Master's Degree
Dementia

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Master's Degree
Dementia

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

Website: **www.techtitute.com/us/medicine/master-degree/master-dementia**

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01

Introduction

The fundamental teaching objective of this Master's Degree in Dementia is to provide comprehensive course for professionals dealing with people suffering from the most prevalent neurodegenerative diseases, which occur with Dementia, from a multidisciplinary perspective. Make the most of this opportunity and gain solid knowledge in this field of healthcare which with allow you to become a successful professional in the field.

People who suffer from neurodegenerative diseases need specialist care. Join our team of students and become the best in your profession"

Patients with forms of Dementia gradually lose more and more of their abilities. For this reason, it's necessary to provide them with more personalized and multidisciplinary care, with professionals who are able to adapt to any situation and who have the most up to date knowledge in this field. By integrating into the same theoretical framework the vision of specialists in neurology geriatrics, psychiatry, neuro-radiology, nuclear medicine and neuropathology, we are able to offer exceptional training, which is both complete and enriching.

Basic concepts will be taught in a developing educational structure by leading professionals in their fields, in both functional and structural imaging biomarkers as well as in neuropathology, including genetic counseling and neuropsychology. We never miss the opportunity to prepare students to deal with the diagnostic process and the management of people who suffer from rapidly progressive Dementia in its different forms. In addition, students will be presented with real situations within which they need to make clinical and diagnostic decisions which are all the more complex due to their differential diagnosis and their therapeutic approach.

The theoretical contents will be reinforced by clinical-practical cases, educational videos, online tutorials, as well as support material, always based on the latest information in the field.

This TECH Master's Degree in Dementia is an educational project that promises to train high-quality professionals. A program devised by professionals specialized in each specific field who encounter new challenges every day.

After completing this Master's Degree, students with have sufficient knowledge to approach the management of people with Dementia. From the first moment, they will know everything that comes with this type of disease, from its diagnosis, treatment and possible adverse effects to the importance of communication with the family members. So don't hesitate any longer and become a true professional through the latest educational technology 100% online.

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

- Practical case studies presented by experts in Dementia
- 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
- The latest information on treatment for Dementia patients
- Practical exercises where self-assessment can be used to improve learning
- A special emphasis on innovative methodologies in the field of Dementia
- 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

Don't miss the opportunity to study this TECH Master's Degree in Dementia with us" It's the perfect opportunity to advance your career"

This Master's Degree may be the best investment you can make when selecting a refresher program, for two reasons: in addition to updating your knowledge in Dementia, you will obtain a qualification from TECH Global University"

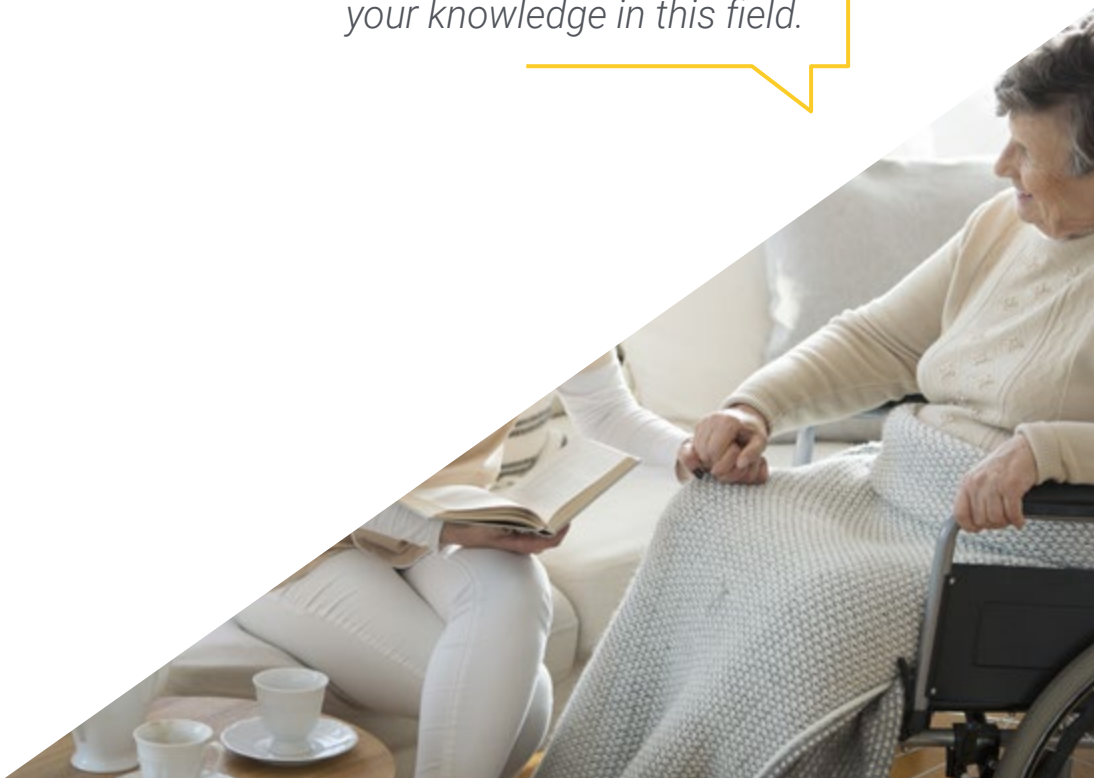
This program comes with the best educational material, providing you with a contextual approach that will facilitate your learning.

This 100% online Master's Degree will allow you to combine your studies with your professional work while increasing your knowledge in this field.

The teaching staff includes medical professionals who bring their experience to this program, as well as renowned specialists from leading societies and prestigious universities.

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

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, professionals will be assisted by an innovative interactive video system created by renowned and experienced experts in Dementia with extensive experience.



02

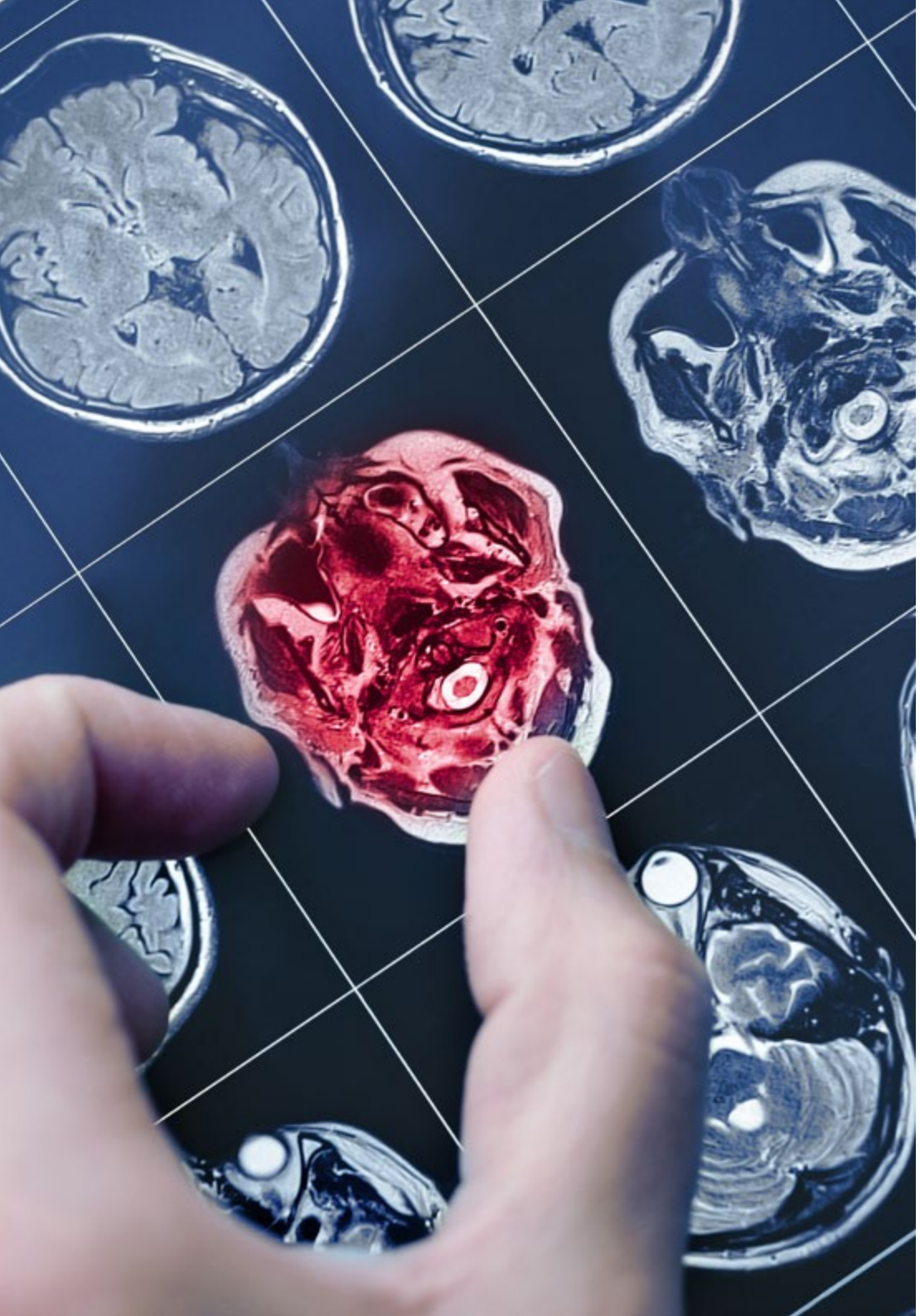
Objectives

The TECH Master's Degree in Dementia is aimed at facilitating the medical professional's performance with the latest advances and most innovative treatments in the sector.

It is the best option to learn about the latest advances in Dementia treatment"

General Objectives

- Gain in-depth knowledge of Dementia, how to diagnose it and how to treat it
- Identify the risk factors and the possibility of prevention
- Enter the very versatile and extremely difficult field of Dementia diseases
- Learn how to detect the early symptoms that could be a sign of this disease
- Explore clinical, motor, cognitive, dysautonomia and neuropsychiatric symptoms
- Know the different clinical presentations of the disease, some of which are first seen in a psychiatric consultation or in the form of neuromuscular or movement disorders before being associated with a type of Dementia
- Learn the particularities for examining the signs and symptoms, both cognitive and behavioral, as well as understanding the therapeutic approach
- Inform students about the knowledge of the different assessment tools and cognitive rehabilitation used in various Dementias
- Understand genetically conditioned Dementias and their inheritance patterns
- Know the different neuroimaging equipment and radiotracers available to evaluate the specific processes involved in neurodegenerative conditions with Dementia
- Provide knowledge on the different imaging techniques used in the evaluation of patients with cognitive impairment, both structural studies with CT or MRI, and functional studies that can be performed with MRI or Perfusion and Diffusion studies, as well as functional MRI studies
- Know the indications and usefulness of each technique in the different causes of Dementia
- Delve into the study of Alzheimer's disease, with emphasis on early diagnosis, as well as on imaging markers that allow assessment of progression and possible response to treatment
- Interpret the most important lesions which characterize the different neurodegenerative pathologies
- Know the main categories of rapidly progressive Dementia syndromes, the most prevalent diseases in each one of these categories and the diagnostic algorithm to follow
- Learn to consider important aspects when assessing older people with cognitive deterioration or Dementia, taking into account both the impact of neurodegeneration as well as the clinical evolution of people suffering from this condition



Specific Objectives

Module 1. Alzheimer's Disease

- Obtain sufficient training to be able to deal with the diagnostic process of Alzheimer's disease
- Learn how to use diagnostic biomarkers in an appropriate way
- Know the treatment of cognitive and non-cognitive symptoms, as well as the correct communication of the diagnosis and support throughout the course of the disease
- Gain knowledge of genetic assessment

Module 2. Vascular Cognitive Impairment

- Address the diagnostic process of vascular Dementia, its clinical phenotypes and its differential diagnosis with other types of Dementia, both from the clinical and neuropsychological point of view
- Know the cardiovascular risk factors as well as their prevention in relation to vascular Dementia
- Understand the value of structural MRI in the diagnostic process
- Understand the different aspects of the therapeutic approach to this complex type of Dementia (cognition, behavior and non-pharmalogical treatments). Also acquire the ability to communicate a diagnosis and support a patient and their family throughout the disease

Module 3. Lewy Body Dementia

- Know the diagnostic criteria, the therapeutic possibilities (weighing up the risks and the benefits of the different approaches) and the interaction of the therapeutic approach with the approach of other comorbid pathologies in these patients
- Obtain the appropriate training to deal with this complex and exciting disease

Module 4. Frontotemporal Dementia

- Learn the diagnostic criteria of all its clinical forms, the diagnostic methods and how to control the different symptoms
- Know how to manage the neuropsychiatric symptoms which present one of the most complex therapeutic challenges within the field of Dementias

Module 5. Neuropsychology in Dementias

- Know the different neuropsychological evaluation tools used in the different cognitive areas (attention, memory, praxis, visuospatial functions, language and executive functions) as well as the main tests to assess the functional and behavioral area in Dementia
- Know the cognitive patterns of Dementias (cortical vs. subcortical and fronto-temporal vs. parieto-occipital), as well as cognitive rehabilitation strategies

Module 6. Genetic Assessment in Dementias

- Learn how to perform genetic counseling, decision-making algorithms according to clinical phenotypes and communication of the genetic diagnosis of all Dementias covered in the master's degree

Module 7. Molecular Neuroimaging in Dementias

- Familiarize yourself with the methodology for performing and reading PET and SPECT molecular imaging in Dementia
- Understand the benefits of molecular neuroimaging in the diagnosis of Alzheimer's disease and other neurodegenerative conditions associated with Dementia
- Evaluate the role of different PET and SPECT techniques in the differential diagnosis of neurodegenerative disorders
- Understand the clinical recommendations for using neuroimaging as a diagnostic support in neurodegenerative disorders associated with Dementia

Module 8. MRI in Dementias

- Develop diagnostic algorithms in patients with mild cognitive impairment and in patients with Dementia
- Know the different imaging markers in neurodegenerative diseases: qualitative grading of medial temporal atrophy, frontal and parietal atrophy
- Identify global and hippocampal volumetry techniques
- Make an assessment of cerebral perfusion
- Know the MRI semiology of vascular Dementia and the main neurodegenerative diseases
- Gain knowledge of the future perspectives in the early diagnosis of Alzheimer's disease

Module 9. Neuropathology in Dementias

- Extract all the relevant information from a neuropathological report in a case of Dementia
- Adequately interpret this information in light of the clinical data available
- Evaluate its possible relevancy for the family members of the patient

Module 10. Rapidly Progressive Dementias

- Obtain sufficient training to deal with the diagnostic process in a patient with rapidly progressive Dementia
- Identify associated symptoms that may suggest a specific etiology, the appropriate use of complementary tests and, if necessary, the most appropriate initial treatment

Module 11. Comprehensive Geriatric Assessment of the Elderly Person Suffering from Cognitive Impairment or Dementia Clinical and Cognitive Comorbidities Some Aspects of the Advanced Planning with Impact the Clinical Evolution

- Understand the basic diagnostic-therapeutic approach to the systemic processes which affect older people with Dementia, geriatric syndromes and the approach to other comorbid pathologies in these patients
- Obtain adequate training to be able to deal with the complex interaction of other common clinical situations in elderly patients with neurodegeneration

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Skills

After passing the assessments on the TECH Master's Degree in Dementia, the professional will have acquired the necessary skills for a quality and up-to-date practice based on the most innovative teaching methodology.

This program will help you acquire the skills you need to excel in your daily work"

General Skills

- Perform a diagnosis of Dementia and create an appropriate treatment plan
- Understand ways to prevent Dementia and risk factors
- Recognise the different symptoms of Dementia in their different manifestations and states
- Use different evaluation and diagnostic tools
- Recognize the signs of Alzheimer's and perform a diagnosis of the disease
- Recognize and highlight lesions of neurodegenerative pathologies
- Be capable of performing a holistic intervention in cognitive impairment

Make the most of the opportunity and take the step to get up to date on the latest developments in Dementia"

Specific Skills

- Diagnose Alzheimer's disease using diagnostic biomarkers in an appropriate way
- Apply the appropriate treatment in each phase of the disease
- Confidently and successfully perform a differential diagnosis of vascular Dementia
- Develop preventative protocols for vascular Dementia
- Implement an integral therapeutic approach
- Diagnose Lewy Body Dementia
- Be aware of the comorbidity of this condition
- Perform a successful treatment protocol
- Recognize all the symptoms of Frontotemporal Dementia in its different forms
- Know the appropriate management of its symptoms
- Incorporate the use of different neuropsychological assessment tools in the diagnosis of different Dementias
- Know how to implement cognitive rehabilitation strategies in these Dementias
- Include the genetic aspect of neurocognitive diseases associated with Dementia
- Interpret PET and SPECT images in Dementia and Alzheimer's disease and the appropriateness of their use
- Incorporate the results in the diagnosis
- Know how to create algorithms in mild and advanced Dementias
- Use different imaging markers as well as global and hippocampal volumetric techniques
- Know how to evaluate cerebral perfusion
- Understand the semiology of MRI
- Know how to optimize the data from a neuropathological report in Dementia to help with diagnosis
- Know how to translate the information for the family of the patient
- Diagnose rapidly progressive Dementia
- Apply appropriate treatment
- Know how to apply the diagnostic-therapeutic approach and comorbidity of systemic processes in elderly patients with Dementia
- Recognise other common situations in elderly patients with neurodegeneration

04

Course Management

The program's teaching staff includes leading experts in Dementia who contribute their vast work experience to this training program. Additionally, other recognized experts participate in its design and preparation, completing the program in an interdisciplinary manner.

Leading professionals in the field have come together to teach you the latest advances in treating people with Dementia"

International Guest Director

Internationally recognized for his contributions to Neurology, Dr. Richard Levy has extensively investigated the histology of Dementias and other brain pathologies. In particular, he has led multiple clinical trials at the Institute of Memory and Alzheimer's Disease (IM2A), associated with the Salpetrière Hospital, which have provided innovative results to understand many of the conditions related to the human nervous system.

His areas of expertise, in addition to Neurodegenerative Diseases, include Electrophysiology and executive functions. In the latter field, he has several analyses on frontal lobe capabilities in decision making and action planning. From the beginning of his career, in the laboratory of the renowned Professor Yves Agid, he conducted pioneering research on the anatomy of the Basal Ganglia. In this way, he has stood out for his innovative skills in the study of cognition and behavior, and was chosen for a postdoctoral stay in this field at Yale University.

Also, thanks to his cutting-edge knowledge, he has achieved prominent roles as the Director of the FRONTlab Research Team at the Brain and Spinal Cord Institute. From that scientific group he has also examined behavioral disorders targeting Apathy and Disinhibition. In parallel, he has numerous articles, published in high impact journals, widely cited by other experts.

In addition to his research work, Dr. Levy also has a prominent career in the clinical setting. His work as Director of the Department of Neurology at the Saint-Antoine University Hospital, or as head of the specialized unit at the Salpetrière Hospital, is evidence of this. In both institutions he collaborates with the care of patients with medical problems where the boundaries between Neurosciences and Psychiatry are blurred.

Dr. Levy, Richard

- Director of the FRONTlab of the Brain Institute of the Salpetrière Hospital, Paris, France
- Head of the Institute of Memory and Alzheimer's Disease (IM2A), associated with the Salpetrière Hospital
- Director of the Department of Neurology, Saint-Antoine University Hospital, Paris, France
- Academician at the Sorbonne University
- Doctorate in Medical Sciences from the Sorbonne University
- Research stay at Yale University, United States

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

Management

Dr. Manzano Palomo, María del Sagrario

- Neurological Services in the Cognitive Pathology Unit Infanta Leonor Hospital
- Coordinator of the Behavioral Neurology and Dementia Group of the Spanish Society of Neurology
- Degree in Medicine. Complutense University of Madrid
- Credits in the Neuroscience PhD Complutense University of Madrid
- Advanced Studies Certificate. Complutense University of Madrid
- Internal Medicine Residency Program, specializing in neurology San Carlos Clinical Hospital
- Doctor of Medicine. University of Alcalá
- Member of the Neurogeriatric Group of the Spanish Society of Neurology
- Reviewer of the Neurology Journal (Spanish Society of Enurology)
- Member of the rotating committee of the Alzheimer's Journal Research in Dementia

Professors

Dr. Agüera Ortíz, Luis Fernando

- Head of Department Psychiatric Department 12 de Octubre University Hospital
- Teachers' Representative Partners of the Department of Psychiatry Complutense University of Madrid
- Degree in Medicine and Surgery Faculty of Medicine in Cordoba
- Specialist in Psychiatry
- Specific training in psychogeriatrics at the University of Geneva Switzerland
- PhD in Medicine Autonomous University of Madrid
- 12 de October University Hospital From 2008-2010
- Head of Carabanchel Mental Health Center, part of the Psychiatric Clinical Management and Mental Health Department at the 12 de October University Hospital, Madrid

Dr. Álvarez Linera Prado, Juan

- Head of Diagnostic Imaging Department, Neuro-Radiology Ruber International Hospital Madrid
- PhD in Neuroscience. Autonomous University of Madrid
- Qualified in Neuroradiology European Board of Neuroradiology
- Official training in radiosurgery planning Radiosurgery Unit at the Karolinska Institute, Sweden
- Postgraduate program in Angio-MRI Madison University, Wisconsin
- Postgraduate program in ENT, IIlinois County Hospital-University of IIlinois, Chicago
- Fellowship in Magnetic Resonance in Neuroradiology Ohio State University Columbus
- Internal Medicine Residency- Móstoles General Hospital Madrid

Dr. Arbizu, Javier

- Head of Services in the Department of Nuclear Medicine Clinical University of Navarra, Pamplona
- Titular Professor in the Department of Nuclear Medicine Navarra University
- Degree in Medicine Navarra University
- Residency in Nuclear Medicine Navarra University Clinic
- PhD in Neuro-imaging Navarra University
- Member of the editorial committee of the Spanish Journal of Nuclear Medicine and Molecular Imaging
- President of the Commission of Continuing Training Clinical University of Navarra, Pamplona
- Member of the Continuing Education Committee of the Health Research Institute of Navarra (IdisNA), Pamplona
- Recent publication: Arbizu J, et al. Neuroimaging Committee Proven validity and management impact of amyloid imaging in Alzheimer's disease-repetita juvant Eur J Nucl Med Mol Imaging. 2020 Mar 4

Dr. Barro Crespo, Ángeles

- Neuropsychologist and co-ordinator of clinical trials at the Neurosciences Unit at Victoria Eugenia Hospital Seville
- Neuropsychologist and clinical trials coordinator of the Dementia unit of the neurology service at the Virgen Macarena University Hospital, Seville
- Neuropsychologist in the memory clinic (Neurobrain) in the Andalusian Neurological Institute
- Degree in Psychology University of Seville
- International Master's Degree in Clinical Neuropsychology Miguel de Cervantes European University
- Member of the Official School of Psychology of Western Andalusia
- Member of the Spanish Society of Neurology
- Member of the Andalusian Society of Neurology

Dr. Clarimón, Jordi

- Head Researcher at the Genetic Unit of Neurodegenerative Diseases at Sant Pau
- PhD in Biological Sciences from the Univeristy of Pompeu Fabra
- Degree in Biology from the University of Barcelona
- Two and a half year postdoctoral residency at the National Institute of Health (Bethesda, Maryland, USA), in the laboratory of Dr. John Hardy
- His research focuses on the study of genetic risk factors in neurodegenerative diseases, such as Alzheimer's disease and other Dementias; neuromuscular diseases, such as amyotrophic lateral sclerosis; and movement disorders, such as Parkinson's disease

Dr. Esteve Arrien, Ainhoa

- Faculty Specialist in Geriatric Unit Infanta Leonor University Hospital
- TECH Master's Degree in Healthcare Management International University of La Rioja
- Level II of Professional Career Faculty Specialist in Geriatric Department Infanta Leonor Hospital
- Higher Diploma in the Methodology of Clinical Research Carlos III Health Institute and Spanish Medical Association
- Master's Degree in Palliative Care Valladolid
- Specializing in Geriatrics via Internal Medicine Residency Cruz Roja Central Hospital Madrid
- Advanced Studies Certificate. Complutense University of Madrid. Madrid
- PhD in Geriatrics Complutense University of Madrid. Madrid
- Degree in Medicine and Surgery University of Malaga
- Member of the Violence Commission at Infanta Leonor University Hospital
- Coordinator of the Falls Study Group of the Spanish Society of Geriatric Medicine (SEMEG)

Dr. Muñiz Castrillo, Sergio

- Neuro-oncology service at the National Reference Center for Paraneoplastic Neurological Syndromes and Autoimmune Encephalitis, Hôpital Neurologique(Lyon, France)
- Degree in Medicine University of Oviedo, Asturias
- TECH Master's Degree in Tropical Neurology and Infectious Diseases International University of Cataluyna
- Specialist in Neurology San Carlos Clinical Hospital Madrid
- Recent publication: Muñiz-Castrillo S, et al. Associations between HLA and autoimmune neurological diseases with autoantibodies. Autoimmune Highlights; 2020, 11:2
- Pérez Casas Award for the best record in anatomy, School of Medicine University of Oviedo

Dr. Pelegrín Valero, Carmelo Mariano

- Head of Department. Psychiatric Department San Jorge Hospital Huesca
- Associate Professor in the Department of Medicine, Psychiatry at Dermatology at the University of Zaragoza
- Doctor of Medicine. University of Zaragoza
- PhD in Psychiatry University of Zaragoza
- Degree in Medicine
- Degree in Human Nutrition and Diet

Dr. Rábano Gutiérrez del Arroyo, Alberto

- PhD Faculty of Sciences at the Autonomous University of Madrid March 2014
- Degree in Medicine and Surgery from the Faculty of Medicine at the Complutense University of Madrid June 1984
- Medical Specialist in Pathological Anatomy (Internal Medicine Residency), 1990
- Co-ordinator at the Department of Neuropathology and Tissue Bank, CIEN Foundation (ISCIII)-Queen Sofia Foundation Alzheimer Center Scientific Director, CIEN Tissue Bank November 2007-present

Dr. Toribio Díaz, María Elena

- Faculty Specialist in the Neurology Unit Henares University Hospital
- Associate Professor Francisco de Vitoria University
- TECH Master's Degree in Movement Disorders University of Murcia
- Specialist Diploa in Health Law and Bioethics National School of Health
- Master's Degree in Medical and Clinical Management National School of Health, Carlos II Health Institute and UNED
- Doctor of Medicine. Miguel Hernández- Alicante
- Specialist in Neurology La Paz University Hospital, Madrid
- Degree in Medicine and Surgery University of Salamanca

Dr. Viñuela Fernández, Félix

- Director of the Department of Neurosciences Andalusian Neurological Institute at the Victoria Eugenia Hospital, Seville
- Co-ordinator of the Cognitive Impairment Unit at the Virgen Macarena Hospital, Seville
- Degree in Medicine and Surgery Navarra University
- Specialist in Neurology Virgen Macarena Univeristy Hospital, Seville
- Doctor of Medicine. University of Seville
- PhD in Philology University of Seville
- Member and Co-ordinator for the Spanish Society of Neurology
- Editor and Author of the guide "Recommendations for the Management of Cognitive Impairment 2019, Andalusian Society of Neurology"

Dr. Zea Sevilla, María Ascensión

- PhD in Medicine from the University of La Laguna, Tenerife
- Degree in Medicine and Surgery from the University of Granada
- Master's Degree in Neuro-immunology from the Autonomous University Madrid
- Specialist in Neurology, University Hospital of the Canary Islands (La Laguna, Santa Cruz de Tenerife)
- Member of the Neurology Department- Alzheimer's Research Project Unit Reina Sofía Foundation CIEN Foundation
- Member of the team of the Diagnostic Guidance Unit in Dementias of the Research Center for Neurological Diseases Foundation (CIEN) Carlos III Health Institute. Madrid
- Member of the group of the National Biobanks Platform Tissue Bank (BT-CIEN) Neurological Diseases Research Center Foundation Carlos III Health Institute Madrid

05

Structure and Content

The structure of the content has been designed by the best professionals in the sector, with extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied, and diagnosed, and with extensive knowledge of new technologies applied to teaching.

This TECH Master's Degree in Dementia contains the most complete and up-to-date scientific program on the market"

Module 1. Alzheimer's Disease

1.1. Concept
1.2. Epidemiology
1.3. Risk Factors
1.4. Typical and Atypical Clinical Phenotypes
1.5. Diagnostic Criteria
1.6. Biomarkers in Alzheimer's Disease
1.7. Treatment Focused on Cognition Pharmacological and Non-pharmacological
1.8. Treatment of BPSD
1.9. Future Therapeutic Targets
1.10. Genetic Assessment

Module 2. Vascular Cognitive Impairment

2.1. Concept
2.2. Risk Factors
2.3. Epidemiology
2.4. Diagnostic Criteria
2.5. Clinical Phenotypes
2.6. Neuropsychological Aspects
2.7. Biomarkers in Structural Imaging
2.8. Treatment Focused on Cognition
2.9. Treatment Focused on Behavior
2.10. Non-Pharmacological Treatment

Module 3. Lewy Body Dementia

3.1. Introduction: Lewy Body Dementia Within Synucleinopathies
3.2. Epidemiology
3.3. Clinical and Radiological Diagnostic Criteria Topography of Lesions in Images and their Clinical Expression Differential Diagnosis Based on the Clinical Expression of the Topographic Lesion
3.4. Early and Late Clinical Semiology Clinical Phenotypes
3.5. Diagnostic Approach and Clinical Management of Dysautonomia and the Common Clinical Comorbidities Falls and Fractures Sleep Disorders. Behavioral Disorders
3.6. Pharmacological Treatment Focused on Cognition
3.7. Non-Pharmacological Treatment
3.8. Treatment Focused on Motor Skills
3.9. Pharmacological and Non-pharmacological Treatment Focused on Behavior
3.10. Considerations for Advanced Decision Planning for People with Lewy Body Disease

Module 4. Frontotemporal Dementia

4.1. Concept
4.2. Epidemiology
4.3. Diagnostic Criteria
4.4. Specificity of Cognitive and Behavioral Symptoms
  4.4.1. Cognitive Symptoms
  4.4.2. Behavioral Symptoms
4.5. Clinical Sub-types
  4.5.1. Behavioral Variant FTD
  4.5.2. Language Variants
  4.5.3. Motor Variants: CBD and PSP
  4.5.4. FTD-ALS
4.6. Pharmacological Treatment
4.7. Non-Pharmacological Treatment

Module 5. Neuropsychology in Dementias

5.1. Neuropsychological Assessment of Attention and Memory
5.2. Neuropsychological Evaluation of Language
5.3. Neuropsychological Evaluation of Praxis
5.4. Neuropsychological Evaluation of Visual-spatial Functions
5.5. Neuropsychological Evaluation of Executive Functions
5.6. Behavioral and Functional Evaluation
5.7. Cognitive Patterns in Dementia
  5.7.1. Cortical vs. Sub-cortical
  5.7.2. Frontotemporal vs. Parieto-Occipital
5.8. Cognitive Rehabilitation
5.9. Bibliographic References

Module 6. Genetic Assessment in Dementias

6.1. Introduction
6.2. Genetics in Alzheimer's Disease
  6.2.1. Prevalence
  6.2.2. Mendelian Genetics
  6.2.3. Susceptibility of Genes
  6.2.4. Recommendations in Clinical Practice
6.3. Genetics in Vascular Dementia
  6.3.1. Recommendations in Clinical Practice
6.4. Genetics in Fronto-temporal Dementia
  6.4.1. Genetics of BVFTD
  6.4.2. Genetics in FTD with Parkinsonism
  6.4.3. Genetics in FTD-ALS
  6.4.4. Genetics of Primary Aphasia
  6.4.5. Clinical-Genetic Correlations
  6.4.6. Recommendations in Clinical Practice
6.5. Genetics of Prion Diseases
  6.5.1. Recommendations in Clinical Practice
6.6. Diagnostic Algorithm
  6.6.1. Diagnostic Algorithm in Alzheimer's Disease
  6.6.2. Diagnostic Algorithm in FTD
6.7. Genetic Counseling
  6.7.1. Concept of Genetic Counseling
  6.7.2. Practical Examples PSEN 1 Gene, C9ORF72 Gene, APOE4 Gene, CADASIL Cases, Progranulin Gene

Module 7. Molecular Neuroimaging in Dementias

7.1. Introduction
7.2. Methodological Aspects
  7.2.1. Equipment SPECT and PET
  7.2.2. Molecular Processes and Radiopharmaceuticals
    7.2.2.1. Neuron Activity
    7.2.2.2. Dopaminergic Activity
    7.2.2.3. Amyloid Deposition
    7.2.2.4. Tau Deposit
    7.2.2.5. Neuroinflammation
  7.2.3. Image Analysis
    7.2.3.1. Visual Analysis
    7.2.3.2. Comparison with a Normal Database in Stereostatic Surface Projection (SSP)
    7.2.3.3. Voxel-Based Image Analysis
7.3. Neuroimaging of Alzheimer's Disease
  7.3.1. Mild Cognitive Impairment and Dementia
  7.3.2. Atypical Forms
7.4. Neuroimaging in Fronto-temporal Dementia
  7.4.1. FTD Variant in Behavior
  7.4.4. Primary Aphasias
  7.4.3. Others
7.5. Neuroimaging of Dementias with Parkinsonism
  7.5.1. Lewy Body Dementia
  7.5.2. Progressive Supranuclear Palsy
  7.5.3. Corticobasal Degeneration
7.6. Diagnostic Algorithm
  7.6.1. Diagnostic Algorithm in Alzheimer's Disease
  7.6.2. Diagnostic Algorithm in FTD and Dementia with Parkinsonism
7.7. Case Studies

Module 8. MRI in Dementias

8.1. Introduction
8.2. Diagnostic Algorithm
  8.2.1. CT and MRI in Cognitive Impairment Evaluation Classification of Dementias
  8.2.2. White Matter Evaluation
  8.2.3. Gray Matter Evaluation
  8.2.4. Advanced Techniques: Perfusion, Diffusion, Spectroscopy, Functional MRI
8.3. Potentially Treatable Causes of Dementia
  8.3.1. Adult Hydrocephalus, Vascular Injuries
  8.3.2. Surgical Injuries: Tumors and Subdural Hematoma
  8.3.3. Inflammatory and Infectious Lesions
8.4. Alzheimer's Disease.
  8.4.1. Structural MRI: Typical and Atypical Phenotypes
  8.4.2. Volumetry: Cortical Thickness and Hippocampi
  8.4.3. Perfusion Techniques: Differential Diagnosis
  8.4.4. Progression Markers
8.5. Vascular Dementia
  8.5.1. Small Vessel Disease
  8.5.2. Multi-infarct Dementia
  8.5.3. Microhemorrhages SWI Imaging
8.6. Other Degenerative Dementias
  8.6.1. Frontotemporal Dementia
  8.6.2. Lewy Body Dementia
8.7. Future Perspectives
  8.7.1. Functional MRI and Brain Networks
  8.7.2. Neuroimaging and Artificial Intelligence

Module 9. Neuropathology in Dementias

9.1. Introduction
- 9.1.1. Delimitation of the Scope of the Study
- 9.1.2. Pathogenic Axis for the Interpretation of Histological Findings
- 9.1.3. Sporadic vs. Genetic Diseases
- 9.1.4. Diagnostic Criteria vs. Neuropathological Findings

9.2. Levels of Study in Neuropathology
- 9.2.1. Macroscopic
- 9.2.2. Histological
- 9.2.3. Molecular

9.3. Alzheimer's Type Pathology
- 9.3.1. Macroscopic Findings
- 9.3.2. Characteristics of Histological Lesions
- 9.3.3. Beta Amyloid Pathology
- 9.3.4. TAU Pathology
- 9.3.5. Diagnostic Criteria and Stages

9.4. Lewy Type Pathology
- 9.4.1. Macroscopic Findings
- 9.4.2. Characteristics of Histological Lesions
- 9.4.3. Lewy Body Dementia: Stages and Subtypes
- 9.4.4. Lewy Disease as a Combined Pathology

9.5. Tauopathies with Dementia
- 9.5.1. Molecular Classification of Tauopathies
- 9.5.2. Progressive Supranuclear Palsy
- 9.5.3. Argyrophilic Grain Disease
- 9.5.4. Corticobasal Degeneration
- 9.5.5. Pick Disease
- 9.5.6. Other Less Common Tauopathies
- 9.5.7. Combined Pathology Tauopathies

9.6. Pathology TDP-43
- 9.6.1. FTLD TDP-43 Classification
- 9.6.2. Sporadic FTLD
- 9.6.3. Genetics in FTLD
- 9.6.4. Hippocampal Sclerosis and LATE

9.7. Rare FTLD and Other Uncommon Pathologies as a Cause of Neurodegenerative Dementia

9.8. Human Prion Diseases
- 9.8.1. Molecular Pathology of the Prionic Protein
- 9.8.2. Sporadic Creutzfeldt-Jakob Disease: Molecular Subtypes
- 9.8.3. Genetic Prionic Diseases
- 9.8.4. Transmissible Prion Diseases

9.9. Cerebrovascular Pathology and Dementia
- 9.9.1. Basic Lesions and Assessment Strategy
- 9.9.2. Post-infarction Dementia
- 9.9.3. Dementia and Small Vessel Pathology
- 9.9.4. Cerebrovascular Disease as a Combined Pathology

Module 10. Rapidly Progressive Dementias

10.1. Introduction
- 10.1.1. Concept
- 10.1.2. Epidemiology
- 10.1.3. Differential Diagnosis and Diagnostic Algorithm

10.2. Prion Diseases
- 10.2.1. Sporadic Creutzfeldt-Jakob Disease
- 10.2.2. Other Prionopathies: Variant CJD, Gerstmann-Sträussler, Fatal Familial Insomnia, etc.

10.3. Infections
- 10.3.1. HIV
- 10.3.2. Syphilis
- 10.3.3. Other Infections of the Central Nervous System (Viral Encephalitis, PML, Subacute-Chronic Meningitis)

10.4. Autoimmune Diseases
- 10.4.1. Antibody-mediated Encephalitis
- 10.4.2. Hashimoto
- 10.4.3. Vasculitis of the Central Nervous System
- 10.4.4. Others (Sarcoidosis, Systemic Vasculitis, etc.)

10.5. Oncology Patients
- 10.5.1. Tumors of the Central Nervous System
- 10.5.2. Meningeal Carcinomatosis
- 10.5.3. Yatrogen (Radiotherapy, Intrathecal Chemotherapy)

10.6. Toxic-Metabolic
- 10.6.1. Endocrinopathies
- 10.6.2. Carential
- 10.6.3. Mitochondrial
- 10.6.4. Toxic (Alcohol, Metal, Drugs)

Module 11. Comprehensive Geriatric Assessment of the Elderly Person Suffering from Cognitive Impairment or Dementia Clinical and Cognitive Comorbidities Some Aspects of the Advanced Planning with Impact the Clinical Evolution

11.1. Introduction: Eldery Patients with Cognitive Impairment Dementia and the Functional Perspective

11.2. Comorbidities: Elderly Patients Who Suffer From Comorbid Pathologies Which Influence Neurodegeneration and Comorbid Pathologies Which Are Related to Non-Dementia Cognitive Impairment

- 11.2.1. Polypharmacy and Overprescription
- 11.2.2. Falls, Walking and Cognition Joint Evaluation of Both Entities
- 11.2.3. Frailty and Sarcopenia Prescribed Exercise in Elderly People with Cognitive Impairment
- 11.2.4. Anorexia, Dysphagia, Weight Loss and Refusal to Eat Interaction with Cognitive Impairment and Clinical Evolution
- 11.2.5. Other Geriatric Syndromes
- 11.2.6. Considerations of Advanced Planning of Care and Decision Making in Elderly Patients Who Suffer From Cognitive Impairment and Dementia

This program will allow you to advance comfortably in your career"

06

Methodology

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

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

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

At TECH we use the Case Method

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

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

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

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

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

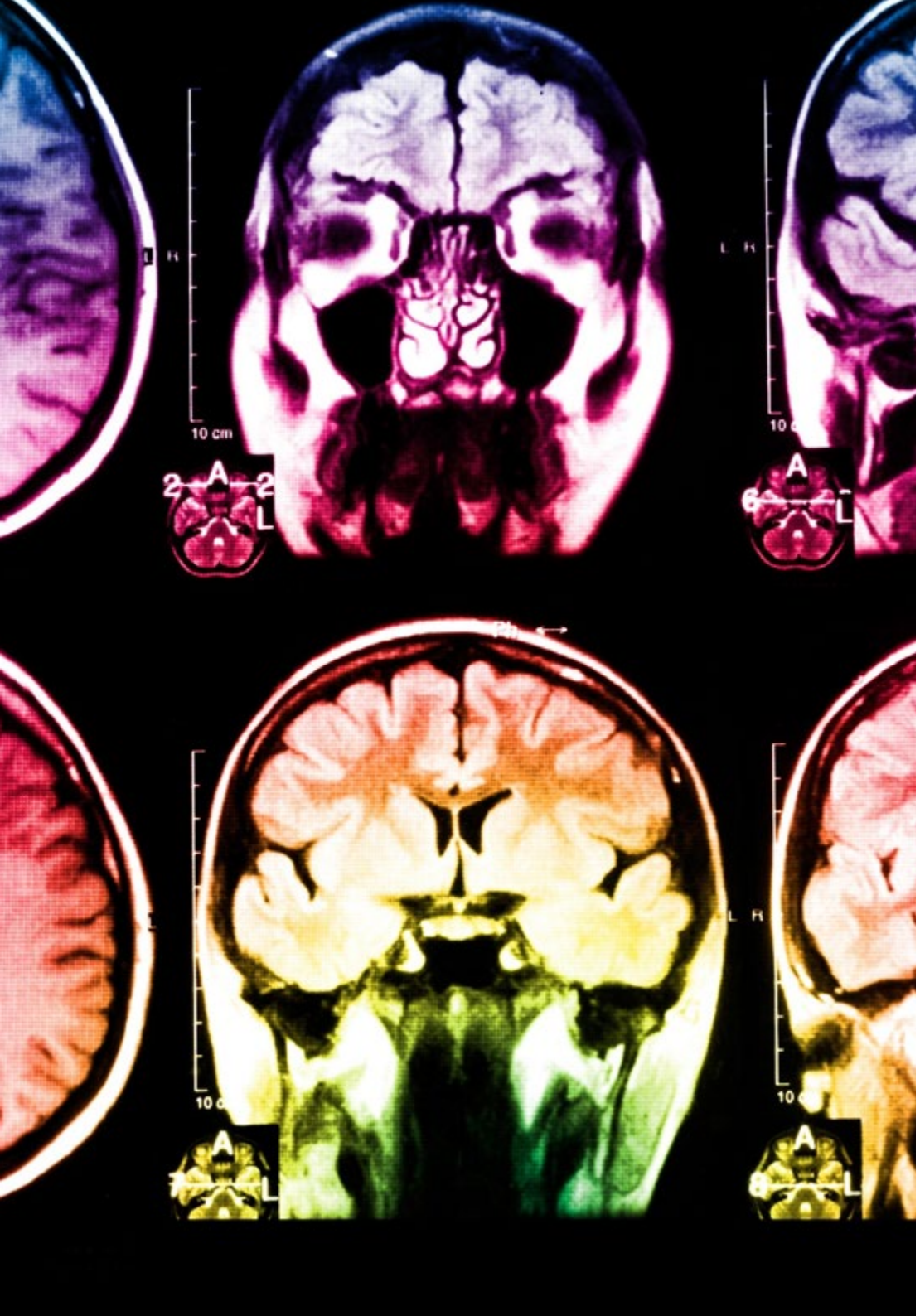
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better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

Relearning Methodology

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

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

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



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

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

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

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

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

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

Study Material

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

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

Surgical Techniques and Procedures on Video

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

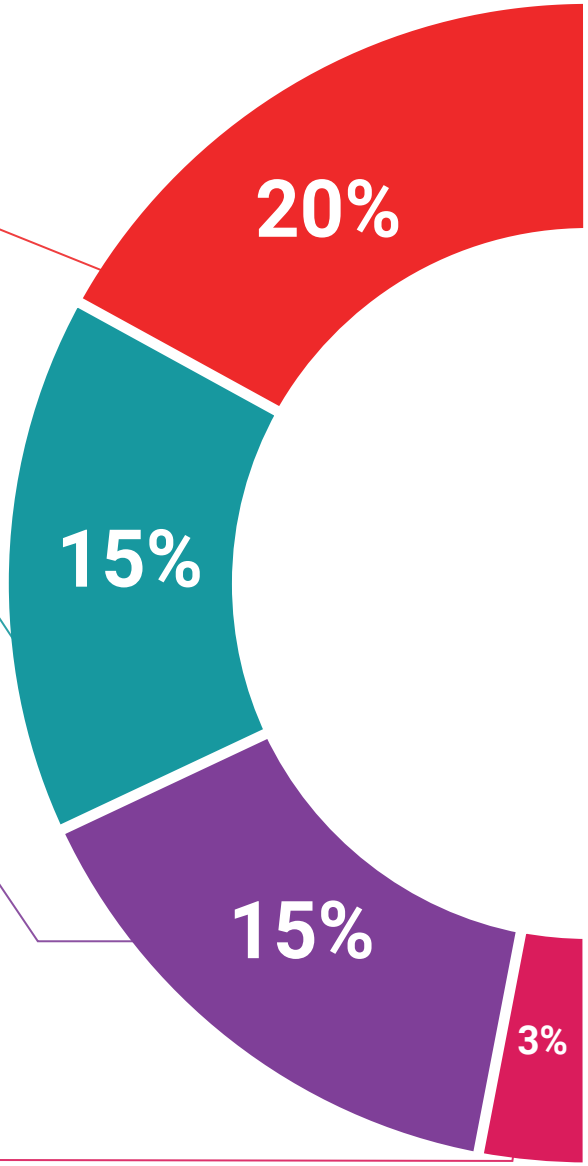
Interactive Summaries

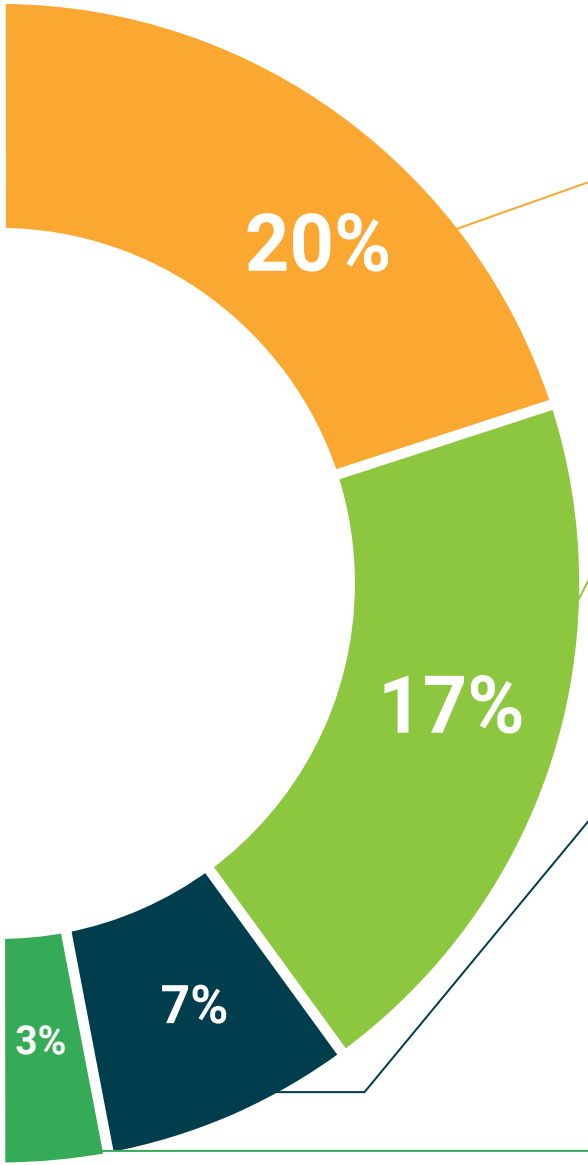
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

Additional Reading

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





Expert-Led Case Studies and Case Analysis

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

Testing & Retesting

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

Classes

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

Quick Action Guides

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

07

Certificate

The Master's Degree in Dementia guarantees you, in addition to the most rigorous and updated training, access to a Master's Degree issued by TECH Global University.

Successfully complete this program and receive your university degree without travel or laborious paperwork"

This program will allow you to obtain your **Master's Degree in Dementia** 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: **Master's Degree in Dementia**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**


tech global university

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

Master's Degree in Dementia

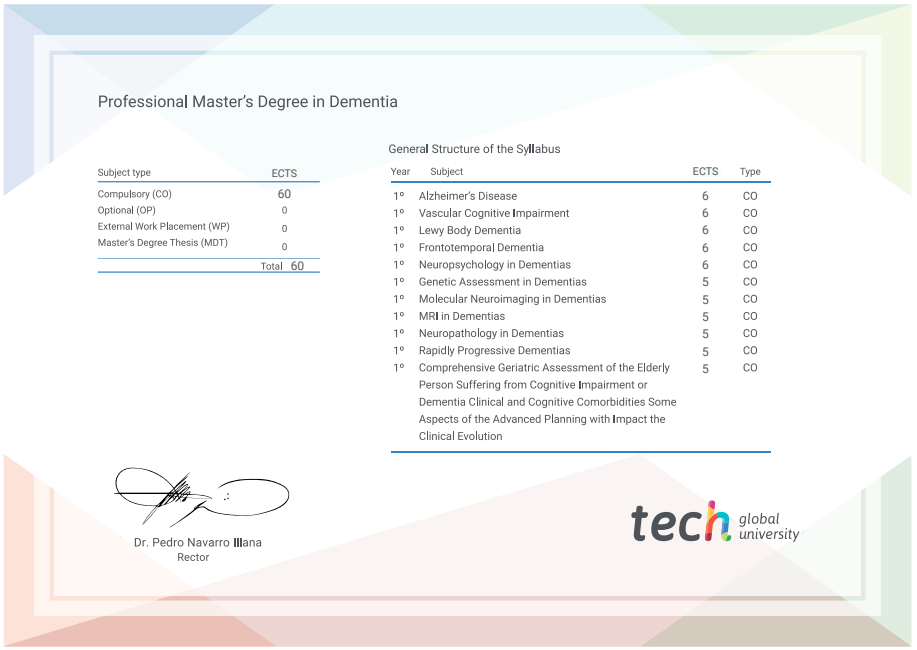
This is a program of 1,500 hours of duration equivalent to 60 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

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


Professional Master's Degree in Dementia

Subject type	ECTS
Compulsory (CO)	60
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
Total	60

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	Alzheimer's Disease	6	CO
1º	Vascular Cognitive Impairment	6	CO
1º	Lewy Body Dementia	6	CO
1º	Frontotemporal Dementia	6	CO
1º	Neuropsychology in Dementias	6	CO
1º	Genetic Assessment in Dementias	5	CO
1º	Molecular Neuroimaging in Dementias	5	CO
1º	MRI in Dementias	5	CO
1º	Neuropathology in Dementias	5	CO
1º	Rapidly Progressive Dementias	5	CO
1º	Comprehensive Geriatric Assessment of the Elderly Person Suffering from Cognitive Impairment or Dementia Clinical and Cognitive Comorbidities Some Aspects of the Advanced Planning with Impact the Clinical Evolution	5	CO

Dr. Pedro Navarro Illana
Rector

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*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.

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Master's Degree
Dementia

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

Master's Degree
Dementia

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