

# Postgraduate Certificate

## Other Uses of Clinical Ultrasound in Primary Care



## Postgraduate Certificate Other Uses of Clinical Ultrasound in Primary Care

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

Website: [www.techtute.com/us/medicine/postgraduate-certificate/other-uses-clinical-ultrasound-primary-care](http://www.techtute.com/us/medicine/postgraduate-certificate/other-uses-clinical-ultrasound-primary-care)

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# 01

# Introduction

Ultrasound scanners have been instrumental in medical care advances. Over the years, these machines have become smaller and cheaper, which has allowed for widespread adoption in hospital medical practices. For this reason, it is vitally important that physicians receive training in this specialty.





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*Earn your qualification in Other Uses of Clinical Ultrasound in Primary Care from the world's largest online university”*



With the Postgraduate Certificate in Other Uses of Clinical Ultrasound in Primary Care, students will update their knowledge on the subject and will obtain the skills required to use ultrasound in their daily medical practice.

Clinical Ultrasound or point-of-care ultrasound is the technique of ultrasound exploration of the body that is used for the practical practice of medicine, related to the direct observation of the patient.

The use of clinical ultrasound in primary care facilitates the work of healthcare professionals, allowing them to develop a thorough diagnosis of the pathology presented by the patient for subsequent treatment. There are numerous uses for clinical ultrasound in primary care, such as the monitoring or detection of abnormalities such as diabetes, breast tumors, dermatological problems and even brain problems.

With this Postgraduate Certificate, students have the opportunity to take a teaching program that brings together the most advanced and in-depth knowledge of the use of clinical ultrasound in Primary Care, where a group of teachers of high scientific standing and extensive international experience offers you the most complete and up-to-date information on the use of ultrasound as a complement to physical examinations.

It endorses the latest advances in ultrasound with a robust and educational teaching program, which positions it as a product of the highest scientific rigor aimed at health professionals at the international level. In addition, the program is based on a multidisciplinary approach to its subjects, which allows for training and professional development in different areas.

This **Postgraduate Certificate in Other Uses of Clinical Ultrasound in Primary Care** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Numerous clinical cases presented by ultrasound experts
- ♦ The graphic, schematic, and practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional
- ♦ New diagnostic-therapeutic developments on evaluation, diagnosis, and intervention in problems or disorders that can be addressed with ultrasound
- ♦ It contains practical exercises where the self-evaluation process can be carried out to improve learning
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- ♦ Special emphasis on evidence-based medicine and research methodologies in ultrasound processes
- ♦ Content that is accessible from any fixed or portable device with an Internet connection
- ♦ All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments



*Update your knowledge on the different utilities and uses of ultrasound in primary care, with the help of distinguished experts in the field"*

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*You will have distinguished tutored in the field, who will guide you throughout the learning process"*

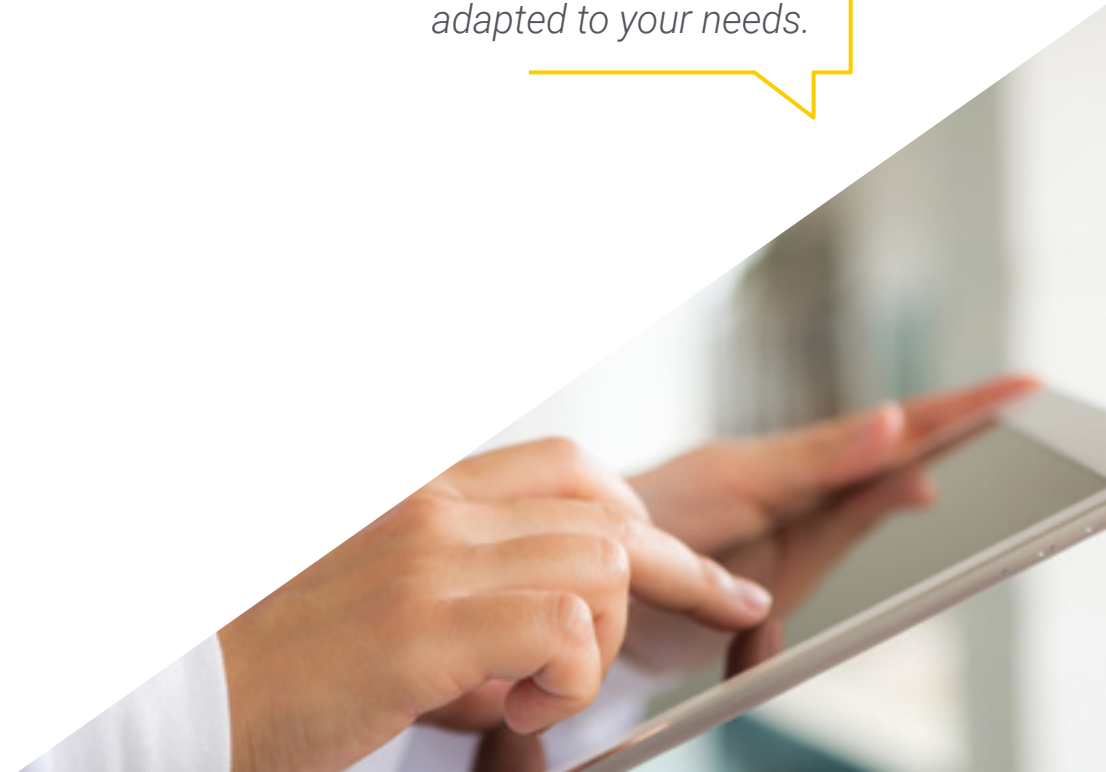
The teaching staff is made up of prestigious and renowned professionals who have extensive experience in healthcare, teaching, and research in various countries, contributing their professional expertise to this Postgraduate Certificate.

The methodological design, developed by a multidisciplinary team of *e-learning experts*, integrates the latest advances in educational technology in order to create numerous multimedia tools that allow professionals to solve real-life situations in their daily practice. These will enable you to advance by both acquiring knowledge and developing new skills in your future professional work.

The contents generated for this Postgraduate Certificate, as well as the videos, self-exams, clinical cases, and modular exams, have been thoroughly reviewed, updated, and integrated by the professors and the team of experts that make up the course working group, in order to gradually and educationally facilitate a learning process that allows for the objectives of the teaching program to be achieved.

*Thanks to the e-learning methodology, on which this Postgraduate Certificate is based, you will assimilate the contents more quickly and for a longer period of time.*

*As it is 100% online, you will be able to update your knowledge on the advances in ultrasound diagnostics in a practical way adapted to your needs.*



# 02 Objectives

The main objective of this Postgraduate Certificate is to acquire the most up-to-date and innovative scientific knowledge in this diagnostic area, which will allow students to develop the skills that will turn their daily clinical practice into a benchmark of the best standards based on the available scientific evidence, in a critical, innovative, multidisciplinary and integrative sense.







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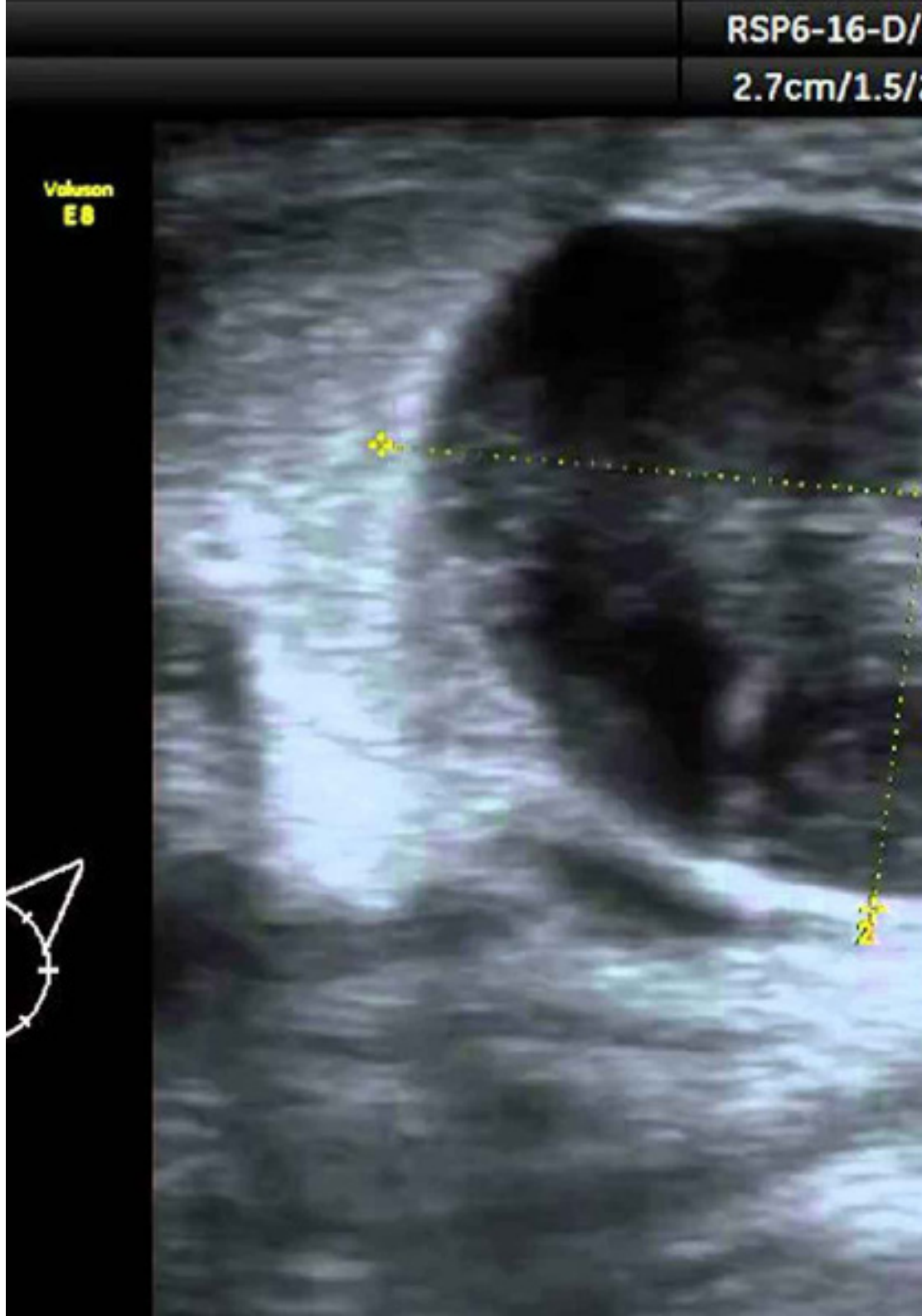
*At the end of this Postgraduate Certificate, you will have the knowledge and skills necessary to use ultrasound in your daily medical practice”*



## General Objectives

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- Acquire the necessary knowledge in the use of ultrasound, in order to manage the routine situations of their practical use in healthcare.
- Apply the skills acquired while performing the duties of an ultrasound specialist.
- Use the latest clinical developments in the day-to-day work of a medical professional.





## Specific Objectives

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- Optimize ultrasound imaging through in-depth knowledge of the physical principles of ultrasound and the controls and operation of ultrasound scanners
- Master the basic and advanced procedures in ultrasound, both at the diagnostic and therapeutic levels
- Determine the indications and limitations of ultrasound and its application in the most common clinical situations
- Predict the results of invasive diagnostic procedures non-invasively by using ultrasound, with the possibility of replacing them.
- Guide invasive therapeutic procedures to minimize their risks
- Understand how to extend the concept of ultrasound to healthcare, research, and academic environments

03

# Course Management

The program's teaching staff includes leading specialists in clinical ultrasound and other related areas, who bring their years of work experience to this training. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner.







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*Throughout the program, you will have real cases of prestigious health professionals, which will help you develop your skills in the field”*



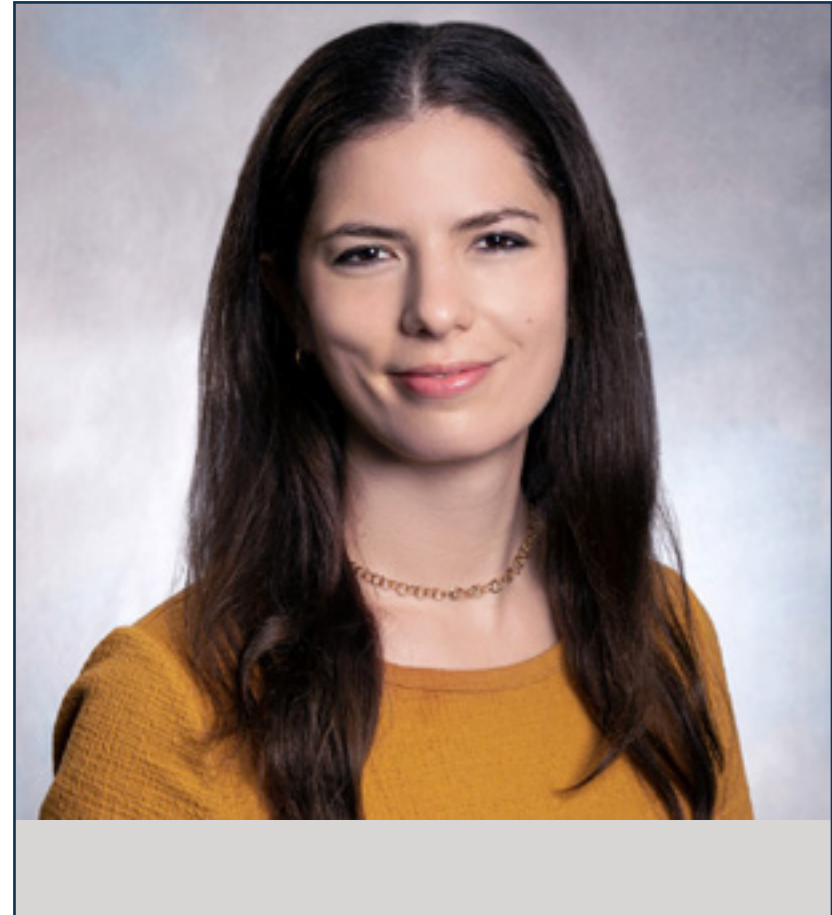
## International Guest Director

Dr. Lauren Ann J. Selame is a recognized professional in the field of Medicine, specializing in Clinical Ultrasound. Her expertise focuses on the application of ultrasound in emergency medical, diagnostic imaging, simulation and public health. With a deep interest in procedural competence and in the development of advanced techniques to detect various disorders, she has contributed significantly to the use of Anatomical Ultrasound to improve response times and accuracy in emergency treatments.

Throughout his career, he has played key roles in prestigious institutions. At Brigham Women's Hospital, recognized among the best hospitals in the world by Newsweek magazine, she has been Director of Ultrasound Education in Emergency Medicine, in addition to serving as an emergency physician. Her experience also includes her time at Massachusetts General Hospital as an Emergency Ultrasound Assistant, and at Thomas Jefferson Hospital, where she was a resident in Emergency Medicine, after training at the Sidney Kimmel School of Medicine of Thomas Jefferson University.

At the international level, she is noted for her contributions, especially in Emergency Medicine. She has worked in some of the most prestigious healthcare centers in the United States, which has allowed her to hone her skills and bring significant advances to the medical community. Her work has earned her a reputation for her expertise in diagnostic ultrasound, and she is a reference in the use of this technology in emergencies.

As a researcher associated with university institutions, she has written numerous scientific articles on its emphasis, addressing both its application in critical situations and its advances in medical diagnosis. Her publications are consulted by professionals worldwide, consolidating her role as one of the most influential voices in the field of clinical ultrasound.



## Dr. Selame, Lauren Ann J.

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- Director of Ultrasound in Emergency Medicine Brigham Women's Hospital, Boston, United States
- Emergency Medicine Physician Specialist at Brigham Women's Hospital
- Emergency Ultrasound Physician Specialist at Massachusetts General Hospital, Massachusetts
- Resident Physician in Emergency Medicine at Thomas Jefferson University Hospital
- Research Assistant at the Perelman School of Medicine, University of Pennsylvania
- M.D., Thomas Jefferson University
- Medical Degree, Sidney Kimmel School of Medicine at the Thomas Jefferson University

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*Thanks to TECH, you will be able to learn with the best professionals in the world”*

## Management



### Dr. Fumadó Queral, Josep

- ◆ Family physician at Els Muntells Primary Care Center (Amposta, Tarragona).
- ◆ Graduate in Clinical Ultrasound and Training of Trainers, University of Montpellier-Nîmes, France
- ◆ Lecturer at the Associació Mediterrània of General Medicine
- ◆ Teacher at the Spanish School of Ultrasound of the Spanish Society of General and Family Physicians (SEMG)
- ◆ Honorary Member of the Canary Society of Ultrasound (SOCANECO) and Professor of its Annual Symposium
- ◆ Lecturer on the Master's Degree in Clinical Ultrasound for Emergencies and Critical Care, CEU Cardenal Herrera University



### Dr. Pérez Morales, Luis Miguel

- ◆ Family physician at the Primary Care Center of Arucas (Gran Canaria, Canary Islands).
- ◆ Diploma in Ultrasound in Primary Care University Rovira i Virgili Catalan Institute of Health
- ◆ Expert in Thoracic Ultrasound University of Barcelona
- ◆ Expert in Abdominal and Musculoskeletal Clinical Ultrasound for Emergency and Critical Care, CEU Cardenal Herrera University
- ◆ President and Professor of the Canary Society of Ultrasound (SOCANECO) and Director of its Annual Symposium
- ◆ Lecturer on the Master's Degree in Clinical Ultrasound for Emergencies and Critical Care, CEU Cardenal Herrera University

## Scientific Committee

### Dr. Álvarez Fernández, Jesús Andrés

- ♦ Specialist in Intensive Care Medicine
- ♦ Intensive Care Medicine and Major Burns Service, Getafe University Hospital Getafe, Madrid
- ♦ Director of the Master's Degree in Clinical Ultrasound in Emergency and Critical Care, CEU Cardenal Herrera University
- ♦ Director of the Master's Degree in Clinical Imaging in Emergency and Critical Care, CEU Cardenal Herrera University
- ♦ Professor on the Specialist Degree in Thoracic Ultrasound, University of Barcelona

### Dr. Herrera Carcedo, Carmelo

- ♦ Family Physician and Head of the Ultrasound Unit, Briviesca Health Center, Burgos
- ♦ Tutor at the Family and Community Medicine Teaching Unit, Burgos
- ♦ Teacher at the Spanish School of Ultrasound of the Spanish Society of General and Family Physicians (SEMG)
- ♦ Member of the Spanish Society of Ultrasound (SEECO) and the Spanish Association of Prenatal Diagnosis (AEDP)

### Dr. Jiménez Díaz, Fernando

- ♦ Specialist in Sports Medicine
- ♦ Professor in the Faculty of Sports Sciences, University of Castilla La Mancha Toledo
- ♦ Director of the International Chair of Musculoskeletal Ultrasound, Catholic University of Murcia
- ♦ Professor on the Master's Degree in Clinical Imaging in Emergency and Critical Care, CEU Cardenal Herrera University

### Dr. Sánchez, José Carlos

- ♦ Radiodiagnosis Specialist
- ♦ Director of the Integrated Diagnostic Imaging Management Area and Intrahospital Coordinator of the Breast Cancer Early Detection Program, Poniente Hospital El Ejido, Almería
- ♦ Professor on the Specialist Degree in Clinical Ultrasound for Family Physicians, University of Barcelona

## Professors

### Dr. Arancibia Zemelman, Germán

- ♦ Radiology Department Specialis, Clínica Meds Santiago de Chile, Chile

### Dr. Argüeso García, Mónica

- ♦ Intensive Care Medicine Department Gran Canaria Maternity Complex Las Palmas de Gran Canaria, Canary Islands

### Dr. Barceló Galíndez, Juan Pablo

- ♦ Specialist in Occupational Medicine and Medical Sonographer, Mutualia Bilbao

### Dr. Cabrera González, Antonio José

- ♦ Family Physician Tamaraceite Health Center. Las Palmas de Gran Canaria, Canary Islands

### Dr. Corcoll Reixach, Josep

- ♦ Family Physician Tramuntana Health Center, Mallorca, Balearic Islands

### Dr. De Varona Frolov, Serguei

- ♦ Angiology and Vascular Surgery Specialist General University Hospital of Gran Canaria Dr. Negrín. Las Palmas de Gran Canaria, Canary Islands

### Dr. Donaire Hoyas, Daniel

- ♦ Specialist in Orthopedic Surgery and Traumatology Poniente Hospital El Ejido, Almería

### Mr. Fabián Feroso, Antonio

- ♦ Global Clinical Insights Leader Point of Care General Electric Healthcare Getafe,

Madrid

### Mr. Gálvez Gómez, Francisco Javier

- ♦ Ultrasound Portfolio Solutions Manager España, SIEMENS Healthcare Getafe, Madrid

### Dr. García García, Nicasio

- ♦ Family Physician, Schamann Health Center

### Dr. Herrero Hernández, Raquel

- ♦ Specialist in Service of Intensive Care Medicine and Major Burns, Getafe University Hospital Getafe, Madrid

### Dr. Igeño Cano, José Carlos

- ♦ Head of the Emergency and Intensive Care Department, San Juan de Dios Hospital Córdoba

### Dr. León Ledesma, Raquel

- ♦ Specialist in General and Digestive System Surgery and Obstetrics and Gynecology, Getafe University Hospital Getafe, Madrid

### Dr. López Cuenca, Sonia

- ♦ Family Physician and Assistant in the Intensive Care and Major Burns, Getafe Hospital, Madrid

### Dr. López Rodríguez, Lucía

- ♦ Specialist in Service of Intensive Care Medicine and Major Burns, Getafe University Hospital Getafe, Madrid



**Dr. Martín del Rosario, Francisco Manuel**

- ◆ Rehabilitation Specialist. Insular University Hospital Complex, Maternity and Infant. Las Palmas de Gran Canaria

**Mr. Moreno Valdés, Javier**

- ◆ Business Manager Ultrasound. Cannon (Toshiba) Medical Systems. Getafe, Madrid

**Dr. Núñez Reiz, Antonio**

- ◆ Specialist in Intensive Medicine, San Carlos Clinical University Hospital Getafe, Madrid

**Dr. Santos Sánchez, José Ángel**

- ◆ Specialist in the Radiology Department, Salamanca University Hospital Salamanca

**Dr. Segura Blázquez, José María**

- ◆ Family Physician Canalejas Health Center Las Palmas de Gran Canaria, Canary Islands

**Dr. Wagüemert Pérez, Aurelio**

- ◆ Specialist in Pulmonology, San Juan de Dios Hospital Santa Cruz de Tenerife, Canary Islands

04

# Structure and Content

The structure of the contents has been designed by a team of professionals from leading hospitals, who have taken into account the need to update the content that will be taught, as well as the use of quality teaching through new educational technologies.



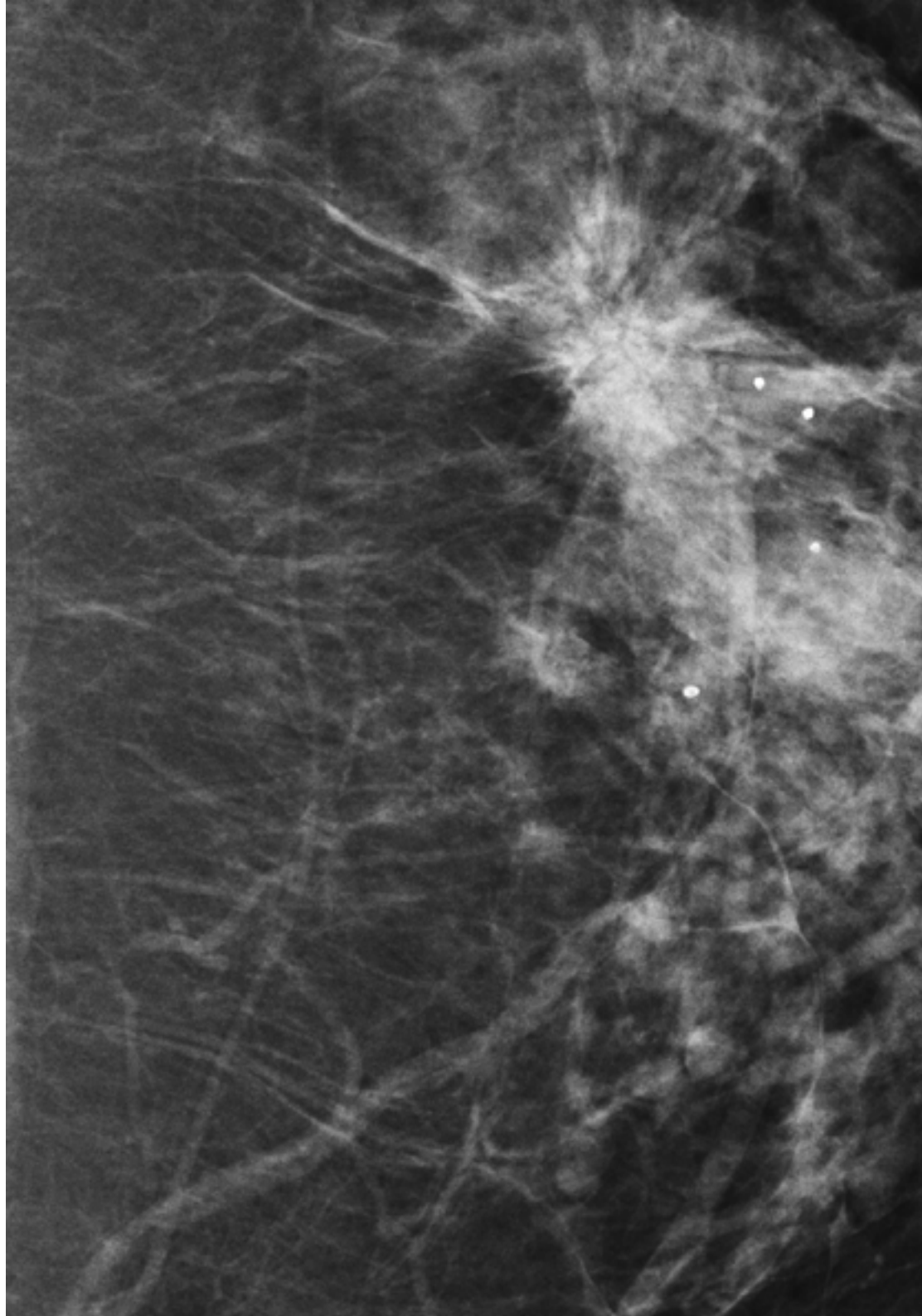


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*With this program you will be able to detect and intervene in those pathologies that can be diagnosed through ultrasound”*

## Module 1 Other Uses of Clinical Ultrasound

- 1.1. Radial Breast Ultrasound
  - 1.1.1. Anatomy Recap
  - 1.1.2. Technical Requirements
  - 1.1.3. Ultrasound Slices
  - 1.1.4. Ultrasound Features - Breast Pathology
  - 1.1.5. Breast Elastography
- 1.2. Dermatological Ultrasound
  - 1.2.1. Echoanatomy of the Skin and Appendages
  - 1.2.2. Ultrasound of Skin Tumors
  - 1.2.3. Ultrasound of Inflammatory Skin Diseases
  - 1.2.4. Ultrasound in Dermoesthetics and its Complications
- 1.3. Ultrasound in Diabetes
  - 1.3.1. Aortic/Carotid Atheromatosis in Diabetics
  - 1.3.2. Parenchymal Echogenicity in Diabetic Patients
  - 1.3.3. Biliary Lithiasis in Diabetic Patients
  - 1.3.4. Neurogenic Bladder in Diabetic Patients
  - 1.3.5. Cardiomyopathy in Diabetic Patients
- 1.4. Ultrasound Report
  - 1.4.1. Ultrasound Note
  - 1.4.2. Ultrasound Derivation
  - 1.4.3. Ultrasound Report in PC
- 1.5. Ultrasound Safety during the COVID-19 Pandemic





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*A unique, key, and decisive  
training experience to boost your  
professional development”*



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.



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*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

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

*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 Other Uses of Clinical Ultrasound in Primary Care guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



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*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 Other Uses of Clinical Ultrasound in Primary Care** 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.

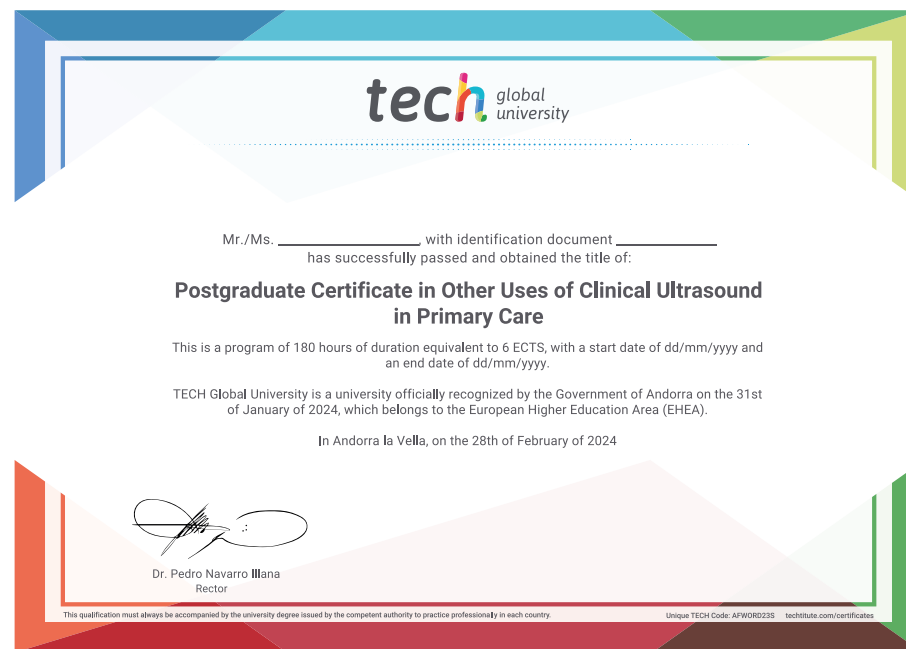
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Other Uses of Clinical Ultrasound in Primary Care**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 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.

health future  
confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
online training  
development language  
virtual classroom



**Postgraduate Certificate**  
Other Uses of Clinical  
Ultrasound in Primary Care

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



# Postgraduate Certificate

## Other Uses of Clinical Ultrasound in Primary Care

