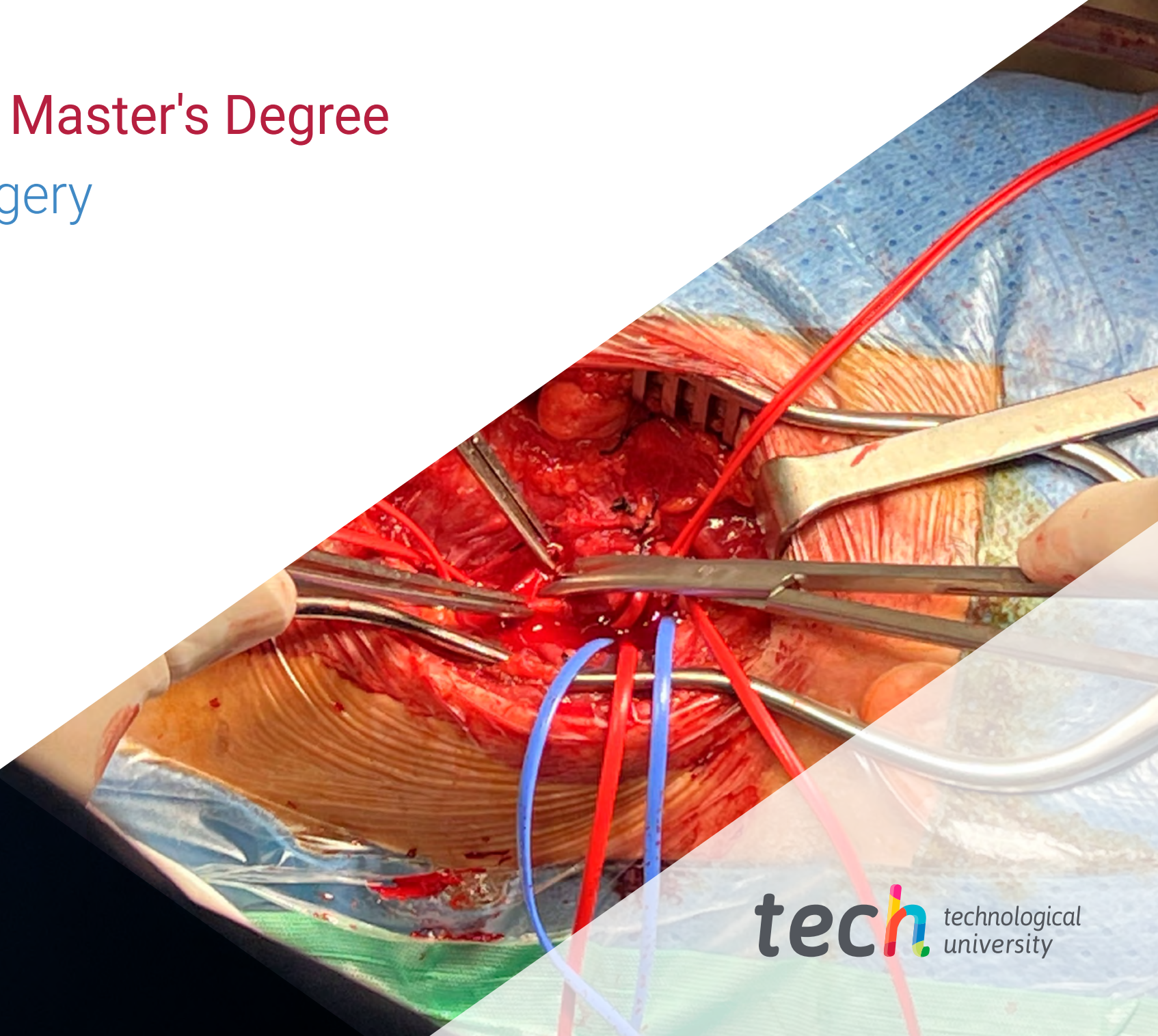


# Professional Master's Degree

## Vascular Surgery





## Professional Master's Degree Vascular Surgery

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/professional-master-degree/master-vascular-surgery](http://www.techtute.com/us/medicine/professional-master-degree/master-vascular-surgery)

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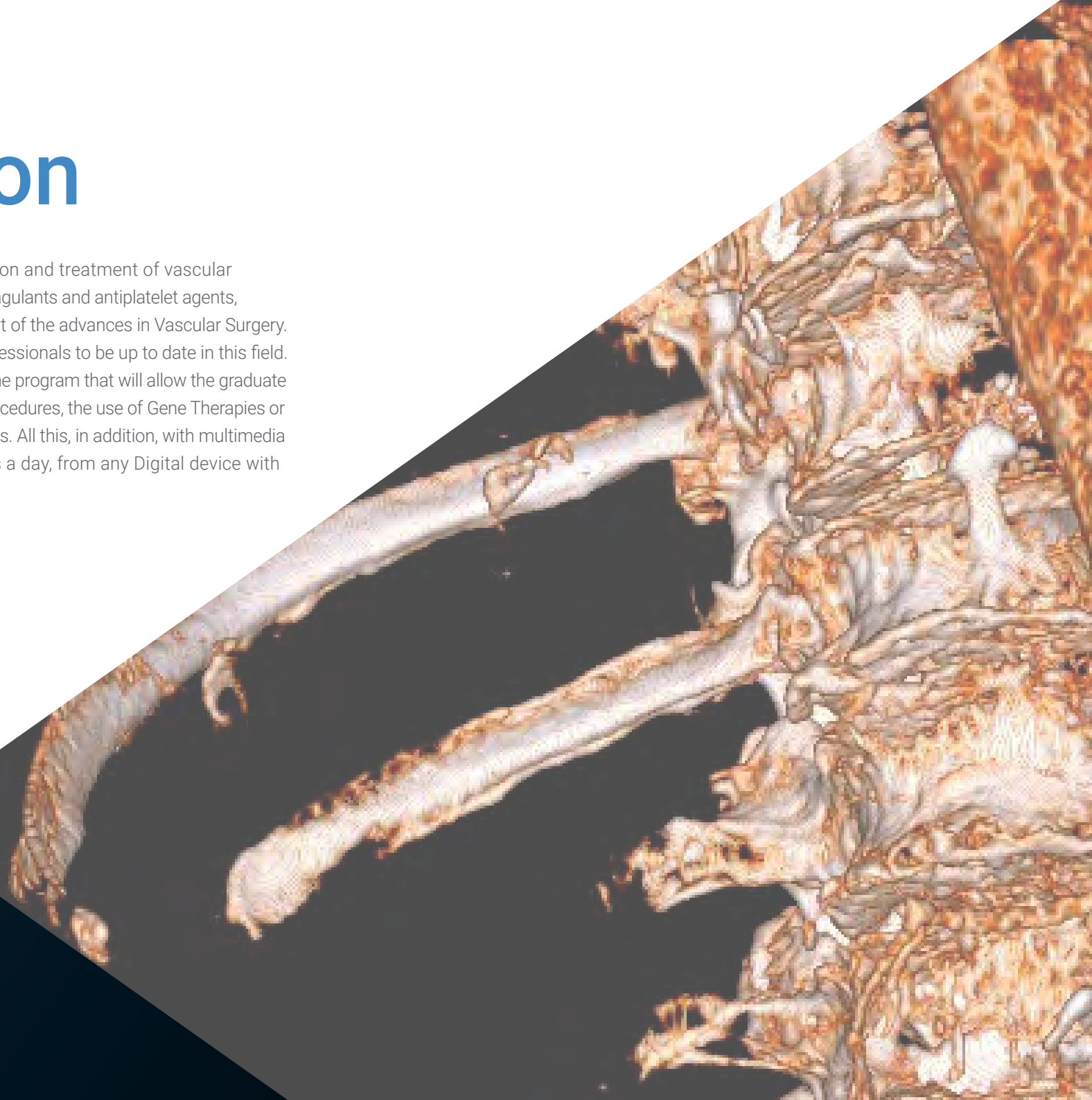
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# 01

# Introduction

New pharmacological advances for the prevention and treatment of vascular diseases, such as more effective and safer anticoagulants and antiplatelet agents, or the incorporation of new stent materials are part of the advances in Vascular Surgery. A specialty in continuous evolution that leads professionals to be up to date in this field. For this reason, TECH has designed this 100% online program that will allow the graduate to perform an effective update in the evaluation procedures, the use of Gene Therapies or the latest scientific research in vascular pathologies. All this, in addition, with multimedia didactic material that can be accessed 24 hours a day, from any Digital device with internet connection.





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*Get a complete update in Vascular Surgery through an online Professional Master's Degree with a comprehensive approach"*

Research and innovation go hand in hand in the field of Vascular Surgery. Therefore, there have been continuous and rapid changes in the use of new technology to plan and practice surgical interventions. Likewise, the improvement of materials, the development of devices for the treatment of vascular diseases or the use of cell therapy have made it possible to improve the health of patients.

A scenario that leads specialists to constantly update their knowledge. For this reason, this educational institution has created this Professional Master's Degree with 1,500 teaching hours and with the most advanced syllabus, prepared by experts in this field. It is a program that will lead students to enhance their skills and competences in the physiopathology of Vascular Diseases, in the methods of diagnosis in Vascular Pathology, the monitoring of Venous Diseases, as well as the latest research in this field. All this, from a theoretical-practical approach, complemented by video summaries of each topic, videos in detail, specialized readings and case studies.

In addition, thanks to the *Relearning* system, the graduate will advance naturally through the syllabus, effectively consolidating the most important concepts of this first level educational itinerary.

Undoubtedly, an ideal opportunity for those who are looking for an update through a comfortable and flexible program. Students only need an electronic device with internet connection to visualize, at any time of the day, the content of this program. An unparalleled educational option that adapts to the agenda and real needs of professionals.

This **Professional Master's Degree in Vascular Surgery** 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 healthcare experts in Patients Quality and Security
- 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



*Thanks to the Vascular Surgery simulation scenarios, the specialist will be able to delve into the most complex surgical techniques"*

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*A qualification that will allow you to be up to date in the treatment of vascular diseases in just 12 months"*

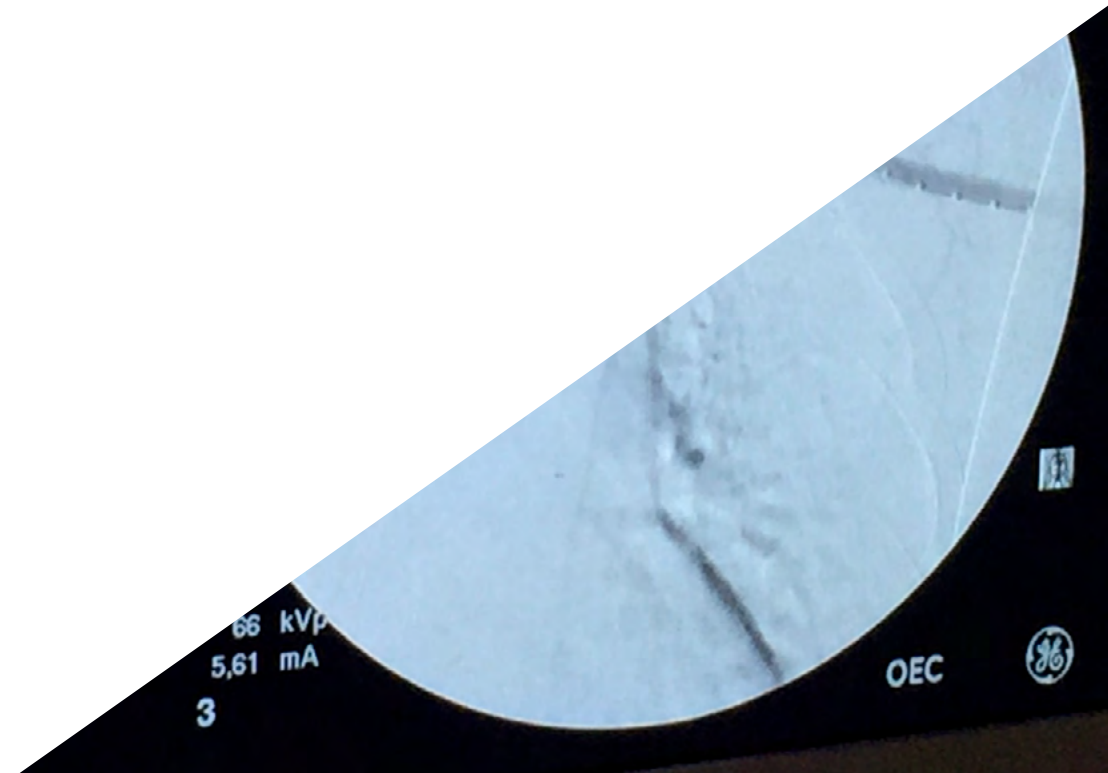
The program's teaching staff includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Delve into the improvement of coagulation, hemogram and blood biochemistry tests through the best didactic material.*

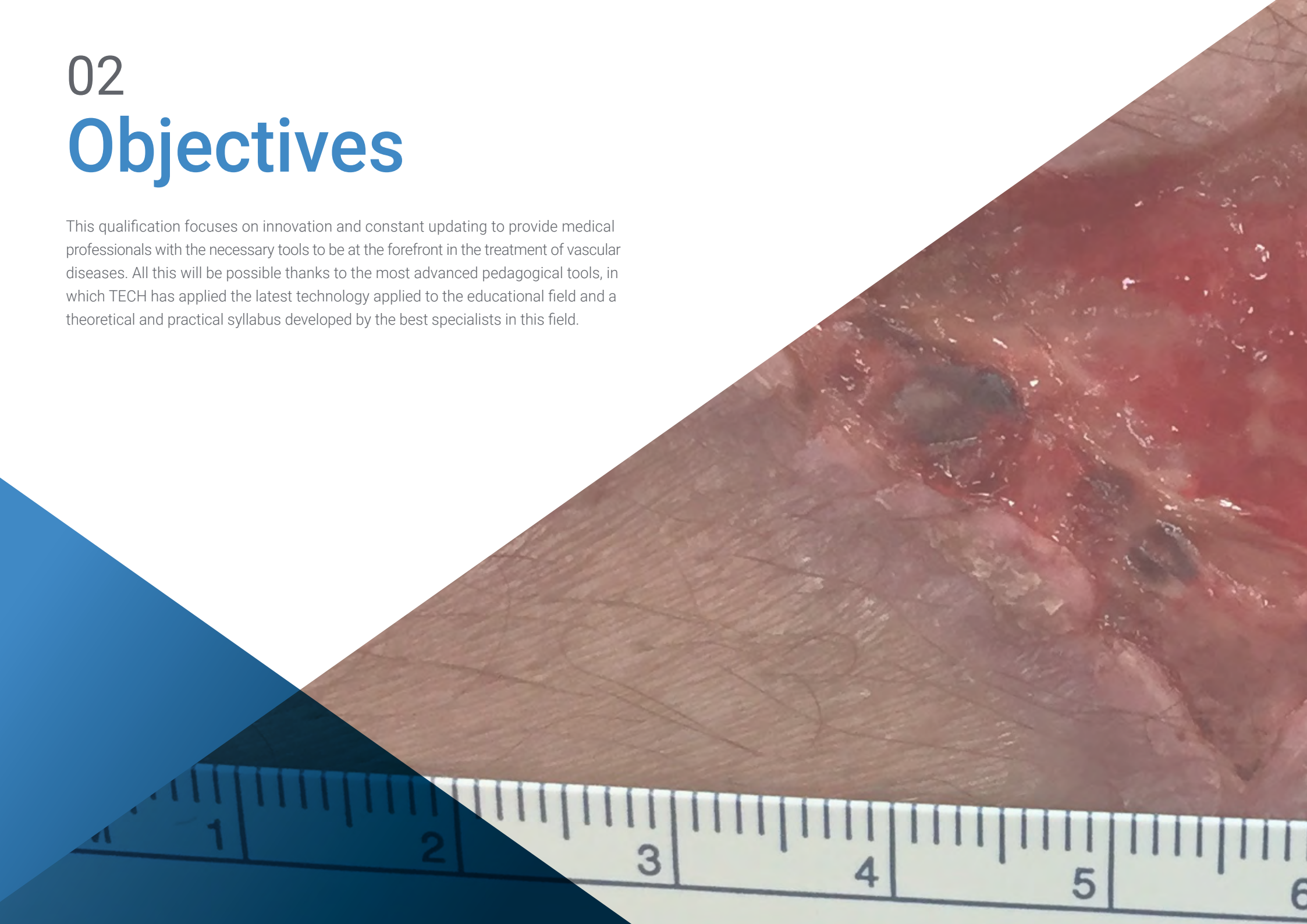
*Go in depth when and where you want in Arterial Diseases and update your knowledge with complete flexibility.*



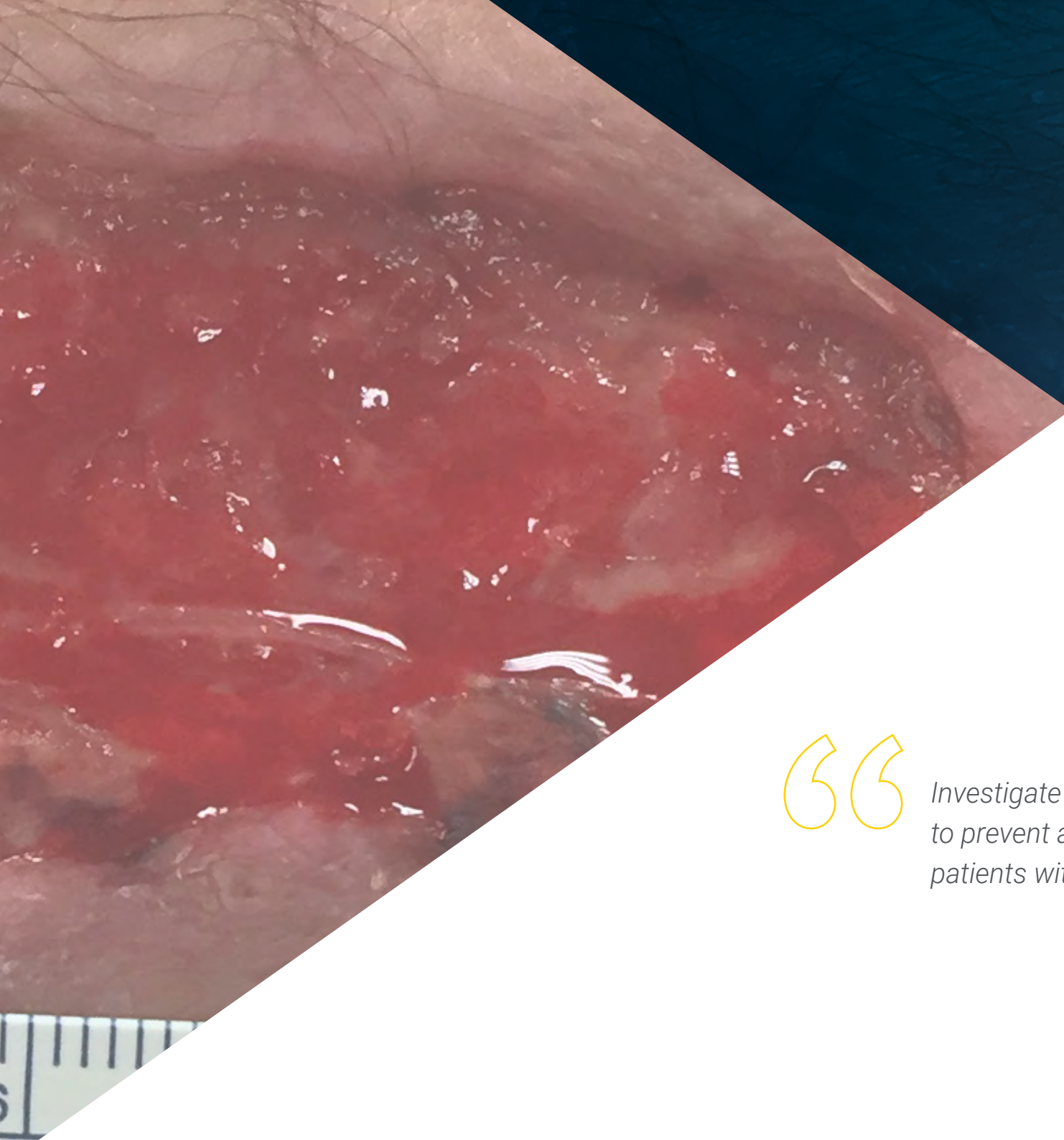
# 02

# Objectives

This qualification focuses on innovation and constant updating to provide medical professionals with the necessary tools to be at the forefront in the treatment of vascular diseases. All this will be possible thanks to the most advanced pedagogical tools, in which TECH has applied the latest technology applied to the educational field and a theoretical and practical syllabus developed by the best specialists in this field.







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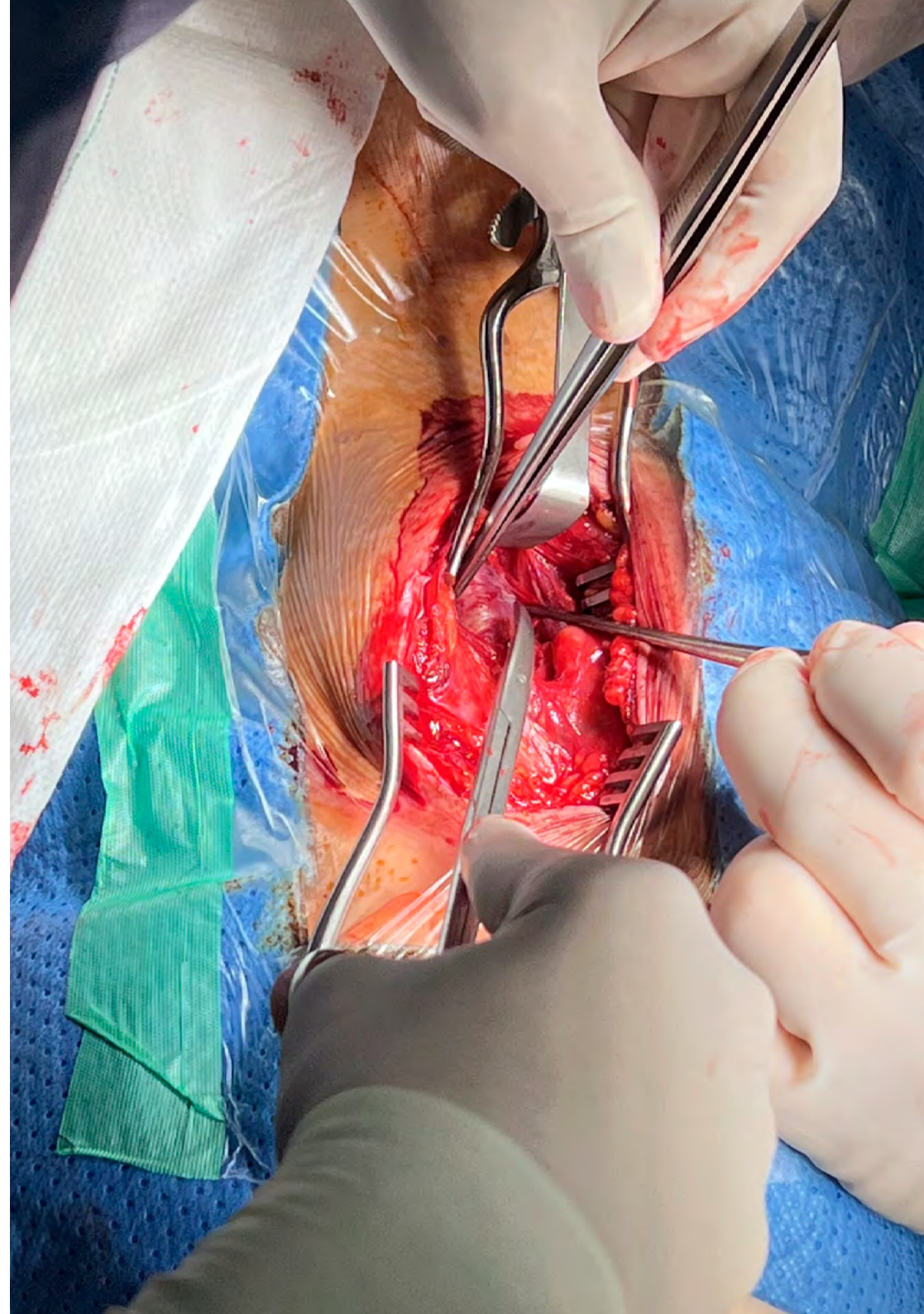
*Investigate the most effective strategies to prevent and control risk factors in patients with vascular diseases”*



## General Objectives

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- ♦ 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





## Specific Objectives

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### 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. Pathophysiology of Vascular Diseases

- ♦ Delve into atherosclerosis as the pathological process underlying most systemic vascular diseases, including coronary artery disease, cerebrovascular disease and peripheral vascular disease. Delve into inflammatory vascular diseases, such as giant cell arteritis, polyarthritis nodosa or Wegener's granulomatosis, among others, and delve into the pathophysiological mechanisms underlying their development
- ♦ Delve into diabetic vasculopathy and its relationship with Diabetes Mellitus, as well as to learn about renal vascular diseases, such as renal artery stenosis or diabetic nephropathy
- ♦ Update knowledge on the identification of the different vascular diseases, the understanding of their pathophysiology and their impact on patients' health
- ♦ Delve into the clinical assessment and diagnosis of vascular diseases, including the performance of diagnostic tests and interpretation of results
- ♦ Delve into the treatments available for vascular diseases, including pharmacologic therapies, surgical interventions and other complementary therapies

### Module 4. Diagnostic Methods in Vascular Pathology

- ♦ Delve into the semiology and clinical vascular examination for the identification of signs and symptoms of vascular diseases
- ♦ Investigate the different imaging methods used in vascular pathology, such as angiography, Doppler ultrasound, computed tomography and magnetic resonance imaging, among others
- ♦ Interpret the results of the different diagnostic imaging methods, depending on the vascular pathology in question
- ♦ Delve into laboratory diagnostic techniques for the study of vascular diseases, such as coagulation tests, hemogram and blood biochemistry

### Module 5. Arterial Diseases

- ♦ Delve into the etiology of arterial diseases, including risk factors and underlying causes, such as chronic inflammation, oxidative damage, hypertension and diabetes
- ♦ Delve into the pathogenesis and molecular mechanisms involved in the formation of atherosclerotic plaques
- ♦ Delve into the clinical evaluation and interpretation of diagnostic tests, such as Doppler ultrasound, angiography and computed tomography

### **Module 6. Venous Diseases**

- ♦ Delve into the anatomy and physiology of the veins. Describe the etiology of venous diseases, including risk factors and hereditary causes
- ♦ Delve into the clinical assessment and diagnostic imaging of venous diseases, such as deep vein thrombosis and chronic venous insufficiency
- ♦ Update knowledge in pharmacological and non-pharmacological treatments of venous diseases
- ♦ Delve into surgical and minimally invasive procedures to treat venous disease, such as phlebectomy and endovenous ablation

### **Module 7. Lymphatic Diseases**

- ♦ Delve into the anatomy and physiology of the lymphatic system, including the structure and function of lymphatic vessels, lymph nodes and lymphoid organs
- ♦ Describe the etiology and pathogenesis of lymphatic diseases, such as primary and secondary lymphedema, Castleman's disease and Hodgkin's disease, among others
- ♦ Delve into the diagnostic techniques used in lymphatic diseases, including clinical evaluation, imaging tests, such as lymphography and MRI, and laboratory tests, such as lymph node biopsy. Describe about the treatment options available for lymphatic diseases, including physical therapy, manual lymphatic drainage, compressive therapy, pharmacologic therapy, and surgery

### **Module 8. Surgical and Endovascular Treatment of Vascular Diseases**

- ♦ Delve into the concepts of vascular surgery, including surgical techniques and procedures used for the treatment of vascular diseases
- ♦ Delve into endovascular treatment, including the use of catheters, guidewires, and devices for the treatment of vascular diseases
- ♦ Select appropriate patients for different surgical and endovascular procedures
- ♦ Delve into the complications associated with surgical and endovascular procedures, as well as techniques for their management
- ♦ Interpret and use different imaging techniques, such as angiography, ultrasound and tomography, for the diagnosis and follow-up of vascular diseases

### **Module 9. Pre- and post-operative care of the vascular patient**

- ♦ Update comprehensive patient assessment procedures to determine if the patient is a candidate for vascular surgery, including a thorough evaluation of medical history, family history, medications, and lifestyle habits
- ♦ Be aware of preoperative protocols, including the performance of diagnostic tests, administration of medications and preparation of the surgical team
- ♦ Delve into the periodic assessment and monitoring of the patient's evolution after vascular surgery, including the identification and management of possible complications, such as infections, thrombosis or hemorrhages



### Module 10. 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

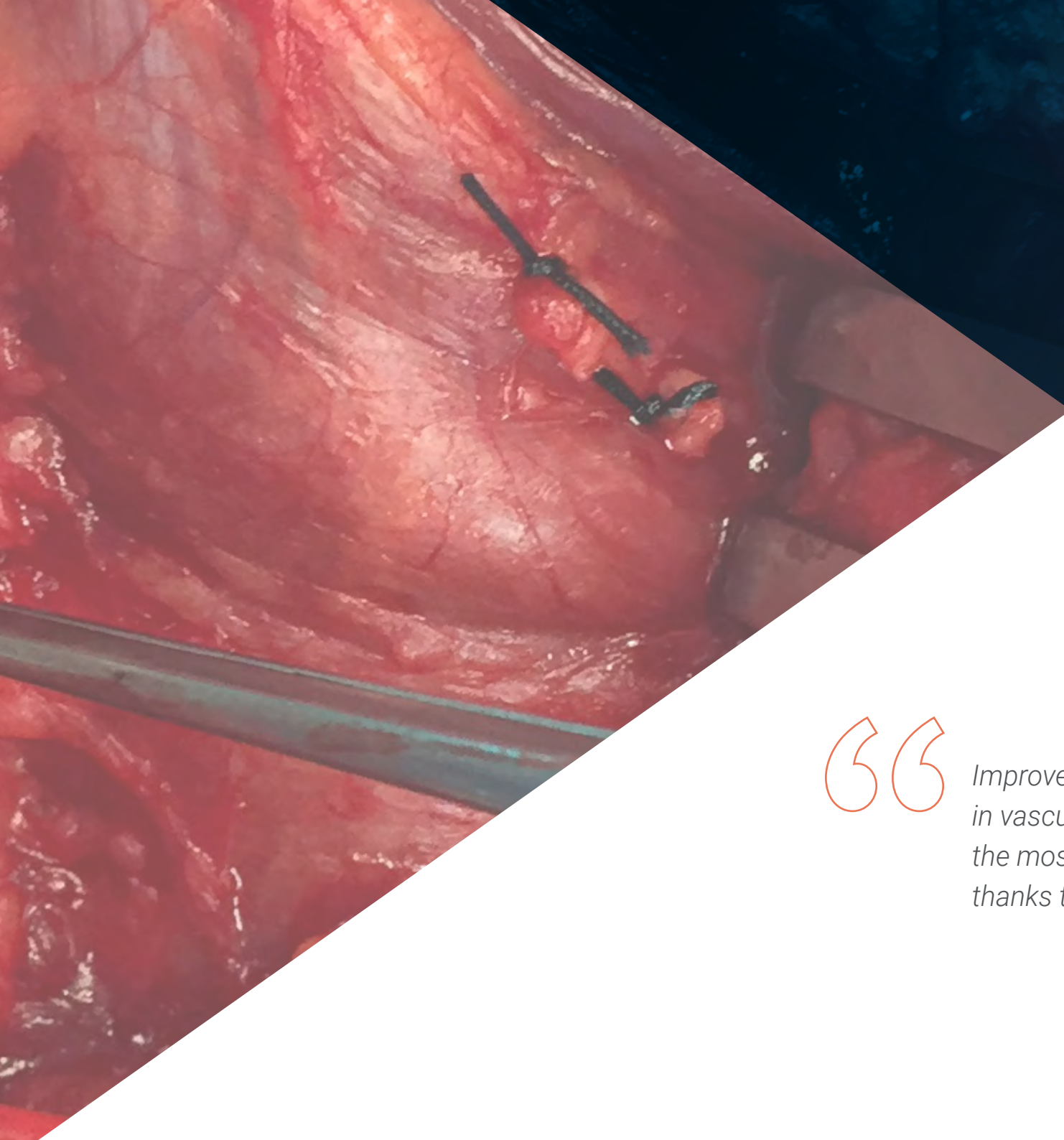
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*A program that will allow you to keep abreast of advances in diabetic vasculopathy and its relationship with Diabetes Mellitus"*

# 03 Skills

Thanks to this educational option, professionals will be able to enhance their diagnostic skills in vascular patients, as well as the technical skills to perform an optimal pre and post-operative follow-up. For this purpose, innovative didactic resources are available, including case study simulations, which will allow them to successfully integrate the most current procedural and evaluation methodologies.





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*Improve your diagnostic skills  
in vascular diseases and apply  
the most advanced techniques  
thanks to this qualification"*



## General Skills

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- ◆ Perform preoperative and postoperative care for vascular patients, including rehabilitation and follow-up
- ◆ Perform comprehensive treatment for arterial diseases, including the choice of surgical and endovascular techniques
- ◆ Understand the pathophysiology of vascular diseases
- ◆ Apply the latest diagnostic methods in vascular pathology
- ◆ Perform Diagnosis and Treatment of Arterial Diseases
- ◆ Carry out Diagnosis and Treatment of Venous Diseases
- ◆ Distinguish the etiology, diagnosis and treatment of lymphatic diseases
- ◆ Perform surgical and endovascular treatment of vascular diseases
- ◆ Plan and perform Pre- and post-operative care of the vascular patient
- ◆ Research and stay current on advances in vascular pathology



*You will be aware of treatment options for Arterial Diseases such as pharmacologic therapies and invasive procedures"*







## Specific Skills

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- ◆ Perform preoperative evaluation of the vascular patient, including assessment of risk factors and assessment of associated diseases
- ◆ Select the most appropriate surgical technique for each vascular pathology, including endovascular and open surgery
- ◆ Perform perioperative management of the vascular patient, including administration of medications and constant monitoring of vital signs
- ◆ Perform complex surgical procedures, such as revascularization surgery and bypass surgery
- ◆ Perform complex endovascular procedures, such as angioplasty and vascular stenting
- ◆ Perform management of intraoperative and postoperative complications, including thrombosis and hemorrhage
- ◆ Manage postoperative pain in vascular patients, utilizing multimodal analgesia techniques
- ◆ Identify and treat late complications following vascular surgery, such as stenosis and thrombosis
- ◆ Perform advanced imaging techniques, such as Doppler ultrasound, for the assessment of vascular pathology

# 04

# Course Management

In its premise to offer a Professional Master's Degree of the highest quality, TECH has brought together in this qualification a management and teaching staff with a consolidated trajectory in Vascular Surgery in reference hospitals. In this way, students will have the guarantee of access to a complete update of knowledge through an educational option that includes an advanced, up to date syllabus and innovative pedagogical tools. In addition, thanks to the proximity of the teaching staff, graduates will be able to resolve any doubts they may have about the content of this program.





“

*Distinguished experts in Vascular Surgery will be in charge of providing you with the most current information in this field"*

## 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. Martín Pedrosa, José Miguel

- ♦ Head of the Angiology and vascular surgery at Valladolids Clinical University Hospital
- ♦ Specialist in Angiology and Vascular Surgery
- ♦ PhD Cum Laude in Surgery from the University of Valladolid
- ♦ Member of: Scientific Committee of the Endovascular Surgery Chapter of the Spanish Society of Angiology and Vascular Surgery (SEACV)

### Dr. Cenizo Revuelta, Noelia

- ♦ Assistant Physician at the the Angiology and vascular surgery at Valladolid Clinical University Hospital
- ♦ Specialist in Angiology and Vascular Surgery(ACV)
- ♦ Tutor accredited by the University of Valladolid
- ♦ Tutor Coordinator of the LCA Teaching Unit of the Valladolid Clinical University Hospital
- ♦ Professor in charge of the subject "Medical Pathology" in the Degree of Dentistry of the European University Miguel de Cervantes (UEMC) of Valladolid
- ♦ Associate Professor at the University of Valladolid
- ♦ PhD Cum Laude and Extraordinary Award the Doctorate in Medicine and Surgery from from the University of Valladolid

### 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 the 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

# 05

## Structure and Content

The syllabus of this qualification has been designed to offer, from a theoretical-practical perspective, the most current and rigorous information on Vascular Pathology. An educational path of 1,500 teaching hours that will allow you to be up to date in the diagnostic and therapeutic procedures in vascular diseases. Furthermore, this syllabus can be extended thanks to the numerous additional didactic resources available in the Virtual Library of this program.





“

*Thanks to the Relearning method,  
you will be able to consolidate the  
key concepts in an agile way"*

## 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. Pathophysiology of Vascular Diseases

- 3.1 Vascular Physiopathology
  - 3.1.1. Alterations in the structure and function of blood vessels that can lead to various diseases
  - 3.1.2. Changes in the regulation of blood flow and blood pressure that may affect tissue perfusion
  - 3.1.3. Abnormal responses of vascular endothelium and vascular wall cells to different stimuli, such as inflammation, hypoxia, and stress
- 3.2 Cellular and molecular mechanisms of vascular diseases
  - 3.2.1. Endothelial dysfunction and alterations in the production and activity of vasodilator and vasoconstrictor factors
  - 3.2.2. Cell proliferation and migration of smooth muscle cells that can lead to the formation of atheromatous plaques and stenosis
  - 3.2.3. Activation of inflammatory cells and release of inflammatory mediators that may contribute to vascular injury and disease progression
- 3.3 Modifiable and Non-modifiable risk factors
  - 3.3.1. Non-modifiable risk factors: Age, Family history, Genetics
  - 3.3.2. Modifiable risk factors: Tobacco, Diet, Physical activity
  - 3.3.3. Risk factor prevention approaches: primary, secondary and tertiary
- 3.4 Primary and Secondary Vascular Injuries
  - 3.4.1. Primary Vascular Injuries: Aneurysms, arteriovenous malformations, vasculitis
  - 3.4.2. Secondary vascular Injuries: deep vein thrombosis, pulmonary embolism, atherosclerosis
  - 3.4.3. Comparison between Primary and Secondary Vascular Injuries
- 3.5 Inflammatory and repair responses in vascular diseases
  - 3.5.1. Role of inflammatory cells in vascular diseases
  - 3.5.2. Cell-cell and cell-matrix interactions in vascular inflammation
  - 3.5.3. Biomarkers of inflammation and vascular repair
- 3.6 Development of atherosclerosis
  - 3.6.1. Molecular mechanisms of atherosclerotic plaque formation
  - 3.6.2. Non-invasive assessment of atherosclerosis
  - 3.6.3. Pharmacological and non-pharmacological therapies for atherosclerosis

- 3.7 Deep venous thrombosis and pulmonary embolism
  - 3.7.1 Risk factors for deep vein thrombosis and pulmonary embolism
  - 3.7.2 Diagnostic methods for deep vein thrombosis and pulmonary embolism
  - 3.7.3 Treatment of deep vein thrombosis and pulmonary embolism
- 3.8 Pathophysiology of chronic venous insufficiency
  - 3.8.1 Mechanisms of development of chronic venous insufficiency
  - 3.8.2 Clinical Assessment of chronic venous insufficiency
  - 3.8.3 Treatment of Chronic Venous insufficiency
- 3.9 Effects of aging on the vascular system
  - 3.9.1 Physiological changes in the vascular system during aging
  - 3.9.2 Relationship between aging and vascular diseases
  - 3.9.3 Strategies to prevent or delay the aging of the vascular system
- 3.10 Role of genetics in Cellular diseases and molecular mechanisms of vascular diseases
  - 3.10.1 Genes related to vascular diseases
  - 3.10.2 Methods for diagnosis and early detection of inherited vascular diseases
  - 3.10.3 Personalized treatments based on the genetics of each patient

## Module 4. Diagnostic Methods in Vascular Pathology

- 4.1 Importance of Diagnostic in Vascular Pathology
  - 4.1.1 Consequences of an incorrect or late diagnosis in vascular diseases
  - 4.1.2 Role of prevention and early detection in the diagnosis of vascular diseases
  - 4.1.3 Importance of follow-up and evaluation of treatment in the diagnosis of vascular diseases
- 4.2 Physical Examinations Methods
  - 4.2.1 Inspection, palpation and auscultation in vascular examination
  - 4.2.2 Signs and symptoms indicating vascular diseases in physical examination
  - 4.2.3 Importance of physical examination in the differential diagnosis of vascular diseases

- 4.3 Diagnostic Imaging methods: radiology, ultrasonography, tomography, magnetic resonance imaging
  - 4.3.1 Basic principles of each Diagnostic imaging method
  - 4.3.2 Indications and Contraindications of each Diagnostic imaging method
  - 4.3.3 Advantages and limitations of each Diagnostic imaging method in Vascular Pathology
- 4.4 Vascular functional tests: ankle-brachial indices, plethysmography, Doppler study
  - 4.4.1 Basic principles of each vascular functional test
  - 4.4.2 Indications and Contraindications of each vascular functional test
  - 4.4.3 Interpretation of the results of each vascular functional test in Vascular Pathology
- 4.5 Angiography and Arteriography
  - 4.5.1 Indications and Contraindications of Angiography and arteriography
  - 4.5.2 Basic Principles of Angiography and arteriography
  - 4.5.3 Interpretation of the results of Angiography and arteriography in Vascular Pathology
- 4.6 Vascular endoscopy
  - 4.6.1 Indications and Contraindications of vascular endoscopy
  - 4.6.2 Basic principals of vascular endoscopy
  - 4.6.3 Interpretation of the results of each vascular endoscopy in Vascular Pathology
- 4.7 Vascular Biopsies
  - 4.7.1 Indications and Contraindications of vascular Biopsies
  - 4.7.2 Basic principals of vascular Biopsies
  - 4.7.3 Interpretation of the results of each vascular Biopsies in Vascular Pathology
- 4.8 Interpretation of diagnostic test results
  - 4.8.1 Criteria for the Interpretation of diagnostic test results
  - 4.8.2 Importance of clinical correlation in the interpretation of diagnostic test results
  - 4.8.3 Common errors in the interpretation of diagnostic test results in Vascular Pathology

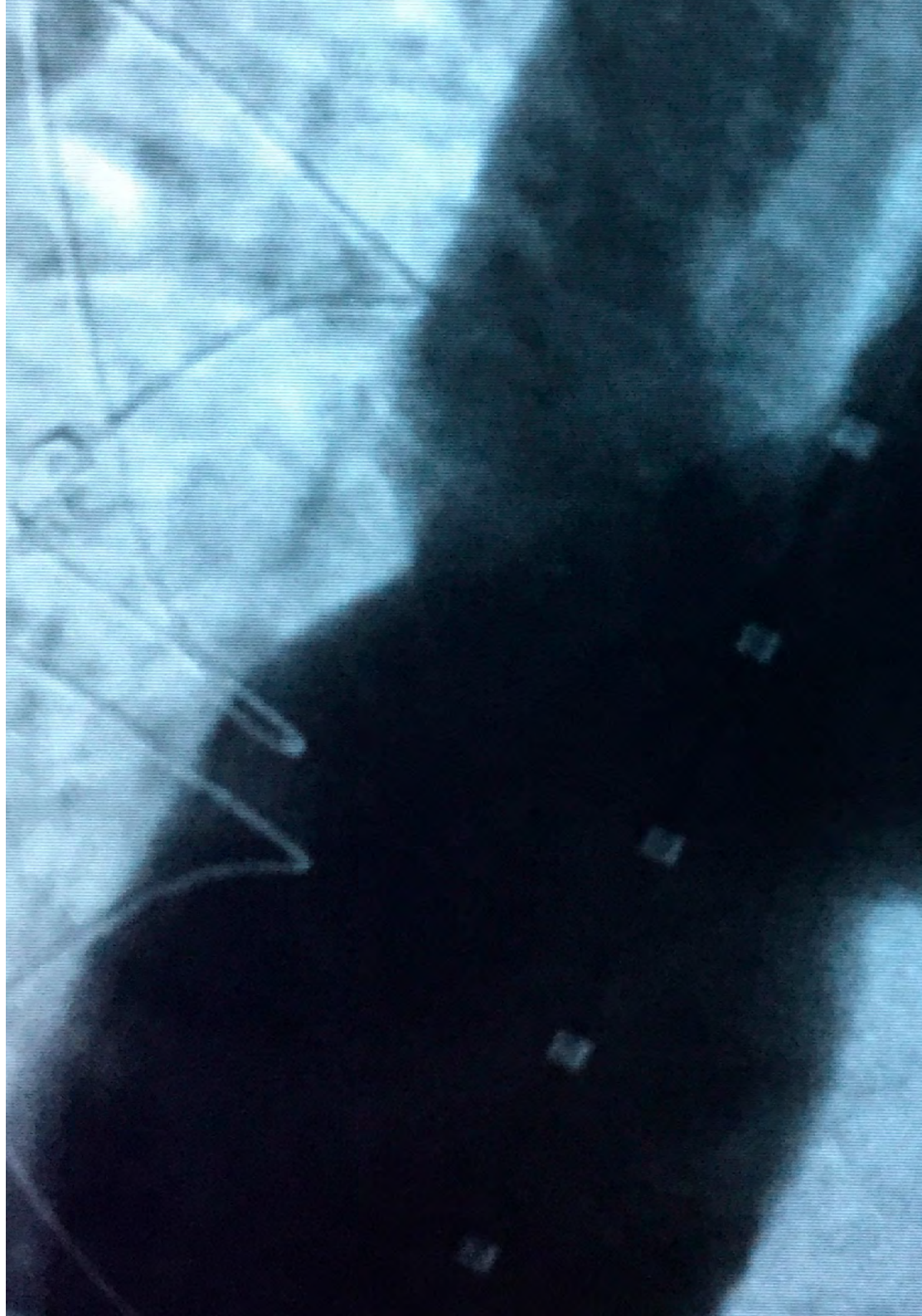
- 4.9 Role of Clinical Assessment in the Diagnoses
  - 4.9.1. Importance of Medical History in the diagnosis of vascular diseases
  - 4.9.2. Role of prevention and early detection in the diagnosis of vascular diseases
  - 4.9.3. Interpretation of diagnostic test results in the Clinical Context
- 4.10 Differential Diagnosis of Vascular Diseases
  - 4.10.1. Clinical and radiologic differences between common vascular diseases
  - 4.10.2. Criteria for differential diagnosis between vascular diseases
  - 4.10.3. Importance of comprehensive patient evaluation in the differential diagnosis of diseases

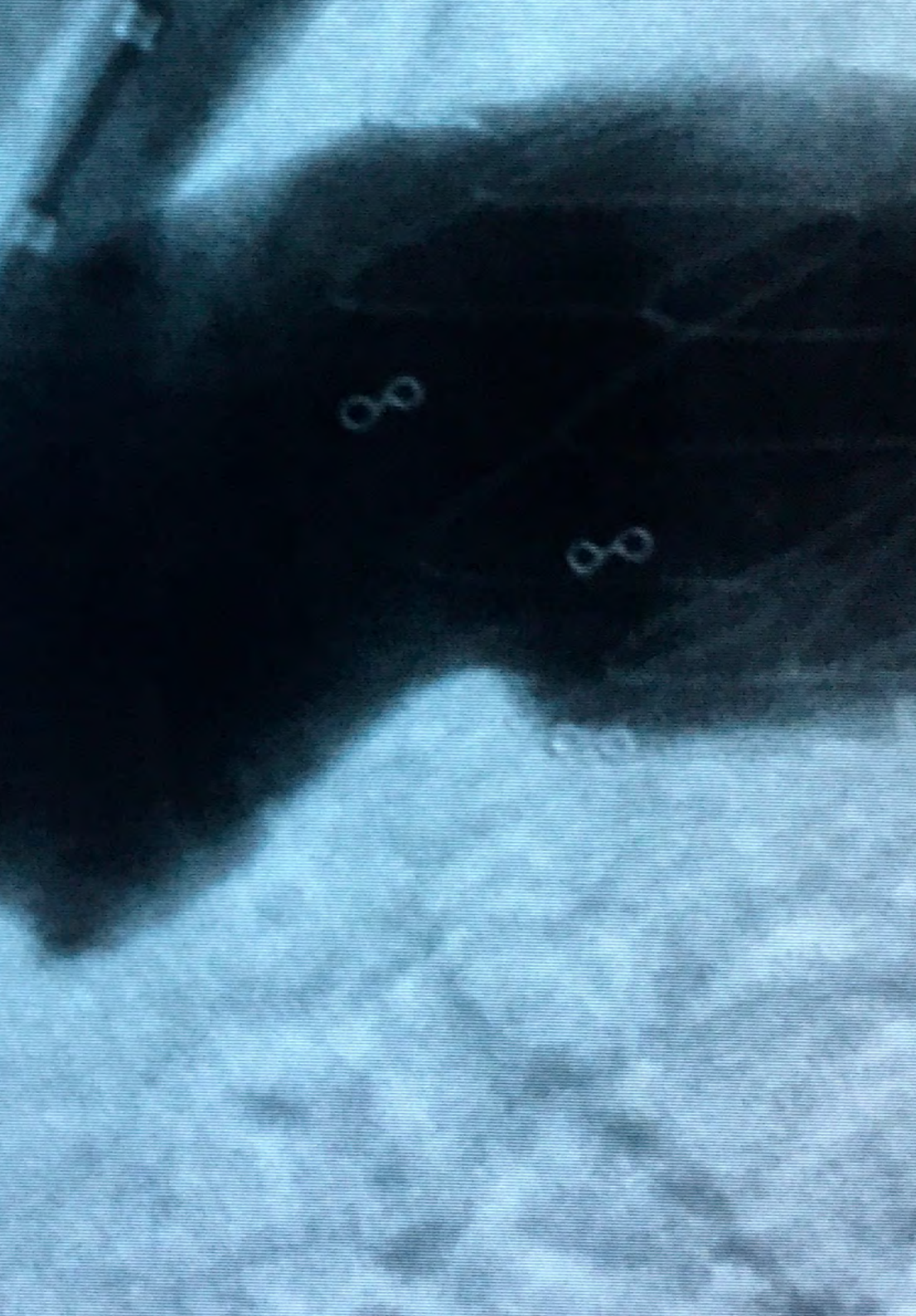
## Module 5. Arterial Diseases

- 5.1 Arterial Diseases
  - 5.1.1. Coronary Arterial Disease
  - 5.1.2. Peripheral Arterial Disease
  - 5.1.3. Cerebral arterial Disease
- 5.2 Etiology of Arterial Diseases
  - 5.2.1. Cardiovascular risk factors: hypertension, diabetes, hyperlipidemia, smoking, sedentary lifestyle
  - 5.2.2. Autoimmune diseases: giant cell arteritis, Takayasu's disease
  - 5.2.3. Genetic diseases: Marfan syndrome, Ehlers-Danlos disease
- 5.3 Symptoms and Signs of Arterial Diseases
  - 5.3.1. Chest pain and other symptoms of coronary artery disease
  - 5.3.2. Intermittent claudication and other symptoms of peripheral arterial disease
  - 5.3.3. Stroke and other symptoms of cerebral arterial disease
- 5.4 Diagnosis of Arterial Diseases: methods and techniques
  - 5.4.1. Imaging tests: angiography, Doppler ultrasonography, computed tomography, magnetic resonance imaging
  - 5.4.2. Vascular function tests: ankle-brachial indices, plethysmography, Doppler study
  - 5.4.3. Clinical evaluation: medical history, physical examination, stress tests
- 5.5 Medical treatment of arterial diseases: antiplatelet and anticoagulant drugs
  - 5.5.1. Antiplatelet agents: aspirin, clopidogrel, ticagrelor
  - 5.5.2. Analgesia: Warfarin, heparin, rivaroxaban
  - 5.5.3. Treatment of hypertension, diabetes and hyperlipidemia to reduce the risk of arterial disease
- 5.6 Endovascular treatment of arterial disease: angioplasty, stenting, atherectomy
  - 5.6.1. Balloon angioplasty: technique to open a narrowed artery
  - 5.6.2. Stent placement: metal tube that keeps an artery open
  - 5.6.3. Atherectomy: technique to remove plaque from an artery
- 5.7 Surgical Treatment of Arterial Diseases: bypass, endarterectomy
  - 5.7.1. Coronary artery bypass: technique for bypassing blood around a blocked coronary artery
  - 5.7.2. Carotid Endarterectomy: technique to remove plaque from the carotid artery
  - 5.7.3. Peripheral bypass surgery: technique to bypass blood around a blocked peripheral artery
- 5.8 Management of Diabetic Foot
  - 5.8.1. Prevention: regular foot care and diabetes control
  - 5.8.2. Wound and ulcer treatment: wound healing and foot care
  - 5.8.3. Revascularization surgery: technique to improve blood flow to the foot
- 5.9 Vascular rehabilitation
  - 5.9.1. Supervised exercise programs
  - 5.9.2. Education on vascular disease management
  - 5.9.3. Occupational therapy and physical therapy
- 5.10 Prognosis and Follow-up of Arterial Diseases
  - 5.10.1. Periodic assessment of disease status
  - 5.10.2. Assessment of response to treatment
  - 5.10.3. Identification and Management of Complications

## Module 6. Venous Diseases

- 6.1 Venous Diseases
  - 6.1.1. Classification of Venous Diseases according to their origin: primary and secondary
  - 6.1.2. Venous diseases according to their anatomical location: superficial and deep varicose veins
  - 6.1.3. Definition and differences between acute and chronic Venous Diseases
- 6.2 Etiology of Venous Diseases
  - 6.2.1. Risk factors for the development of Venous Diseases: age, gender, obesity, sedentary lifestyle
  - 6.2.2. Etiology of secondary venous diseases: trauma, thrombosis, tumors
  - 6.2.3. Relationship between diseases and chronic venous insufficiency
- 6.3 Symptoms and Signs of Venous Diseases
  - 6.3.1. Early symptoms of Venous Diseases: fatigue, heaviness and pain in the legs
  - 6.3.2. Visible signs of Venous Diseases: dilated veins, edema and skin changes
  - 6.3.3. Advanced symptoms of Venous Diseases: ulcers, infections and bleeding
- 6.4 Diagnosis of Venous Diseases: methods and techniques
  - 6.4.1. Non-invasive techniques for the diagnosis of Venous Diseases: ultrasound, Doppler and echo-Doppler
  - 6.4.2. Invasive methods for the diagnosis of Venous Diseases: phlebography and angiotomography
  - 6.4.3. Clinical evaluation of the patient with Venous Diseases: clinical history, physical examination and laboratory tests
- 6.5 Medical treatment of Venous Diseases: phlebotonic drugs, anticoagulants
  - 6.5.1. Phlebotonic drugs for the treatment of Venous Diseases: action and side effects
  - 6.5.2. Anticoagulants for the treatment of Venous Diseases: types and duration of treatment
  - 6.5.3. Combination of phlebotonic and anticoagulant drugs in the treatment of Venous Diseases



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- 6.6 Endovascular treatment of Venous Diseases: sclerosis, phlebectomy, catheterization
    - 6.6.1 Sclerosis as a technique for endovascular treatment of venous diseases: types and procedure
    - 6.6.2 Phlebectomy as an endovascular treatment technique for venous disease: types and procedure
    - 6.6.3 Catheters for endovascular treatment of venous disease: types and clinical use
  - 6.7 Surgical treatment of Venous Diseases: stripping, ligation
    - 6.7.1 Stripping as a surgical technique for the treatment of Venous Diseases: types and procedure
    - 6.7.2 Ligation as a surgical technique for the treatment of Venous Diseases: types and procedure
    - 6.7.3 Comparison between endovascular and surgical techniques for the treatment of Venous Diseases
  - 6.8 Management of venous ulcers
    - 6.8.1 Local care in the management of venous ulcers: cleaning and bandage
    - 6.8.2 Medical treatment of venous ulcers: compressive therapy and topical drugs
    - 6.8.3 Surgical treatment of venous ulcers: skin grafts
  - 6.9 Venous rehabilitation
    - 6.9.1 Exercises for vascular rehabilitation: walking, cycling, and swimming
    - 6.9.2 Massages for vascular rehabilitation: techniques and benefits
    - 6.9.3 Physical therapy techniques for vascular rehabilitation: electrostimulation and ultrasound
  - 6.10 Prognosis and follow-up of Venous Diseases
    - 6.10.1 Factors influencing the prognosis of Venous Diseases: type of disease, age of the patient and presence of complications
    - 6.10.2 Evaluation of the prognosis of Venous Diseases: imaging tests and clinical follow up
    - 6.10.3 Long-term follow-up of patients with venous disease: frequency and purpose of follow-up visits

## Module 7. Lymphatic Diseases

- 7.1 Lymphatic Diseases
  - 7.1.1. Classification of Lymphatic Diseases: primary and secondary
  - 7.1.2. Definition and characteristics of primary lymphatic diseases
  - 7.1.3. Definition and characteristics of secondary lymphatic diseases
- 7.2 Etiology of Lymphatic Diseases
  - 7.2.1. Causes of primary Lymphatic Diseases: Genetic
  - 7.2.2. Causes of secondary lymphatic diseases: traumatic injuries, surgeries, infections
  - 7.2.3. Risk factors of Lymphatic Diseases: obesity, sedentary lifestyle, chronic diseases
- 7.3 Symptoms and Signs of Lymphatic Diseases
  - 7.3.1. Early Symptoms of Lymphatic Diseases
  - 7.3.2. Physical Signs of Lymphatic Diseases
  - 7.3.3. Advance Symptoms of Lymphatic Diseases
- 7.4 Diagnosis of Lymphatic Diseases: methods and techniques
  - 7.4.1. Diagnostic methods for lymphatic diseases: ultrasound, magnetic resonance imaging, biopsy
  - 7.4.2. Diagnostic techniques of Lymphatic Diseases: lymphatic contrast test, lymphography
  - 7.4.3. Assessment of the functional status of the lymphatic system: lymphatic flow measurement techniques
- 7.5 Medical treatment of Lymphatic diseases: lymphotonic drugs
  - 7.5.1. Lymphotonic drugs used in the treatment of Lymphatic Diseases: benzopyrones, diuretics, corticosteroids
  - 7.5.2. Side effects of lymphotonic drugs: hypotension, electrolyte disturbances, gastrointestinal disorders
  - 7.5.3. Medication interactions of lymphotonic drugs: anticoagulants, antihypertensives, diabetes medications
- 7.6 Rehabilitative treatment of lymphatic diseases: sclerosis, embolization
  - 7.6.1. Manual Lymphatic Drainage
  - 7.6.2. Pressure therapy
  - 7.6.3. Compression Therapy
- 7.7 Surgical Treatment of Lymphatic Diseases: dissection, anastomosis
  - 7.7.1. Types of surgeries used in the treatment of Lymphatic Diseases: lymph node dissection, lymphatic-venous anastomosis
  - 7.7.2. Advanced surgical techniques used in the treatment of Lymphatic Diseases: lymph node transplantation, lymphatic transfer
  - 7.7.3. Indications and contraindications of surgery in the treatment of Lymphatic Diseases
- 7.8 Management of Lymphedema
  - 7.8.1. Conservative treatment of lymphedema: skin care, compression, manual lymphatic drainage
  - 7.8.2. Pharmacologic treatment of lymphedema: diuretics, benzopyrones, corticosteroids
  - 7.8.3. Surgical treatment of Lymphedema: volume reduction surgery, vascularized transfer surgery
- 7.9 Vascular rehabilitation
  - 7.9.1. Vascular rehabilitation programs for patients with Lymphatic Diseases: resistance exercises, aerobic exercises, stretching
  - 7.9.2. Role of the occupational therapist in vascular rehabilitation: counseling on self-care techniques, adaptations for home and work
  - 7.9.3. Benefits of vascular rehabilitation on the quality of life of patients with lymphatic diseases
- 7.10 Prognosis and Follow-up of lymphatic Diseases
  - 7.10.1. Factors influencing the prognosis of Lymphatic Diseases: type of disease, severity of disease, presence of comorbidities
  - 7.10.2. Methods of follow-up of Lymphatic Diseases: clinical evaluation, imaging tests, lymphatic function tests
  - 7.10.3. Patient's role in the follow-up of Lymphatic Diseases: symptom monitoring, treatment monitoring, lifestyle changes

## Module 8. Surgical and Endovascular Treatment of Vascular Diseases

- 8.1 Vascular Surgery
  - 8.1.1. Vascular anatomy: structures and function of the circulatory system
  - 8.1.2. Vascular pathologies: diseases and disorders affecting the blood vessels
  - 8.1.3. Revascularization surgery: surgical procedures to restore blood flow
- 8.2 Principles of Endovascular Surgery
  - 8.2.1. Vascular access: techniques to reach the site of intervention inside the body
  - 8.2.2. Device selection: choice of appropriate materials and tools for each procedure
  - 8.2.3. Imaging techniques: use of technology to guide the procedure and monitor the outcome
- 8.3 Selection of the treatment method: criteria and decisions
  - 8.3.1. Severity of the disease: determination of the severity of the pathology and its impact on the patient's health
  - 8.3.2. Location of the lesion: consideration of the location of the vascular problem and surgical accessibility
  - 8.3.3. Patient's health status: assessment of the patient's general medical condition, including possible contraindications
- 8.4 Surgical techniques: description and application
  - 8.4.1. Bypass surgery
  - 8.4.2. Endarterectomy
  - 8.4.3. Aneurysmectomy
- 8.5 Endovascular techniques: description and application
  - 8.5.1. Angioplasty: dilation of a narrowed artery by means of an inflatable balloon
  - 8.5.2. Vascular stent: placement of a metallic device to keep an artery open
  - 8.5.3. Embolization: deliberate obstruction of a blood vessel to treat a lesion or malformation
- 8.6 Vascular Surgery Complications
  - 8.6.1. Thrombosis: formation of blood clots
  - 8.6.2. Hemorrhage: excessive bleeding during or after the procedure
  - 8.6.3. Infection: development of an infection at the site of the procedure

- 8.7 Management of Perioperative Complications
  - 8.7.1. Monitoring of vital signs: constant monitoring of the patient's health during surgery and recovery
  - 8.7.2. Pharmacological treatment: administration of drugs to prevent or treat complications
  - 8.7.3. Additional surgical intervention: performance of rescue surgery to solve a complication
- 8.8 Reinterventions in Vascular Surgery
  - 8.8.1. Revision of anastomosis: correction of a junction between two blood vessels previously surgically joined
  - 8.8.2. Vascular prosthesis replacement: substitution of a previous vascular implant that has failed or generated complications
  - 8.8.3. Treatment of late complications: resolution of complications that arise after an initial vascular surgery

## Module 9. Pre- and post-operative care of the vascular patient

- 9.1 Preoperative evaluation: clinical history and physical examination
  - 9.1.1. Importance of the clinical history in the preoperative assessment: obtaining information on medical history, medications, allergies, lifestyle, etc
  - 9.1.2. Physical examination in the preoperative evaluation: assessment of cardiovascular, respiratory and neurological function, measurement of blood pressure, auscultation of heart and lung sounds, etc
  - 9.1.3. Surgical risk assessment based on age, general health status, presence of chronic diseases, etc
- 9.2 Preoperative evaluation: diagnostic tests and preparation of the patient
  - 9.2.1. Importance of the preoperative evaluation in surgical risk reduction
  - 9.2.2. Types of diagnostic tests used in the preoperative assessment and their relevance in clinical decision making
  - 9.2.3. Preparation of the patient for the preoperative evaluation and its influence on the safety and success of the surgical procedure

- 9.3 Postoperative care planning
  - 9.3.1. Assessment of postoperative care needs: patient dependency, pain level, nutritional needs, mobility, etc
  - 9.3.2. Planning the transition from hospital to home: preparation of the home, follow-up by a physician or nurse, recommendations for recovery, etc
  - 9.3.3. Long-term medical follow-up planning: follow-up appointments with surgeon, follow-up testing, lifestyle recommendations to maintain vascular health
- 9.4 Postoperative Monitoring and Control
  - 9.4.1. Importance of postoperative monitoring: early detection of complications, evaluation of treatment efficacy
  - 9.4.2. Postoperative monitoring techniques: monitoring of blood pressure, heart rate, respiratory rate, oxygenation, etc
  - 9.4.3. Management of postoperative complications: prevention of infections, pain control, management of arterial hypertension, treatment of renal insufficiency, etc
- 9.5 Postoperative Pain Management
  - 9.5.1. Importance of postoperative monitoring: early detection of complications, assessment of treatment efficacy, monitoring of patient progress, etc
  - 9.5.2. Postoperative monitoring techniques: monitoring of blood pressure, heart rate, respiratory rate, oxygenation, etc
  - 9.5.3. Management of postoperative complications: prevention of infections, pain control, management of arterial hypertension, treatment of renal insufficiency, etc
- 9.6 Management of postoperative complications
  - 9.6.1. Post-Operation Infections
  - 9.6.2. Postoperative bleeding
  - 9.6.3. Venous thromboembolism
- 9.7 Care of Surgical Wounds
  - 9.7.1. Suture Techniques
  - 9.7.2. Use of bandages and dressings
  - 9.7.3. Assessment and prevention of surgical wound infection
- 9.8 Postoperative Nutrition and Hydration Management
  - 9.8.1. Types of Diets Post Surgery
  - 9.8.2. Routes of administration of nutrition and fluids
  - 9.8.3. Nutritional and Vitamin Supplements





- 9.9 Postoperative rehabilitation and physiotherapy
  - 9.9.1. Early mobilization exercises
  - 9.9.2. Muscle strengthening
  - 9.9.3. Physical therapy techniques to improve motor function
- 9.10 Long-Term Monitoring of the Vascular Patient
  - 9.10.1. Control of High Blood Pressure
  - 9.10.2. Assessment of Renal Function
  - 9.10.3. Monitoring progression of vascular disease and prevention of recurrence

## Module 10. Research and Advances in Vascular Pathology

- 10.1 Vascular Pathology Studies design
  - 10.1.1. Vascular Pathology Clinical Trials Design
  - 10.1.2. Vascular Pathology Cohort Studies
  - 10.1.3. Vascular Pathology Cohort Studies
- 10.2 Statistical Analysis of Data in Vascular Pathology
  - 10.2.1. Multivariate analysis methods in vascular pathology
  - 10.2.2. Vascular Pathology Survival Analysis
  - 10.2.3. Vascular Pathology Survival Analysis
- 10.3 Advances in Diagnostic Techniques in Vascular Pathology
  - 10.3.1. Vascular Ultrasound
  - 10.3.2. Computed Tomography Angiography (CTA)
  - 10.3.3. Vascular Magnetic Resonance Imaging (MRI)
- 10.4 Research in Arterial Diseases
  - 10.4.1. Atherosclerosis and Coronary Artery Disease
  - 10.4.2. Research on aortic aneurysms
  - 10.4.3. Research in peripheral arterial disease and intermittent claudication
- 10.5 Research in Venous Diseases
  - 10.5.1. Deep Vein Thrombosis (DVT)
  - 10.5.2. Chronic Venous Insufficiency (IVC)
  - 10.5.3. Post-thrombotic syndrome

- 10.6 Research in Lymphatic Diseases
  - 10.6.1. Lymphedema
  - 10.6.2. Congenital Lymphatic Diseases
  - 10.6.3. Lymphangioma
- 10.7 Innovative Therapies in Vascular Pathology
  - 10.7.1. Cell therapy for vascular regeneration
  - 10.7.2. Gene therapy to treat arterial disease
  - 10.7.3. Growth factor therapy for vascular tissue regeneration
- 10.8 Biomarkers in Vascular Pathology
  - 10.8.1. C-reactive protein (CRP)
  - 10.8.2. B-type natriuretic peptide (BNP)
  - 10.8.3. Metalloproteases
- 10.9 Prevention of vascular diseases
  - 10.9.1. Control of cardiovascular risk factors
  - 10.9.2. Physical Activity and Regular Exercise
  - 10.9.3. Healthy diet and body weight control
- 10.10 Future trends in Vascular Pathology
  - 10.10.1. Nanotechnology for the diagnosis and treatment of vascular diseases
  - 10.10.2. Stem Cell Therapy for Vascular Regeneration
  - 10.10.3. Advances in gene therapy for the treatment of vascular diseases



*A program that will allow you to be up to date in Gene Therapy and future trends in Vascular Pathology"*

# 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.

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

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

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

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



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

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

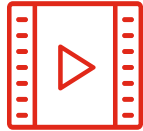
*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

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

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



This program offers the best educational material, prepared with professionals in mind:



#### Study Material

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

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### Interactive Summaries

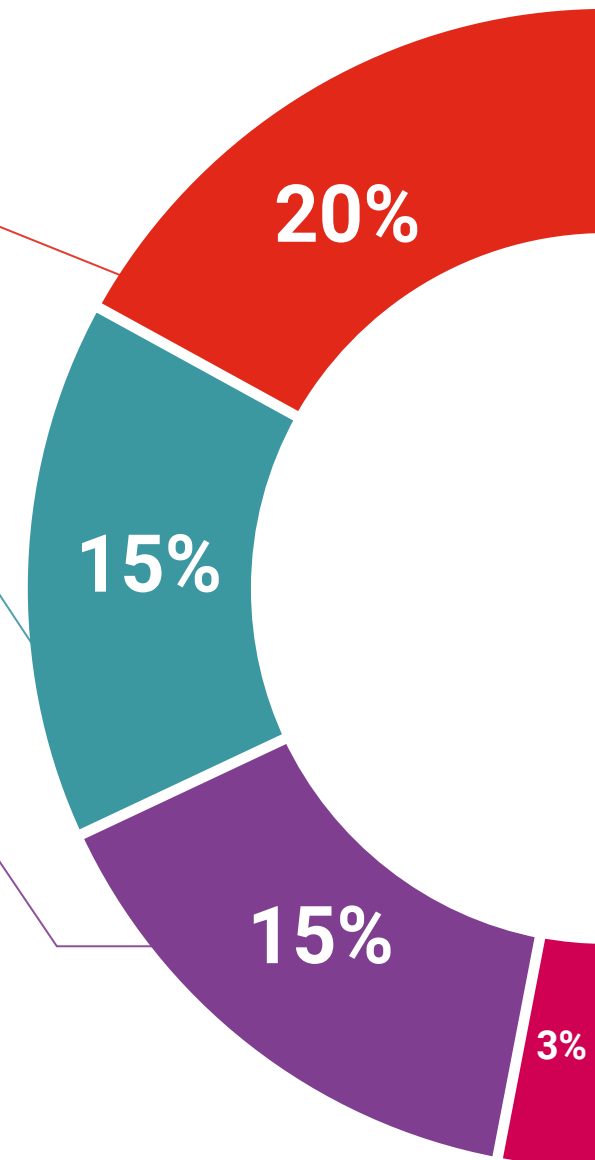
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.







#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



# 07 Certificate

The Professional Master's Degree in Vascular Surgery guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree diploma issued by TECH Technological University.



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

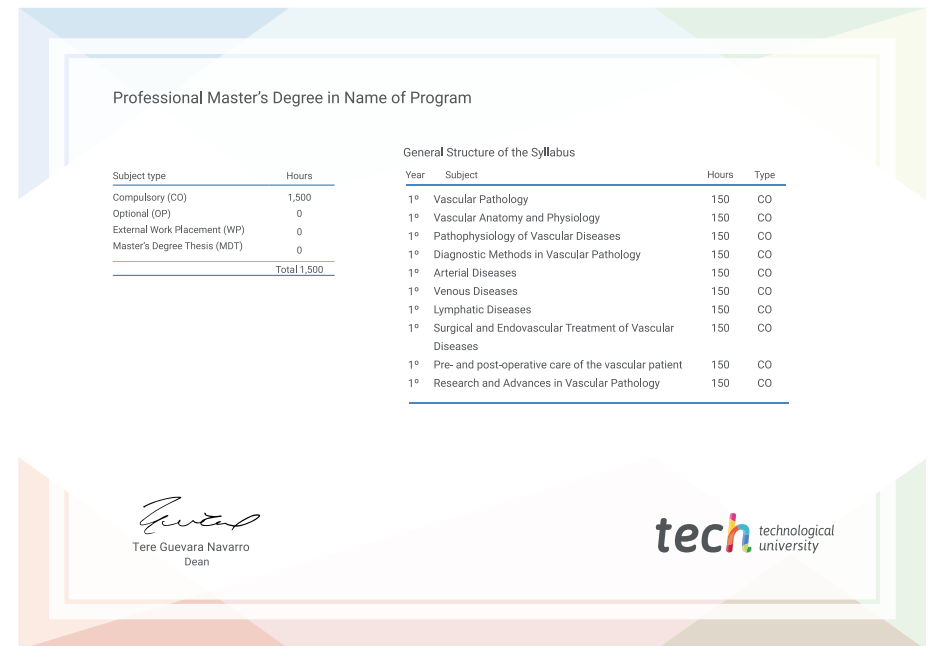
This **Professional Master's Degree in Vascular Surgery** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Professional Master's Degree** issued by **TECH Technological University** via tracked delivery\*

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Professional Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Professional Master's Degree in Vascular Surgery**

Official N° of hours: **1,500 h**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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



## Professional Master's Degree Vascular Surgery

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

# Professional Master's Degree

## Vascular Surgery