Postgraduate Certificate

Locoregional Anesthesia and Pain Management

tech global university

tech global university

Postgraduate Certificate

Locoregional Anesthesia and Pain Management

- Modality: **online**
- Duration: **6 weeks**
- Certificate: **TECH Global University**
- Credits: **6 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/us/medicine/postgraduate-certificate/locoregional-anesthesia-pain-management

Index

01 Introduction p. 4

02 Objectives p. 8

03 Course Management p. 12

04 Structure and Content p. 18

05 Methodology p. 24

06 Certificate p. 32

01

Introduction

The prevalence of chronic pain affects approximately 20% of the world's population, this, among many other aspects, has generated a growing demand for Locoregional Anesthesia and Pain Management in modern medical practice, due to its effectiveness in reducing complications and improving patient recovery, requires trained professionals in this area. In response to this need, TECH has designed a program aimed at updating health professionals in the efficient approach in this area. Thus, it will cover from theoretical fundamentals to techniques and procedures applied in the treatment of pain and anesthesia. This degree is 100% online, and uses the Relearning pedagogical methodology, which promotes active and personalized learning.

With this Postgraduate Certificate you will deepen in the most advanced techniques in the evaluation and efficient application of different treatments for musculoskeletal, visceral and craniofacial pain"

Pain is considered a subjective and complex experience that can result from a variety of causes, including injury, disease and surgery. Proper pain management is essential to improve patients' quality of life and reduce the negative impact on their physical and emotional well-being. Worldwide, it is estimated that 80% of patients undergoing surgery experience acute postoperative pain, and between 10-50% of these cases may progress to chronic pain. In addition, chronic pain affects approximately 20% of the world's population, representing a significant burden on both individuals and healthcare systems.

Locoregional anesthesia is a technique that allows blocking pain transmission in specific areas of the body, resulting in less need for systemic analgesics and faster recovery. In addition, proper treatment of acute postoperative pain can decrease the likelihood of developing chronic pain in the future.

To respond to the demand for professionals in this field, TECH has designed the Diploma in Locoregional Anesthesia and Pain Management in which, in only 180 hours, addresses in a comprehensive and updated way the theoretical and practical fundamentals of this field. The syllabus includes a single module dedicated to the study of the different types of pain, the application of locoregional anesthesia in various clinical contexts, and the treatment of specific conditions such as oncologic pain, low back pain, and musculoskeletal pain, among others.

This program is developed in a 100% online format, which facilitates access to education for professionals from all over the world. The Relearning pedagogical methodology promotes a personalized and active approach in the educational process, allowing an adaptation of the content to the individual needs of each student and a more efficient learning.

This **Postgraduate Certificate in Locoregional Anesthesia and Pain Management** 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 Locoregional Anesthesia and Pain Management
- 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

Contribute to improving the quality of life of your patients with chronic conditions and acute pain through this 100% online program"

Master the latest trends in neurostimulation, spinal drug infusion and regional anesthesia in labor analgesia"

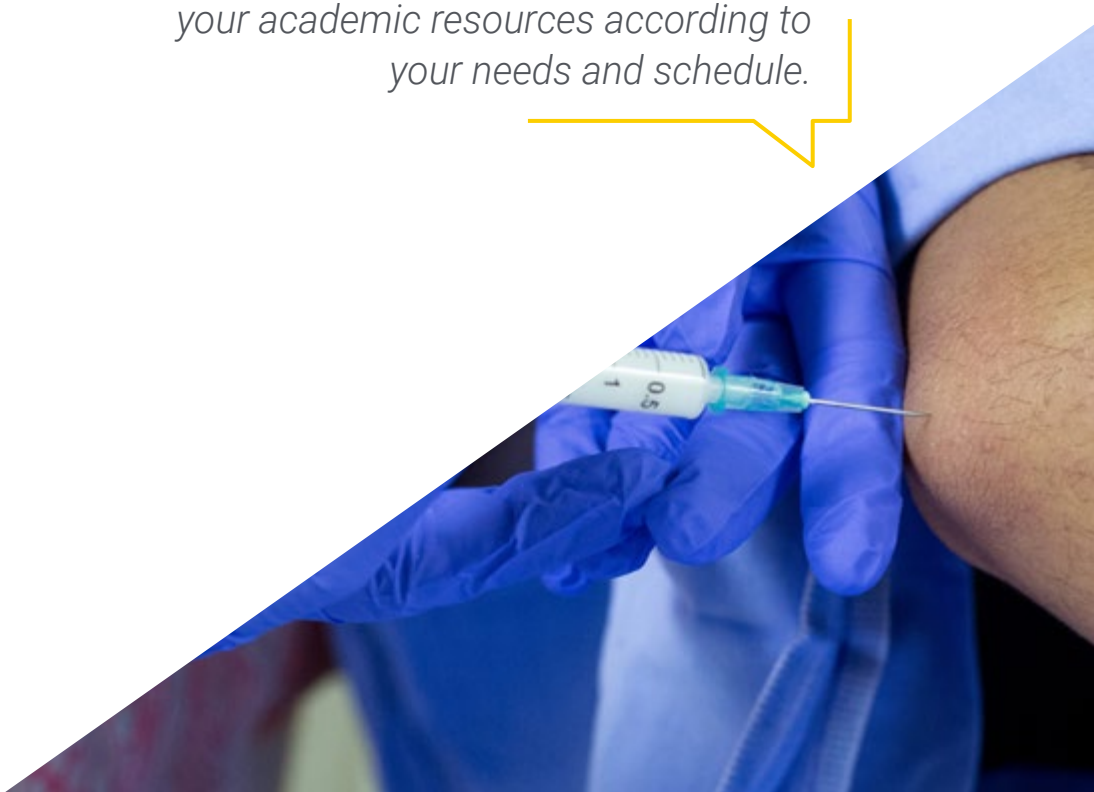
Improve your skills and expand your knowledge in the treatment of acute, neuropathic, oncologic and palliative care pain.

Take advantage of the flexibility offered by this 100% online course and organize your academic resources according to your needs and schedule.

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

Its 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 an immersive education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.



02

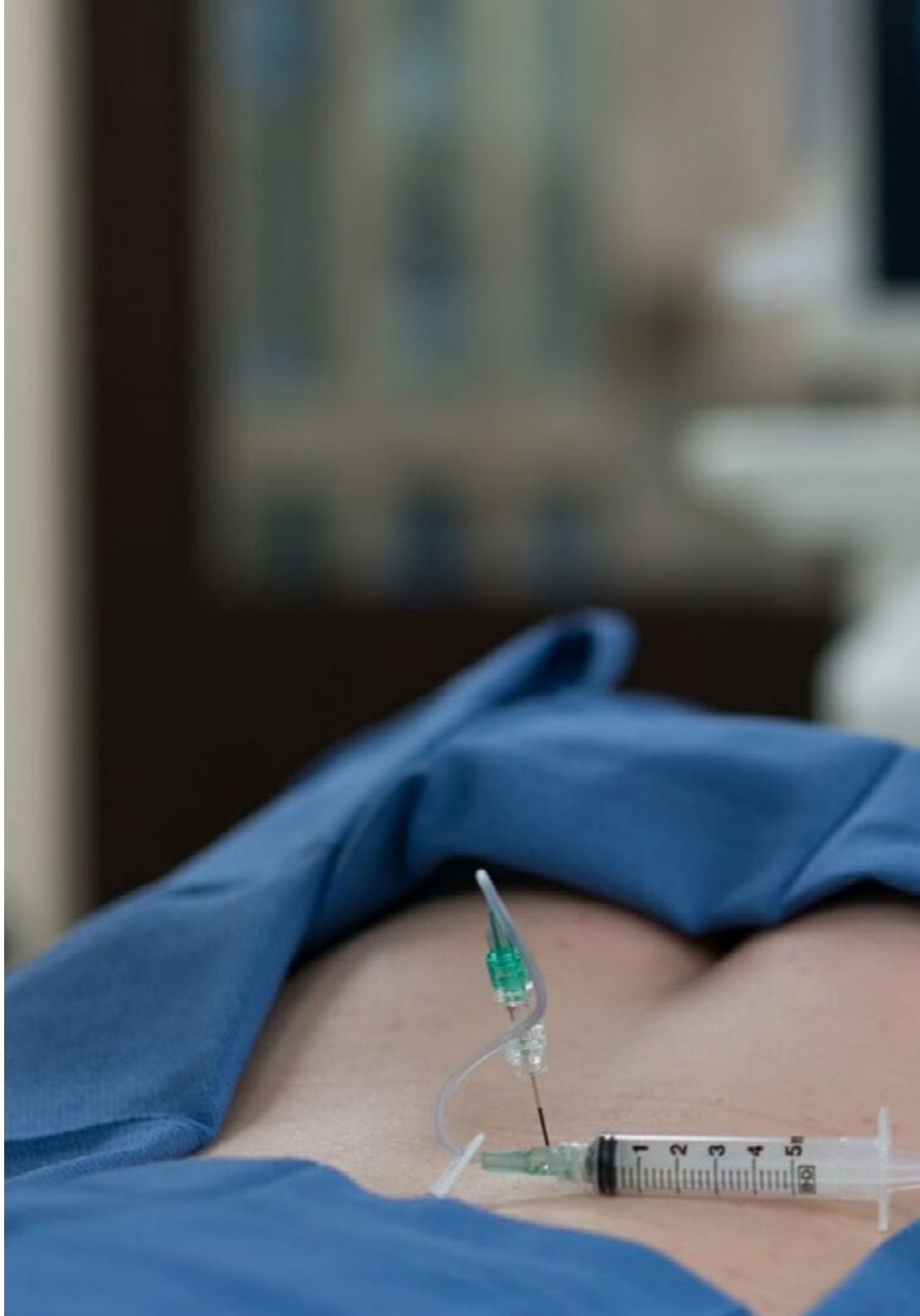
Objectives

The content of this program aims to update the student in their professional area, allowing the deepening of previous knowledge in the anesthetic and analgesic area, generating the improvement of specific skills that will allow them to develop with expertise and naturalness in the field of Locoregional Anesthesia and Pain Management. Thus, health professionals will be prepared to face new challenges with innovative and efficient solutions, allowing patients to alleviate their ailments and improve their quality of life.

Strengthen your professional profile and expand your job opportunities with this degree in a highly specialized area"

General Objectives

- Learn in depth the fundamentals that allow us to perform procedures with regional anesthesia
- Familiarize with the anatomy, physiology and pharmacology applied to regional anesthesia
- Specifically study the types of central blocks, as well as their indications, contraindications, technical aspects and complications
- Specifically study the types of peripheral blocks, as well as their indications, contraindications, technical aspects and complications
- Review limb, head, neck, thoracic and abdominal blocks, as well as those useful for difficult airway management
- Review the basic fundamentals of electrostimulation and ultrasound and apply them to the performance of blocks
- Being familiar with the equipment necessary to perform the blocks
- Know in depth the current clinical practice guidelines for the preoperative management of patients requiring regional anesthesia
- List the particularities of outpatient surgery requiring regional anesthesia.Specifically study the types of Peripheral blocks, as well as their indications, contraindications, technical aspects and complications



Specific Objectives

- Know in depth everything related to Locoregional Anesthesia and Pain Management
- Have the knowledge and practice of pain management at a certain level
- Provide the fundamental and safety aspects, evidence-based indications, the use of more advanced imaging techniques, the meticulous description of each of the techniques supported by images, algorithms and videos, and the resolution of doubts and difficulties that may arise in relation to them

You will reach your professional goals thanks to this program designed to specialize in this important sector of Medicine"

03

Course Management

In its eagerness to offer quality education, TECH has assembled for this Postgraduate Certificate, a highly qualified teaching team with vast experience in the field of anesthesiology and pain management. These experts are committed to providing the tools and knowledge necessary for medical professionals to acquire a solid and updated knowledge in these areas and to improve their skills and competencies in their daily work. Students participating in the program will have the opportunity to learn from a renowned faculty in the field, which will guarantee them a high quality educational experience.

Succeed with experts in anesthesiology and pain management, and enrich your skills in the care of patients with chronic pathologies"

Management

Dr. Burgueño González, Mª Dolores

- Anesthesia Coordinator of Cantoblanco Hospital
- Responsible for Surgical Patient Safety at Cantoblanco Hospital
- Specialist Physician at the Virgen del Mar Hospital
- MIR in Anesthesiology, Resuscitation and Pain Therapy at the University Hospital La Paz
- Master PROANES: Official Updating Program in Anesthesiology, Resuscitation and Pain Therapy by the Catholic University of Valencia
- Postgraduate Diploma in Airway Management by the Catholic University of Valencia

Professors

Dr. Canser Cuenca, Enrique

- Anesthesia Coordinator of Cantoblanco Hospital
- Responsible for Surgical Patient Safety at Cantoblanco Hospital
- Specialist Physician at the Virgen del Mar Hospital
- MIR in Anesthesiology, Resuscitation and Pain Therapy at the University Hospital La Paz
- Master PROANES: Official Updating Program in Anesthesiology, Resuscitation and Pain Therapy by the Catholic University of Valencia
- Postgraduate Diploma in Airway Management by the Catholic University of Valencia

Dr. Vallejo Sanz, Irene

- Collaborator in Clinical Simulation workshops
- MIR in Anesthesiology, Resuscitation and Pain Therapy
- European Diploma of Anaesthesiology and Intensive Care, EDAIC part I
- Member of the Illustrious Official College of Physicians of Madrid
- Member of the Spanish Society of Anesthesiology and Pain Treatment (SEDAR)

Dr. Sancho De Ávila, Azahara

- FEA of Anesthesiology and Resuscitation at the University Hospital of La Paz
- Free practice anesthesiologist at the University Hospital of La Luz
- Free practice anesthesiologist at Nuestra Señora del Rosario Hospital
- Doctor in Medicine and Surgery from the University of La Laguna
- Specialist in Anesthesiology, Resuscitation and Pain Therapy by MIR examination at the University Hospital Nuestra Señora de la Candelaria

Dr. Salgado Aranda, Patricia

- Teaching and research experience Clinical Teaching Collaborator of the University Hospital La Paz
- PhD from the Autonomous University of Madrid
- Degree in Medicine from the University of Alcalá, Spain
- Master's Degree in Infectious Diseases in Intensive Care
- Member of the Illustrious Official College of Physicians of Madrid

Dr. Rodríguez Roca, María Cristina

- Teaching and research experience in several university centers
- PhD from the Autonomous University of Madrid
- European Postgraduate Certificate in Anesthesia and Critical Care (EDAIC)
- Member of the Spanish Society of Anesthesiology and Pain Treatment (SEDAR)
- Member of the working group of Chronic Pain of the Spanish Society of Anesthesiology and Resuscitation

Dr. Martín Martín, Almudena

- Clinical Teaching Collaborator of the University Hospital La Paz
- MIR in Anesthesiology, Resuscitation and Pain Therapy at the University Hospital La Paz
- Master of Continuing Education in "Patient Management"

Dr. Zurita Copoví, Sergio

- Specialist Physician at the Virgen del Mar Hospital
- Resident Tutor at the University Hospital La Paz
- Clinical teaching collaborator at the Autonomous University of Madrid
- Master's Degree in Clinical Management, Medical and Health Care Management
- Master in Patient Management
- European Postgraduate Certificate in Anesthesia and Critical Care
- Member of the Spanish Society of Anesthesiology and Pain Treatment (SEDAR)

A unique, key, and decisive educational experience to boost your professional development"

04

Structure and Content

The content of this program has been elaborated based on the latest scientific postulates corresponding to Regional Anesthesia and Pain Management. Throughout this academic journey, the health professional will be able to address key issues such as the different models of regional analgesia, the management of pulsed RF in the management of neuropathic pain, neurostimulation and spinal infusion of drugs, among others. All this through different multimedia content developed with the latest technology in online teaching software.

Master the techniques of Locoregional Anesthesia and Pain Management with a practical and updated approach, applicable to your daily practice"

Module 1. Locoregional Anesthesia and Pain Management

1.1. Pain and its Pathophysiological Basis. Types of Pain
- 1.1.1. Neuroanatomy lesson
- 1.1.2. Lesson somatic nociceptive pain
- 1.1.3. Lesson Visceral nociceptive pain
- 1.1.4. Neuropathic pain lesson
- 1.1.5. Lesson from acute to chronic pain: peripheral and central sensitization

1.2. Locoregional anesthesia in the treatment of acute postoperative pain
- 1.2.1. Regional analgesia as a fundamental part of multimodal analgesia in acute postoperative pain
- 1.2.2. Lesson Regional Analgesia in Shoulder Surgery and MMSS
- 1.2.3. Regional Analgesia in Hip Surgery Lesson
- 1.2.4. Lesson Regional Analgesia in Shoulder Surgery and MMSS
- 1.2.5. Regional Analgesia in Foot Surgery Lesson
- 1.2.6. Regional Analgesia in Thoracotomy Surgery Lesson
- 1.2.7. Regional Analgesia in Breast Surgery Lesson
- 1.2.8. Regional Analgesia in Laparotomy Surgery Lesson
- 1.2.9. Regional Analgesia in Laparoscopy Surgery Lesson

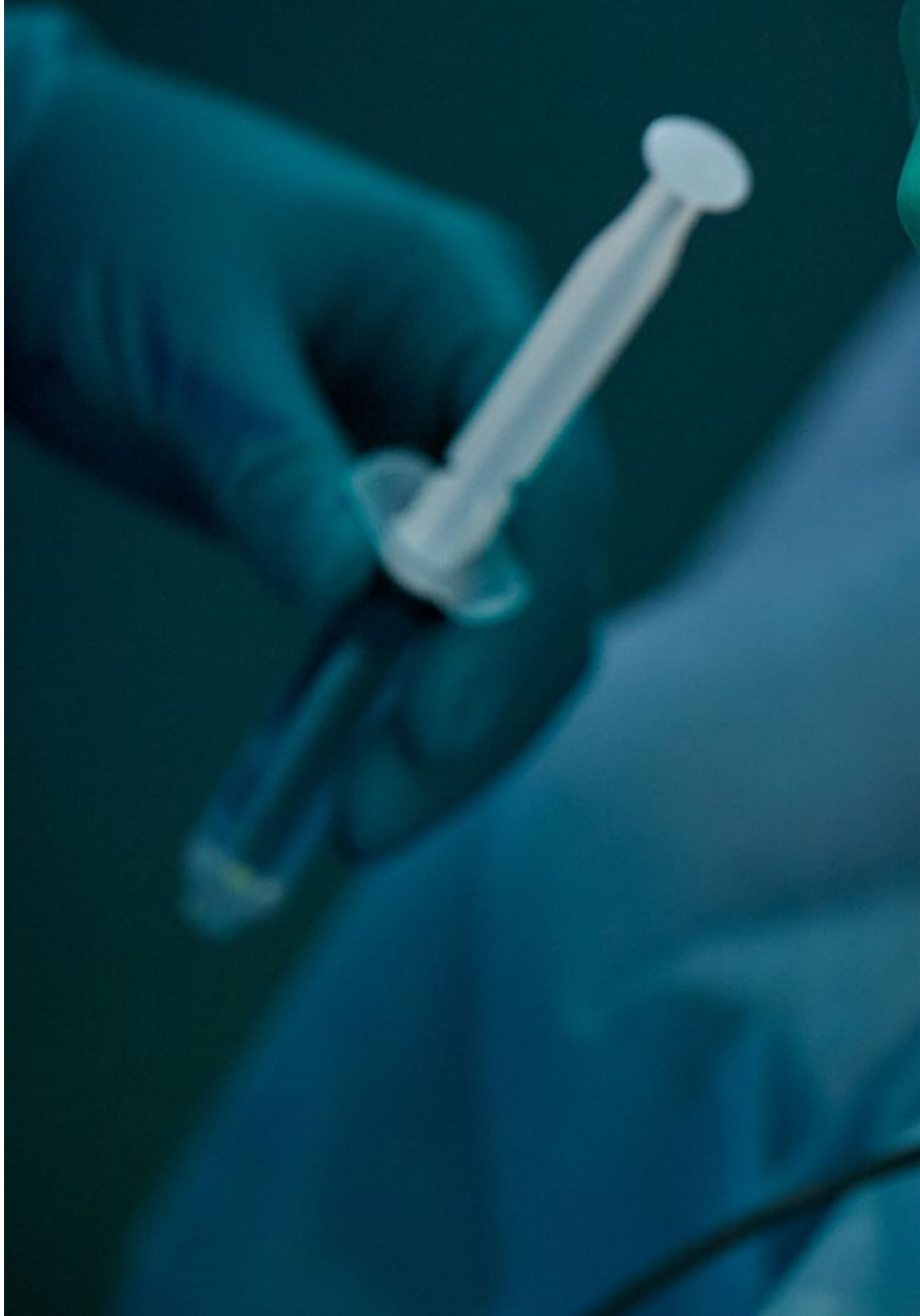
1.3. Locoregional anesthesia in the treatment of neuropathic pain DN pain.)
- 1.3.1. Diagnostic blocks in the treatment of DN
- 1.3.2. Pulsed RF in the treatment of DN in MMSS
- 1.3.3. Pulsed RF in the treatment of DN of the thorax
- 1.3.4. Pulsed RF in the treatment of abdominal DN
- 1.3.5. Pulsed RF in the treatment of lumbar DN
- 1.3.6. Pulsed RF in the treatment of MMII DN

1.4. Locoregional anesthesia in the treatment of oncologic pain and in the field of palliative care
   1.4.1. Invasive techniques as an adjunct to pain management in palliative care. Generalities and differential aspects of these patients. Neurolysis
   1.4.2. Stellate ganglion block for neck cancer pain and EESS
   1.4.3. Blockade of the celiac plexus for supramesocolic cancer pain
   1.4.4. Superior hypogastric plexus, inferior hypogastric plexus and ganglion impar block for pelvic cancer pain
   1.4.5. Peripheral and plexular nerve block in the oncologic patient
   1.4.6. Long-term epidural catheter in the context of the oncologic patient
   1.4.7. Intrathecal pumps for the management of the oncologic patient
1.5. Locoregional anesthesia in the treatment of low back pain
   1.5.1. Blockade and radiofrequency in lumbar facet syndrome
   1.5.2. Regional approach to discogenic pain
   1.5.3. Pain due to lumbosacral radiculopathy
   1.5.4. Lumbar epidural steroids
   1.5.5. Lumbosacral DRG RF
   1.5.6. Lumbar myofascial syndrome
   1.5.7. Blockade and infiltration with botulinum toxin of the piriformis muscle
   1.5.8. Blockade and infiltration with botulinum toxin of the psoas and quadratus lumborum muscle
   1.5.9. Pain due to alterations in the sacroiliac joint. Blockage diagnosis and RF
   1.5.10. Epidurolisis and epiduroscopy

1.6. Regional anesthesia and craniofacial pain. Cervicalgia
- 1.6.1. Trigeminal neuralgia. Block and RF of Gasser's Ganglion
- 1.6.2. Other orofacial algias. Sphenopalatine ganglion block and RF
- 1.6.3. Cervicogenic headache. TON and GON block and RF
- 1.6.4. Cervical pain due to facet pathology. Diagnostic block and RF in cervical facet syndrome
- 1.6.5. Cervical discogenic pain. Cervical epidural steroids
- 1.6.6. Radiculopathy of the MMSS. Epidural, radicular and RF blocks of cervical roots GRD

1.7. Regional anesthesia, visceral pain and CRPS
- 1.7.1. Regional anesthesia in acute and chronic pancreatitis
- 1.7.2. Regional anesthesia in the pathology of acute and chronic renal lithiasis
- 1.7.3. Regional anesthesia in chronic non-oncologic pelvic pain
  - 1.7.3.1. Diagnostic and therapeutic blockade of the superior hypogastric plexus
  - 1.7.3.2. Diagnostic and therapeutic blockade of the Ganglion Impar
  - 1.7.3.3. Block and RF of the pudendal nerve
  - 1.7.3.4. Block and RF of the ilioinguinal and iliohypogastric nerves
- 1.7.4. CRPS
  - 1.7.4.1. Pathophysiology of CRPS
  - 1.7.4.2. CRPS in MMSS: peripheral and stellate ganglion techniques
  - 1.7.4.3. CRPS in MMII: peripheral and lumbar sympathetic techniques

1.8. Regional anesthesia and musculoskeletal pain. Thorax and large joints
- 1.8.1. Regional anesthesia in the painful shoulder. Intra-articular block. Suprascapular nerve RF
- 1.8.2. Regional anesthesia in coxarthrosis. Intra-articular block. Denervation techniques
- 1.8.3. Regional anesthesia in gonarthrosis. Intraarticular block. Denervation techniques (RF N geniculates).Regional Anesthesia in Gonarthrosis
- 1.8.4. Regional anesthesia in myofascial syndrome. Trigger point blockade. Intrafascial blocks
- 1.8.5. Regional anesthesia and discogenic dorsalgia. Epidural steroids
- 1.8.6. Regional anesthesia and discogenic dorsalgia. Diagnostic block and RF in dorsal facet syndrome



1.9. Regional anesthesia in step IV. Neurostimulation and spinal infusion of drugs
- 1.9.1. Pathophysiological basis of neurostimulation and spinal drug infusion
- 1.9.2. Neurostimulation in the treatment of pain secondary to failed back surgery (FBSS)
  - 1.9.2.1. Posterior cord stimulation
  - 1.9.2.2. Stimulation of the GRD
  - 1.9.2.3. Neurostimulation in peripheral neuropathies
  - 1.9.2.4. Neurostimulation of posterior cords in angina and visceral pain
  - 1.9.2.5. Neurostimulation of sacral roots in CPD
  - 1.9.2.6. Intracranial and transcranial stimulation
  - 1.9.2.7. Infusion of drugs via spinal route in non-oncological pathology

1.10. Regional anesthesia in labor analgesia (ATP)
- 1.10.1. Pathophysiology of pain in the phases of labor
- 1.10.2. Regional analgesia in PTA: epidural analgesia. Modalities of drug administration in PTA
- 1.10.3. PTA and other modalities of regional analgesia: combined epidural-intradural (CIE) analgesia. CIE analgesia without intradural drug
- 1.10.4. Regional anesthesia in cesarean section. Epidural Anesthesia. Intradural anesthesia. Anesthesia CIE
- 1.10.5. Special situations in PTA and regional anesthesia
  - 1.10.5.1. PTA, regional anesthesia and obese patient. Ultrasound. Caudal epidural approach
  - 1.10.5.2. DAP in cesarean section without epidural catheter. Abdominal wall blocks
  - 1.10.5.3. Transvaginal/transperineal pudendal nerve block

05

Methodology

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

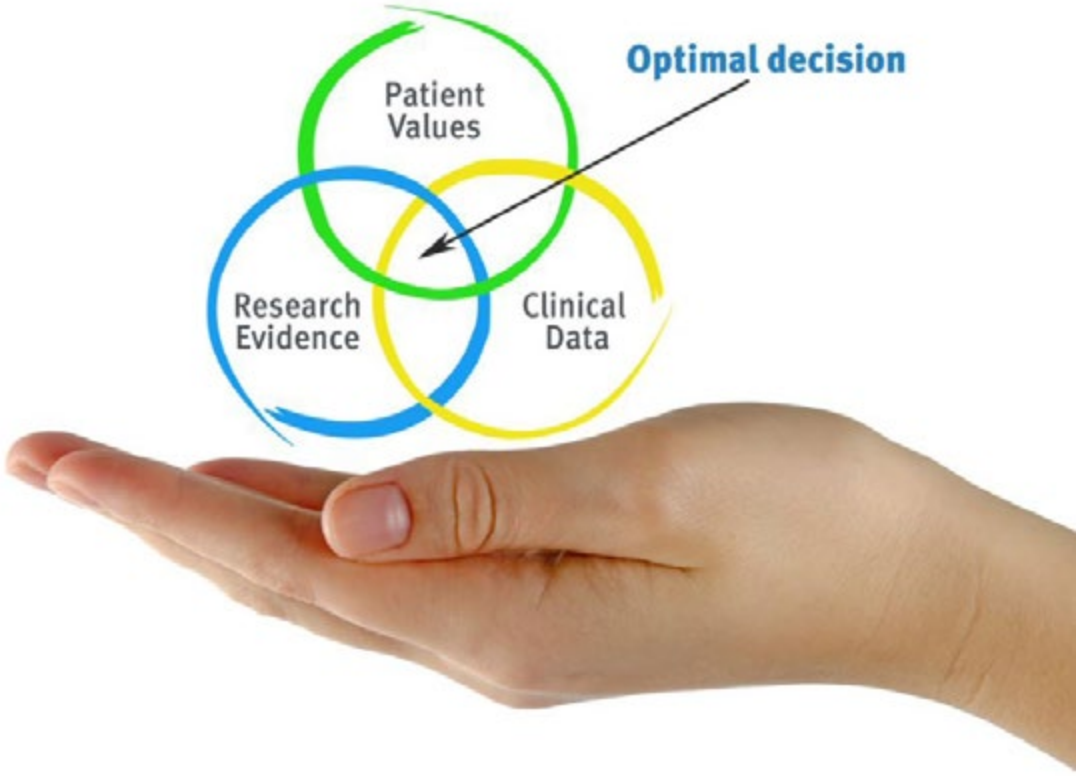
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the ***New England Journal of Medicine*** have considered it to be one of the most effective.

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

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

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

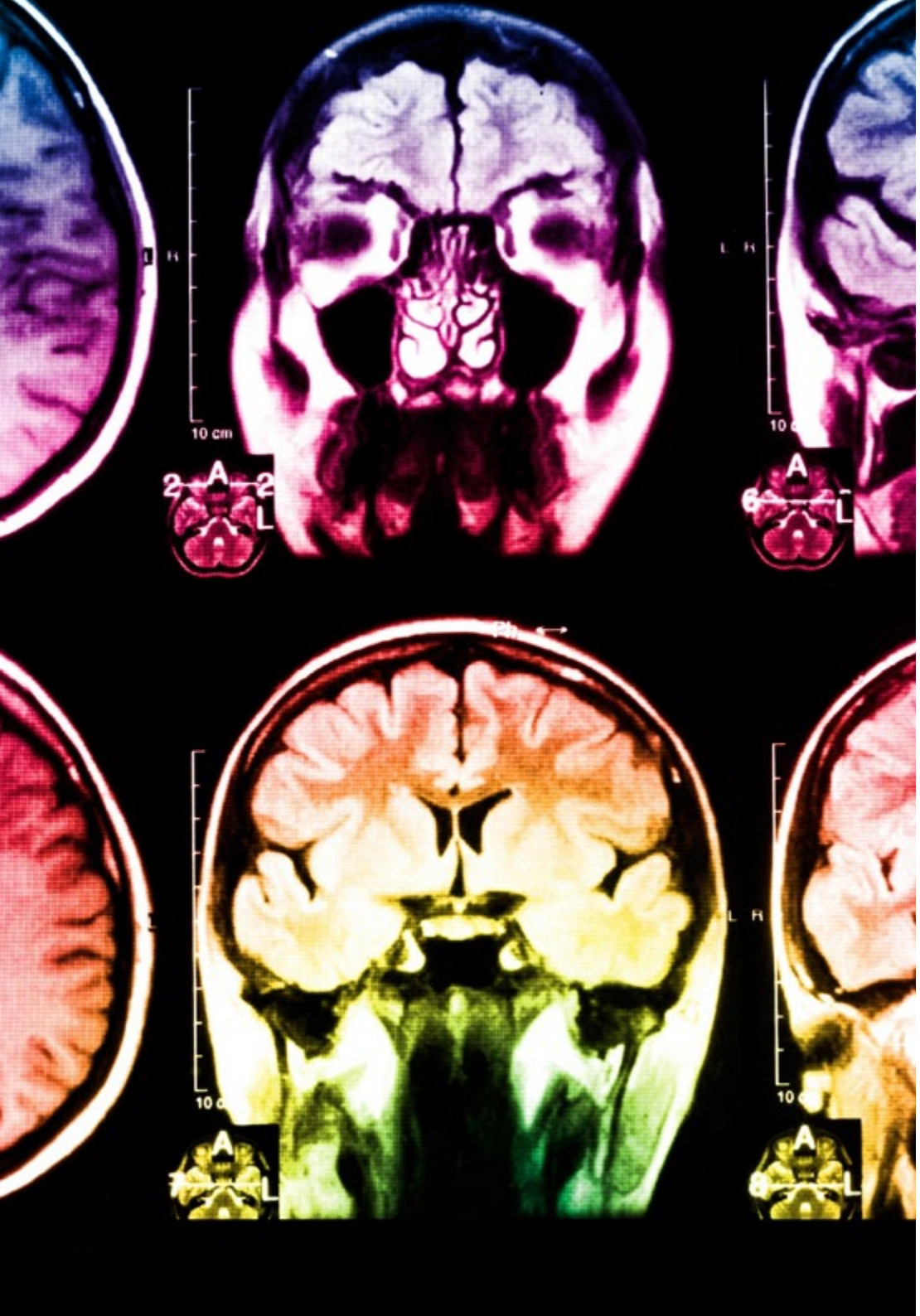
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better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

Relearning Methodology

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

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

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



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

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

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

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

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

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

Study Material

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

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

Surgical Techniques and Procedures on Video

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

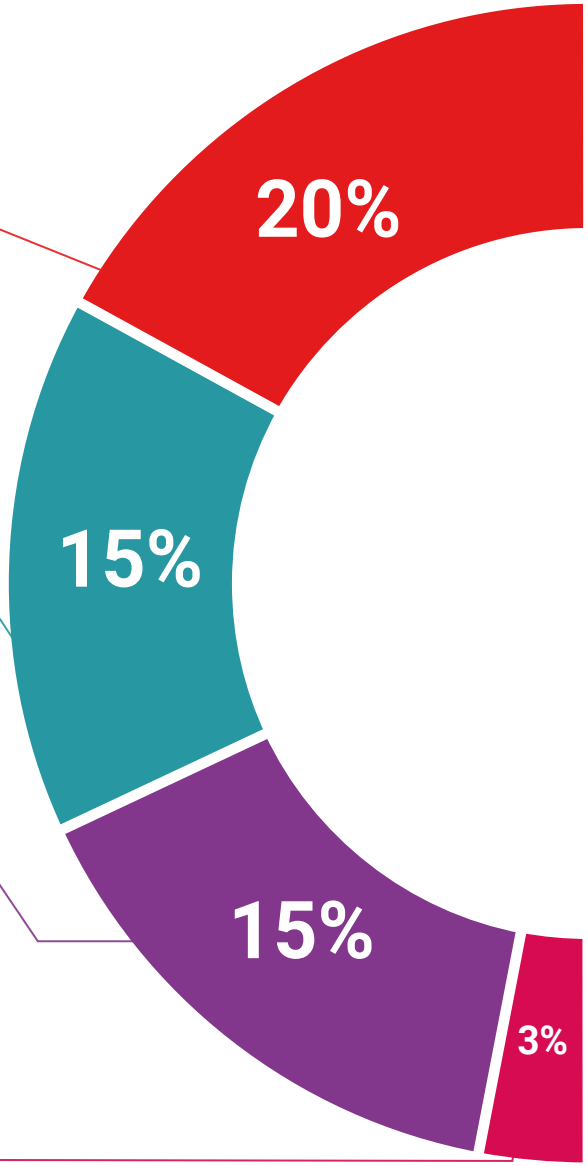
Interactive Summaries

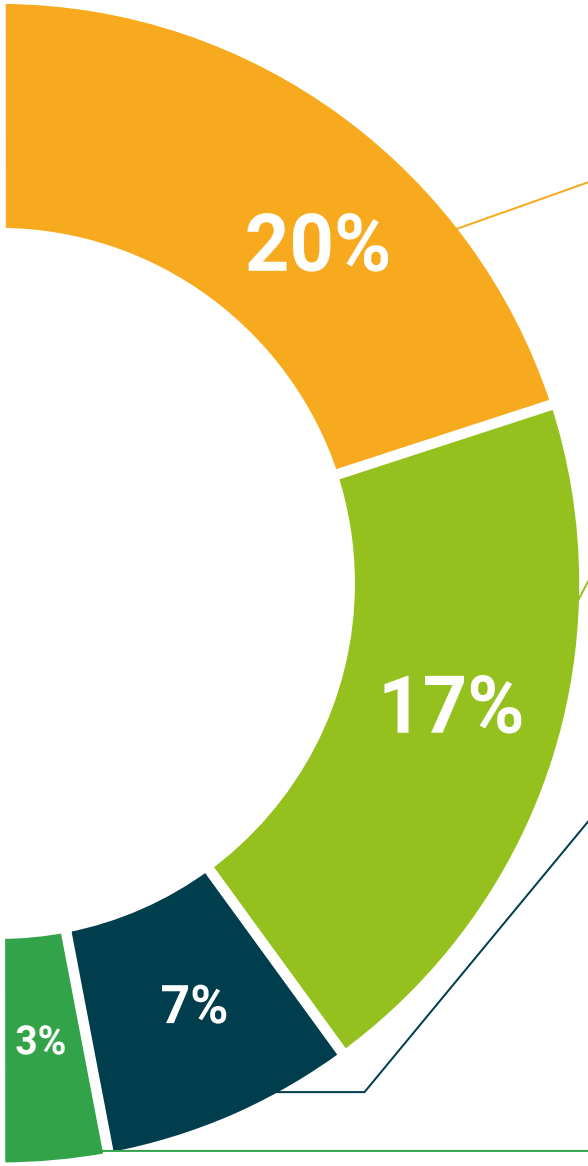
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

Additional Reading

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





Expert-Led Case Studies and Case Analysis

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

Testing & Retesting

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

Classes

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

Quick Action Guides

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

06

Certificate

The Postgraduate Certificate in Locoregional Anesthesia and Pain Management guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.

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

This program will allow you to obtain your **Postgraduate Certificate in Locoregional Anesthesia and Pain Management** 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** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Locoregional Anesthesia and Pain Management**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**

tech global university

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

Postgraduate Certificate in Locoregional Anesthesia and Pain Management

This is a program of 180 hours of duration equivalent to 6 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

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

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

tech global university

Postgraduate Certificate

Locoregional Anesthesia and Pain Management

- Modality: **online**
- Duration: **6 weeks**
- Certificate: **TECH Global University**
- Credits: **6 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Postgraduate Certificate

Locoregional Anesthesia and Pain Management

tech global university