

Professional Master's Degree

Vascular Interventional Procedures





Professional Master's Degree Vascular Interventional Procedures

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Accreditation: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/medicine/professional-master-degree/master-vascular-interventional-procedures

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01

Introduction

The World Health Organization has established that cardiovascular diseases are the leading cause of death on a global scale, claiming approximately 17.9 million lives per year. Within this spectrum, vascular Interventional Procedures play a crucial role in the management of complications such as aneurysms. Faced with this, physicians have the task of frequently updating their knowledge in order to incorporate the most advanced technological tools into their practice and therefore maximize the recovery or survival of their patients. To facilitate this update, TECH implements an exclusive university program focused on the latest innovations in this health field. A very complete program that is taught in a convenient 100% online mode and gives professionals the opportunity to plan their own schedules.





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Thanks to this 100% online Professional Master's Degree, you will master the latest technologies in Vascular Interventional Procedures and you will carry out the most efficient treatments”

The area of Vascular Interventional Procedures has undergone significant transformations due to the advancement of medical technology, driven by Industry 4.0. Examples of this are angioplasties, embolization techniques and stenting. In this way, minimally invasive procedures are completely revolutionizing the approach to vascular diseases. Among the main advantages of these methods are their ability to reduce the risk of postoperative complications (such as infections or excessive bleeding), minimize recovery time and reduce damage to healthy tissues surrounding the treatment area.

Within this framework, TECH has developed an exclusive and innovative Professional Master's Degree in Vascular Interventional Procedures. Its main objective is to bring medical personnel closer to recent advances in endovascular technology, highlighting imaging techniques. The academic itinerary will delve into the handling of instruments such as

Ultrasound, Computed Tomography or Magnetic Resonance Imaging, which will allow graduates to make more accurate diagnoses. Likewise, the syllabus will deepen in sophisticated techniques of Angioplasty such as the use of the Balloon or Stent. The program will also offer the keys to perform an optimal approach in common conditions, ranging from Peripheral Artery Disease or Aneurysms to Embolic Occlusion. Thanks to this, specialists will develop clinical competences to perform rigorous diagnoses and perform vascular interventions with maximum effectiveness.

In addition, TECH employs a 100% online methodology, where didactic strategies such as the Relearning method stand out, based on the repetition of key concepts to fix knowledge and facilitate the updating of competencies. All doctors will need is an electronic device with Internet access to access the Virtual Campus and enjoy the most dynamic didactic materials on the educational market. In addition, they will find a variety of resources

in a variety of formats such as interactive summaries or specialized readings. Undoubtedly, a program based on the latest scientific postulates in Vascular Interventional Procedures that will significantly optimize the work of physicians.

This **Professional Master's Degree in Vascular Interventional Procedures** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of case studies presented by experts in Angiology and Vascular Surgery
- ♦ The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable 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



If you have set yourself the goal of renewing your knowledge, TECH gives you the opportunity to achieve it while combining it with your professional responsibilities"

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You will delve into the most sophisticated Multimodal Imaging Techniques, which will allow you to obtain detailed information about the structure and function of the body's organs”

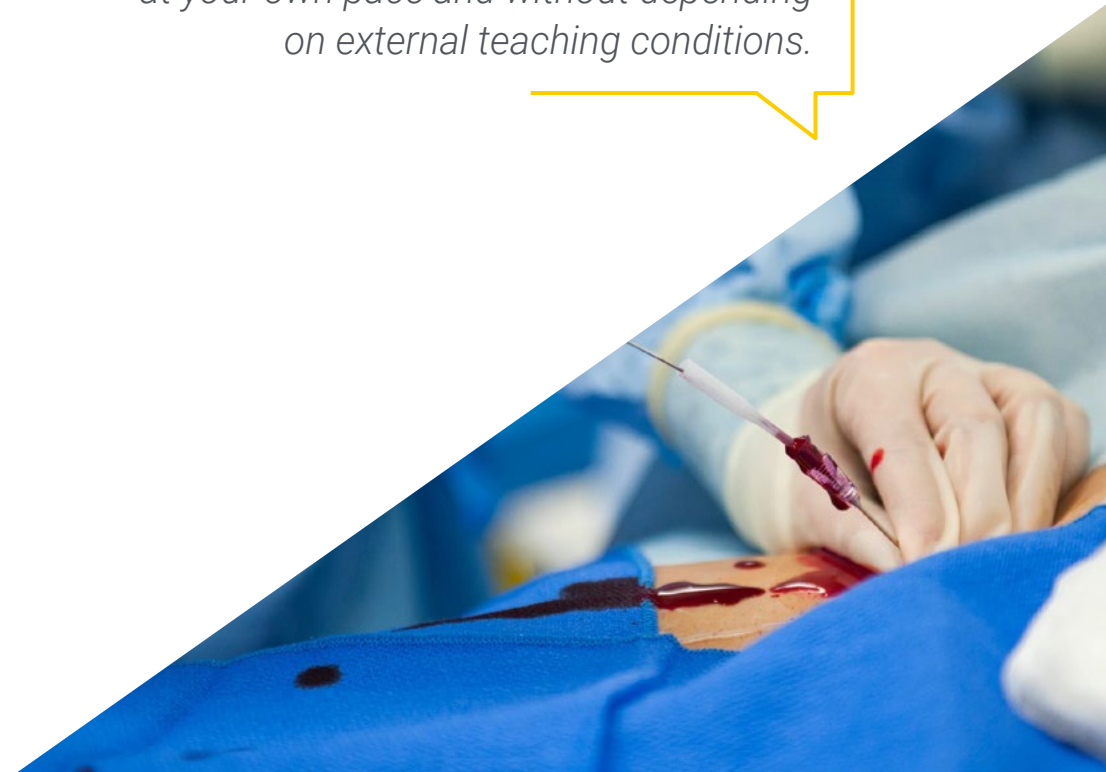
The program's teaching staff includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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

You will perfect your therapeutic procedures through innovative strategies of Endovascular Treatment, with which you will prevent the management of complications such as internal bleeding.

TECH's characteristic Relearning system will allow you to renew your knowledge at your own pace and without depending on external teaching conditions.



02 Objectives

By completing this Professional Master's Degree, physicians will stand out for their holistic vision of Vascular Interventional Procedures. In this sense, medical professionals will obtain advanced practical skills for the use of catheterization, angioplasty and embolization techniques, among others. At the same time, graduates will remain at the forefront of the latest technologies used in this field of specialization, among which the following stand out Computed Tomography or Magnetic Resonance Imaging. Therefore, physicians will develop competencies in the comprehensive management of patients with vascular pathologies requiring interventional treatments.



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You will acquire a deep knowledge of the most avant-garde techniques of Vascular Interventional Procedures to treat a wide range of pathologies, such as Arterial Stenosis or Aneurysms”



General Objectives

- ◆ Develop the technical skills necessary to accurately perform and analyze angiographic studies
- ◆ Promote an appreciation of the importance of multidisciplinary teamwork in the interpretation and management of vascular angiographic results
- ◆ Acquire skills to apply techniques such as angioplasty, Stent placement, and other minimally invasive procedures
- ◆ Determine the procedures and protocols for performing and interpreting computed tomography angiography (CTA) in the context of vascular interventional procedures



You will expand your knowledge through real cases and the resolution of complex situations in simulated learning environments"





Specific Objectives

Module 1. Vascular Angiography

- ♦ Acquire specialized knowledge about the physical and technological principles behind vascular angiography, including digital imaging, contrast injection and fluoroscopy
- ♦ Develop practical skills in patient preparation, safe contrast administration, and monitoring during vascular angiography procedures
- ♦ Analyze clinical cases and angiographic studies to identify vascular abnormalities, assess disease severity and plan therapeutic interventions
- ♦ Integrate angiographic findings with clinical information and results of other diagnostic imaging tests to make an accurate differential diagnosis and formulate an optimal treatment plan for each patient

Module 2. Non-Invasive Vascular Imaging

- ♦ Analyze the physical principles and technology behind Doppler ultrasound as a tool for the evaluation of vascular flow and structure
- ♦ Identify the characteristics and limitations of magnetic resonance angiography (MRA) in the visualization of vascular anatomy and its usefulness in the diagnosis of vascular pathologies
- ♦ Compare the advantages and disadvantages of each noninvasive vascular imaging modality in specific clinical situations, such as Peripheral Artery Disease, Aneurysms, and Vascular Malformations
- ♦ Determine the clinical indications and benefits of each imaging modality in diagnosis, follow-up and treatment planning in vascular diseases

Module 3. Vascular Interventions

- ♦ Determine the fundamental principles of Angioplasty, including balloon dilatation and the use of Stents, in the treatment of arterial stenosis and Occlusions
- ♦ Identify the indications and contraindications for percutaneous angioplasty and detail the necessary pre- and postoperative care
- ♦ Analyze the techniques and devices used in embolization, including embolization materials and selective occlusion procedures
- ♦ Explore the applications of vascular interventional procedures in the treatment of aneurysms, vascular malformations and arteriovenous fistulae

Module 4. Interventional Procedures in Carotid and Vertebral Arteries

- ♦ Identify the indications for interventional procedures in carotid and vertebral arteries, including significant stenosis and aneurysms
- ♦ Determine the imaging techniques used in the diagnosis and follow-up of carotid and vertebral artery disease, such as magnetic resonance angiography (MRA) and computed tomography angiography (CTA)
- ♦ Establish the therapeutic options for carotid stenosis, including carotid endarterectomy and angioplasty with stenting
- ♦ Explore embolization techniques used in the treatment of carotid and vertebral artery aneurysms

Module 5. Interventional Procedures in Arteries of the Upper Extremities

- ♦ Determine the indications for Interventional Procedures in arteries in the upper extremity, including stenosis, occlusions and dissections
- ♦ Establish the imaging techniques used in the diagnosis and follow-up of upper extremity artery disease, such as computed tomography arteriography (CTA) and Doppler ultrasonography
- ♦ Examine therapeutic options for Stenosis and Occlusions in arteries in the upper extremities, including balloon angioplasty and Stenting
- ♦ Explore embolectomy and thrombectomy techniques used in the treatment of acute occlusions in these arteries

Module 6. Interventional Procedures in Extremity, Neck and Central Thoracic Veins

- ♦ Identify the indications for Interventional Procedures in upper extremity, neck and central thoracic veins, including thrombosis, stenosis and venous insufficiency
- ♦ Analyze the imaging techniques used in the diagnosis and follow-up of venous disease in these areas, such as venous Doppler ultrasound and computed tomography venography (CTV)
- ♦ Analyze the therapeutic options for Deep Venous Thrombosis (DVT) in the upper extremities, including thrombectomy and the use of filtering devices
- ♦ Explore angioplasty and stenting techniques for venous stenosis of the upper extremities and cervical areas

Module 7. Thoracic Aorta Interventional Procedures

- ♦ Identify the indications for interventional thoracic aortic surgery, including Aneurysms, Dissections and other pathologies
- ♦ Review imaging techniques used in the diagnosis and follow-up of thoracic aortic disease, such as computed tomography angiography (CTA) and magnetic resonance imaging (MRI)
- ♦ Determine therapeutic options for thoracic aortic aneurysms, including aortic stent-graft placement (EVAR) and open surgery
- ♦ Explore endovascular repair techniques for aortic dissections in the thoracic aorta

Module 8. Interventional Procedures in Abdominal Aortic and Pelvic Arteries

- ♦ Identify the indications for interventional procedures in the abdominal aorta and iliac arteries, including Aneurysms, Stenosis and Occlusions
- ♦ Describe the imaging techniques used in the diagnosis and follow-up of disease in the abdominal aorta and iliac arteries, such as computed tomography angiography (CTA) and magnetic resonance angiography (MRA)
- ♦ Discuss therapeutic options for abdominal aortic aneurysms, including endovascular repair (EVAR) and open surgery
- ♦ Explore angioplasty and Stenting techniques for iliac artery Stenosis and Occlusions



Module 9. Interventional Procedures in the Arteries of the Lower Extremities

- ◆ Identify the indications for intervention in lower extremity arteries, including Stenosis, Occlusions and Peripheral Arterial Disease
- ◆ Determine the imaging techniques used in the diagnosis and follow-up of lower extremity artery disease, such as digital arteriography and Doppler ultrasound
- ◆ Discuss the therapeutic options for Stenosis and Occlusions in the lower extremity arteries, including balloon angioplasty and Stent placement
- ◆ Explore surgical and endovascular revascularization techniques in the treatment of Peripheral Artery Disease

Module 10. Interventional Procedures in Lower Extremity Veins

- ◆ Identify the indications for Interventional Procedures in Lower Extremity Veins, including Deep Venous Thrombosis, obstructions and chronic venous syndromes
- ◆ Describe imaging techniques used in the diagnosis and follow-up of lower extremity vein disease, such as venous Doppler ultrasound and phlebography
- ◆ Determine the therapeutic options for Deep Venous Thrombosis, chronic obstructions and venous syndromes, including Thrombectomy, Venous Angioplasty and Stenting
- ◆ Explore endovenous ablation and sclerotherapy techniques in the treatment of varicose veins and venous malformations

03 Skills

Upon completion of this comprehensive university program, medical professionals will be highly qualified to make more accurate diagnoses and perform vascular interventions in a safe and efficient manner. At the same time, graduates will develop advanced skills to deftly handle innovative technological tools such as CT scans, MRI or Energy Doppler Ultrasound. They will also master methods such as Stent placement, embolization and angioplasty. In this way, specialists will adapt with immediacy to the technological changes that occur in their field; applying these advances in their daily clinical practice.





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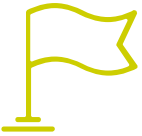
You will easily adapt to the rapid technological changes in the field of Vascular Interventional Procedures and apply these innovations to your clinical procedures”



General Skills

- ◆ Develop practical skills in patient preparation, safe contrast administration, and monitoring during vascular angiography procedures
- ◆ Determine the procedures and protocols for performing and interpreting computed tomography angiography (CTA) in the context of vascular interventional procedures
- ◆ Provide a theoretical and practical basis for vascular interventions in the context of vascular Interventional Procedures
- ◆ Examine the anatomy and physiology of the carotid and vertebral arteries, as well as their importance in cerebral perfusion
- ◆ Develop practical skills in the performance of Interventional Procedures in carotid and vertebral arteries
- ◆ Identify the indications for Interventional Procedures in upper extremity, neck and central thoracic veins, including thrombosis, stenosis and venous insufficiency
- ◆ Develop practical skills in the performance of interventional procedures in the thoracic aorta
- ◆ Acquire knowledge of imaging techniques used in the diagnosis and follow-up of diseases in this anatomical region





Specific Skills

- Analyze clinical cases and angiographic studies to identify vascular abnormalities, assess disease severity and plan therapeutic interventions
- Integrate angiographic findings with clinical information and results of other diagnostic imaging tests to make an accurate differential diagnosis and formulate an optimal treatment plan for each patient
- Identify the characteristics and limitations of magnetic resonance angiography (MRA) in the visualization of vascular anatomy and its usefulness in the diagnosis of vascular pathologies
- Generate practical skills in the performance of interventional procedures in arteries of the upper extremities
- Promote the development of practical skills and techniques necessary to perform vascular interventions in a safe and effective manner
- Analyze the imaging techniques used in the diagnosis and follow-up of venous disease in these areas, such as venous Doppler ultrasound and computed tomography venography (CTV)
- Acquire specialized knowledge on the imaging techniques used in the diagnosis and follow-up of diseases in this section of the aorta
- Promote patient safety and improved outcomes by understanding the potential complications and their management during these procedures
- Become familiar with the indications and contraindications for interventions in the arteries of the lower extremities
- Be aware of the indications and contraindications for lower extremity vein interventions
- Obtain practical skills in performing interventional procedures on the arteries of the lower extremities
- Develop practical skills in performing interventional procedures in the veins of the lower extremities

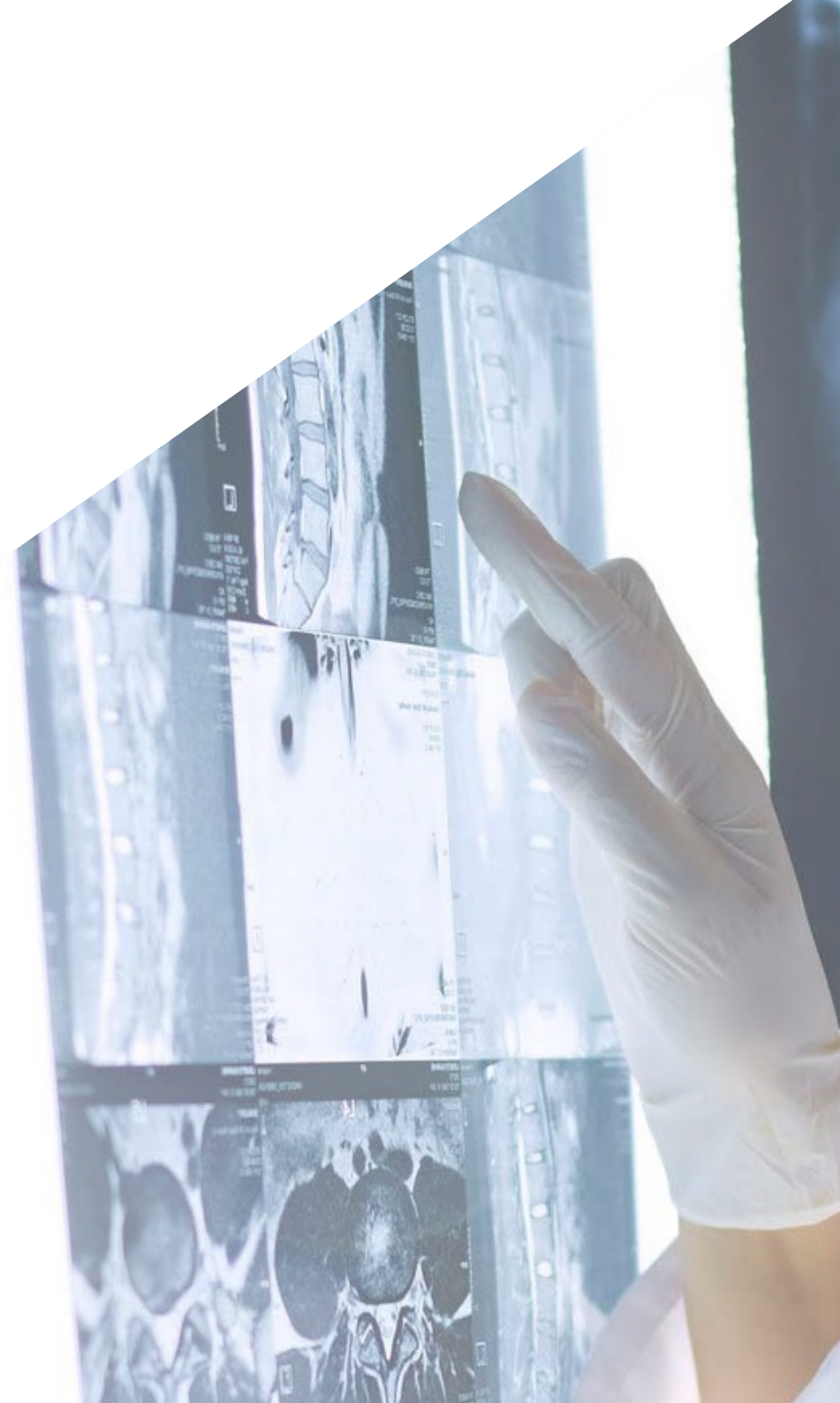


You will have access to the best multimedia resources to enrich your learning and put what you have studied into practice in a much easier way”

04

Course Management

TECH's philosophy is based on providing the most complete and renewed university programs in the academic panorama, which is why it carries out a rigorous process to form its teaching staff. For this Professional Master's Degree, it brings together authentic references in the field of Vascular Interventional Procedures. These professionals have a wide professional background, where they have been part of reference health institutions. Therefore, they have accumulated multiple cases of success in vascular interventions and have helped their patients to optimize their wellbeing. Undoubtedly, this is an endorsement for the graduates, who will have access to an experience that will raise their professional horizons.



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An experienced teaching team, highly specialized in Vascular Interventional Procedures, will guide you throughout the learning process and will provide you with personalized advice”

Management



Dr. Del Río Solá, María Lourdes

- ♦ Chief from the Vascular Angiology and Surgery Service at the Valladolid University Clinical Hospital
- ♦ Specialist in Angiology and Vascular Surgery
- ♦ European Board in Vascular Surgery
- ♦ Academic Correspondent of the Royal Academy of Medicine and Surgery
- ♦ Full Professor at the European University Miguel de Cervantes
- ♦ Associate Professor in Health Sciences at the University of Valladolid

Professors

Dr. Estévez Fernández, Isabel

- ♦ Chief of the Angiology and Vascular Surgery Section of the Hospital San Jorge de Huesca
- ♦ Physician at the Clinical Hospital of Valladolid
- ♦ Stay at Barnes-Jewish Hospital, St. Louis, Missouri, USA
- ♦ Doctor of Medicine from the University of Valladolid
- ♦ Degree in Medicine from the University of Valladolid
- ♦ University Expert in Venous Thromboembolic Disease and Cancer
- ♦ Training as Director of X-Ray Facilities by the Spanish Society of Medical Physics
- ♦ Course on Radiological Protection by the Ministry of Health, Consumption and Social Welfare
- ♦ Member of: Spanish Society of Angiology and Vascular Surgery

Dr. Gutiérrez Véliz, Daniel

- ♦ Deputy Chief of Surgery and Chief of Vascular Surgery at Chilean Public Assistance Emergency Hospital
- ♦ General and Peripheral Vascular Surgeon of Public Assistance Emergency Hospital
- ♦ Peripheral Vascular Surgeon at las Condes and Redsalud Clinic, Santiago de Chile
- ♦ Bachelor of Medicine from the Catholic University of Maule
- ♦ Expert in General Surgery from the University of Santiago de Chile
- ♦ Subspecialist in Peripheral Vascular Surgery from the University of Chile, Clinical University Hospital of Chile
- ♦ Member of: Chilean Society of Surgery (SOCHICIR), Chilean Society of Vascular and Endovascular Surgery (SOCHIVAS) and American College of Surgery (FACS)



Dr. González Ruíz, Aleya

- ◆ Head of the Angiology Area at Clinext (Extremities Clinic)
- ◆ Specialist Physician in Angiology and Vascular Surgery
- ◆ Bachelor of Medicine, General Surgery and Midwife by the Autonomous University of Chiapas
- ◆ Specialty in Angiology and Vascular and Endovascular Surgery at the Antonio Fraga Mouret Specialty Hospital
- ◆ Postgraduate in Doppler Ultrasound, ANÁHUAC University
- ◆ Postgraduate in Integral Angiology, ANÁHUAC University
- ◆ Postgraduate in Endovascular Surgery, ANÁHUAC University
- ◆ Member of: Mexican Society of Angiology and Vascular and Endovascular Surgery

Dr. Boda Sandoval, Pablo Martin

- ◆ Medical Angiologist of the National Institute of Rehabilitation "Luis Guillermo Ibarra Ibarra", (Mexico)
- ◆ Specialist Physician in Angiology, Vascular and Endovascular Surgery
- ◆ Surgeon at the Monterrey Institute of Technology and Higher Education (ITESM)
- ◆ Specialty in Angiology and Vascular Surgery from the National Autonomous University of Mexico.
- ◆ Residency in Angiology and Vascular Surgery at the La Raza National Medical Center Specialty Hospital
- ◆ Vascular Doppler Echo Course of the International Association of Noninvasive Vascular Diagnosis

05

Structure and Content

Through this program, physicians will have a solid knowledge of Vascular Anatomy, Physiopathology and the latest techniques in Vascular Interventional Procedures. The academic itinerary will deepen on the handling of sophisticated tools for endovascular procedures, such as Access Needles, Catheters or Dilators. Likewise, the syllabus will analyze Non Invasive Vascular Imaging techniques (including Ultrasound, Computed Tomography and Magnetic Resonance Imaging). The didactic materials will also cover issues such as interventions on Carotid Arteries, Thoracic Aorta and even in Veins of the Lower Extremities. Therefore, graduates will make accurate diagnoses and perform effective vascular operations.



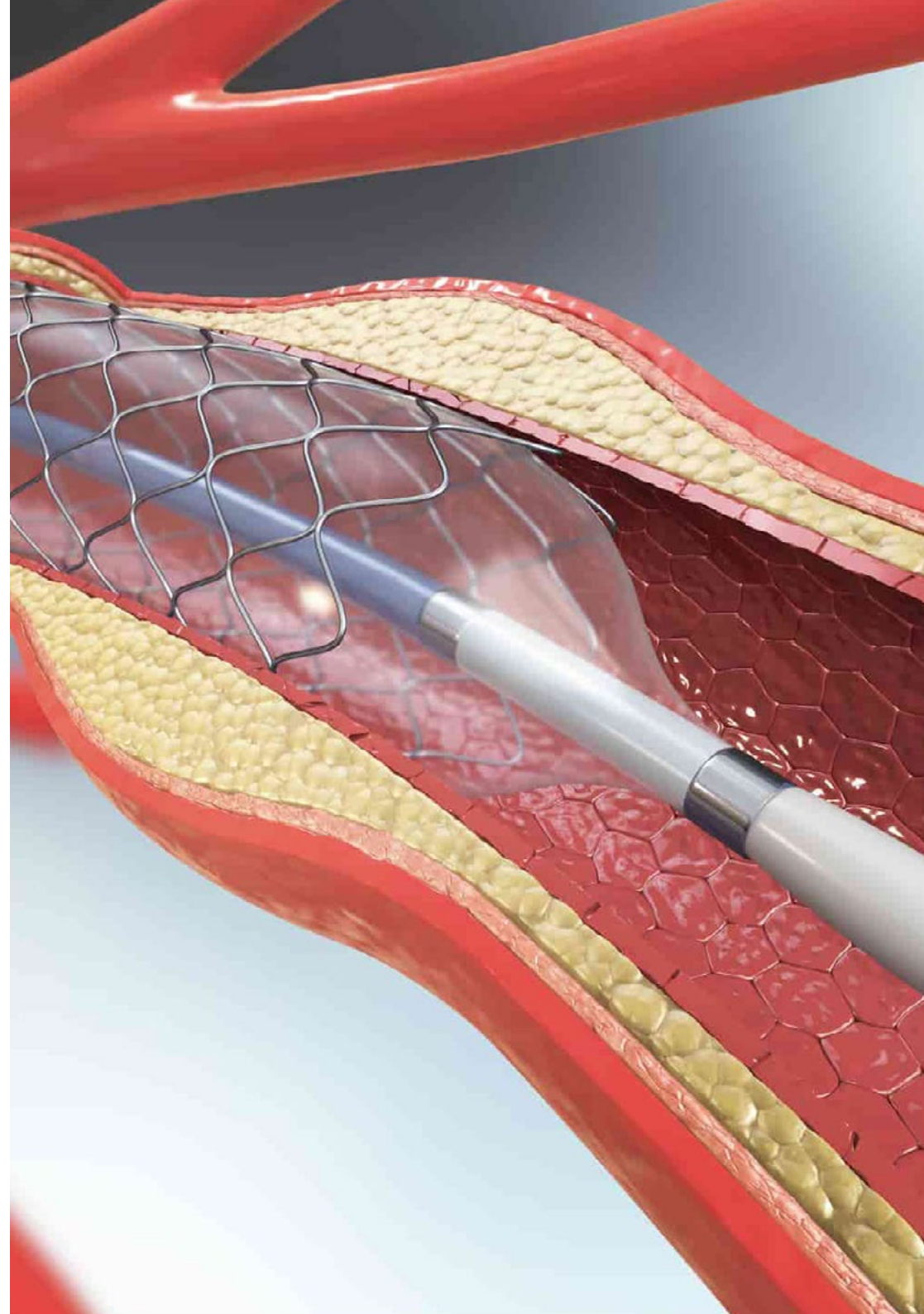


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You will incorporate into your clinical practice the most avant-garde diagnostic and therapeutic procedures in the field of Vascular Interventional Procedures”

Module 1. Vascular Angiography

- 1.1. Evaluation and Management of the Pre-procedure of the Patient with Vascular Pathology
 - 1.1.1. Clinical History and Physical Evaluation
 - 1.1.2. Psychological Preparation and Informed Consent
 - 1.1.3. Evaluation of Contraindications and Risk Factors
- 1.2. Safety in Vascular Interventional Procedures
 - 1.2.1. Radiological Protection for the Patient and Staff
 - 1.2.2. Infection Prevention and Sterility Control
 - 1.2.3. Emergency Procedures and Response Plan
- 1.3. Tools in Vascular Intervention: Access Needles, Guides, Dilators and Catheters
 - 1.3.1. Access Needles
 - 1.3.2. Guides and Advancement Techniques
 - 1.3.3. Dilators and Catheters
- 1.4. Contrast Agents in Vascular Intervention
 - 1.4.1. Iodinated Contrast Agents
 - 1.4.2. Evaluation of Renal Function and Risk of Nephrotoxicity
 - 1.4.3. Adverse Reactions to Contrast
- 1.5. Alternative Contrast Agents: Carbon Dioxide Gas, Gadolinium Chelates
 - 1.5.1. Carbon Dioxide Gas as a Contrast Agent
 - 1.5.2. Gadolinium Chelates in Angiography
 - 1.5.3. Alternative Contrast Agents
- 1.6. Intraprocedural Care in Vascular Intervention: Sedation, Antibiotic Prophylaxis, Blood Pressure Control, Anticoagulation
 - 1.6.1. Safe Administration of Sedatives during the Procedure
 - 1.6.2. Antibiotics and Prophylaxis Protocols prior to the Intervention
 - 1.6.3. Hemodynamic Stability and Prevention of Thrombosis
- 1.7. Arterial Puncture: Common Femoral Artery, Axillary or High Brachial Artery, Translumbar Aorta, Unusual Arterial Access
 - 1.7.1. Puncture Site and Artery Evaluation
 - 1.7.2. Femoral and Axillary Artery Puncture Techniques
 - 1.7.3. Management of Unusual Puncture Sites



- 1.8. Venous Puncture: Common Femoral Vein, Internal Jugular Vein, Subclavian Vein, Veins of the Upper Extremity, Inferior Cava Vein
 - 1.8.1. Evaluation of the Central and Peripheral Venous System
 - 1.8.2. Venous Catheter Puncture and Positioning Techniques
 - 1.8.3. Complications and Management Strategies during and after Puncture
 - 1.9. Other Venous Accesses
 - 1.9.1. Deep Vein Access: Deep Femoral Vein or External Jugular Vein
 - 1.9.2. Access in Emergency Situations
 - 1.9.3. Risk-Benefit Assessment to Determine the Best Venous Access
 - 1.10. Do's and Don'ts in Vascular Interventional Procedures
 - 1.10.1. Safety Protocols and Etiquette in the Angiography Area
 - 1.10.2. Preventing Complications and Common Errors During the Procedure
 - 1.10.3. Teamwork Strategies in the Angiographic Environment
- Module 2. Non-Invasive Vascular Imaging**
- 2.1. Ultrasound in the Diagnosis of Vascular Pathology Susceptible to Intervention.
 - 2.1.1. Ultrasound
 - 2.1.2. Clinical Applications of Vascular Ultrasound
 - 2.1.3. Acquisition Techniques and Scanning Protocols
 - 2.2. Grayscale Ultrasound in the Diagnosis of Vascular Pathology Susceptible to Intervention
 - 2.2.1. Interpretation of Grayscale Images
 - 2.2.2. Assessment of Vascular Morphology and Structure
 - 2.2.3. Differential Diagnosis and Normal Findings
 - 2.3. Doppler Ultrasound in the Diagnosis of Vascular Pathology Susceptible to Intervention
 - 2.3.1. Doppler Effect
 - 2.3.2. Interpretation of Real Time Blood Flows
 - 2.3.3. Measurement of Velocities and Calculation of Hemodynamic Indices
 - 2.4. Color Doppler Ultrasound in the Diagnosis of Vascular Pathology Susceptible to Intervention
 - 2.4.1. Color Doppler Ultrasound over Conventional Doppler Ultrasound
 - 2.4.2. Applications in the Diagnosis of Vascular Pathology
 - 2.4.3. Limitations and Artifacts of Color Doppler Ultrasound
 - 2.5. Energy Doppler Ultrasound in the Diagnosis of Vascular Pathology
 - 2.5.1. Energy Doppler Ultrasound
 - 2.5.2. Clinical Utility in the Study of Low Velocity Vascular Flows
 - 2.5.3. Evaluation of Tissue Perfusion
 - 2.6. Contrast Agents for Ultrasound in the Diagnosis of Vascular Pathology Susceptible to Intervention
 - 2.6.1. Contrast Agents
 - 2.6.2. Visualization and Characterization of Vascular Lesions
 - 2.6.3. Safety in the Use of Ultrasonographic Contrast Agents in Vascular Diagnostics in Vascular Diagnosis
 - 2.7. Magnetic Resonance Imaging and Angiography
 - 2.7.1. Magnetic Resonance Imaging for the Diagnosis Prior to Endovascular Procedures
 - 2.7.2. Magnetic Resonance Angiography Protocols
 - 2.7.3. Image Interpretation and Differential Diagnosis
 - 2.8. Computed Tomography and Computed Tomography Angiography Prior to Endovascular Procedures
 - 2.8.1. Image Acquisition and Optimization Protocols
 - 2.8.2. Applications in the Study of the Peripheral and Central Vasculature
 - 2.8.3. Evaluation of Complications and Limitations
 - 2.9. Post-Processing of Diagnostic Images of Vascular Pathologies.
 - 2.9.1. Data Reconstruction and Visualization Techniques
 - 2.9.2. Quantitative and Qualitative Image Analysis
 - 2.9.3. Integration of Results in the Radiological Report
 - 2.10. Technological Advances and Trends in Noninvasive Vascular Imaging
 - 2.10.1. Innovations in Hardware and Software to Improve Image Quality
 - 2.10.2. Developments in Multimodality Imaging Techniques
 - 2.10.3. Personalization of Treatment

Module 3. Vascular Interventions

- 3.1. Balloon Angioplasty
 - 3.1.1. Angioplasty Mechanisms
 - 3.1.2. Patient Selection and Preprocedural Evaluation
 - 3.1.3. Angioplasty Techniques and Procedures
- 3.2. Embolic Protection Devices
 - 3.2.1. Embolic Protection Devices
 - 3.2.2. Indications and Clinical Utility
 - 3.2.3. Safety and Potential Complications of Atheroembolism
- 3.3. Stents and Stent-Grafts for Endovascular Treatment
 - 3.3.1. Stents and Stent-Grafts
 - 3.3.2. Implantation and Placement Techniques
 - 3.3.3. Stent-Grafts in the Treatment of Aneurysms
- 3.4. Pharmacological Thrombolysis in Acute Thrombosis
 - 3.4.1. Thrombolytic Agents
 - 3.4.2. Administration and Monitoring Protocols
 - 3.4.3. Clinical Outcomes and Associated Complications
- 3.5. Mechanical Thrombectomy in Acute Thrombosis
 - 3.5.1. Thrombectomy Devices
 - 3.5.2. Thrombectomy Procedures and Techniques
 - 3.5.3. Outcomes and Effectiveness in Vascular Recanalization
- 3.6. Pharmacomechanical Thrombolysis in Acute Thrombosis
 - 3.6.1. Pharmacomechanical Thrombolysis
 - 3.6.2. Devices and Techniques Used
 - 3.6.3. Comparison with Other Methods of Thrombolysis
- 3.7. Vasodilator Drugs in Limb Ischemia
 - 3.7.1. Mechanism of Action and Vasodilator Effects in Limb Ischemia
 - 3.7.2. Clinical Uses in Vascular Interventions
 - 3.7.3. Administration of Drugs and Monitoring of Results after Administration of Vasodilator Drugs
- 3.8. Endovascular Embolization and Ablation in Vascular Malformations
 - 3.8.1. Embolization and Ablation
 - 3.8.2. Embolization Techniques
 - 3.8.3. Endovascular Ablation: Methods and Clinical Applications

- 3.9. Pseudoaneurysms of Arterial Access
 - 3.9.1. Evaluation of Pseudoaneurysms after Radial Access
 - 3.9.2. Endovascular and Surgical Treatment
 - 3.9.3. Follow-up and Management of Complications
- 3.10. Implantation of Devices for Endovascular Treatment
 - 3.10.1. Implantation Techniques
 - 3.10.2. Device Selection for Endovascular Treatment
 - 3.10.3. Perioperative Management and Postimplantation Follow-Up

Module 4. Interventional Procedures in Carotid and Vertebral Arteries

- 4.1. Key Collateral Pathways in the Cerebral Circulation
 - 4.1.1. Collateral Vascularization of the Carotid and Vertebral Arteries
 - 4.1.2. Intracranial and Extracranial Collateral Circulation
 - 4.1.3. Clinical Significance in Case of Arterial Occlusion
- 4.2. Imaging in the Diagnosis and Follow-Up of Vascular Diseases
 - 4.2.1. Imaging Techniques for Evaluation of the Carotid and Vertebral Arteries
 - 4.2.2. Interpretation of Imaging Results: Normal and Pathological Findings
 - 4.2.3. Imaging in the Diagnosis and Follow-Up of Vascular Diseases
- 4.3. Interventional Procedures in Atherosclerotic Occlusive Disease
 - 4.3.1. Pathogenesis and Associated Risk Factors
 - 4.3.2. Clinical Manifestations and Diagnostic Methods
 - 4.3.3. Treatment Options and Prevention of Complications
- 4.4. Interventional Procedures in Fibromuscular Dysplasia
 - 4.4.1. Imaging Findings
 - 4.4.2. Differential Diagnosis with Other Vascular Diseases
 - 4.4.3. Therapeutic and Prognostic Management of Fibromuscular Dysplasia
- 4.5. Interventional Procedures in Vasculitis
 - 4.5.1. Vasculitis in Carotid and Vertebral Arteries
 - 4.5.2. Clinical Manifestations and Differential Diagnosis
 - 4.5.3. Immunosuppressive Treatment and Monitoring
- 4.6. Interventional Procedures in Spontaneous Carotid and Vertebral Dissection
 - 4.6.1. Pathophysiologic Mechanisms and Predisposing Factors
 - 4.6.2. Diagnostic Methods
 - 4.6.3. Acute Management and Long-Term Follow-Up

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- 4.7. Interventional Procedures in Traumatic Lesions of the Carotid and Vertebral Arteries
 - 4.7.1. Traumatic Lesions of the Carotid and Vertebral Arteries
 - 4.7.2. Initial Evaluation and Diagnostic Imaging
 - 4.7.3. Treatment Strategies and Prevention of Complications
 - 4.8. Interventional Procedures in Carotid Body Tumors
 - 4.8.1. Diagnostic Imaging
 - 4.8.2. Multidisciplinary Treatment: Surgical, Radiotherapy and Chemotherapy Options
 - 4.8.3. Prognosis and Long-Term Follow-Up
 - 4.9. Stroke Therapy
 - 4.9.1. Acute Approach to Thrombolytic Therapy
 - 4.9.2. Endovascular Revascularization: Techniques
 - 4.9.3. Acute Phase Management and Postictus Rehabilitation
 - 4.10. Interventional Procedures in Cerebral Venous Thrombosis
 - 4.10.1. Etiology and Associated Risk Factors of Cerebral Vein Thrombosis
 - 4.10.2. Clinical Manifestations and Diagnosis of Cerebral Vein Thrombosis
 - 4.10.3. Treatment and Management. Anticoagulant and Thrombolytic Therapy: Considerations

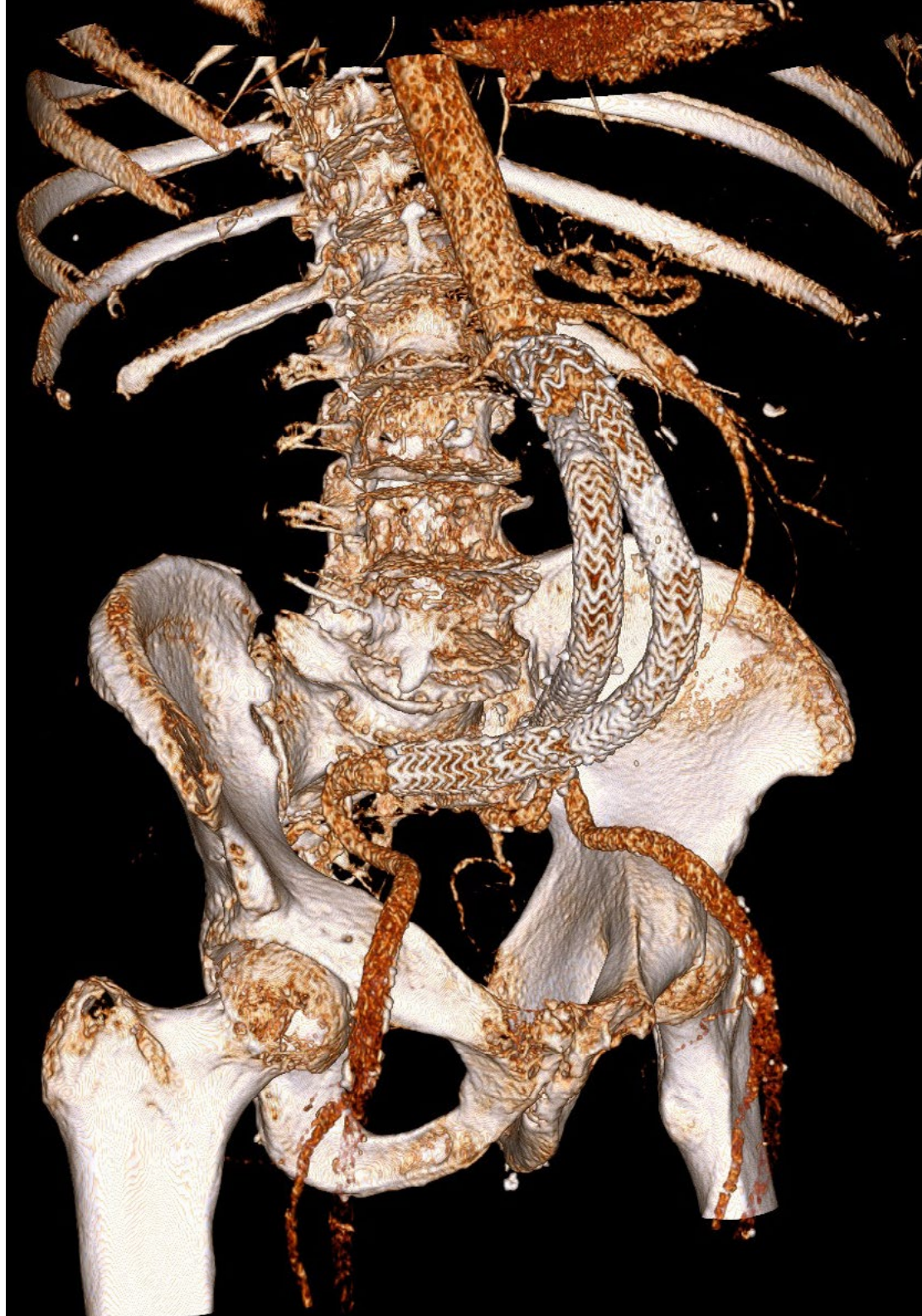
Module 5. Interventional Procedures in the Arteries of the Upper Extremities

- 5.1. Collateral Routes for Vascular Interventional Procedures
 - 5.1.1. Collateral Circulation in the Upper Extremities
 - 5.1.2. The Collateral Veins in Case of Arterial Occlusion
 - 5.1.3. Clinical Evaluation and Diagnosis of the Collateral Circulation
- 5.2. Imaging in the Diagnosis and Follow-Up of Upper Extremity Arteries
 - 5.2.1. Imaging Methods in the Study of the Arteries of the Upper Extremities
 - 5.2.2. Interpretation of Radiologic Findings in Vascular Imaging
 - 5.2.3. Imaging in Diagnosis and Follow-up of Upper Extremity Arteries
- 5.3. Interventional Procedures in Vasospastic Disorders
 - 5.3.1. Vasospastic Disorders
 - 5.3.2. Differential Diagnosis
 - 5.3.3. Treatment and Symptom Management Strategies
- 5.4. Interventional Procedures in Chronic Ischemia
 - 5.4.1. Associated Risk Factors
 - 5.4.2. Diagnosis of Chronic Ischemia in Lower Extremities
 - 5.4.3. Therapeutic Options for the Management of Chronic Ischemia

- 5.5. Interventional Procedures in Acute Ischemia
 - 5.5.1. Acute Ischemia in the Upper Extremities
 - 5.5.2. Urgent Diagnostic Evaluation and Treatment Prioritization
 - 5.5.3. Strategies for Revascularization and Management in the Acute Phase
- 5.6. Interventional Procedures in the Upper Thoracic Operculum Syndrome
 - 5.6.1. Pathophysiologic Mechanisms of the Upper Thoracic Operculum Syndrome
 - 5.6.2. Differential Diagnosis
 - 5.6.3. Conservative Treatment and Surgical Options
- 5.7. Interventional Procedures in Aneurysms
 - 5.7.1. Surgical Indication of Aneurysms in the Arteries of the Upper Extremities
 - 5.7.2. Diagnostic Imaging and Assessment of the Risk of Rupture
 - 5.7.3. Endovascular Therapeutic Management and Long-term Follow-up
- 5.8. Interventional Procedures in Vasculitis and Fibromuscular Dysplasia
 - 5.8.1. Vasculitis and Fibromuscular Dysplasia
 - 5.8.2. Imaging Findings
 - 5.8.3. Endovascular Therapeutic Management and Prognosis
- 5.9. Interventional Procedures in Vascular Trauma
 - 5.9.1. Traumatic Injuries to the Arteries of the Upper Extremities
 - 5.9.2. Evaluation and Diagnosis of Traumatic Arterial Injuries
 - 5.9.3. Urgent Management and Postoperative Rehabilitation after Endovascular Treatment of Arterial Traumatic Injuries
- 5.10. Use of Artificial Intelligence in Interventional Procedures in the Arteries of the Upper Extremities
 - 5.10.1. AI Applications in Vascular Image Analysis
 - 5.10.2. Outcome Prediction and Treatment Selection
 - 5.10.3. Integration of AI in Endovascular Procedures

Module 6. Interventional Procedures in the Veins of the Upper Extremities

- 6.1. Imaging for the Evaluation of Upper Extremity, Neck and Central Thoracic Veins
 - 6.1.1. Imaging Techniques for the Evaluation of Upper Extremity, Neck and Central Thoracic Veins
 - 6.1.2. Interpretation of Radiological Findings in Venous Imaging
 - 6.1.3. Imaging in the Diagnosis and Follow-up of Upper Extremity, Neck and Central Thoracic Veins



- 6.2. Interventional Procedures in the Upper Extremity Venous Thrombosis
 - 6.2.1. Associated Risk Factors
 - 6.2.2. Differential Diagnosis
 - 6.2.3. Therapeutic Strategies for the Management of Venous Thrombosis
- 6.3. Interventional Procedures in the Upper Thoracic Operculum Syndrome
 - 6.3.1. Pathophysiological Mechanisms
 - 6.3.2. Diagnostic Evaluation and Diagnosis
 - 6.3.3. Treatment and Management of Thoracic Operculum Syndrome
- 6.4. Interventional Procedures in Superior Vena Cava Syndrome
 - 6.4.1. Predisposing Factors
 - 6.4.2. Diagnosis of Superior Vena Cava Syndrome
 - 6.4.3. Management and Treatment Strategies for Superior Vena Cava Syndrome
- 6.5. Interventional Procedure in Central Venous Access
 - 6.5.1. Central Venous Access Techniques
 - 6.5.2. Venous Access Device Selection
 - 6.5.3. Postinsertion Care
- 6.6. Device Implantation in Central Venous Thrombosis
 - 6.6.1. Implantation of Venous Access Devices
 - 6.6.2. Anesthesia and Insertion Site Preparation
 - 6.6.3. Management of Complications and Device Follow-Up
- 6.7. Interventional Management of Venous Access Device Complications
 - 6.7.1. Device-Related Infection and Sepsis
 - 6.7.2. Venous Thrombosis and Pulmonary Embolism
 - 6.7.3. Device Dysfunction and Need for Withdrawal
- 6.8. Angioplasty and Stents in Central Venous Thrombosis
 - 6.8.1. Indications for Angioplasty and Vein Stenting
 - 6.8.2. Angioplasty Procedure and Stenting Techniques
 - 6.8.3. Results and Complications of the Intervention
- 6.9. Interventional Procedures in the Management of Thrombosed Dialysis Access
 - 6.9.1. Thrombosis in the Dialysis Vascular Access
 - 6.9.2. Strategies for Unblocking and Recanalization of the Thrombosed Access
 - 6.9.3. Recurrence Prevention and Long-Term Follow-up
- 6.10. Use of Artificial Intelligence in Upper Extremity, Neck and Thoracic Vein Interventional Procedures
 - 6.10.1. AI Applications in Vascular Image Analysis
 - 6.10.2. Outcome Prediction and Treatment Selection
 - 6.10.3. Integration of AI in Endovascular Procedures

Module 7. Thoracic Aorta Interventional Procedures

- 7.1. Interventional Procedures in Ascending Aortic Aneurysms
 - 7.1.1. Associated Risk Factors
 - 7.1.2. Clinical Manifestations and Diagnostic Methods
 - 7.1.3. Treatment and Management of Ascending Aortic Aneurysms
- 7.2. Interventional Procedures in Aortic Arch Aneurysms
 - 7.2.1. Diagnostic Evaluation and Imaging Strategies
 - 7.2.2. Therapeutic Approaches for Transverse Arc Aneurysms
 - 7.2.3. Innovations and Future Directions
- 7.3. Interventional Procedures for Descending Thoracic Aortic Aneurysms
 - 7.3.1. Aneurysms of the Descending Thoracic Aorta
 - 7.3.2. Clinical Findings and Diagnostic Imaging
 - 7.3.3. Treatment and Management of Aneurysms of the Descending Thoracic Aorta
- 7.4. Interventional Procedures in Aortic Dissection
 - 7.4.1. Clinical Manifestations and Differential Diagnosis
 - 7.4.2. Therapeutic Approach and Treatment Strategies for Aortic Dissection
 - 7.4.3. Innovations and Future Directions
- 7.5. Interventional Procedures in Intramural Hematoma
 - 7.5.1. Diagnostic Imaging and Evaluation Methods in Intramural Hematoma
 - 7.5.2. Treatment and Management of Intramural Hematoma
 - 7.5.3. Innovations and Future Directions
- 7.6. Interventional Procedures in Penetrating Aortic Ulcers
 - 7.6.1. Pathogenic Mechanisms
 - 7.6.2. Clinical Diagnosis and Radiological Evaluation
 - 7.6.3. Therapeutic Options and Surgical Considerations
- 7.7. Interventional Procedures in Trauma involving the Thoracic Aorta
 - 7.7.1. Trauma Affecting the Thoracic Aorta
 - 7.7.2. Initial Evaluation and Diagnosis of Traumatic Aortic Injuries
 - 7.7.3. Emergency Management and Therapeutic Considerations in Aortic Trauma
- 7.8. Interventional Procedures in Vasculitis
 - 7.8.1. Underlying Pathology and Inflammatory Mechanisms
 - 7.8.2. Clinical Manifestations and Diagnostic Methods
 - 7.8.3. Treatment and Management of Vasculitides Affecting the Thoracic Aorta

- 7.9. Interventional Procedures in Aortic Coarctation
 - 7.9.1. Pathophysiology and Clinical Presentation
 - 7.9.2. Diagnosis and Evaluation of Aortic Coarctation
 - 7.9.3. Treatment Strategies and Long-Term Follow-Up
- 7.10. Use of Artificial Intelligence in Thoracic Aortic Interventional Procedures
 - 7.10.1. AI Applications in Vascular Image Analysis
 - 7.10.2. Outcome Prediction and Treatment Selection
 - 7.10.3. Integration of AI in Endovascular Procedures

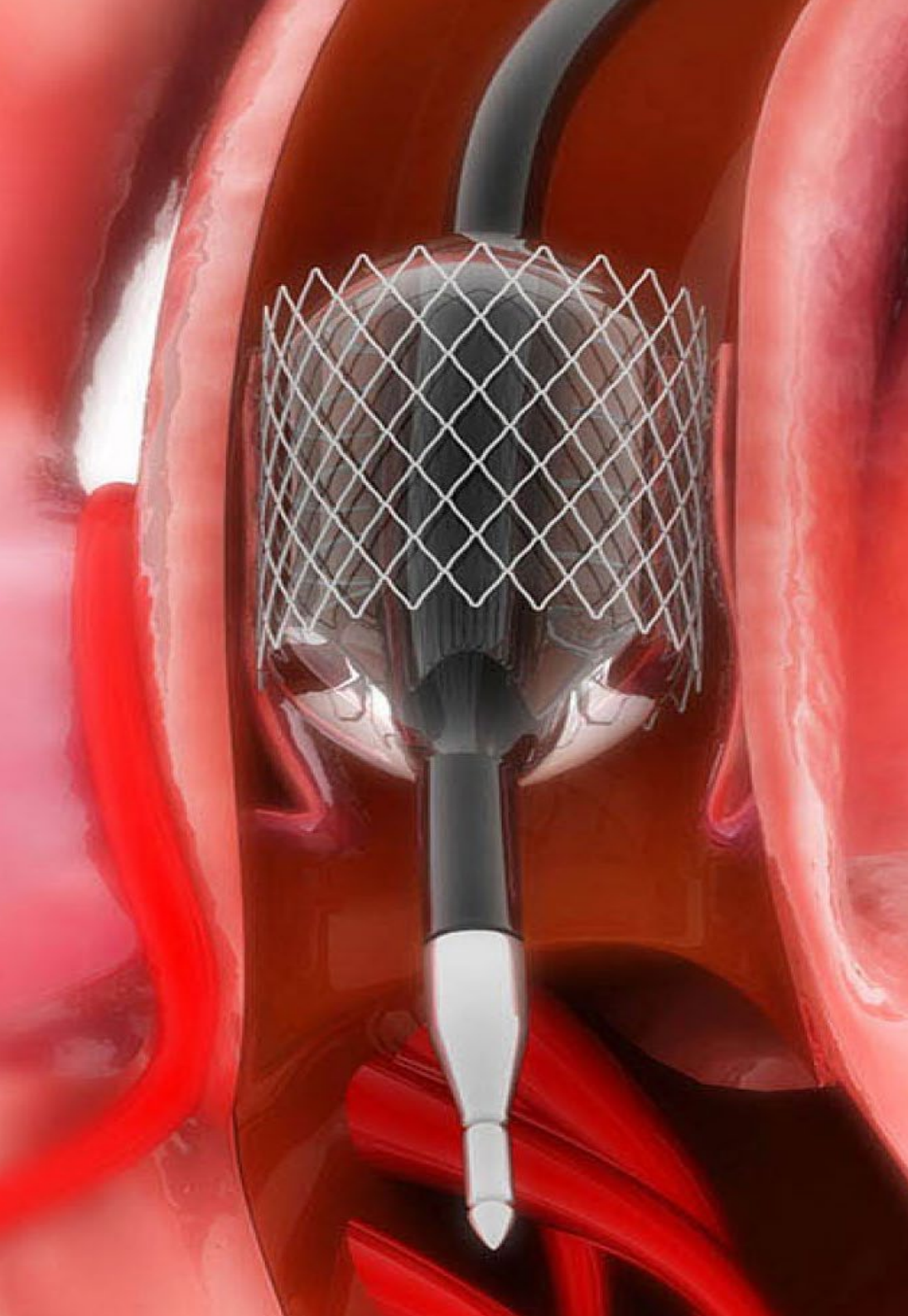
Module 8. Interventional Procedures in the Abdominal Aorta and Iliac Arteries

- 8.1. Interventional Procedures in the Abdominal Aorta
 - 8.1.1. Evaluation of the Abdominal Aorta through Imaging Techniques
 - 8.1.2. Associated Pathologies and Clinical Considerations in the Abdominal Aorta
 - 8.1.3. Endovascular Treatment Strategies and Management of Complications
- 8.2. Interventional Procedures in the Iliac Arteries and their Branches
 - 8.2.1. Main Arterial Branches and their Function
 - 8.2.2. Diseases and Disorders Affecting the Iliac Arteries
 - 8.2.3. Endovascular Treatment Strategies and Management of Complications
- 8.3. Interventional Procedures in Aneurysms of the Iliac Artery
 - 8.3.1. Risk Factors for the Development of Aneurysms in the Abdominal Aorta and Pelvic Arteries
 - 8.3.2. Diagnosis and Evaluation of Aneurysms by Imaging Techniques
 - 8.3.3. Endovascular Treatment Options and Management of Aneurysms of the Abdominal Aorta and Iliac Arteries
- 8.4. Interventional Procedures in Occlusive Disease
 - 8.4.1. Occlusive Disease in the Abdominal Aorta and Pelvic Arteries
 - 8.4.2. Diagnostic Evaluation and Diagnostic Imaging Methods
 - 8.4.3. Endovascular Therapeutic Strategies to Address Occlusive Disease of the Abdominal Aorta and Pelvic Arteries
- 8.5. Interventional Procedures in Dissection
 - 8.5.1. Dissection of the Abdominal Aorta and Pelvic Arteries
 - 8.5.2. Diagnosis and Evaluation of Dissection Using Imaging Techniques
 - 8.5.3. Endovascular Treatment Approaches and Therapeutic Considerations for Vascular Dissection

- 8.6. Infection after Endovascular Treatment
 - 8.6.1. Infections after Endovascular Treatment in Abdominal Aorta and Iliac Arteries
 - 8.6.2. Clinical Manifestations and Diagnosis of Vascular Infection
 - 8.6.3. Endovascular Treatment and Management of Infections in the Abdominal Aorta and Iliac Arteries
- 8.7. Interventional Procedures in Embolic Occlusion
 - 8.7.1. Vascular Occlusion due to Embolism
 - 8.7.2. Diagnosis and Evaluation of Embolic Occlusion by Imaging Techniques
 - 8.7.3. Endovascular Therapeutic Strategies for the Management of Embolic Occlusion in the Abdominal Aorta and Iliac Arteries
- 8.8. Interventional Procedures in Vasculitis
 - 8.8.1. Vasculitis in the Abdominal and Pelvic Vascular System
 - 8.8.2. Diagnosis and Evaluation of Vascular Vasculitis
 - 8.8.3. Endovascular Treatment and Management of Vasculitis in the Abdominal Aorta and Iliac Arteries
- 8.9. Interventional Procedures in Trauma of the Abdominal Aorta and Iliac Arteries
 - 8.9.1. Trauma Affecting the Abdominal Aorta and Pelvic Arteries
 - 8.9.2. Initial Evaluation and Diagnosis of Traumatic Vascular Injuries
 - 8.9.3. Emergency Management and Endovascular Therapeutic Considerations in Abdominal and Pelvic Vascular Trauma
- 8.10. Use of Artificial Intelligence in Thoracic Aortic Interventional Procedures
 - 8.10.1. AI Applications in Vascular Image Analysis
 - 8.10.2. Outcome Prediction and Treatment Selection
 - 8.10.3. Integration of AI in Endovascular Procedures

Module 9. Interventional Procedures in Lower Extremity Arteries

- 9.1. Interventional Procedures in Chronic Occlusive Disease
 - 9.1.1. Occlusive Disease in the Arteries of the Lower Extremities
 - 9.1.2. Clinical Evaluation and Diagnosis of Chronic Occlusive Disease
 - 9.1.3. Endovascular Therapeutic Strategies for the Management of Chronic Occlusive Disease
- 9.2. Percutaneous Interventions in the Superficial Femoral and Popliteal Artery
 - 9.2.1. Percutaneous Interventions in the Superficial and Popliteal Arteries
 - 9.2.2. Angioplasty and Stenting Techniques in the Superficial Femoral and Popliteal Artery
 - 9.2.3. Complications and Postoperative Management of Percutaneous Interventions



- 9.3. Angioplasty and Stents in the Tibial Artery
 - 9.3.1. Evaluation and Diagnosis of Arterial Disease in the Tibial Arteries
 - 9.3.2. Techniques of Angioplasty and Stenting in the Tibial Artery
 - 9.3.3. Clinical Outcome and Prognosis After Tibial Angioplasty and Stenting
- 9.4. Interventional Procedures in Acute Limb Ischemia
 - 9.4.1. Acute Ischemia in the Lower Extremities
 - 9.4.2. Diagnostic Evaluation and Differential Diagnosis of Acute Ischemia
 - 9.4.3. Emergency Management and Endovascular Treatment of Acute Ischemia of the Extremities
- 9.5. Endovascular Treatment of Popliteal Artery Aneurysm
 - 9.5.1. Development of Popliteal Aneurysms
 - 9.5.2. Diagnosis and Evaluation of Popliteal Artery Aneurysms
 - 9.5.3. Endovascular Treatment Options and Management of Popliteal Aneurysms
- 9.6. Interventional Procedures in the Common Femoral Artery Aneurysm
 - 9.6.1. Common Femoral Artery Aneurysms
 - 9.6.2. Diagnostic Evaluation and Diagnostic Imaging of Common Femoral Aneurysms
 - 9.6.3. Endovascular Therapeutic Approaches and Surgical Considerations for Common Femoral Aneurysms
- 9.7. Interventional Procedures in Penetrating Trauma. Knee Dislocation
 - 9.7.1. Penetrating Trauma in the Lower Extremities
 - 9.7.2. Vascular Complications Associated with Knee Dislocation
 - 9.7.3. Endovascular Treatment Strategies and Postoperative Rehabilitation
- 9.8. Interventional Procedures in Vasculitis. Ergotism
 - 9.8.1. Vasculitis in the Lower Extremities
 - 9.8.2. Ergotism: Etiology, Clinical Presentation and Vascular Manifestations
 - 9.8.3. Endovascular Management and Treatment of Vasculitis and Ergotism in the Context of the Lower Extremities
- 9.9. Interventional Procedures in Popliteal Artery Entrapment Adventitial Cystic Disease
 - 9.9.1. Popliteal Artery Entrapment
 - 9.9.2. Adventitial Cystic Disease of the Popliteal Artery
 - 9.9.3. Endovascular Treatment and Management of Popliteal Artery Entrapment and Cystic Adventitial Disease
- 9.10. Use of Artificial Intelligence in Intervention in Lower Extremity Arteries
 - 9.10.1. AI Applications in Vascular Image Analysis
 - 9.10.2. Outcome Prediction and Treatment Selection
 - 9.10.3. Integration of AI in Endovascular Procedures

Module 10. Interventional Procedures in Lower Extremity Veins

- 10.1. Interventional Procedures in Acute Deep Vein Thrombosis (DVT)
 - 10.1.1. Etiology and Risk Factors for DVT
 - 10.1.2. Endovascular Treatment of DVT
 - 10.1.3. Prevention and Complications of Endovascular Treatment of DVT
- 10.2. Interventional Procedures in Chronic Venous Obstruction and Post-Phlebitic Syndrome
 - 10.2.1. Pathophysiology and Clinical Manifestations
 - 10.2.2. Multidisciplinary Treatment
 - 10.2.3. Pain Management and Quality of Life
- 10.3. Interventional Procedures in Chronic Venous Valvular Disease
 - 10.3.1. Pathophysiology and Clinical Manifestations
 - 10.3.2. Endovascular Treatment and Management of Valve Insufficiency
 - 10.3.3. Rehabilitation and Prevention of Complications of Interventional Procedures in Chronic Venous Valve Insufficiency
- 10.4. Interventional Procedures in Superficial Venous Thrombosis
 - 10.4.1. Etiology and Clinical Characteristics
 - 10.4.2. Endovascular Treatment of Septic Superficial Venous Thrombosis
 - 10.4.3. Complications and Follow-up of Endovascular Treatment of Superficial Venous Thrombosis
- 10.5. Interventional Procedures in Klippel-Trenaunay and Parkes-Weber Syndromes
 - 10.5.1. Klippel-Trenaunay and Parkes-Weber Syndromes Diagnosis
 - 10.5.2. Endovascular Therapeutic Approach and Clinical Management
 - 10.5.3. Quality of Life and Long-Term Follow-Up in Klippel-Trenaunay and Parkes-Weber Syndromes after Endovascular Treatment
- 10.6. Venous Malformations
 - 10.6.1. Types of Venous Malformations
 - 10.6.2. Endovascular Therapeutic Approach to Venous Malformations.
 - 10.6.3. Follow-up and Rehabilitation after Endovascular Treatment of Venous Malformations
- 10.7. Venous Aneurysms
 - 10.7.1. Venous Aneurysms
 - 10.7.2. Endovascular Treatment and Clinical Management of Venous Aneurysms
 - 10.7.3. Follow-up after Endovascular Treatment of Venous Aneurysms





- 10.8. Applications of AI in the Diagnosis of Venous Pathology of the Lower Extremities
 - 10.8.1. AI Algorithms for Vascular Image Analysis in Lower Extremity Venous Pathology
 - 10.8.2. AI-Assisted Diagnosis: Improvements in Accuracy and Efficiency in Lower Extremity Venous Pathology
 - 10.8.3. Clinical Cases of AI in the Identification of Anomalous Patterns in Lower Extremity Venous Pathology
- 10.9. AI in the Planning of Diagnostic Treatments in Lower Extremity Venous Pathology
 - 10.9.1. Predictive AI Models in the Choice of Endovascular Interventions in Lower Extremity Veins
 - 10.9.2. Optimization of Personalized Therapies with AI after Endovascular Interventions in Lower Extremity Veins
 - 10.9.3. Simulation of AI Procedures: Reducing Errors and Improving Outcomes in Endovascular Interventions in Lower Extremity Veins
- 10.10. Monitoring and Prediction of Outcomes in Endovascular Interventions in the Veins of the Lower Extremities
 - 10.10.1. AI Tools in Continuous Monitoring of Patients undergoing Endovascular Treatment for Lower Extremity Venous Pathology
 - 10.10.2. Prognosis of Recurrence and Complications with Predictive AI Models in Interventional Procedures in the Lower Extremity Veins
 - 10.10.3. Use of AI in the Research and Development of New Vascular Therapies in Interventional Procedures in the Lower Extremity Veins

“*Increase your safety in clinical decision making by updating your knowledge through a complete Professional Master's Degree. Enroll now!*”

06

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

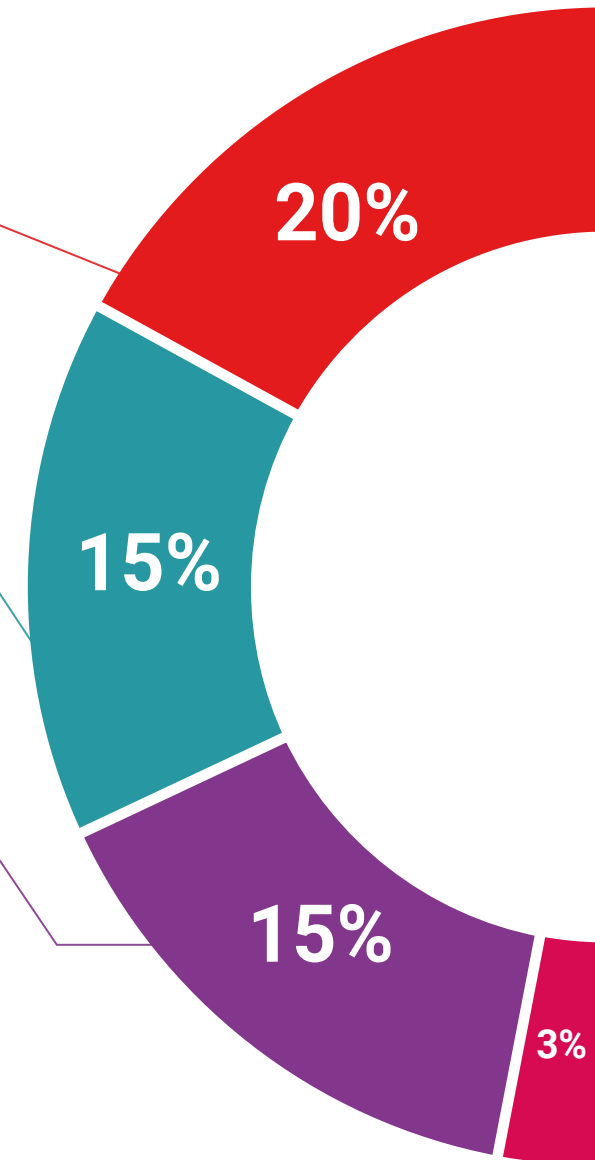
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

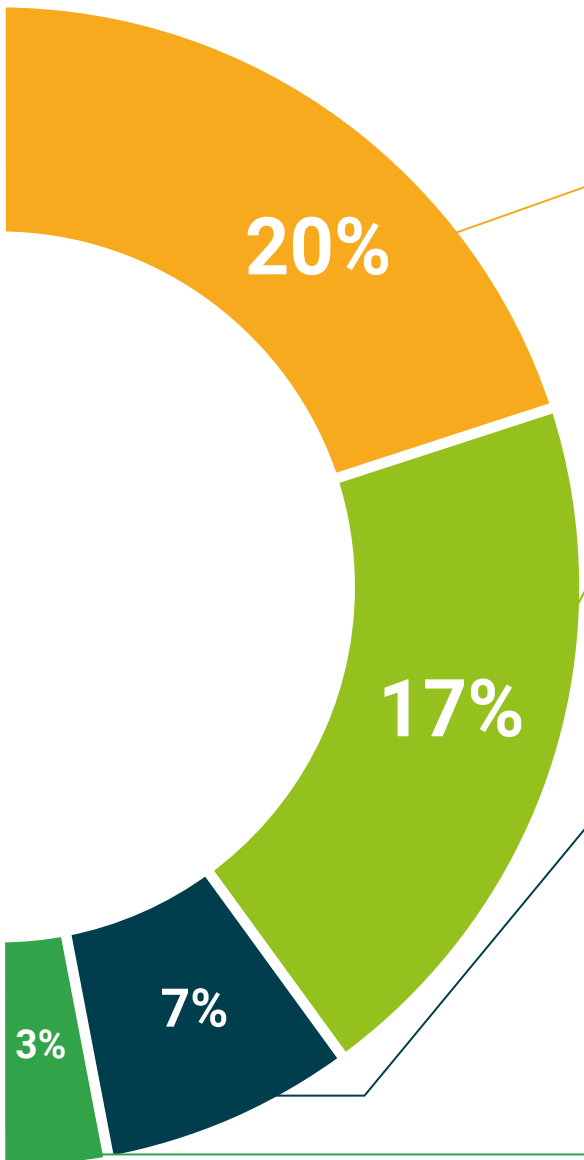
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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.



07

Certificate

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



“

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

This private qualification will allow you to obtain a **Professional Master's Degree in Vascular Interventional Procedures** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra (*official bulletin*). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Professional Master's Degree in Vascular Interventional Procedures**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**



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



Professional Master's Degree

Vascular Interventional Procedures

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Accreditation: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Professional Master's Degree

Vascular Interventional Procedures

