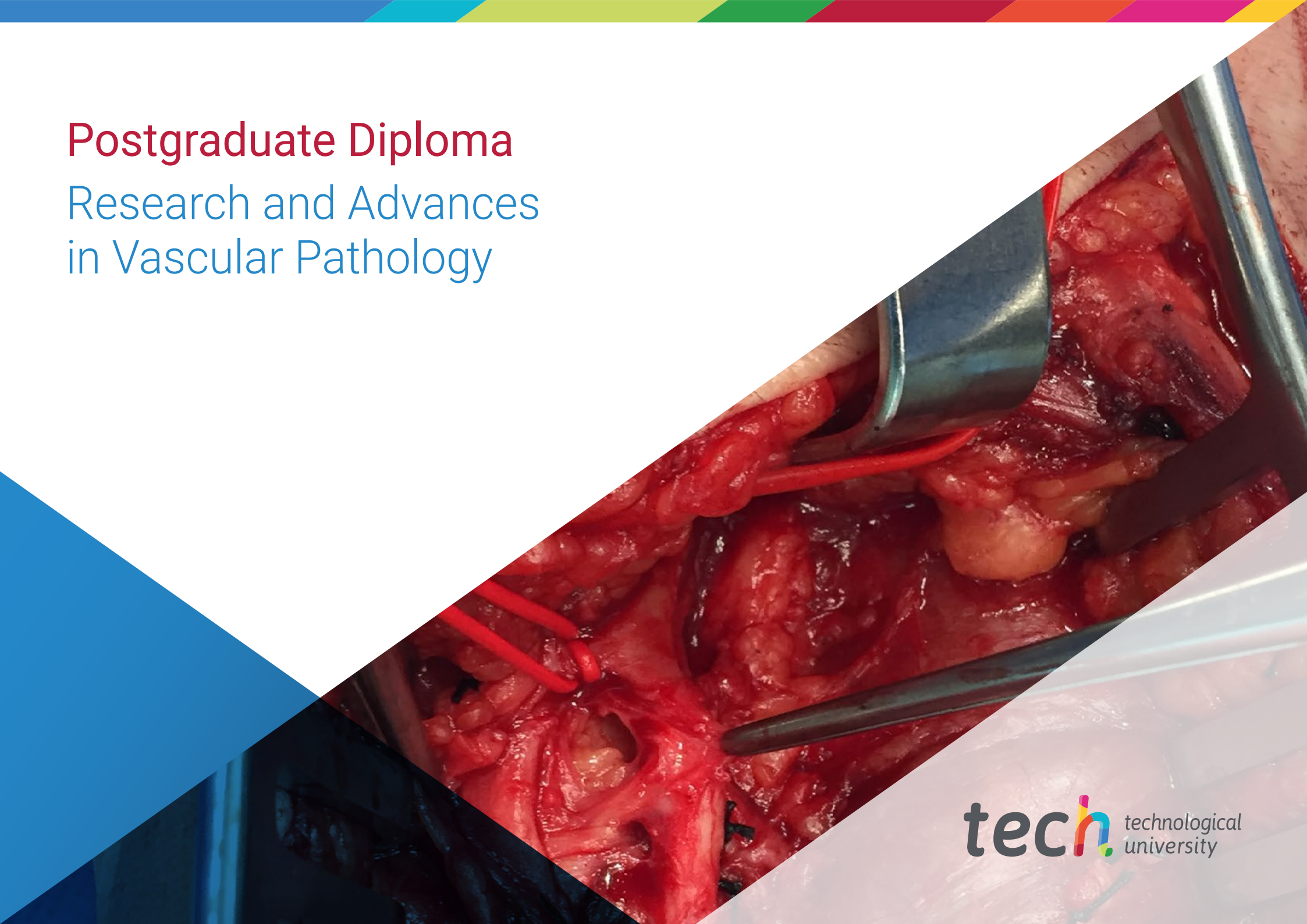
Postgraduate Diploma

Research and Advances in Vascular Pathology



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Postgraduate Diploma

Research and Advances in Vascular Pathology

- 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-research-advances-vascular-pathology

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01

Introduction

The new models of venous stents, the choice of intravascular ultrasound in the treatment of ischemia, aneurysms or thrombosis or the approach to pathologies of great diagnostic and therapeutic complexity are the focus of the latest advances in this field. A field that forces specialists to constantly update their knowledge and integrate it into their daily practice. For this reason, TECH has designed this 100% online qualification that allows professionals to access an effective update in this field through a modality that adapts to their needs. In this way, they will delve into the methodologies of clinical research in Vascular Pathology or in the development of new imaging techniques for the diagnosis of vascular diseases.

A complete 450-hour update on the most current advances in Vascular Pathology"

The medical literature on vascular pathologies in recent years shows a significant advance in diagnosis and endovascular techniques that have allowed lower morbidity and mortality rates in cases of open surgery. Advances that also reduce patient recovery times and fewer complications.

In view of these advances, specialists in this field are constantly updating their knowledge and perfecting their competencies. A scenario that has motivated TECH to develop this Postgraduate Diploma in Research and Advances in Vascular Pathology.

This is an educational itinerary of 6 months duration and 450 teaching hours that allows the graduate to carry out an effective update in primary prevention measures such as the control of risk factors and the promotion of healthy lifestyles, secondary prevention measures such as pharmacological therapy, surgical intervention and rehabilitation.

Likewise, in this program you will be able to delve into peripheral arterial disease, coronary artery disease, venous insufficiency and thrombosis, culminating with an exhaustive review of the most outstanding advances in pharmacological therapies, development of new imaging techniques for both diagnosis and follow-up. All this, in addition, with didactic material that can be accessed 24 hours a day, 7 days a week

An excellent educational option for those who wish to keep abreast of progress in this specialty by means of a flexible university program. Students only need a digital device with an internet connection to view the content of this program at any time of the day.

This **Postgraduate Diploma in Research and Advances in Vascular Pathology** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Practical cases presented by experts in vascular surgery
- 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

With this program you will be able to keep abreast of new pharmacological therapies to treat vascular diseases"

You will have at your disposal the best multimedia didactic material so that you can dynamically delve into prevention strategies according to the type of vascular disease, its severity and the affected population"

A program of 450 teaching hours with the most advanced information on new pharmacological therapies.

Delve comfortably from your digital device into diagnostic advances in peripheral arterial disease, coronary artery disease, venous insufficiency and thrombosis.

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.

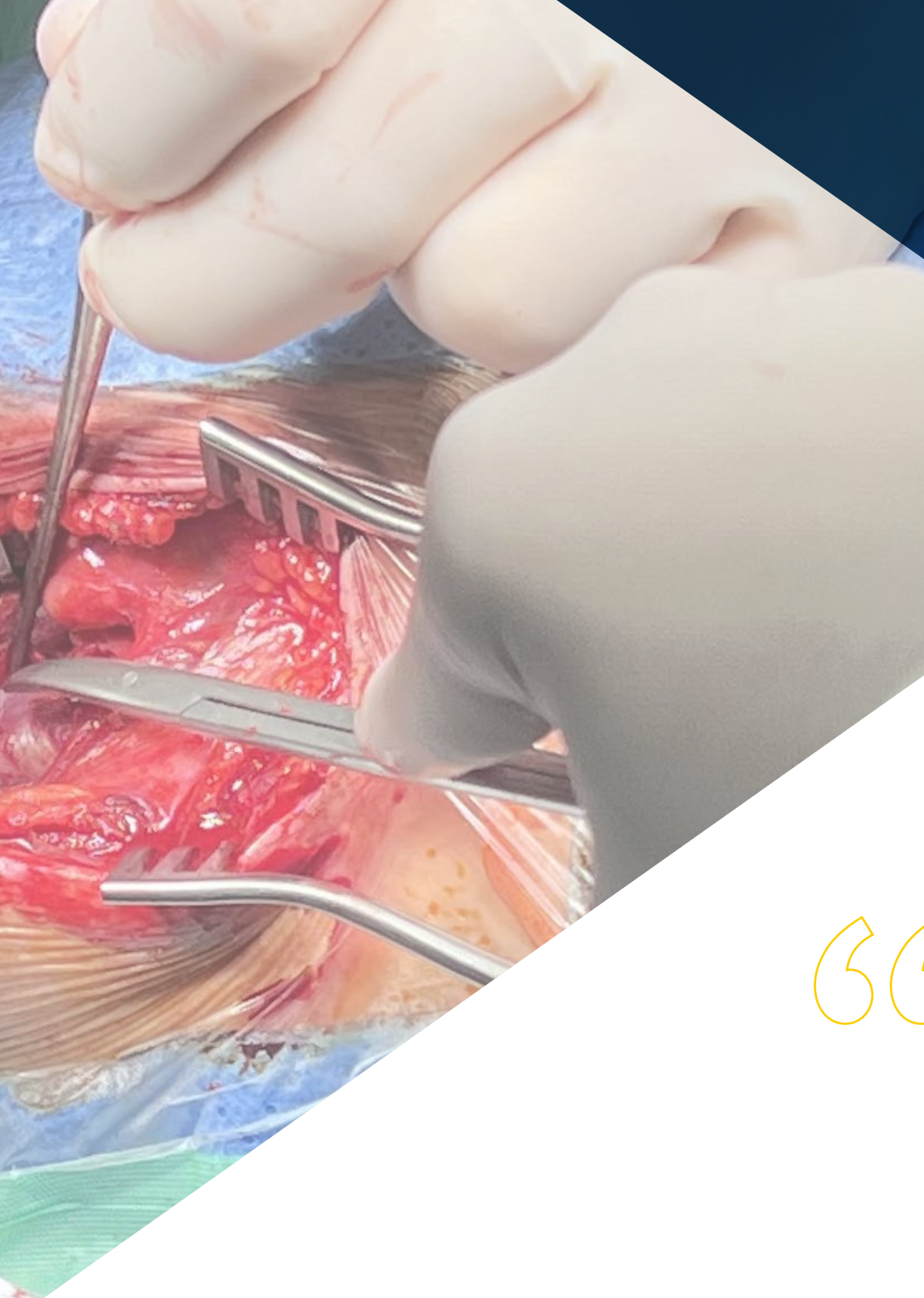
The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

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 This will be done with the help of an innovative system of interactive videos made by renowned experts.

02

Objectives

This program focuses on the most current and recent information in the field of Research and the most recent advances in Pathology. To achieve this goal with total guarantee, TECH provides students with the most comprehensive content, complemented by innovative teaching materials. In addition, thanks to the specialized faculty that makes up this program, graduates will have the opportunity to resolve any doubts they may have about the content of this academic option.



Thanks to this program, you will be up to date with the latest studies on the mechanisms of vascular disease and the evaluation of new therapeutic interventions"

General Objectives

- Learn about the structure and function of blood vessels, both arterial and venous, and the regulation of blood flow in the microcirculation
- Delve into the epidemiology and Risk Factors
- Update knowledge on the main risk factors for the development of vascular diseases and the strategies for primary and secondary prevention
- Gain in-depth understanding of the pathophysiology of vascular diseases
- Inquire into the different diagnostic methods
- Delve into the diagnostic techniques used in vascular pathology, including clinical examination and vascular semiology, imaging methods, laboratory diagnosis and study of vascular function and hemodynamics
- Explain the different research methods and advances in vascular pathology, especially those focused on vascular pathology, including the development of new drug therapies, genetics and genomics in vascular diseases, and the development of new imaging techniques for the diagnosis and follow-up of vascular diseases

Enhance your clinical decision making and problem solving skills by applying the latest advances in Vascular Pathology"

Specific Objectives

Module 1. Vascular Pathology

- Delve into the epidemiology of vascular diseases
- Delve into risk factors of vascular diseases
- Inquire into primary and secondary prevention of vascular diseases

Module 2. Vascular Anatomy and Physiology

- Inquire into the anatomy and histology of arteries and veins
- Delve into the physiology of arterial and venous circulation
- Delve into the regulation of blood flow in the microcirculation

Module 3. Research and Advances in Vascular Pathology

- Describe clinical and basic research methodologies in vascular pathology
- Delve into the development of new pharmacological therapies for the treatment of vascular diseases
- Delve into the development of new imaging techniques for the diagnosis and monitoring of vascular diseases
- Enhance skills for the critical evaluation of the scientific literature in pathology

03

Course Management

One of the elements that distinguishes this educational proposal is its excellent teaching staff. In this Postgraduate Diploma, TECH has brought together an unparalleled team of specialists in this program. Their extensive clinical experience is combined with their experience in the scientific field. In this way, graduates will be sure to have access to a syllabus that responds to their needs for updating in Vascular Pathology and, moreover, guided by true professionals.

Authentic experts in Vascular Surgery and in advanced diagnostic imaging techniques will be in charge of providing you with a complete update in Vascular Pathology"

Management

Dr. Del Río Sola, María Lourdes

- Head of the Angiology and vascular surgery at Valladolids Clinical University Hospital
- Specialist in Angiology and Vascular Surgery
- European Board in Vascular Surger
- Permanent Correspondents of the Royal Academy of Medicine and Surgery
- Professor at Miguel de Cervantes European University
- Associate Teacher in Health Sciences, University of Valladolid

Professors

Dr. Revilla Calavia, Álvaro

- Assistant Physician at the the Angiology and vascular surgery at Valladolid Clinical University Hospital
- Specialist in Angiology and Vascular Surgery
- Associate Professor at Miguel de Cervantes European University
- Doctor Cum Laude from the University of Valladolid
- Certification of the second level training course in Radiation Protection oriented to interventional practice
- Academic Correspondent of the Royal Academy of Medicine and Surgery of Valladolid

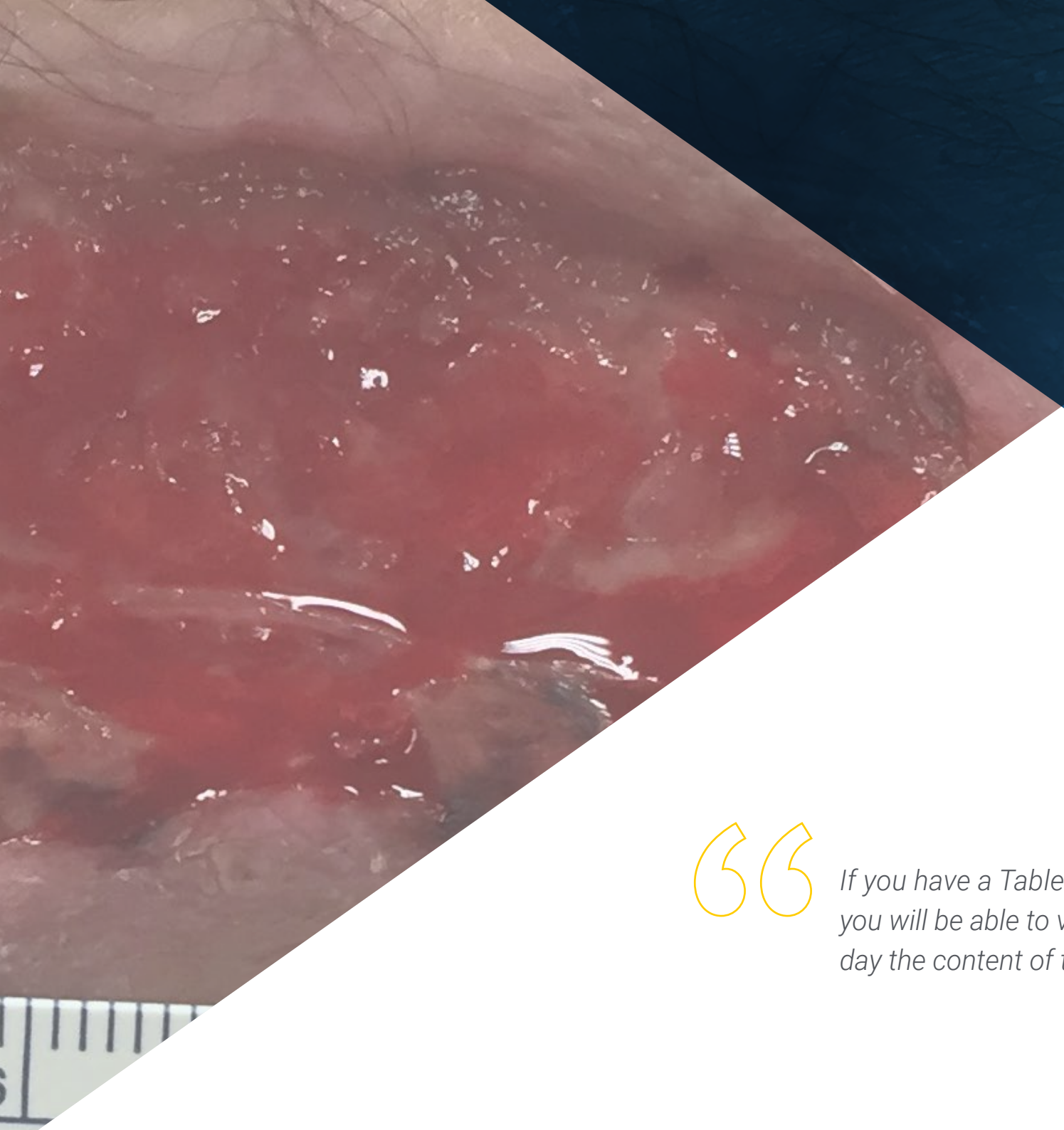
Dr. Flota Medina, Cintia

- Assistant Physician at the the Angiology and vascular surgery at Valladolid Clinical University Hospital
- Specialist in Angiology and vascular surgery at Valladolids Clinical University Hospital
- Postgraduate certificate in Vascular Duplexing
- Postgraduate certificate in Endovascular Procedures from the Anáhuac Mayab University
- Tutor accredited and Collaborating Professor at the University of Valladolid
- Certification and Recertification by the Mexican Board of Angiology and Vascular Surgery

04

Structure and Content

The syllabus of this program has been designed to offer, from a theoretical-practical perspective, the most current and rigorous information on the advances in Vascular Pathology. An educational journey that will lead the specialist to delve further into the diagnostic and therapeutic procedures in vascular diseases. All this, in addition, with an innovative pedagogical material, accessible from any electronic device with internet connection and available 24 hours a day.



If you have a Tablet with internet connection you will be able to visualize at any time of the day the content of this 100% online program"

Module 1. Vascular Pathology

1.1. Vascular Pathology
- 1.1.1. Vascular Pathology
- 1.1.2. Differences between vascular and cardiovascular diseases
- 1.1.3. Types of vascular diseases

1.2. Vascular Pathology History
- 1.2.1. Important milestones in the history of vascular pathology
- 1.2.2. Evolution of treatments in Vascular Pathology
- 1.2.3. Historical advances in the diagnosis of vascular diseases

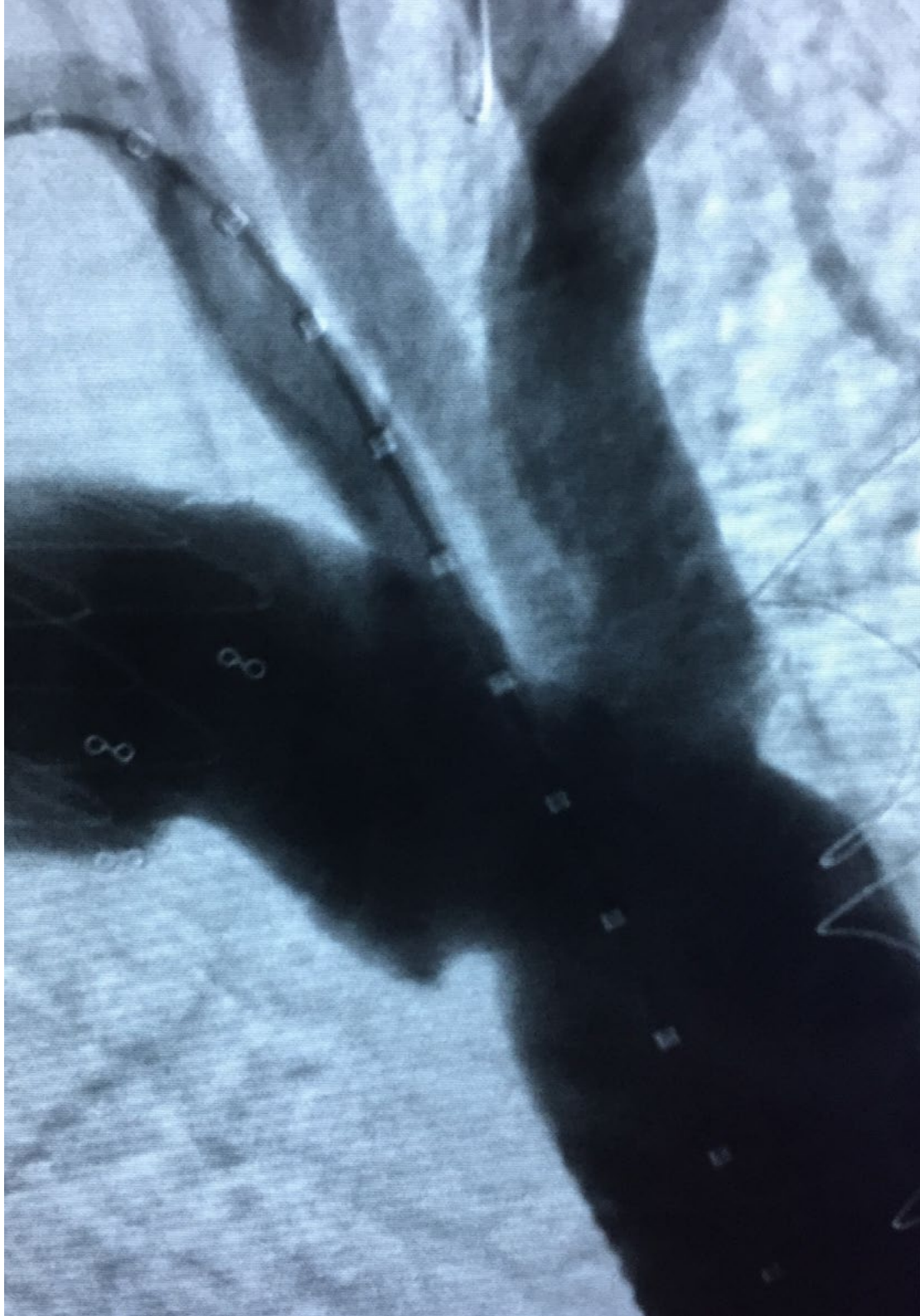
1.3. Classification of Vascular Diseases
- 1.3.1. Classification of Arterials Diseases
- 1.3.2. Classification of Venous Diseases
- 1.3.3. Classification of Lymphatic Diseases

1.4. Epidemiology of Vascular Diseases
- 1.4.1. Prevalence of vascular diseases in the world
- 1.4.2. Geographical distribution of vascular diseases
- 1.4.3. Factors influencing the epidemiology of vascular diseases

1.5. Risk factors of vascular diseases
- 1.5.1. Non-modifiable risk factors
- 1.5.2. Modifiable risk factors
- 1.5.3. Role of psychosocial factors in the risk of vascular disease

1.6. Public health impact of vascular disease
- 1.6.1. Economic cost of vascular diseases
- 1.6.2. Consequences of vascular diseases on the quality of life
- 1.6.3. Focus on prevention and treatment to reduce the impact on public health

1.7. Importance of early diagnosis and treatment in vascular pathology
- 1.7.1. Benefits of early Diagnostic in Vascular Pathology
- 1.7.2. Strategies for the early diagnosis of vascular diseases
- 1.7.3. Early treatment and its relationship to improved prognosis in vascular diseases



1.8. Role of the physician specializing in vascular pathology
- 1.8.1. Training and specialization in Vascular Pathology
- 1.8.2. Functions of the physician specialized in vascular pathology
- 1.8.3. Importance of Interdisciplinary Work in Vascular Pathology

1.9. Interdisciplinarity in the approach to Vascular Pathology
- 1.9.1. Teamwork in Vascular Pathology
- 1.9.2. Roles of the different health professionals in the approach to vascular diseases
- 1.9.3. Interdisciplinary coordination in the treatment and follow-up of patients with vascular diseases

1.10. Prevention of Vascular Diseases
- 1.10.1. Primary prevention strategies in vascular diseases
- 1.10.2. Secondary prevention strategies in vascular diseases
- 1.10.3. Promotion of healthy lifestyles to prevent vascular diseases

Module 2. Vascular Anatomy and Physiology

2.1. Anatomical structure of blood vessels
- 2.1.1. Composition of arterial and venous walls
- 2.1.2. The Structure of the Vascular Endothelium
- 2.1.3. Types of cells present in the vascular wall

2.2. Blood Vessels Functions
- 2.2.1. Transport of nutrients and oxygen
- 2.2.2. Blood Pressure Regulation
- 2.2.3. Control of blood flow and blood distribution in the organism

2.3. Human Circulatory System
- 2.3.1. Anatomy and function of the heart
- 2.3.2. Cardiac cycle and its relation to blood circulation
- 2.3.3. Electrical conduction pathways in the heart

2.4. Arterial and Venous Circulation
- 2.4.1. Structural differences between arteries and veins
- 2.4.2. Backflow and venous return mechanisms
- 2.4.3. Tissue Perfusion phenomena

2.5. Control of blood flow
- 2.5.1. Mechanisms of local regulation of blood flow
- 2.5.2. Regulation of blood flow by the autonomic nervous system
- 2.5.3. Hormonal Control of blood flow

2.6. Adaptive mechanisms of the blood vessels
- 2.6.1. Arterial remodeling in hypertension
- 2.6.2. Venous adaptation in chronic venous insufficiency
- 2.6.3. Mechanisms of vascular response to hypoxia

2.7. Vascularization of organs and tissues
- 2.7.1. Characteristics of microcirculation
- 2.7.2. Mechanisms of angiogenesis
- 2.7.3. Vascular repercussions of systemic diseases

2.8. Influence of age on the vascular system
- 2.8.1. Anatomical and functional changes of the vascular system with age
- 2.8.2. Vascular aging and atherosclerosis
- 2.8.3. Clinical repercussions of vascular fragility in the elderly

2.9. Anatomical and physiological Variations of blood vessels
- 2.9.1. Congenital Abnormalities of blood vessels
- 2.9.2. Variations in the anatomical arrangement of the blood vessels
- 2.9.3. Role of anatomical variants in vascular pathology

2.10. Hormonal regulation in the vascular system
- 2.10.1. Action of the catecholamines in the cardiovascular system
- 2.10.2. Influence of natriuretic peptides on vascular tone
- 2.10.3. Effects of sex steroids on the vascular system

Module 3. Research and Advances in Vascular Pathology

3.1. Vascular Pathology Studies design
- 3.1.1. Vascular Pathology Clinical Trials Design
- 3.1.2. Vascular Pathology Cohort Studies
- 3.1.3. Vascular Pathology Cohort Studies

3.2. Statistical Analysis of Data in Vascular Pathology
- 3.2.1. Multivariate analysis methods in vascular pathology
- 3.2.2. Vascular Pathology Survival Analysis
- 3.2.3. Vascular Pathology Survival Analysis

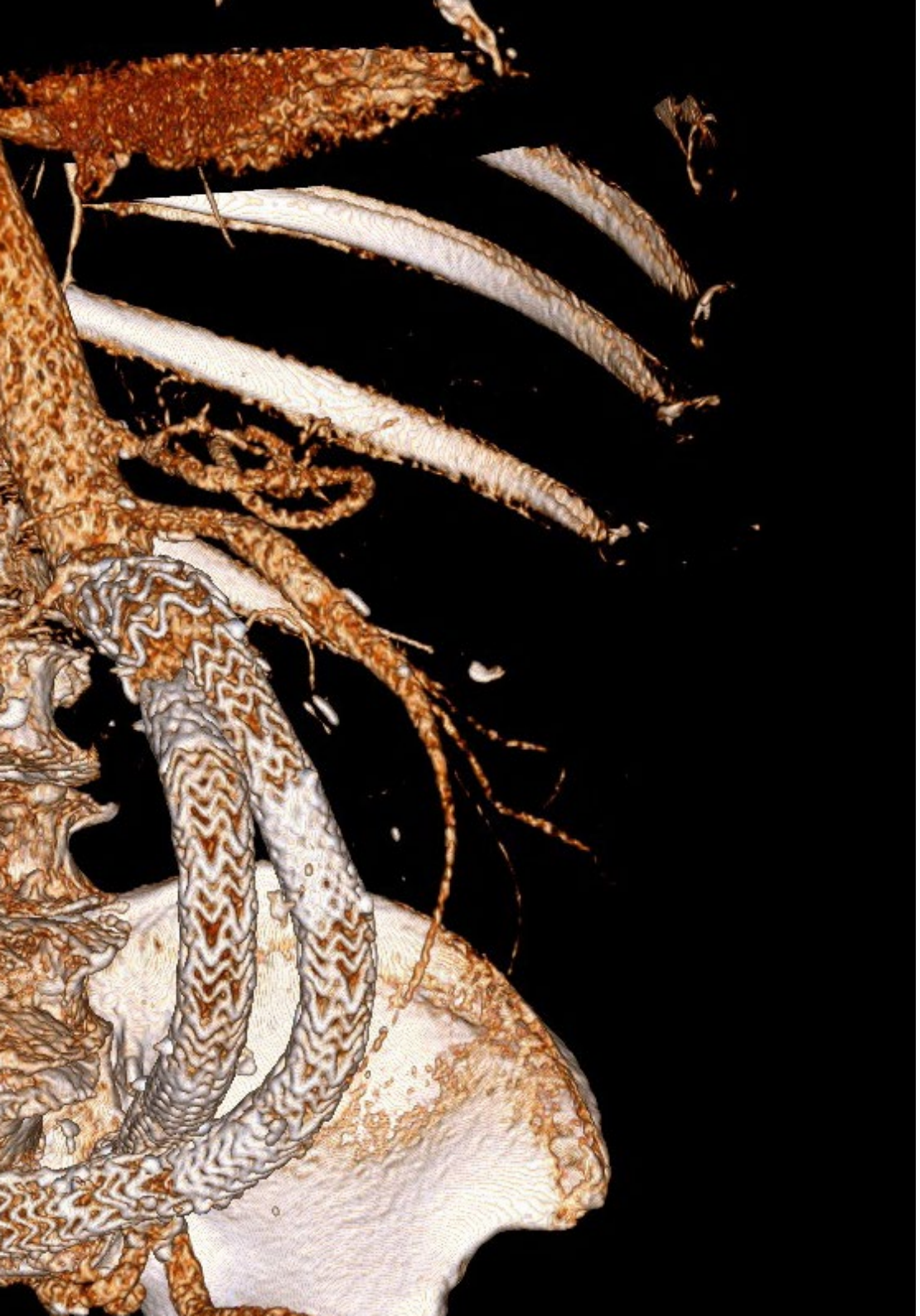
3.3. Advances in Diagnostic Techniques in Vascular Pathology
- 3.3.1. Vascular Ultrasound
- 3.3.2. Computed Tomography Angiography (CTA)
- 3.3.3. Vascular Magnetic Resonance Imaging (MRI)

3.4. Research in Arterial Diseases
- 3.4.1. Atherosclerosis and Coronary Artery Disease
- 3.4.2. Research on aortic aneurysms
- 3.4.3. Research in peripheral arterial disease and intermittent claudication

3.5. Research in Venous Diseases
- 3.5.1. Deep Vein Thrombosis (DVT)
- 3.5.2. Chronic Venous Insufficiency (IVC)
- 3.5.3. Post-thrombotic syndrome

3.6. Research in Lymphatic Diseases
- 3.6.1. Lymphedema
- 3.6.2. Congenital Lymphatic Diseases
- 3.6.3. Lymphangioma

3.7. Innovative Therapies in Vascular Pathology
- 3.7.1. Cell therapy for vascular regeneration
- 3.7.2. Gene therapy to treat arterial disease
- 3.7.3. Growth factor therapy for vascular tissue regeneration



3.8. Biomarkers in Vascular Pathology
- 3.8.1. C-reactive protein (CRP)
- 3.8.2. B-type natriuretic peptide (BNP)
- 3.8.3. Metalloproteases

3.9. Prevention of vascular diseases
- 3.9.1. Control of cardiovascular risk factors
- 3.9.2. Physical Activity and Regular Exercise
- 3.9.3. Healthy diet and body weight control

3.10. Future trends in Vascular Pathology
- 3.10.1. Nanotechnology for the diagnosis and treatment of vascular diseases
- 3.10.2. Stem Cell Therapy for Vascular Regeneration
- 3.10.3. Advances in gene therapy for the treatment of vascular diseases

A program that will allow you to be up to date in Nanotechnology for the diagnosis and treatment of vascular diseases"

05

Methodology

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

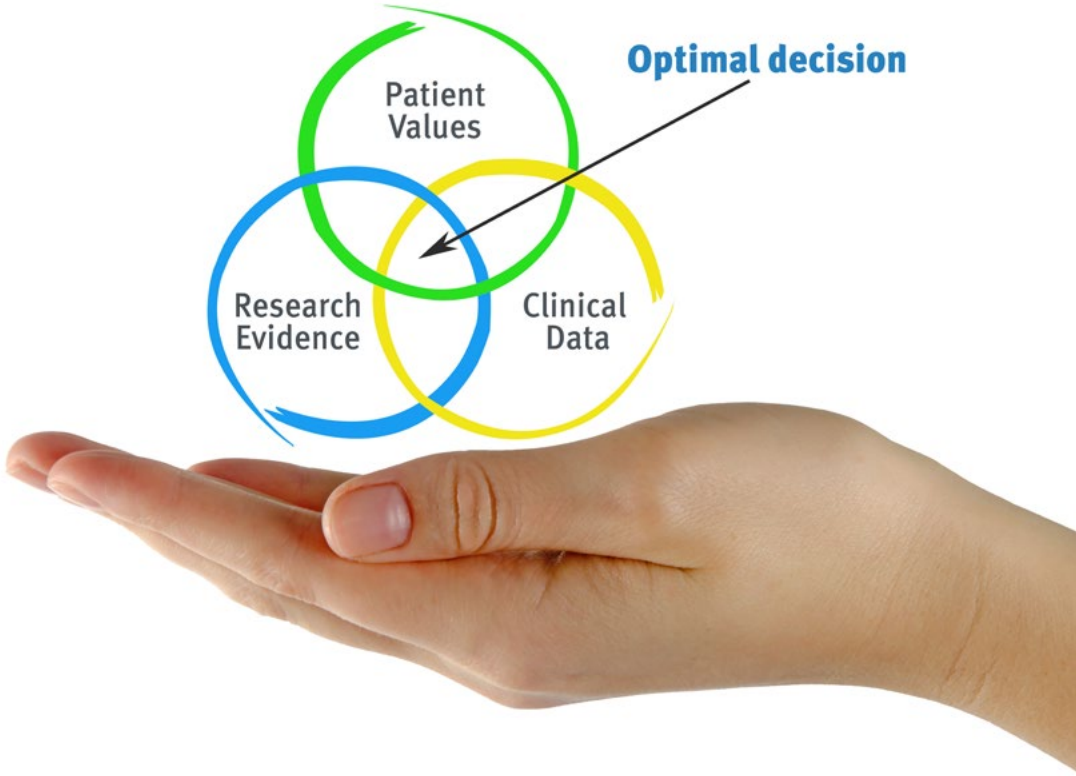
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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:

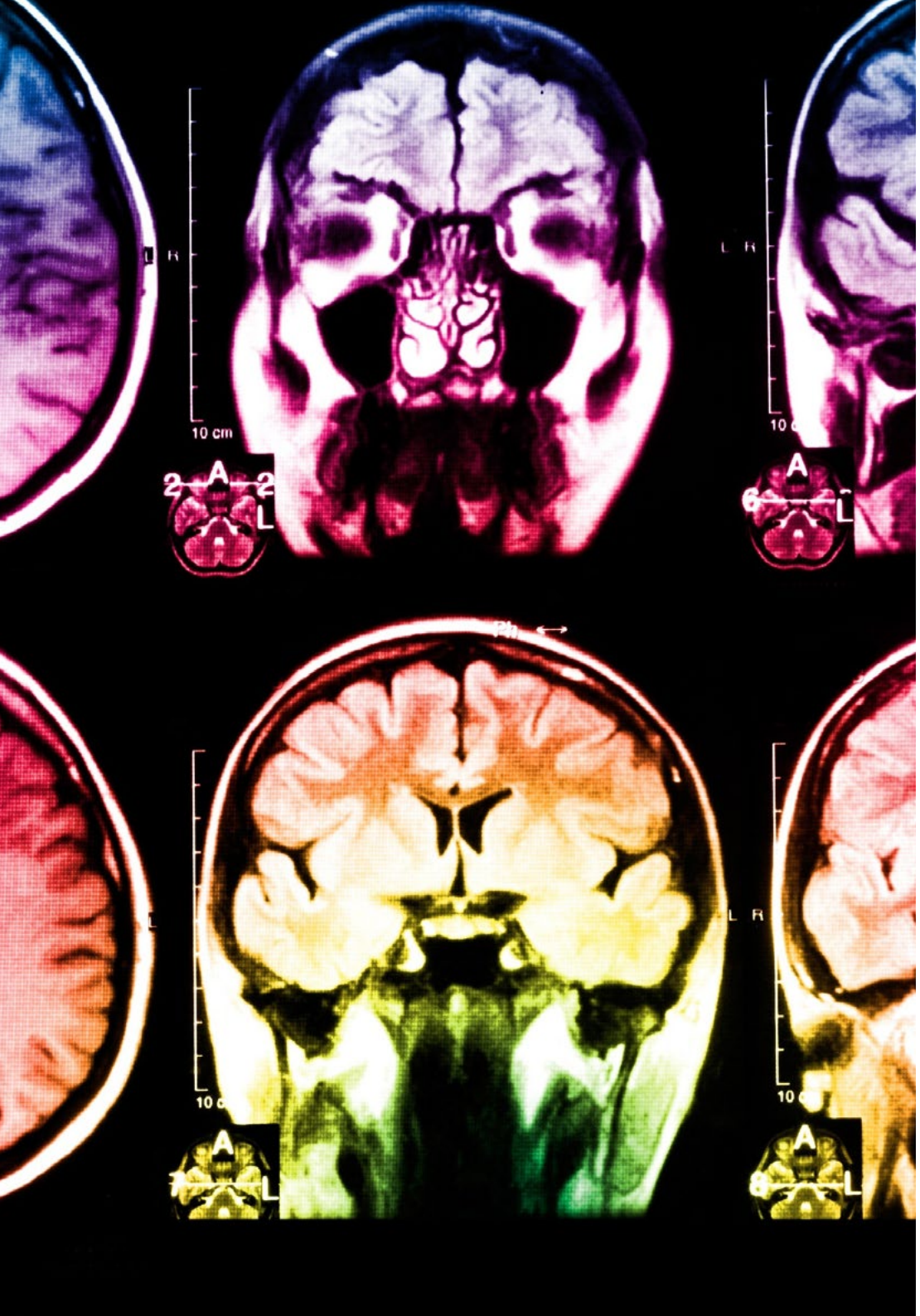
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better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

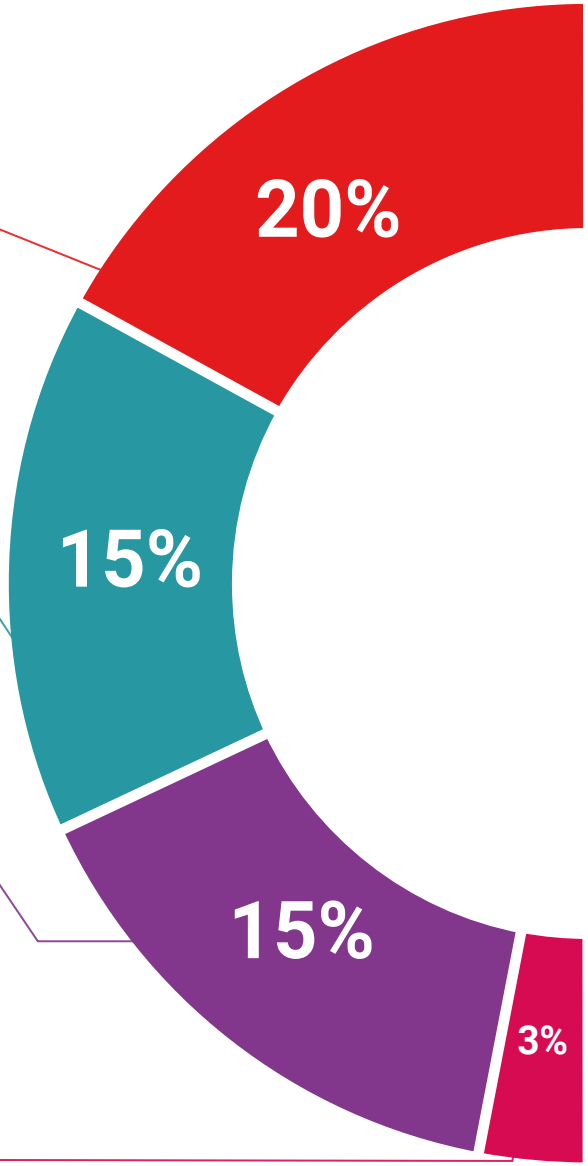
Interactive Summaries

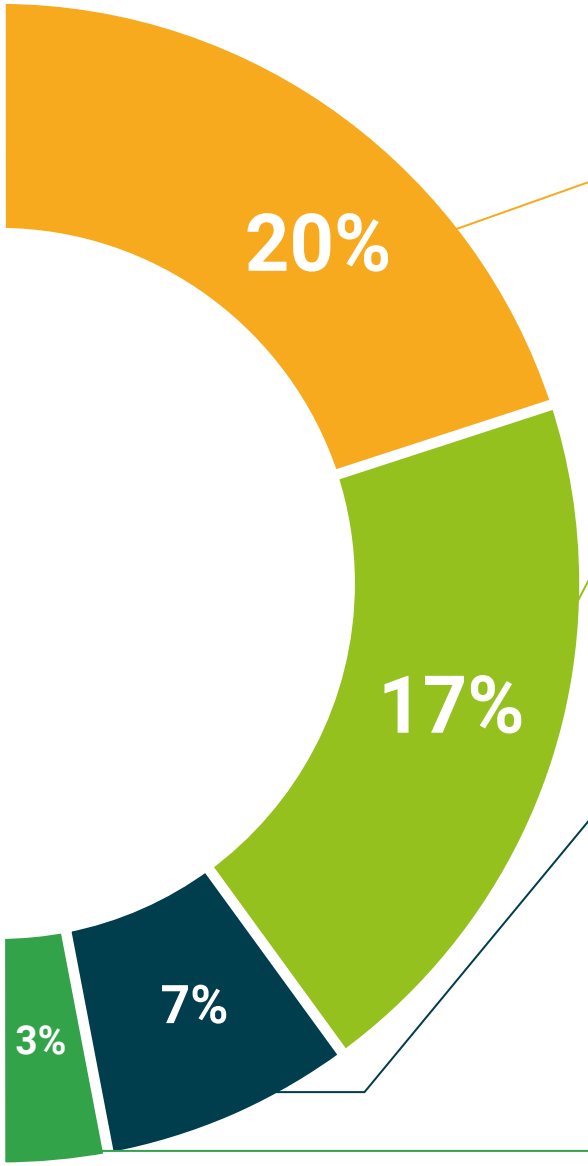
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Research and Advances in Vascular Pathology 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 Research and Advances in Vascular Pathology** 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 Certificate** 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 Research and Advances in Vascular Pathology**

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

Research and Advances in Vascular Pathology

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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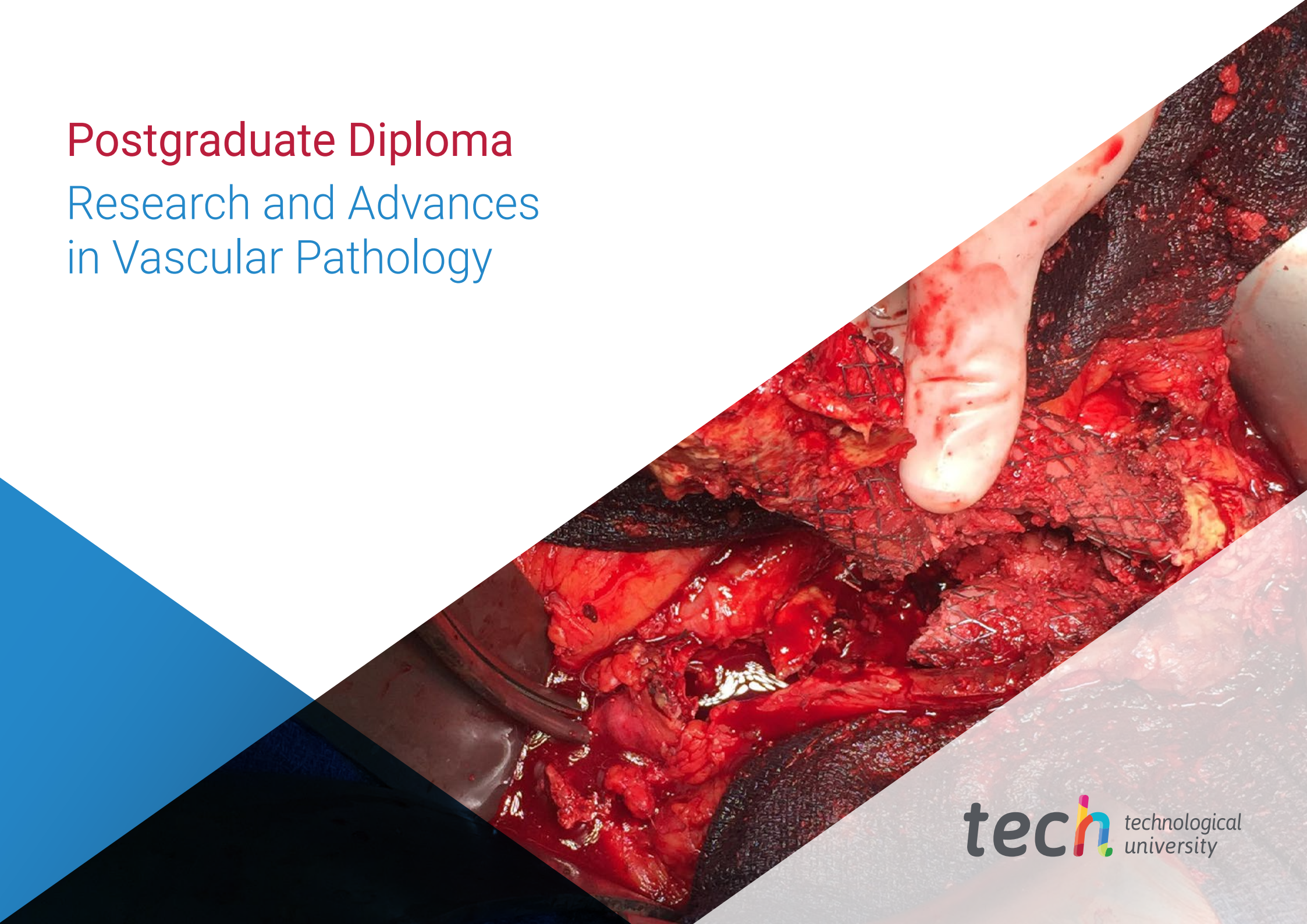

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