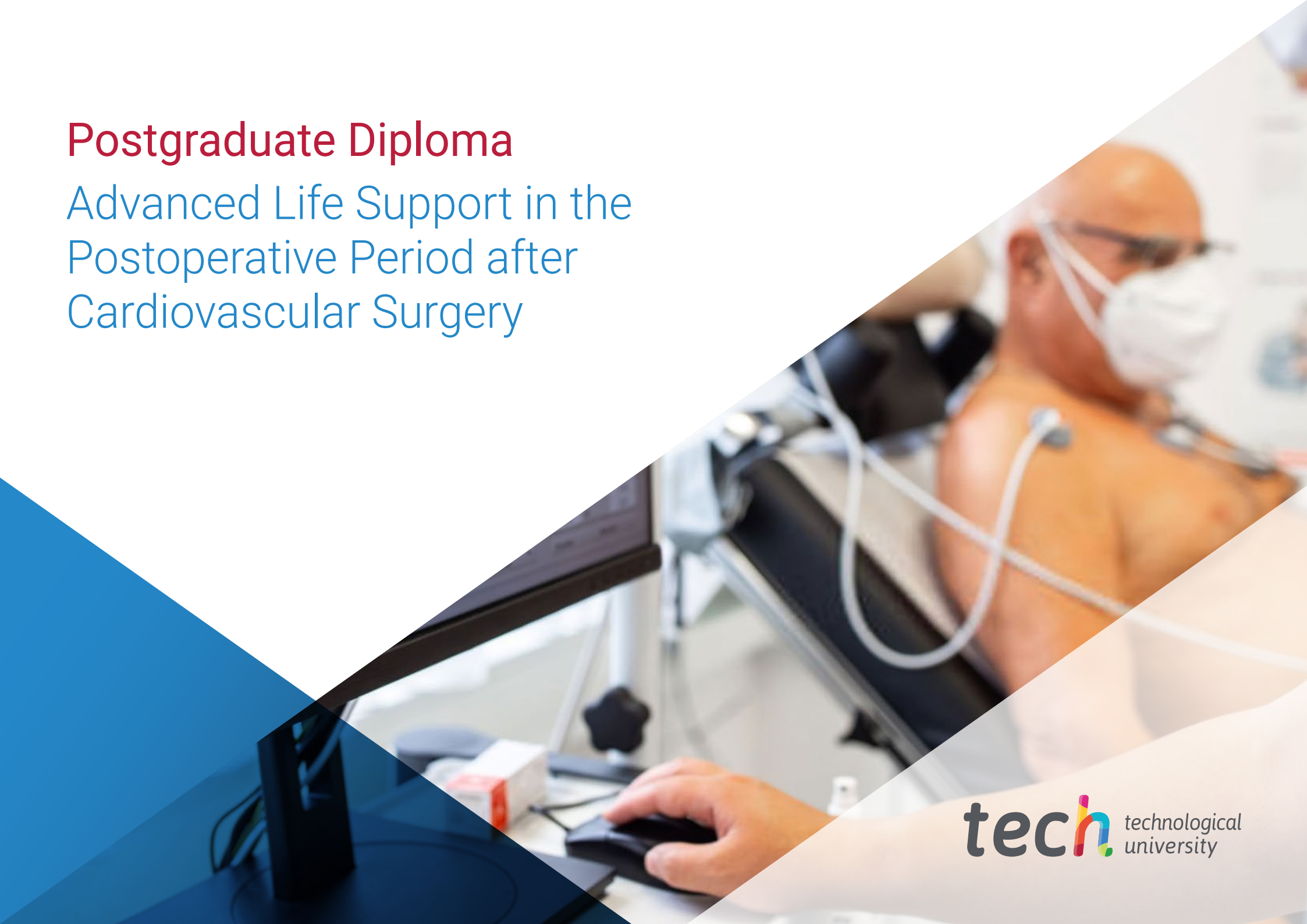

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