

# Professional Master's Degree

## Geriatric Rheumatology





## Professional Master's Degree Geriatric Rheumatology

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

Website: [www.techtute.com/us/medicina/professional-masters-degree/master-geriatric-rheumatology](http://www.techtute.com/us/medicina/professional-masters-degree/master-geriatric-rheumatology)

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# 01

# Introduction

The locomotor system, the immune system and rheumatic diseases show specific nuances in elderly patients. These particularities condition both diagnoses and treatments. For this reason, it is necessary for specialists to comprehensively approach the main pathologies present in this stage of life, in a health system that tends to sub-specialization. Faced with this reality, TECH offers graduates an update through a 100% online program, which leads the professional to be aware of the latest advances in degenerative and infectious diseases, metabolic atroparias, aging or pharmacotherapy, among others. Everything under the maximum scientific rigor and with a syllabus prepared by the best specialists in this medical field.





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*You have 1,500 hours of rigorous and recent information on Geriatric Rheumatology. Introduce the latest advances in this specialty into your daily practice”*

The current sociodemographic situation in much of the world shows an increase in the elderly population and life expectancy in contrast to the reduction of the birth rate. For this reason, the presence of geriatric patients in health systems is common, who also require, due to their special characteristics in the biological, psychological and social spheres, comprehensive care to meet their needs.

Therefore, the approach to the main pathologies from this perspective facilitates increased quality and efficiency of care. In this sense, it is essential for medical professionals to be aware of diagnostic and therapeutic advances in the main pathologies of this age group. For this reason, TECH has designed this Professional Master's Degree in Geriatric Rheumatology that offers a complete syllabus prepared by real experts in this field with extensive experience in leading hospitals.

This is a program of 1,500 teaching hours, where the graduate, through multimedia didactic material, complementary readings and simulations of clinical case studies, will delve into aging, the most frequent diseases that affect the locomotor system, as well as the advances in imaging techniques for diagnosis and pharmacological and non-pharmacological treatments.

Everything, moreover, from a theoretical-practical perspective and a pedagogical methodology that moves away from long hours of study. Thanks to the Relearning system, based on the continuous reiteration of key concepts, students will consolidate them in a much simpler way.

Undoubtedly, an exceptional opportunity to keep up-to-date with the management of rheumatologic conditions without the need to attend centers in person, or to have sessions with fixed schedules. In this way, the specialist is faced with a flexible and convenient university program. They only need an electronic device (cell phone, tablet or computer) with internet connection to visualize, at any time of the day, the syllabus of this advanced academic option.

This **Professional Master's Degree in Geriatric Rheumatology** 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 rheumatology
- 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



*Practical case studies will allow you to have interaction with complex situations of routine consultation of degenerative and infectious pathologies”*

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*TECH has designed a program for professionals like you with high responsibilities and eager to update your knowledge with the best specialists”*

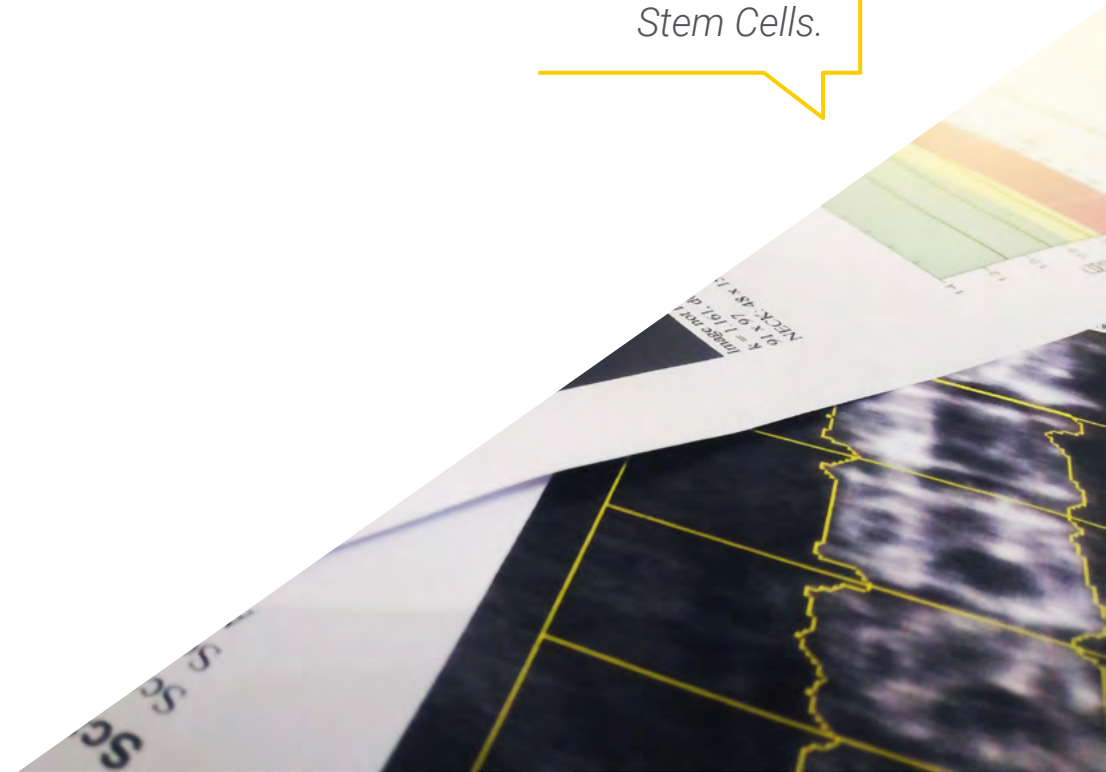
The program’s teaching team includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Delve into the latest scientific evidence on primary and metastatic musculoskeletal tumor treatments.*

*Delve into the latest clinical developments in pain treatments with Platelet Rich Plasma and Mesenchymal Stem Cells.*



# 02

# Objectives

The purpose of this university program is to provide throughout its 12-month duration, the most rigorous and current scientific information on diagnostic and therapeutic procedures in Geriatric Rheumatology. Therefore, the graduate will conclude this program being aware of the holistic approach to these patients and incorporating the latest advances in pharmacological and non-pharmacological treatments in the most common pathologies in their usual clinical practice.







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*In only 12 months you will get an update in Geriatric Rheumatology through the most advanced pedagogical resources”*



## General Objectives

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- Delve into the processes of aging, its clinical, diagnostic and prognostic implications
- Research on the specific biological and physiological determinants of geriatric patients
- Delve into the reasons why pathologies manifest themselves differently in geriatric patients, as well as the pharmacological characteristics that condition their treatments
- Update knowledge about the biopsychosocial determinants related to the aging process
- Promote comprehensive and holistic care in geriatric patients with rheumatic pathologies, whether measured by the immune system, bone metabolism, paraneoplastic or degenerative manifestations



*The case studies will allow you to keep up-to-date with current solutions to the main comorbidities in geriatric patients”*





## Specific Objectives

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### Module 1. Specific characteristics of the geriatric patient

- ◆ Delve into the concept of aging, updating the knowledge of the biological and physiological bases of the involutive process
- ◆ Delve into the different pathologies and their peculiarities in the elderly population
- ◆ Provide a global approach to the geriatric patient, integrating the disease with the functional and social aspect as a whole
- ◆ Study the pharmacokinetic differences in this elderly population that condition pharmacological prescription, as well as pharmacovigilance programs and prescription quality indicators
- ◆ Delve into the handling of the most frequently used scales in the evaluation of the functional, mental and social spheres of the elderly patient

### Module 2. Pathology of bone metabolism

- ◆ Present the latest advances in bone molecular biology to facilitate the diagnosis and management of metabolic bone pathology
- ◆ Perform a correct initial evaluation of the elderly patient with osteoporosis, as well as recognize fracture risk factors and fracture risk
- ◆ Identify the problems and limitations of diagnostic techniques and be able to adapt to the specific conditions of this population group to ensure an adequate diagnosis
- ◆ Perform an adequate management of pharmacological and non-pharmacological therapeutic measures in each of the situations that may arise in metabolic bone pathologies in the specific context of the geriatric population

### **Module 3. Chronic inflammatory joint diseases (arthritis/spondyloarthritis)**

- ♦ Delve into the concepts of inflammation and chronicity, as well as epidemiological and biological differential characteristics in the geriatric population
- ♦ Update procedures related to the comprehensive management of chronic joint diseases in the geriatric population
- ♦ Identify the problems and limitations of current classification criteria for chronic inflammatory joint diseases in geriatric patients
- ♦ Be aware of the appropriate management of pharmacological and non-pharmacological therapeutic measures in each of the situations that may occur in chronic inflammatory joint diseases

### **Module 4. Connectivopathologies: characteristics, manifestations and specific care in the geriatric patient**

- ♦ Delve into the specific characteristics of each of the pathologies treated in the geriatric population
- ♦ Identify the current and comprehensive management of chronic connective tissue diseases in the geriatric population
- ♦ Point out the problems and limitations of the different current classification criteria for connective tissue diseases in geriatric patients
- ♦ Update the pharmacological and non-pharmacological therapeutic measures in each of the situations that may occur in chronic connective tissue diseases

### **Module 5. Musculoskeletal manifestations of systemic pathologies of the elderly (IR, hepatic I, anemias, parathyroid pathology) and other metabolic atroparias**

- ♦ Delve into the specific characteristics of each of the pathologies included with their repercussions in the geriatric age
- ♦ Analyze the approach to systemic diseases mediated by the immune system (vasculitis, myopathies and others) in the geriatric population
- ♦ Identify the problems and limitations of the different current classification criteria for immune-mediated systemic diseases (vasculitis, myopathies, and others) in geriatric patients
- ♦ Cover the current pharmacological and non-pharmacological therapeutic measures in each of the situations that can occur in immune-mediated systemic diseases

### **Module 6. Neoplastic and Paraneoplastic Pathology**

- ♦ Improve competences to perform a clinical evaluation of Oncogeriatrics
- ♦ Delve into the peculiarities of the different oncological treatments in geriatric patients, as well as the optimal times of application
- ♦ Delve into and manage the different types of immunotherapy treatments available and under development, as well as their applications and indications in the geriatric population
- ♦ Delve into the management of the different paraneoplastic syndromes
- ♦ Manage the different rheumatic manifestations of chemotherapy medications and immunotherapy
- ♦ Investigate the most frequent pathological fractures in oncogeriatric patients

**Module 7. Degenerative and infectious pathology**

- ♦ Integrate the manifestations of degenerative and infectious pathology of the locomotor system in the geriatric patient broken down by anatomical structures
- ♦ Be aware of the most current procedures in the approach to degenerative and infectious pathologies of the locomotor system in the geriatric population
- ♦ Identify the most advanced pharmacological and non-pharmacological therapeutic measures in each of the situations that may occur in degenerative and/or infectious pathologies of the locomotor system

**Module 8. Vasculitis, myopathies and other systemic diseases**

- ♦ Delve into the etiopathogenic mechanisms of the different musculoskeletal manifestations of systemic diseases in the geriatric population
- ♦ Establish the current and comprehensive management of joint manifestations of systemic diseases in the geriatric population
- ♦ Identify the problems and limitations that present themselves to the clinician in routine clinical practice and provide the theoretical and practical tools to solve them
- ♦ Delve into pharmacological and non-pharmacological therapeutic measures in each of the situations that may arise in the musculoskeletal manifestations of systemic diseases

**Module 9. Pain of rheumatic origin in the geriatric patient**

- ♦ Strengthen the anatomical and physiological knowledge to ensure an update on the mechanisms and pathways by which pain occurs
- ♦ Integrate the different types of pain for each of the situations of routine clinical practice
- ♦ Update knowledge on the basis of pain to enable the participant to perform the most appropriate treatment for each case
- ♦ Delve into the indication of the different specific therapies for pain management

**Module 10. Common problems in geriatric patients**

- ♦ Strengthen knowledge of patients' comorbidities and how they can influence polypharmacy and vice versa
- ♦ Recognize the need for prophylactic and supportive treatments derived from the first prescription
- ♦ Evaluate the stages of the care process in geriatric patients
- ♦ Delve into the knowledge of the nursing work in the care of geriatric patients
- ♦ Identify the spatial characteristics of the geriatric population from a statistical point of view

# 03 Skills

Thanks to this advanced program, the professional will improve their skills and abilities to effectively treat the most common pathologies in geriatric patients. To do this, it has videos in detail, video summaries of each topic and numerous material that will allow you to delve into the closest challenges for the diagnosis and treatment of cognitive tissue diseases, chronic inflammatory or systemic joint diseases, among others. A unique opportunity that only TECH, the world's largest digital university, could offer.





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*Improve your skills in Rheumatology, whenever and wherever you want. All you need is a digital device to access the syllabus of this program”*



## General Skills

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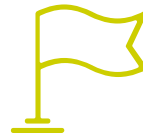
- ♦ Improve critical skills to evaluate scientific evidence or develop research work in this population group
- ♦ Increase the professional's ability to comprehensively evaluate the characteristics of the disease, as well as the comorbidities in the geriatric population
- ♦ Recognize and manage in a comprehensive manner the metabolic bone pathologies that occur in the geriatric population, taking into account the latest advances in this field
- ♦ Adequately prescribe treatment for the geriatric population
- ♦ Perform an adequate interpretation of the results of studies of the spatial characteristics of the geriatric population



*Delve into the challenges of the coming years in the diagnosis and management of chronic pathologies mediated by the immune system”*







## Specific Skills

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- ♦ Improve skills for clinical evaluation Oncogeriatrics
- ♦ Increase skills for the evaluation and management of oncologic pain in geriatric patients
- ♦ Implement in clinical practice the latest advances in degenerative and infectious pathologies of the locomotor system in geriatric patients
- ♦ Manage the most current procedures in the different types of pain
- ♦ Incorporate into practice the individualized management of pharmacological and non-pharmacological therapeutic measures in each of the situations that may be the origin of the painful experience

04

# Course Management

TECH maintains its premise of offering all professionals a quality program. For this reason it carries out a rigorous selection process of each and every one of the teachers who make up this Professional Master's Degree. In this way, the graduate will have access to information developed by leading experts in the area of Rheumatology, Pain, geriatric patient care and Physical Activity. Areas that will allow the student to carry out a multidisciplinary and complete up-date on Geriatric Rheumatology.



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*A university program made up of the best specialists in rheumatology with accumulated experience in clinical care and research”*

## International Guest Director

Vikas Majithia, M.D. is an internationally renowned figure in the field of Rheumatology, recognized for his leadership and contributions in clinical research and medical practice. As such, he has devoted his career to the treatment of inflammatory diseases such as Rheumatoid Arthritis, Psoriatic Arthritis, Lupus and Vasculitis, and is an expert in procedures such as Arthrocentesis and Joint Injections.

In this way, he has a distinguished career in the academic and medical fields, highlighting his role as Head of the Division of Rheumatology at the Mayo Clinic in Florida, USA. In addition, he has served as Director of the Division of Rheumatology at the University of Mississippi Medical Center, where he has supervised. He has also worked as a rheumatologist at the GV (Sonny) Montgomery VA Medical Center, providing care to veterans for over a decade.

Likewise, his dedication to clinical research has led him to be the principal investigator on numerous trials and studies, contributing more than 40 peer-reviewed publications and several book chapters. Indeed, his commitment to ongoing research keeps him at the forefront of key projects, being responsible for the implementation of advanced clinical studies at Mayo Clinic, including the CLASSIC study in Axial Spondyloarthritis, the PICORI-funded Patient Advocates in Lupus (PALS) study, and the RAPROPR study to evaluate outcomes in patients with Rheumatoid Arthritis among several non-TNF biologic drugs.

Among his most notable accomplishments, he has received multiple awards, including the prestigious Pioneer Award in Medicine and Science, as well as the Research and Education Foundation Literature Award for Student Research from the American Society of Health-System Pharmacists, and is considered one of America's Top Doctors.



## Dr. Majithia, Vikas

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- ♦ Head of the Division of Rheumatology, Department of Medicine, Mayo Clinic, Florida, USA
- ♦ Director of the Division of Rheumatology at the University of Mississippi Medical Center
- ♦ Rheumatologist at the VA GV (Sonny) Montgomery Medical Center
- ♦ Fellowship in Rheumatology at the University of Mississippi Medical Center
- ♦ Master's Degree in Public Health from Johns Hopkins Bloomberg School of Public Health (BSPH)
- ♦ M.D. from Pandit Bhagwat Dayal Sharma Graduate Institute of Medical Sciences
- ♦ Bachelor of Medicine and Biological Sciences, Pandit Bhagwat Dayal Sharma Graduate Institute of Medical Sciences



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

## Management



### Dr. García Martos, Álvaro

- ◆ Specialist in Rheumatology at the Hospital Universitario del Tajo
- ◆ Specialist in Rheumatology at the Hospital Universitario 12 de Octubre
- ◆ Associate Professor of Rheumatology at the University Alfonso X, El Sabio
- ◆ Research proficiency from the Complutense University of Madrid
- ◆ Degree in Medicine from the University of Cantabria
- ◆ Master's Degree in Rheumatic Diseases mediated by the Immune System, Universidad Rey Juan Carlos and the Spanish Society of Rheumatology
- ◆ EFSUMB Certification: Musculoskeletal Ultrasound level 1
- ◆ Levels A and B of Musculoskeletal Ultrasound of the Spanish Society of Sports Medicine

## Professors

### Dr. Ruiz Pinto, Ana

- ◆ Assistant specialist in Geriatrics at the Hospital Universitario del Tajo
- ◆ Research Sufficiency by the University of Alcalá de Henares
- ◆ Master's Degree in Clinical Management, Medical and Healthcare Management from the CEU Cardenal Herrera University
- ◆ Member of the Humanization Commission of the Hospital Universitario del Tajo, member of the Social and Health Commission of the Hospital Universitario del Tajo, member of the subcommittee of the Program for the Optimization of the use of Antimicrobials of the Hospital Universitario del Tajo, working group of Early Mobilization of the Hospital Universitario del Tajo

### Dr. Lavilla Villar, Patricia

- ◆ Assistant Physician in the Rheumatology Service at the Hospital Universitario General de Villalba
- ◆ Assistant Physician, Rheumatology, Hospital Universitario La Zarzuela, Madrid
- ◆ Assistant Physician, Rheumatology, Hospital Universitario 12 de Octubre, Madrid
- ◆ Researcher at the Fundación Investigación Biomédica 12 de Octubre de Madrid
- ◆ Collaborating teacher at the Alfonso X El Sabio University
- ◆ Bachelor's Degree in Medicine from the University of Oviedo

**Dr. González Hombrado, Laura**

- ♦ Rheumatology Area Specialist at Hospital Universitario del Tajo
- ♦ Responsible for Patient Safety in the Rheumatology Section of the Hospital Universitario del Tajo
- ♦ Specialist in Rheumatology at Hospital 12 de Octubre, Madrid
- ♦ Specialist in Rheumatology at the Fundación Jiménez Díaz
- ♦ Associate Professor at the Alfonso X El Sabio University
- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid
- ♦ Master SER in Rheumatic diseases mediated by the immune system
- ♦ Member of the Spanish Society of Rheumatology and ECOSER group, member of the Rheumatology Society of the Community of Madrid, president of the Continuing Education Commission of the Hospital Universitario del Tajo, member of the Pain Commission of the Hospital Universitario del Tajo

**Dr. Retuerto Guerrero, Miriam**

- ♦ Specialist in Rheumatology at the Complejo Asistencial Universitario de Leon
- ♦ Physician at the Hospital Central de la Defensa Gomez Ulla
- ♦ Physician at the Doce de Octubre Hospital of Madrid
- ♦ Physician at the Hospital of Móstoles
- ♦ Degree in Medicine and Surgery from the Faculty of Medicine of Valladolid
- ♦ Master's Degree in Rheumatologic and Traumatologic Musculoskeletal Ultrasound at the University of Alcalá
- ♦ Master SER in Rheumatic Diseases mediated by the Immune System of the Universidad Rey Juan Carlos
- ♦ Master's Degree in Applied Biostatistics in Health Sciences from the University of Seville

**Dr. Arconada López, Celia**

- ♦ Specialist in Rheumatology at the Hospital Universitario Infanta Elena de Valdemoro
- ♦ Rheumatologist at the Hospital Universitario 12 de Octubre in Madrid
- ♦ Rheumatologist at the Hospital Universitario Infanta Cristina in Parla
- ♦ Rheumatologist at the New Medical Center of Majadahonda
- ♦ Rheumatologist at the Clínica Mediceuro of Boadilla del Monte
- ♦ Rheumatologist at the Clínica Mediceuro of Boadilla del Monte
- ♦ Clinical tutor of internships in the Degree in Medicine at the Francisco de Vitoria University
- ♦ Researcher in the REASON and STAR studies
- ♦ Degree in Medicine from the University of Cantabria
- ♦ Member of the Spanish Society of Rheumatology, Madrid Society of Rheumatology (SORCOM), Uveitis working group of the SER

**Dr. Bonilla González-Laganá, Carmen**

- ♦ Assistant Rheumatology Specialist at the Infanta Cristina Hospital
- ♦ Assistant Specialist Rheumatology Physician at the Hospital del Tajo
- ♦ Assistant Specialist Physician in Rheumatology at the Hospital Infanta Elena
- ♦ Rheumatology Specialty at the Severo Ochoa University Hospital
- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid
- ♦ Member of the Spanish Society of Rheumatology, Society of Rheumatology of the Community of Madrid

**Dr. De Santiago Moraga, Mar**

- ♦ Spine Unit Physician of the Hospital del Tajo
- ♦ Specialist in Orthopedic and Traumatologic Surgery
- ♦ Degree in Medicine from the Complutense University of Madrid
- ♦ Master of Research and Specialized Treatment of Pain by the University of Valencia

**Dr. Álvarez Collado, Carlos Juan**

- ♦ Physician of the Arthroscopy and Sports Medicine Unit of the Hospital Universitario del Tajo
- ♦ Medical Specialist in Orthopedic Surgery and Traumatology
- ♦ Degree in Medicine from the Complutense University of Madrid
- ♦ Master's Degree in Medical and Clinical Management
- ♦ Master of the National University of Distance Education in collaboration with the National School of Health
- ♦ Master's Degree in Orthopedic Surgery and Traumatology Update by CEU Cardenal Herrera University

**Dr. Andrés Esteban, Eva María**

- ♦ Specialist in Epidemiology
- ♦ Teacher at the Universidad Rey Juan Carlos
- ♦ PhD in Medicine, Psychiatry and Dermatology from the University of Zaragoza
- ♦ Degree in Statistical Sciences and Techniques, Universidad Miguel Hernández de Elche
- ♦ Postgraduate Certificate in Statistics from the University of Zaragoza

**Dr. Parra Grande, Francisco Javier**

- ♦ Specialist Physician of Area Hospital del Tajo
- ♦ Physician at the Instituto Médico Integral Toledo
- ♦ Area Specialist Physician at the Hospital Universitario Príncipe de Asturias Alcalá de Henares
- ♦ Specialist in Orthopedic and Trauma Surgery
- ♦ Physician at the Virgen del Mar Arthroscopy Unit
- ♦ Degree in Medicine from the Autonomous University Madrid
- ♦ Advanced Studies Diploma from the Complutense University of Madrid
- ♦ Certificate of professional update in Orthopedic Surgery and Traumatology by the Spanish Society of Orthopedic Surgery and Traumatology



**Dr. Muñoz Sánchez-Miguel, César Gregorio**

- ♦ Oncologist at the University Hospital HM Sanchinarro
- ♦ Physician at the University Hospital del Tajo
- ♦ Researcher in clinical trials of advanced gastric and gastroesophageal cancer
- ♦ Specialist in Oncological Medicine at the Hospital Universitario 12 de Octubre de Madrid
- ♦ Associate Professor of Medicine at the University San Pablo CEU
- ♦ Degree in Medicine from the Autonomous University Madrid

**Dr. Cortijo Garrido, Laura**

- ♦ Physical Medicine and Rehabilitation Physician at the Tajo University Hospital
- ♦ Assistant Specialist Physician at CROSECON
- ♦ Assistant Specialist Physician at the Gorniz Hospital
- ♦ Physical Medicine and Rehabilitation Specialist at the University Hospital Fundación Alcorcón
- ♦ Academic Internship Tutor in the Degree of Medicine at the Alfonso X El Sabio University
- ♦ Honorary Collaborator of the University Rey Juan Carlos
- ♦ Degree in Medicine from the Autonomous University Madrid
- ♦ Official Master's Degree in Epidemiology and Public Health, Universidad Rey Juan Carlos
- ♦ Expert in musculoskeletal ultrasound by the Francisco de Vitoria University
- ♦ Member of the Commission of Knowledge Management and Continuing Education of the Hospital Universitario del Tajo, Spanish Society of Physical Medicine and Rehabilitation

**Dr. Sánchez Martín, Julio**

- ♦ Attending Physician of Rheumatology at the Marqués de Valdecilla University Hospital
- ♦ Specialists in Rheumatology at the Hospital Universitario 12 de Octubre
- ♦ Family and Community Physician at the Virgen de La Concha Hospital
- ♦ Degree in Medicine and Surgery from the University of Salamanca
- ♦ Official certificate of expert in infiltrative pain therapy by the Swiss Pain Society
- ♦ Official expert certificate in musculoskeletal ultrasound by the Swiss Society of musculoskeletal ultrasound and SER
- ♦ Member of the Spanish Society of Rheumatology, Spanish Society of Pain Medicine (SEMDOR), Spanish Pain Society (SED), ECOSER Working Group of the Spanish Society of Rheumatology

**Dr. González Ferrer, Ruth**

- ♦ Responsible for Quality at the Hospital Universitario del Tajo
- ♦ Internal Medicine Specialist at the Tajo University Hospital
- ♦ Internal Medicine Specialist at the Hospital Universitario del Sureste
- ♦ Internal Medicine Specialist at the Virgen de Valme University Hospital
- ♦ Reviewer of articles for the scientific journal Actualidad Médica
- ♦ Degree in Medicine from the University of Granada
- ♦ Master's Degree in "Research and Advances in Preventive Medicine and Public Health" from the University of Granada
- ♦ Master's Degree in "Palliative Care" from the University of Valladolid

**Ms. Fernández Guardia, Cristina**

- ♦ Nurse at the Tajo University Hospital
- ♦ Nurse of Internal Medicine Service at the Hospital Universitario del Tajo
- ♦ Nurse at Primary Care Health Center
- ♦ Nurse at the Obstetrics and Cardiology Service of the Gregorio Marañón University Hospital
- ♦ Geriatric Nurse Specialist
- ♦ Associate Professor of the Faculty of Nursing at the University of Alcalá, Spain
- ♦ Degree in Nursing, EUE Red Cross-UAM
- ♦ Postgraduate Certificate in Social Work, Universidad Complutense de Madrid
- ♦ Postgraduate Certificate in Nursing EUE Puerta de Hierro
- ♦ Master's Degree in Research in Social and Health Sciences from the University of Alcalá
- ♦ Member of the Secretary-Treasurer of the Madrid Association of Gerontological Nursing, President of the Group of Pressure Ulcers and Falls of the Hospital del Tajo



#### **D. Díaz Alcalde, Víctor**

- CEO and personal trainer at PROHEALTH by Víctor Díaz
- Teacher at the Institute of Nutrition and Health Sciences (ICNS) of the Catholic University of Murcia
- Physical trainer and injury readaptor at Club Atlético de Madrid
- Sports Coordinator at Fitness Place Sport Center
- Master's Degree in Physical Activity and Health from the European University Miguel de Cervantes
- Postgraduate Diploma in preventive exercise applied to people with chronic pathologies, Francisco de Vitoria University
- Postgraduate Diploma in planning and prescription of therapeutic exercise by Isabel I University
- Postgraduate Diploma in prevention, intervention and functional recovery of injuries by the Polytechnic University of Madrid
- Degree in Physical Activity and Sports Sciences from the Universidad Autónoma de Madrid

05

# Structure and Content

In order to promote a complete update in Geriatric Rheumatology, the specialized teaching team of this program has designed a syllabus that deals in depth with the differential aspects of geriatric patients from the point of view of molecular biology, genetics and physiology. Moreover, thanks to the numerous additional didactic resources, you will be able to update your knowledge on an individual basis for each of the different groups of rheumatic pathologies. All this with a virtual library accessible 24 hours a day from any digital device with an Internet connection.





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*Integrate into your daily practice the most recent treatments to address pathologies of bone metabolism”*

## Module 1. Specific characteristics of the geriatric patient

- 1.1. Physiology of aging
  - 1.1.1. Aging
  - 1.1.2. Biological process of aging
- 1.2. Demography and epidemiology of aging
  - 1.2.1. Aging in Spain and the rest of the world
  - 1.2.2. Morbimortality in the elderly population and new challenges
- 1.3. Longevity and life expectancy
  - 1.3.1. Senescence processes and possible pathways of regulation
  - 1.3.2. Healthy aging
- 1.4. Disease in the elderly
  - 1.4.1. Intrinsic capacity, frailty and functional continuum
  - 1.4.2. Acute, chronic and multimorbidity disease
  - 1.4.3. Specialized geriatric care
- 1.5. Pharmacotherapy in the elderly patient
  - 1.5.1. Pharmacokinetic and pharmacodynamic modifications
  - 1.5.2. Pharmacovigilance
  - 1.5.3. Prescription quality
- 1.6. Medical assessment and complementary tests in the elderly patient
  - 1.6.1. Medical History
  - 1.6.2. Physical Examination
  - 1.6.3. Complementary Tests
- 1.7. Comprehensive geriatric assessment (CGA)
  - 1.7.1. Components of the IGV
  - 1.7.2. Instruments used in IGV

- 1.8. Geriatric syndromes (GS)
  - 1.8.1. Characteristics of GS
  - 1.8.2. Classification and prevalence of GS
  - 1.8.3. Recommendations for the preventive and therapeutic management of SGs
- 1.9. Aging and physical exercise
  - 1.9.1. Neuromuscular system and aging
  - 1.9.2. Cardiovascular function, physical exercise and aging
  - 1.9.3. Biomechanics and mobility assessment
- 1.10. Health care of the elderly patient
  - 1.10.1. Levels of care and social resources
  - 1.10.2. Management and quality of care in health care for the elderly

## Module 2. Pathology of bone metabolism

- 2.1. Bone metabolism in the geriatric patient
  - 2.1.1. Osteoporosis
  - 2.1.2. Importance of osteoporosis in the elderly. Special characteristics of the geriatric patient
- 2.2. Epidemiology of bone metabolism pathologies
  - 2.2.1. Most frequent bone diseases
  - 2.2.2. Epidemiology of bone diseases in the elderly
- 2.3. Molecular and cellular biology of bone metabolism
  - 2.3.1. Bone tissue. Bone remodeling. Acquisition of peak bone mass
  - 2.3.2. Bone formation/destruction imbalance in the elderly patient
  - 2.3.3. Elderly patient: oxidative stress, osteoblast and osteocyte senescence, autophagy

- 2.4. Diagnostic techniques and interpretation
  - 2.4.1. Initial evaluation of the patient with osteoporosis
  - 2.4.2. Bone densitometry and its correct interpretation. FRAX®. Strengths and limitations
  - 2.4.3. Biochemical markers of bone remodeling
- 2.5. The importance of 25-hydroxyvitamin D
  - 2.5.1. Absorption and Metabolism
  - 2.5.2. Optimal level of 25-hydroxyvitamin D. Daily requirements
  - 2.5.3. Deficit and Excess of 25-hydroxyvitamin D
- 2.6. Pathologies due to a decrease in bone mineral density
  - 2.6.1. Previous key concepts
  - 2.6.2. Osteomalacia
  - 2.7. Pathologies due to increased bone mineral density
- 2.7.1. DISH. Diffuse idiopathic skeletal hyperostosis
  - 2.7.2. Paget's disease of bone
- 2.8. Other Bone Diseases
  - 2.8.1. Osteonecrosis. Avascular necrosis of the hip
  - 2.8.2. Sympathetic Reflex Dystrophy
  - 2.8.3. Renal osteodystrophy
- 2.9. Treatment I: Prevention and non-pharmacological measures
  - 2.9.1. Physical activity and exercise in the elderly patient
  - 2.9.2. Geriatric nutrition: Nutritional problems in older adults
  - 2.9.3. Calcium and vitamin D supplementation
- 2.10. Treatment II: Pharmacology
  - 2.10.1. Types of Drugs Antiresorptive and osteoformers
  - 2.10.2. Combined therapy vs. sequential therapy
  - 2.10.3. Special Situations

### Module 3. Chronic inflammatory joint diseases (arthritis/spondyloarthritis)

- 3.1. Molecular biology and pathophysiology of chronic inflammatory joint diseases
  - 3.1.1. Genomic studies in chronic inflammatory joint diseases
- 3.2. Inflammation and chronicity in the geriatric patient
  - 3.2.1. The inflammatory process: mechanisms of production
  - 3.2.2. Chronic inflammation in the geriatric patient
  - 3.2.3. Immunosenescence
- 3.3. Epidemiological characteristics of chronic joint diseases
  - 3.3.1. Epidemiology of Rheumatoid Arthritis
  - 3.3.2. Epidemiology of Spondyloarthritis
- 3.4. Diagnostic techniques in inflammatory joint diseases
  - 3.4.1. Utility of the blood analysis: general analysis, serum markers, autoantibodies
  - 3.4.2. Synovial fluid analysis
  - 3.4.3. Imaging techniques: simple radiology, musculoskeletal ultrasound, other imaging studies
- 3.5. Extra-articular manifestations (uveitis, Diffuse Interstitial Pulmonary Interstitial Disease: EPID, Inflammatory Bowel Disease, etc.)
  - 3.5.1. Ocular Manifestations
  - 3.5.2. Pulmonary manifestations: PIDD
  - 3.5.3. Gastrointestinal manifestations associated with chronic inflammatory joint diseases (IBD)
  - 3.5.4. Cutaneous manifestations
  - 3.5.5. Other extra-articular manifestations
- 3.6. Rheumatoid arthritis in the geriatric population
  - 3.6.1. Epidemiology and Etiopathogenesis
  - 3.6.2. Clinical Diagnosis
  - 3.6.3. Treatment

- 3.7. Spondyloarthritis in geriatric patients
  - 3.7.1. Epidemiology, etiopathogenesis and classification
  - 3.7.2. Clinical Diagnosis
  - 3.7.3. Treatment
- 3.8. Seronegative arthritis
  - 3.8.1. Classification
  - 3.8.2. Treatment
- 3.9. Synthetic disease-modifying medications
  - 3.9.1. Classification
  - 3.9.2. Indications and dosage
  - 3.9.3. Adverse effects and interactions in the pluripathologic and polymedicated elderly patient
- 3.10. Disease-modifying drugs: biologic therapy and small molecules
  - 3.10.1. Classification
  - 3.10.2. Indications and dosage
  - 3.10.3. Adverse effects and interactions in the pluripathologic and polymedicated elderly patient

#### Module 4. Connectivopathologies: characteristics, manifestations and specific care in the geriatric patient

- 4.1. Systemic lupus erythematosus: clinical differences and diagnostic challenges in the geriatric population
  - 4.1.1. Introduction
  - 4.1.2. Etiopathogenesis and epidemiology of SLE in the geriatric patient
  - 4.1.3. Diagnosis of SLE in the geriatric patient
  - 4.1.4. Clinical and immunologic features of senile SLE
- 4.2. Treatment of non-renal systemic lupus erythematosus erythematosus senilis
  - 4.2.1. Non-pharmacological methods
  - 4.2.2. Pharmacological Methods
- 4.3. Treatment of non-renal systemic lupus erythematosus erythematosus senilis
  - 4.3.1. Non-pharmacological methods
  - 4.3.2. Pharmacological Methods

- 4.4. Antiphospholipid syndrome (APS): clinical differences, diagnostic challenges and treatment in the geriatric population
  - 4.4.1. Introduction
  - 4.4.2. Etiopathogenesis and epidemiology of APS in the geriatric patient
  - 4.4.3. Diagnosis of APS in the geriatric patient
  - 4.4.4. Clinical characteristics and peculiarities of APS in the geriatric population
- 4.5. Treatment of APS in geriatric patients
  - 4.5.1. Non-pharmacological methods
  - 4.5.2. Pharmacological Methods
  - 4.5.3. Catastrophic PAS
- 4.6. Scleroderma: clinical differences and diagnostic challenges in the geriatric population
  - 4.6.1. Introduction
  - 4.6.2. Aetiopathogenesis and epidemiology of scleroderma in the geriatric patient
  - 4.6.3. Raynaud's disease. Peculiarities in geriatric population and differential diagnosis
  - 4.6.4. Diagnosis and clinical features of scleroderma in the geriatric patient
- 4.7. Scleroderma: peculiarities of the treatment in the geriatric population
  - 4.7.1. Management of Raynaud's
  - 4.7.2. Pharmacological Methods
- 4.8. Senile Sjögren's syndrome: clinical differences and diagnostic challenges in the geriatric population
  - 4.8.1. Introduction
  - 4.8.2. Etiopathogenesis and epidemiology of Sjögren's syndrome in the geriatric patient
  - 4.8.3. Diagnosis of Sjögren's in the geriatric patient, Is all dryness due to Sjögren's syndrome?
  - 4.8.4. Clinical and immunologic features of senile SLE
  - 4.8.5. Lymphoma and Sjögren's
- 4.9. Treatment of Sjögren's disease in the geriatric population and its peculiarities
  - 4.9.1. Glandular manifestations
  - 4.9.2. Extraglandular manifestations



- 4.10. Undifferentiated connective tissue disease (UCTD) and Mixed Connective Tissue Disease (MCTD) in the geriatric population
  - 4.10.1. Introduction
  - 4.10.2. Etiopathogenesis and epidemiology of CITD and MCTD
  - 4.10.3. Diagnosis and clinical features in the geriatric patient
  - 4.10.4. Treatment of CTE and CTEMS in the geriatric population

### **Module 5. Musculoskeletal manifestations of systemic pathologies of the elderly (IR, hepatic I, anemias, parathyroid pathology) and other metabolic atroparias**

- 5.1. Microcrystalline arthropathies: features
  - 5.1.1. Epidemiology
  - 5.1.2. Pathogenesis
  - 5.1.3. Types
- 5.2. Microcrystalline arthropathies: diagnosis
  - 5.2.1. Pathophysiology
  - 5.2.2. Differential Diagnosis
- 5.3. Microcrystalline arthropathies: treatment
  - 5.3.1. Treatment
  - 5.3.2. Prevention of new episodes
- 5.4. Renal diseases and their musculoskeletal manifestations
  - 5.4.1. Epidemiology
  - 5.4.2. Physiopathogenesis
  - 5.4.3. Treatment
- 5.5. Hepatic Diseases and their musculoskeletal manifestations
  - 5.5.1. Musculoskeletal manifestations of HCV
  - 5.5.2. Cryoglobulinemia
- 5.6. Non-neoplastic hematologic diseases and their musculoskeletal manifestations
  - 5.6.1. Multiple Myeloma Monoclonal Gammopathy of Uncertain Significance (MGUS)
  - 5.6.2. Hemophilia

- 5.7. Endocrinologic diseases and musculoskeletal manifestations
  - 5.7.1. Diabetes Mellitus
  - 5.7.2. Thyroid Disease
- 5.8. Wilson's disease, hemochromatosis, mucopolysaccharidosis
  - 5.8.1. Wilson's disease: etiopathogenesis, clinical features, diagnosis and treatment
  - 5.8.2. Hereditary hemochromatosis: etiopathogenesis, clinical features, diagnosis and treatment
  - 5.8.3. Mucopolysaccharidosis: etiopathogenesis, clinical features, diagnosis and treatment
- 5.9. Rheumatic diseases with cutaneous involvement: Panniculitis
  - 5.9.1. Epidemiology
  - 5.9.2. Pathophysiology
  - 5.9.3. Treatment
- 5.10. Enteropathic arthritis
  - 5.10.1. Coeliac Disease
  - 5.10.2. Collagenous colitis
  - 5.10.3. Whipple's disease

### **Module 6. Neoplastic and Paraneoplastic Pathology**

- 6.1. Oncogeriatrics
  - 6.1.1. Initial assessment of the geriatric oncology patient
  - 6.1.2. Oncologic treatments in geriatric patients
- 6.2. Paraneoplastic Syndromes
  - 6.2.1. Epidemiology, etiology and classification
  - 6.2.2. Prognosis and differential diagnosis of paraneoplastic syndromes
- 6.3. Management of paraneoplastic pathology
  - 6.3.1. Treatment of paraneoplastic syndromes
  - 6.3.2. Follow-up of paraneoplastic syndromes

- 6.4. Joint tumors
  - 6.4.1. Epidemiology, diagnosis and classification
  - 6.4.2. Multidisciplinary management
- 6.5. Primary and metastatic bone tumors
  - 6.5.1. Epidemiology, diagnosis and classification
  - 6.5.2. Multidisciplinary management
- 6.6. Amyloidosis
  - 6.6.1. Epidemiology and types
  - 6.6.2. AL amyloidosis: Therapeutic management
- 6.7. Rheumatic manifestations of chemotherapeutic treatments
  - 6.7.1. Dermatologic toxicities secondary to systemic treatments
  - 6.7.2. Management of dermatological toxicities secondary to systemic treatments
- 6.8. Immune-mediated side effects/diseases in the musculoskeletal system secondary to immunotherapy
  - 6.8.1. Side effects to checkpoint inhibitors
  - 6.8.2. Cellular immunotherapy toxicity: vectors, TILs, CAR-T $\gamma$  cells
- 6.9. Cancer Pain
  - 6.9.1. Incidence, types, classification
  - 6.9.2. Management of oncologic pain
- 6.10. Pathologic bone fractures in oncologic patients
  - 6.10.1. Incidence, causes
  - 6.10.2. Management of pathologic bone fracture in oncology patients

## Module 7. Degenerative and infectious pathology

- 7.1. Arthrosis
  - 7.1.1. Etiopathogenesis. Primary and Secondary Arthrosis
  - 7.1.2. Role of non-osseous structures in osteoarthritis
  - 7.1.3. Molecular biology of osteoarthritis
- 7.2. Diagnostic techniques for osteoarthritis
  - 7.2.1. Reality of the techniques that we ask for in the consultation room
  - 7.2.2. From conventional radiography to nuclear medicine
  - 7.2.3. Other Techniques
- 7.3. Musculoskeletal deterioration associated with age. Fractures in the elderly
  - 7.3.1. Age-associated musculoskeletal pathophysiology: sarcopenia and osteopenia
  - 7.3.2. Epidemiology and socioeconomic cost
  - 7.3.3. Most frequent fractures in the emergency and consultation room
- 7.4. Fractures of the pelvis and hip in the elderly
  - 7.4.1. Epidemiology Socioeconomic implications and public health problems
  - 7.4.2. Diagnosis and Classification
  - 7.4.3. Treatment
- 7.5. Degenerative and traumatic pathology of the elderly spine
  - 7.5.1. Characteristics and pathophysiology of aging at the level of the spine
  - 7.5.2. Specific fractures of geriatric age
  - 7.5.3. Degenerative pathology of the disc, joints and canal
  - 7.5.4. Therapy Options
- 7.6. Other arthropathies
  - 7.6.1. Neuropathic arthropathy
  - 7.6.2. Hemorrhagic arthropathy
  - 7.6.3. Other arthropathic disorders
- 7.7. General information on the treatment of osteoarthritis
  - 7.7.1. Conservative Treatment
  - 7.7.2. Surgical treatment with joint preservation
  - 7.7.3. Prosthetic treatment
- 7.8. Musculoskeletal infections
  - 7.8.1. Soft Tissue Infections
  - 7.8.2. Bone infections: Osteomyelitis
  - 7.8.3. Joint infections
  - 7.8.4. Implant infections

- 7.9. Soft Tissue Injuries
  - 7.9.1. Traumatic and inflammatory muscle injuries
  - 7.9.2. Degenerative, traumatic and inflammatory injuries at the tendon level
  - 7.9.3. Pathology of the synovial bursa
- 7.10. Joint trauma
  - 7.10.1. Contusions
  - 7.10.2. Sprains
  - 7.10.3. Dislocation

## Module 8. Vasculitis, myopathies and other systemic diseases

- 8.1. Chronic idiopathic inflammatory myopathies
  - 8.1.1. Characteristics and classification
  - 8.1.2. Treatment, evolution and prognosis
- 8.2. Vasculitis
  - 8.2.1. Epidemiology
  - 8.2.2. Classification
- 8.3. Large vessel vasculitis
  - 8.3.1. Giant cell arteritis and polymyalgia rheumatica
  - 8.3.2. Takayasu's Arteritis
- 8.4. Polyarteritis nodosa
  - 8.4.1. Epidemiology
  - 8.4.2. Clinical Manifestations
  - 8.4.3. Treatment
- 8.5. Immunocomplex-mediated small-vessel vasculitis
  - 8.5.1. Hypersensitivity vasculitis
  - 8.5.2. IgA vasculitis
  - 8.5.3. Cryoglobulinemic Vasculitis
  - 8.5.4. Hypocomplementemic urticarial vasculitisi

- 8.6. ANCA-positive vasculitis
  - 8.6.1. Granulomatosis with polyangiitis (Wegener's granulomatosis)
  - 8.6.2. Eosinophilic granulomatosis with polyangiitis (Churg-Strauss disease)
  - 8.6.3. Microscopic polyangiitis
  - 8.6.4. Treatment of ANCA-positive vasculitis
- 8.7. Miscellaneous
  - 8.7.1. Behçet's Disease
  - 8.7.2. Relapsing Polychondritis
  - 8.7.3. Single organ vasculitis
- 8.8. Pseudovasculitic syndromes: Vasculitis associated systemic disease
- 8.9. Sarcoidosis from the rheumatologic point of view
  - 8.9.1. Clinical Manifestations
  - 8.9.2. Diagnosis and Treatment
- 8.10. Adult Still's Disease
  - 8.10.1. Epidemiology
  - 8.10.2. Clinical Manifestations
  - 8.10.3. Diagnosis and Treatment

## Module 9. Pain of rheumatic origin in the geriatric patient

- 9.1. Pathophysiology of Pain
  - 9.1.1. The transmission of pain. Nociceptors. Inflammatory Mediators
  - 9.1.2. Peripheral sensitization, nociceptive modulation
  - 9.1.3. Pathophysiology of Neuropathic Pain
- 9.2. Anatomy of pain
  - 9.2.1. Anatomical substrate of nociceptive transmission
- 9.3. Epidemiology of pain in geriatric patients
  - 9.3.1. Factors involved in pain

- 9.4. Treatment: prevention and modification of harmful habits
  - 9.4.1. Quality of life assessment measures
  - 9.4.2. Assessment of function, cognitive and psychological aspects
  - 9.4.3. Prevention of sedentary lifestyles and inactivity. Health education
- 9.5. Non-pharmacological treatment: Interventions in the biopsychosocial field
  - 9.5.1. Initial clinical evaluation
  - 9.5.2. Health education and general recommendations
  - 9.5.3. Symptomatic treatments: Kinesitherapy and electrotherapy
- 9.6. Physical therapy for degenerative pathology
  - 9.6.1. Electrotherapy, kinesitherapy and hydrotherapy
  - 9.6.2. Occupational therapy, orthotics and technical aids
  - 9.6.3. Evidence-Based Medicine
- 9.7. Physical therapy for inflammatory pathology
  - 9.7.1. Physical therapy and kinesitherapy
  - 9.7.2. Occupational therapy, orthotics and technical aids
  - 9.7.3. Evidence-based medicine
- 9.8. Medical Treatment
  - 9.8.1. Therapeutic arsenal and its indications
  - 9.8.2. New developments in the clinic
- 9.9. Interventional techniques in the geriatric patient
  - 9.9.1. Axial Interventionism
  - 9.9.2. Peripheral Interventionism
- 9.10. Regenerative Medicine in the treatment of pain in the geriatric population
  - 9.10.1. Platelet Rich Plasma
  - 9.10.2. Mesenchymal Stem Cells



**Module 10. Common problems in geriatric patients**

- 10.1. Comorbidities. How do they affect treatment?
  - 10.1.1. Pluripathology and prognostic indices
  - 10.1.2. Clinical management recommendations for patients with multiple pathologies
- 10.2. Management of polypharmacy (interactions)
  - 10.2.1. Concept of polypharmacy. Associated Factors
  - 10.2.2. Pharmacotherapeutic optimization: appropriateness, reconciliation, interactions, deprescription, adherence to treatment
- 10.3. Nutrition in the elderly patient
  - 10.3.1. Malnutrition in the elderly. Screening of nutritional status
  - 10.3.2. Nutritional Treatment
- 10.4. Physical activity in the elderly patient
  - 10.4.1. Chronic diseases and exercise
  - 10.4.2. Multicomponent training
- 10.5. Vaccination of the geriatric patient
  - 10.5.1. General vaccination recommendations
  - 10.5.2. Other vaccines according to medical conditions
- 10.6. Prophylactic treatments in geriatric patients
  - 10.6.1. Latent tuberculosis
  - 10.6.2. Osteoporosis
  - 10.6.3. Recurrent infections
- 10.7. Health care facilitation tools
  - 10.7.1. Continuity of care. Integrated care process
  - 10.7.2. Communication tools: telephone consultation, e-consultation, videocall
- 10.8. Geriatric nursing in rheumatology
  - 10.8.1. Pain assessment in older adults with rheumatologic problems
  - 10.8.2. Frailty in older adults
- 10.9. Study design in Rheumatology
  - 10.9.1. Special characteristics of the geriatric population
  - 10.9.2. Advantages and disadvantages of the different designs in the geriatric population
- 10.10. Data analysis in rheumatology
  - 10.10.1. Description of data in geriatrics
  - 10.10.2. Data analysis models

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.





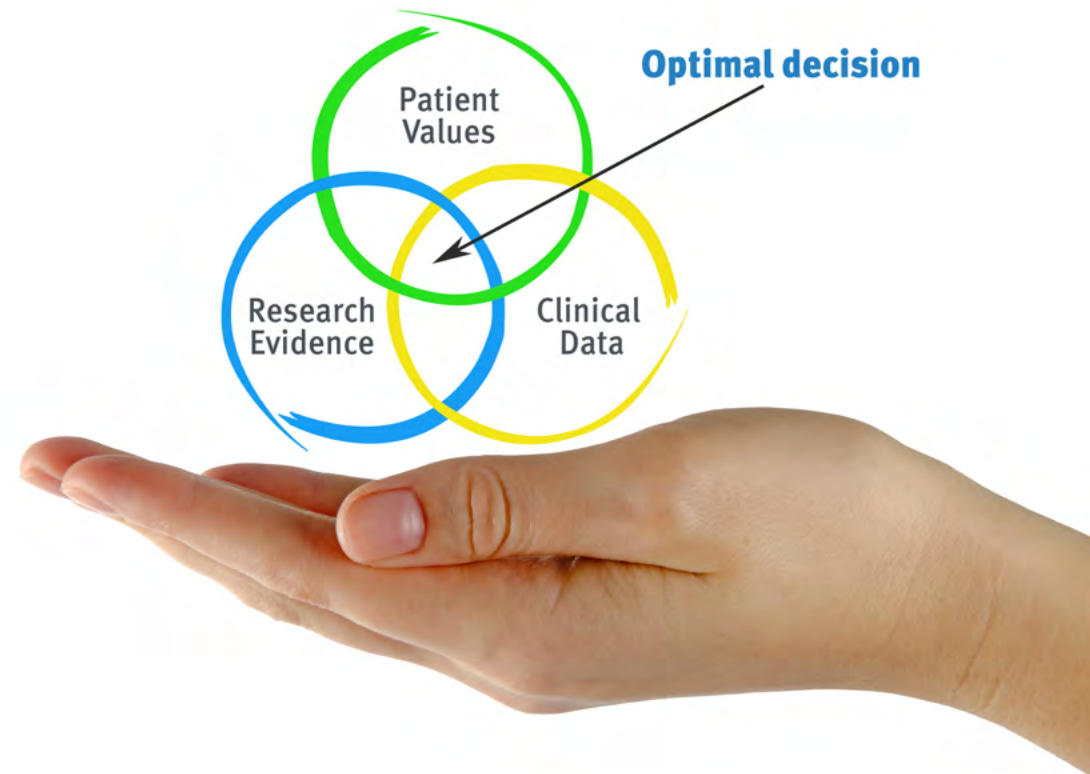
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

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



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

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

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



## Relearning Methodology

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

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

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



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

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

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

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

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



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



#### Study Material

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

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



#### Surgical Techniques and Procedures on Video

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



#### Interactive Summaries

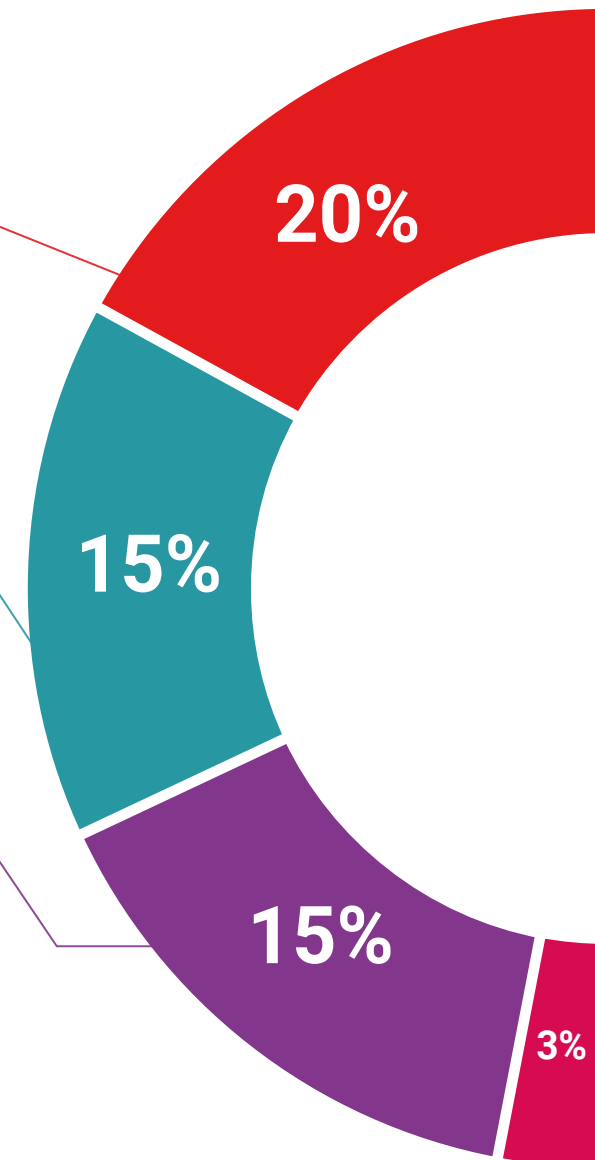
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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



#### Additional Reading

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





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

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



#### Testing & Retesting

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



#### Classes

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



#### Quick Action Guides

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



07

# Certificate

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





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*Successfully complete this program and receive your university certification without traveling or complex paperwork”*

This program will allow you to obtain your **Professional Master's Degree diploma in Geriatric Rheumatology** 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.

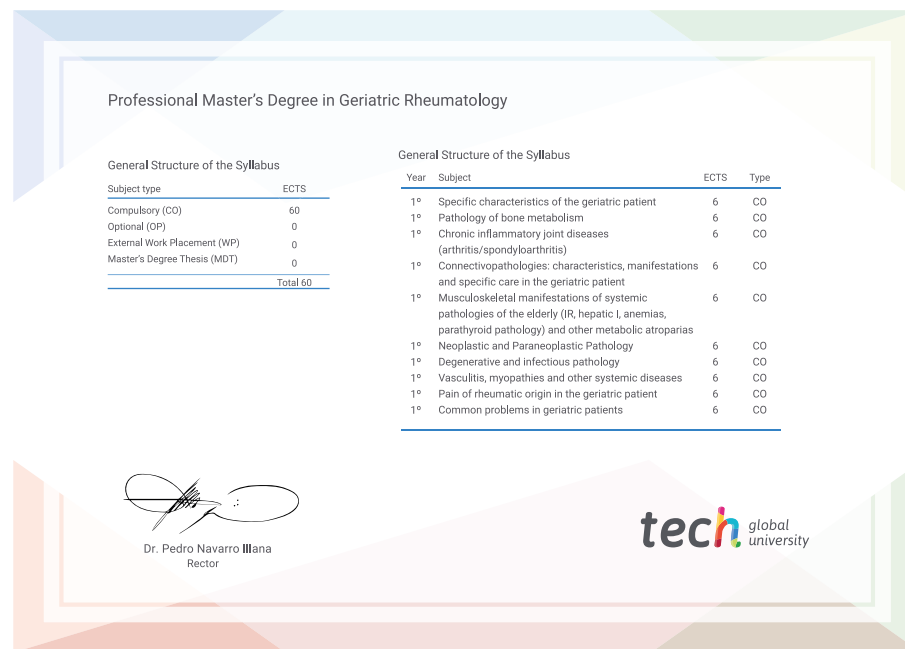
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Professional Master's Degree in Geriatric Rheumatology**

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 Geriatric Rheumatology

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

# Professional Master's Degree

## Geriatric Rheumatology

