Hybrid Master's Degree

Nuclear Medicine

tech global university

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Hybrid Master's Degree

Nuclear Medicine

Modality: **Hybrid (Online + Clinical Internship)**

Duration: **12 months**

Certificate: **TECH Global University**

60 + 5 créditos ECTS

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

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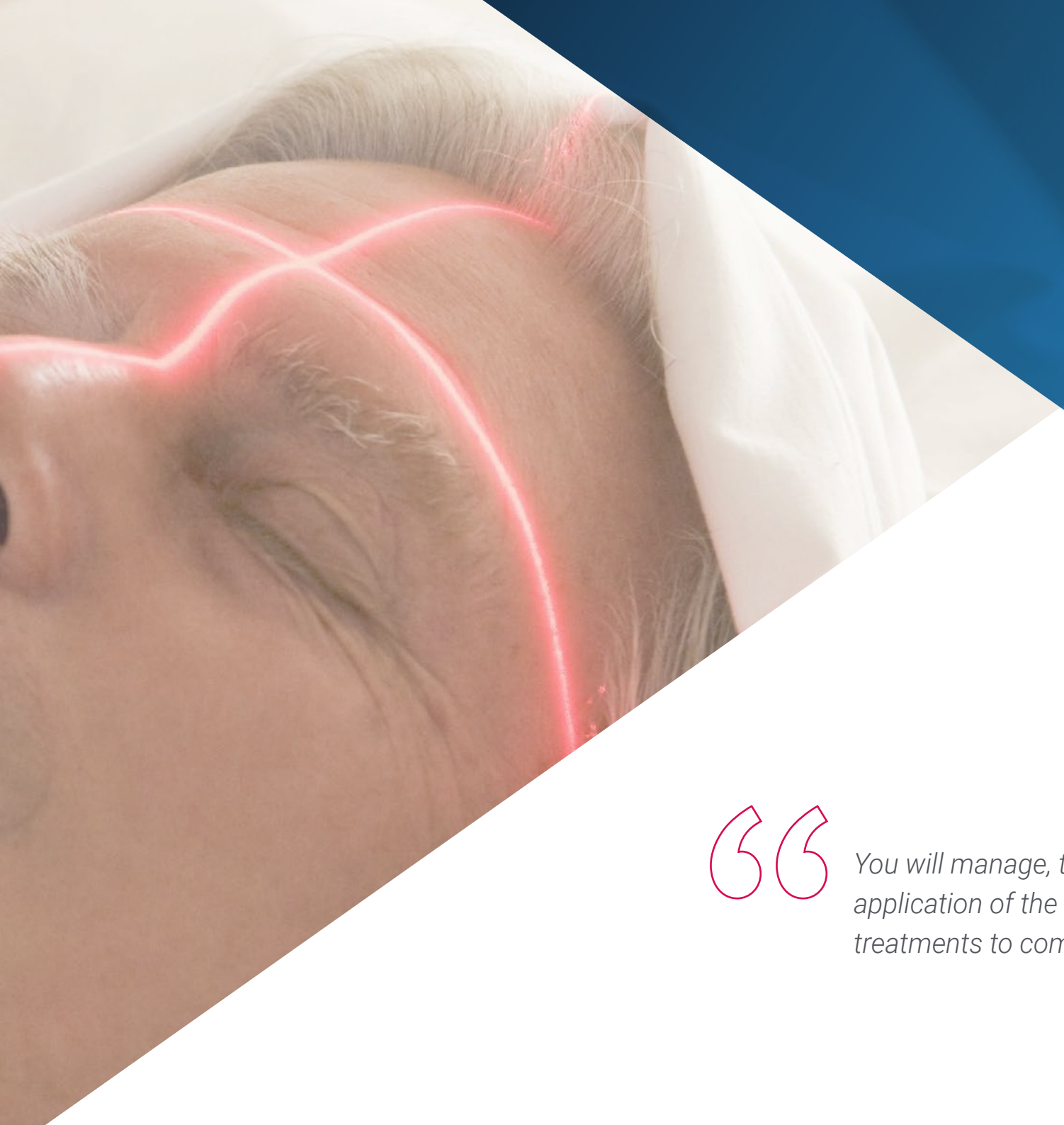
01

Introduction

Technological development has made possible the improvement of diagnostic methods of Nuclear Medicine such as single photon emission tomography or gammagraphy to detect a wide variety of diseases in an accurate, safe and comfortable way for the patient. The benefits it presents with respect to other methods have made this medical field one of the most demanded by hospitals, who need physicians with high skills in this field. Because of this, TECH has created this program through which, combining a 100% online learning with a practical period in a prestigious center, the professional will be up-to-date on the most advanced tests of Nuclear Medicine, handling the most effective nuclear treatments of neuroendocrine tumors.



You will manage, through this program, the application of the most advanced nuclear treatments to combat neuroendocrine tumors"

Nuclear Medicine, thanks to the growth it has experienced in recent years, has become the most rigorous method for the detection of various pathologies, among which cancer stands out. According to various studies, it has been calculated that investment in this discipline in low-income countries could increase survival rates against this disease tenfold in the future, as well as doubling it in low-middle income countries. These exciting statistics have led to an increasing number of healthcare organizations to support the development of this medical field, demanding physicians with extensive knowledge and high skills in the use of the most advanced diagnostic methods and nuclear therapeutics in order to save the lives of many people.

For this reason, TECH has created this Hybrid Master's Degree, with which the student will assimilate the most up-to-date and advanced theoretical and practical knowledge in a constantly evolving field such as Nuclear Medicine. During 1500 hours of learning, the physician will master the most innovative techniques for single photon emission for the diagnosis of different diseases or will establish the most optimized treatment for lung cancer based on the latest scientific evidence. In addition, they will perform cardiopulmonary studies, using the minimum radiation with pediatric patients to detect possible congenital heart disease.

At the end of this theoretical education, taught in a 100% online format allowing 24-hour accessibility to the contents offered from anywhere, a clinical internship is contemplated, where the student will be integrated in a hospital center to apply in a real environment all the knowledge acquired during 12 months of learning.

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

- Development of more than 100 clinical cases presented by physicians specialized in the field of Nuclear Medicine, with extensive professional experience in this field
- 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
- State-of-the-art strategies to optimize the functioning of the Nuclear Medicine Unit, adapting to the environment and available resources
- of each hospital center
- Detailed management of Nuclear Medicine imaging to undertake the follow-up of oncology patients
- Up-to-date tools to diagnose and treat various gastrointestinal and cardiologic diseases in the pediatric patient by means of Nuclear Medicine
- All this will be complemented by 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
- Furthermore, they will be able to carry out a clinical internship in one of the best hospitals

Access a program designed by the best specialists in Nuclear Medicine, who will offer you knowledge with full applicability in the real world"

This Hybrid Master's Degree program, of a professionalizing nature and hybrid learning modality, is aimed at updating those physicians who perform their functions in the specialty of Nuclear Medicine. The contents are based on the latest scientific evidence, and oriented in a educational way to integrate theoretical knowledge in the healthcare practice, and the theoretical-practical elements will facilitate the updating of knowledge and allow decision-making in the management of the patient.

Thanks to the multimedia content, developed with the latest educational technology, will allow the medical professional a situated and contextual learning, i.e., a simulated environment that will provide immersive learning programmed to train 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, the student will be assisted by an innovative interactive video system created by renowned experts.

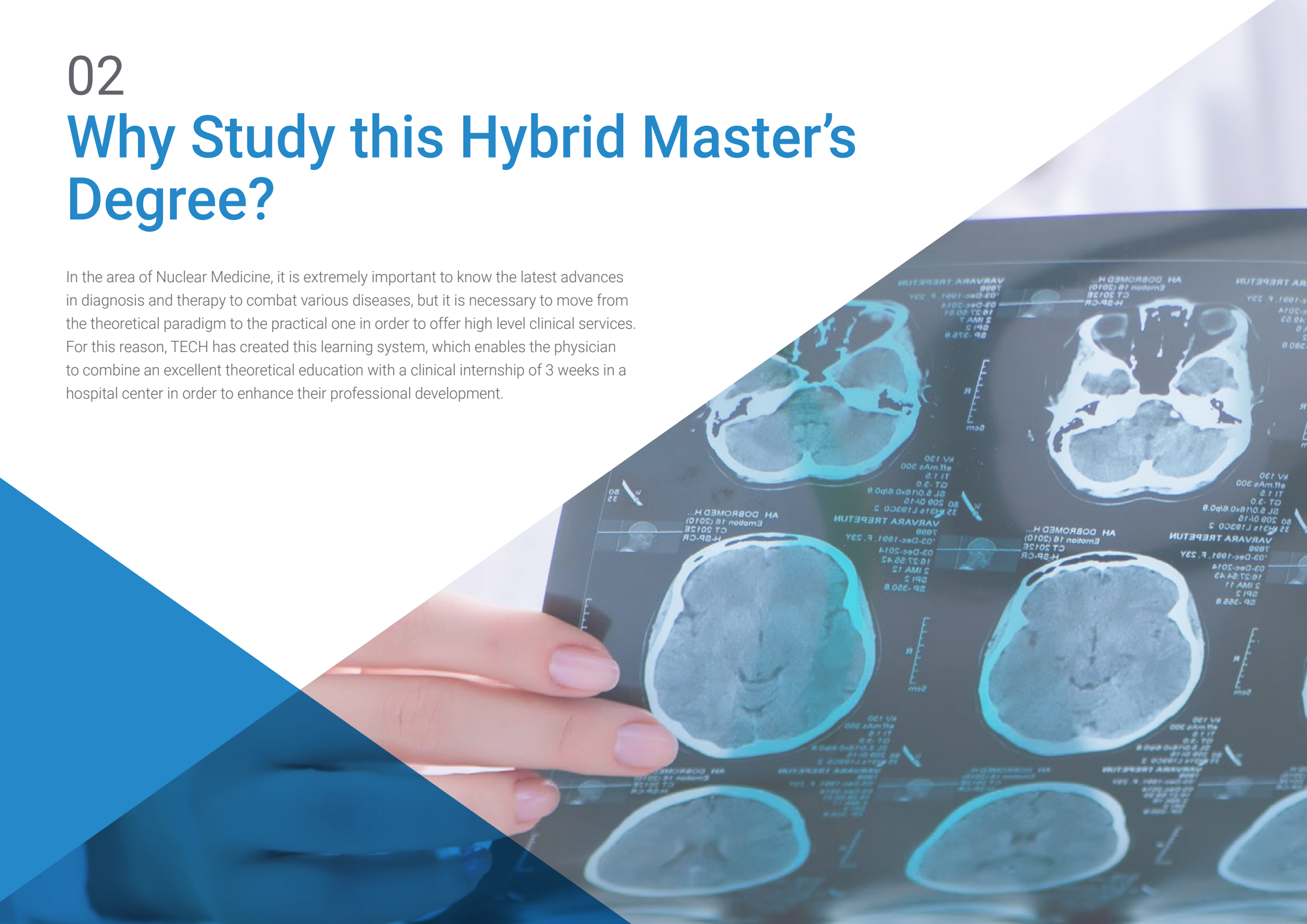
Boost your knowledge and skills in Nuclear Medicine to favor your access to the most prestigious hospitals.

Through a training in simulated environments, you will obtain a series of skills that will allow you to face different complex real cases with ease.

02

Why Study this Hybrid Master's Degree?

In the area of Nuclear Medicine, it is extremely important to know the latest advances in diagnosis and therapy to combat various diseases, but it is necessary to move from the theoretical paradigm to the practical one in order to offer high level clinical services. For this reason, TECH has created this learning system, which enables the physician to combine an excellent theoretical education with a clinical internship of 3 weeks in a hospital center in order to enhance their professional development.



TECH, one of the most prestigious international academic institutions, gives you the opportunity to combine the best theoretical learning in Nuclear Medicine with a clinical internship in a high caliber hospital"

1. Updating from the latest technology available

In Nuclear Medicine, the continuous development of the methods available to diagnose and treat gastrointestinal diseases or different types of cancer requires physicians to be up-to-date. For this reason, and with the intention of allowing physicians to learn about and apply these innovations into their work, TECH has decided to create this Hybrid Master's Degree.

2. Gaining In-Depth Knowledge from the Experience of Top Specialists

In its theoretical section, this Hybrid Master's Degree has didactic contents developed by active professionals in the field of Nuclear Medicine, who will provide students with the latest knowledge. In addition, during their clinical internship they will be integrated into an excellent work team, with whom they will acquire valuable diagnostic and therapeutic skills typical of this discipline.

3. Entering First-Class Clinical Environments

TECH carefully selects all the centers available for internships in its Hybrid Master's Degree programs. Thanks to this, the specialist will have guaranteed access to a prestigious clinical environment in the field of Nuclear Medicine, where they will have access to the most advanced technology in this field and will master the most avant-garde procedures.

4. Combining the Best Theory with State-of-the-Art Practice

In the academic panorama, there are a large number of programs that, far from providing students with knowledge applicable to their day-to-day professional life, only offer theory that is poorly adapted to the working world. That is why TECH has designed this learning model, which allows combining theoretical learning with hospital practice to ensure the adoption of useful skills.

5. Expanding the Boundaries of Knowledge

TECH offers the possibility of carrying out this Internship Program in a large number of high-quality centers. In this way, the specialist will be able to update their theoretical and practical knowledge together with the best professionals, who develop their profession in renowned hospitals.

You will have full practical immersion at the center of your choice"

03

Objectives

The Hybrid Master's Degree in Nuclear Medicine has been created with the aim of keeping up-to-date the knowledge of the professionals in this field of health, which is constantly changing due to the technological advances experienced. In this way, they will acquire valuable knowledge and skills for the use and interpretation of cutting-edge diagnostic tests in a theoretical-practical way. In order to guarantee the adequacy of the learning process, a series of general and specific objectives have been established.

This program provides a theoretical and practical way of assimilating the most advanced knowledge in Nuclear Medicine and applying it efficiently to the professional field"

General Objective

- The general objective of this Hybrid Master's Degree is to enable professionals to significantly expand their knowledge and skills in the field of Nuclear Medicine in order to develop a first-class health practice. Therefore, it will be possible by combining a useful theoretical learning with an internship in a prestigious hospital center to complete the correct assimilation of these medical advances.

Specific Objectives

Module 1. Management

- Delve into the exhaustive management of the Nuclear Medicine unit with efficiency and quality oriented to the patient
- Establish a strategic plan considering the institution's environment, needs and resources
- Delve into the different organizational forms and the implementation of a quality program oriented to continuous improvement focused on the patient

Module 2. Radiomics

- Obtain diagnostic, response predictive and prognostic biomarkers offering patients personalized precision therapy

Module 3. Single Photon Emission Nuclear Medicine: *"pearls and pitfalls"*

- Show the characteristic imaging patterns for new pathologies, the causes of diagnostic error and the update of advances in conventional Nuclear Medicine in a practical way

Module 4. Infection/Inflammation: Gammagraphic Studies and PET Tracers

- Delve into the application of molecular and morphofunctional imaging techniques in the field of Nuclear Medicine in the diagnosis, assessment of the extent and response to treatment of infectious/inflammatory pathology in the different organs and systems.
- Delve into the techniques applied in the specific clinical context.
- Accurate diagnosis with the least consumption of resources and radiation for the patient

Module 5. Nuclear Medicine in Pediatrics

- Delve into the specific characteristics of Nuclear Medicine studies in Pediatrics
- Cover aspects of test indication, acquisition protocols with appropriate choice of radiopharmaceutical and instrumentation characteristics
- Optimization of dosimetric parameters
- Interpret images and know the different pathologies by organs and systems and differential diagnosis
- Understand the best diagnostic strategy with proper sequencing of tests while minimizing radiation
- Avoid tests that do not provide information for the management of the child

Module 6. Neuroendocrine Tumors

- Delve into the clinical, diagnostic and therapeutic aspects of NETs
- Position Nuclear Medicine both in the diagnostic and therapeutic aspects in the appropriate context

Module 7. Radioguided Surgery

- Establish the protocols for performing the techniques, as well as their indication and modifications in the management of the patient in the different locations

Module 8. PET/CT- PET/MRI in oncology clinical guidelines

- Delve into the role of PET/CT studies in tumors with the highest incidence
- Know its impact on diagnosis and staging and on response assessment and monitoring
- Analyze the positioning of the different scientific societies in the respective clinical guidelines

Module 9. Radioligand Targeted Therapy

- Present the diagnostic protocols, patient selection, therapeutic protocols, care of the patient treated with metabolic therapy, responses obtained, side effects, its positioning compared to other therapies and possible lines of research for each of the different pathologies in which it is used

Module 10. Nuclear Medicine

- Delve into the knowledge of the basics of Nuclear Medicine in its fundamental elements, such as radioactivity and the type of disintegrations, image detection and generation, radiopharmaceuticals and radioprotection

Through this program you will discern, based on the latest scientific evidence, which diagnostic tests do not provide the maximum benefits in children"

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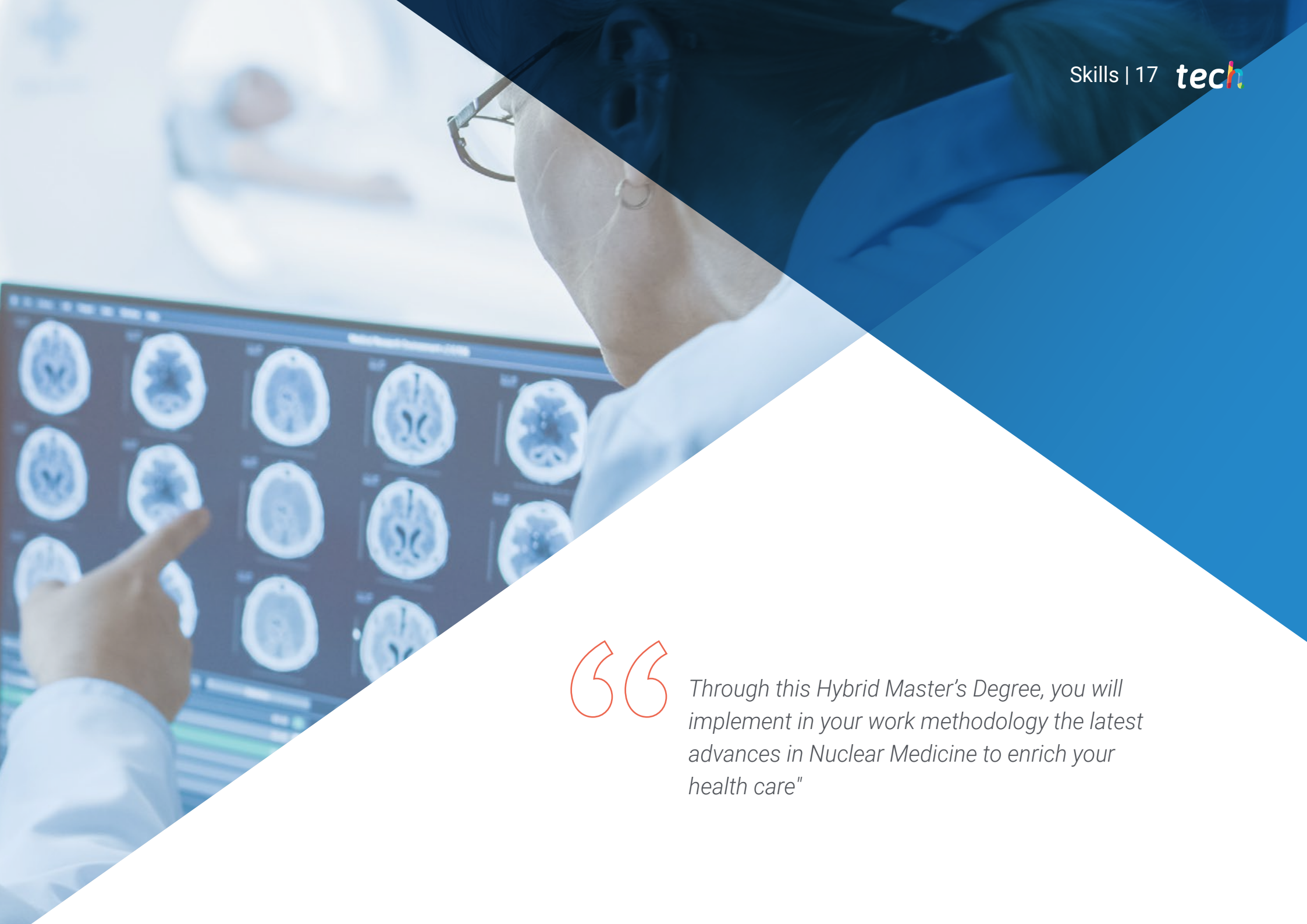
Skills

After completing the evaluations of this Hybrid Master's Degree, the student will have a series of skills that will allow them to perform their functions with the highest quality in cutting-edge clinical environments, offering the best services to their patients.

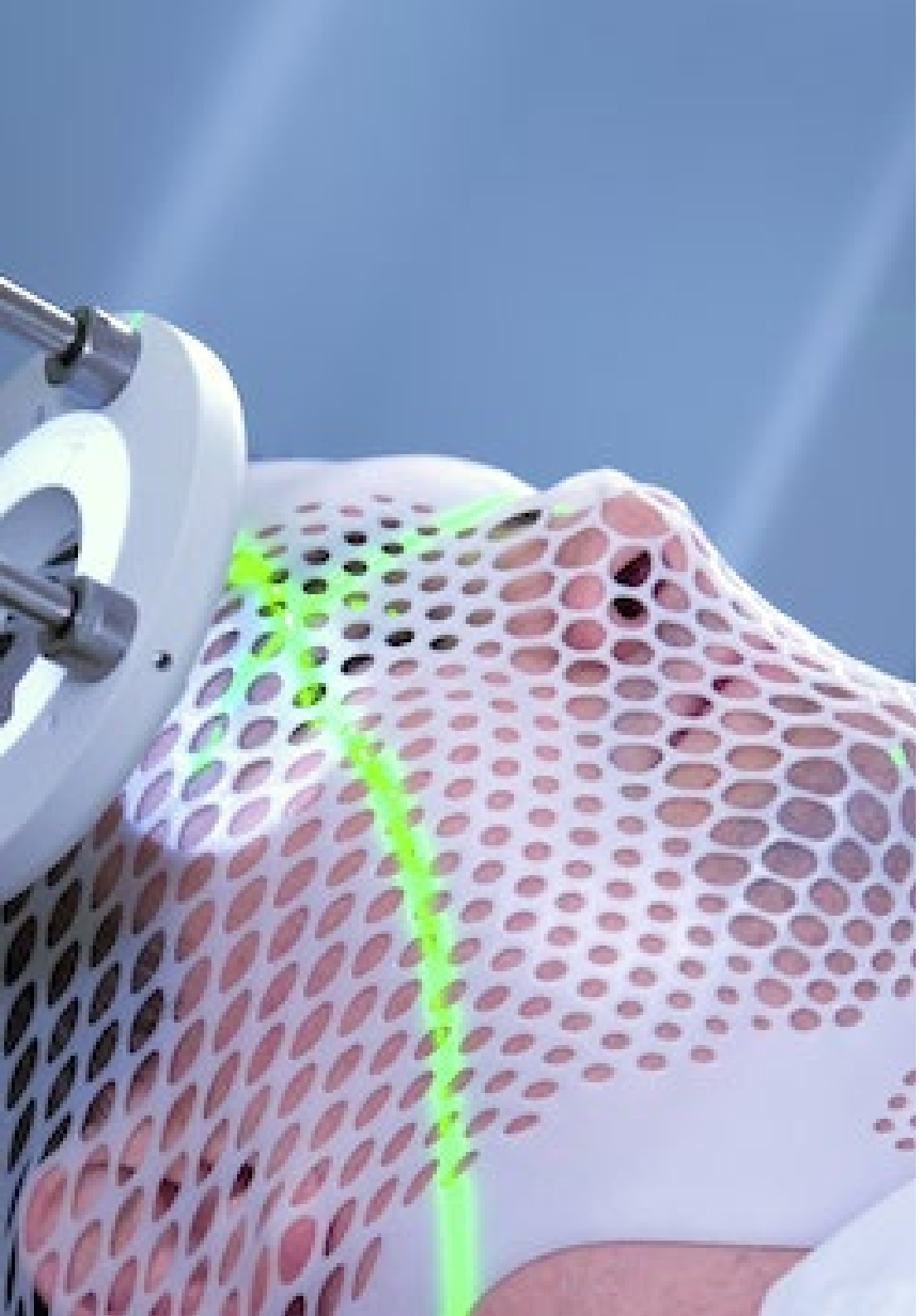


Through this Hybrid Master's Degree, you will implement in your work methodology the latest advances in Nuclear Medicine to enrich your health care"

General Skills

- Apply the most appropriate nuclear treatments, according to the pathology and circumstances of each patient
- Manage a Nuclear Medicine service
- Master the main advances in Nuclear Medicine to be able to respond appropriately to each situation
- Combine traditional nuclear medicine techniques with the latest advances in Nuclear Medicine

Expand your knowledge in the management and interpretation of molecular and morphofunctional diagnostic imaging thanks to the contents offered in this program"



Specific Skills

- Optimize resources and offer quality assistance in a Nuclear Medicine service
- Efficiently and equitably manage all available resources in order to provide excellent quality patient care
- Master computational medical imaging using imaging biomarkers
- Manage technological advances from conventional Nuclear Medicine, such as SEPECT/CT and new radiopharmaceuticals
- Use the molecular and morphofunctional imaging techniques in the field of Nuclear Medicine in the diagnosis
- Apply Nuclear Medicine to the pediatric setting safely
- Treat neuroendocrine tumors with radiopharmaceuticals
- Perform radioguided surgeries applied to breast cancer
- Appropriate use of 18F-FDG PET/CT in different tumors
- Capture, accumulate and dispose of a chemical substance labeled with a radioactive isotope

05

Course Management

In order to preserve intact the excellent educational quality of TECH programs, this Hybrid Master's Degree has a teaching staff made up of Nuclear Medicine professionals with extensive experience in this area. In addition, the didactic contents that the student will study throughout the program are carried out by these specialists, so that the knowledge they will provide will be fully applicable in their work experience.

This teaching staff is made up of a number of specialists in Nuclear Medicine who will provide you with the most up-to-date skills in this area"

Management

Dr. Mitjavila, Mercedes

- Head of the Nuclear Medicine Department at the Puerta de Hierro Majadahonda University Hospital, Madrid
- Project Manager of the Nuclear Medicine Unit in the Department of Diagnostic Imaging at the Alcorcón Foundation University Hospital
- Acting Physician of the Nuclear Medicine Department at the Ramón y Cajal University Hospital
- Acting Physician of the Nuclear Medicine Department at the University Hospital of Getafe
- Doctor in Medicine and General Surgery at the University of Alcalá de Henares

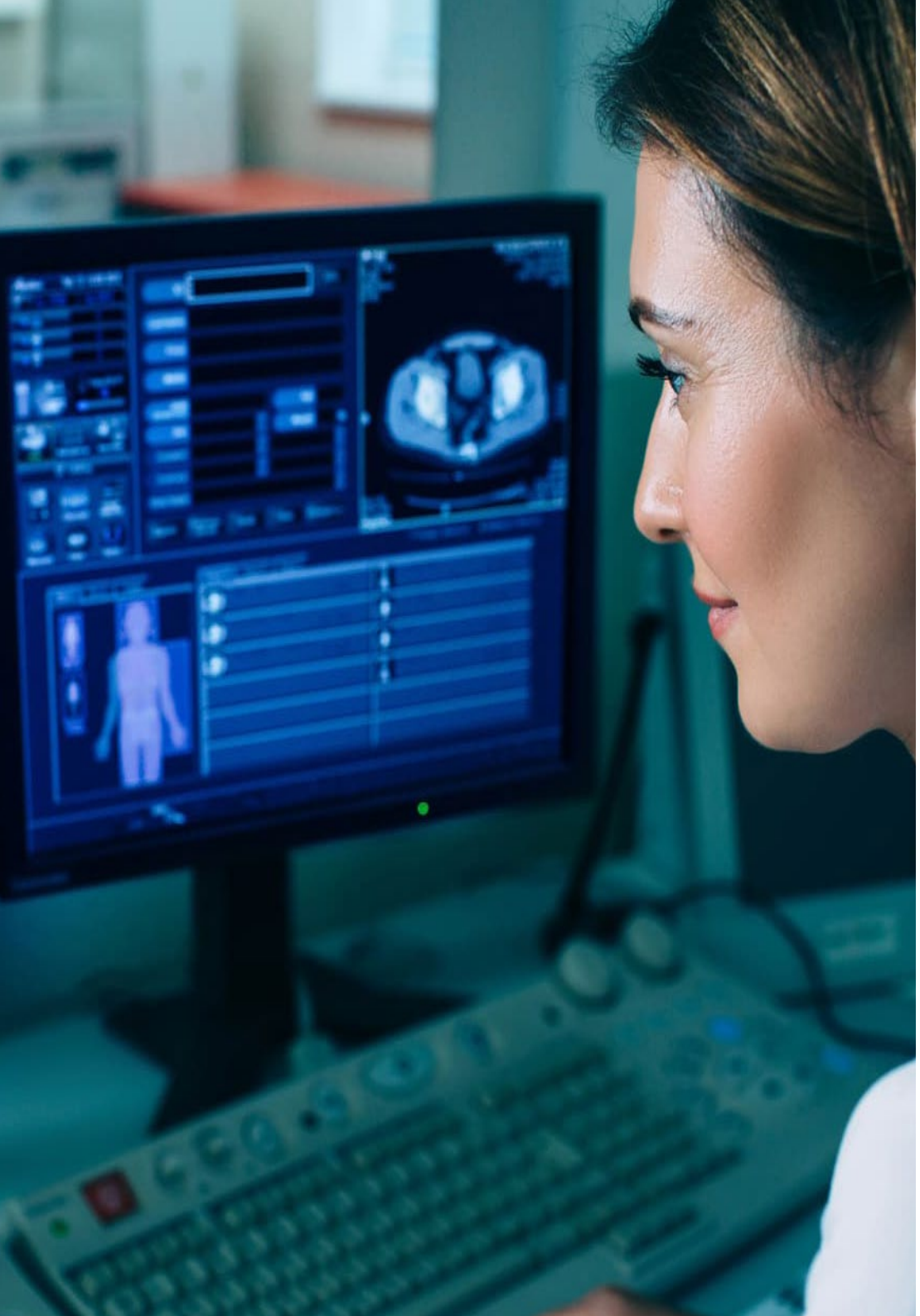
Professors

Dr. Rayo Madrid, Juan Ignacio

- Head of the Nuclear Medicine Service of the University Hospital Complex of Badajoz
- Specialist in the Nuclear Medicine Area of the University Hospital Complex of Badajoz
- Specialist in the Nuclear Medicine Area at the Clinical University Hospital of Salamanca
- Doctor in Medicine and Surgery from the University of Salamanca Outstanding Award
- Degree in Medicine and Surgery from the University of Extremadura
- Master's Degree in Quality Management in Health and Social Health Organizations from the Complutense University of Madrid
- European Expert in Quality Management in the Healthcare Sector

Mr. Herrero González, Antonio

- Director of Data Analytics in the Big Data and Advanced Analytics Area at Quirónsalud Hospital Group
- Director of Information Systems (IT) at the General University Hospital of Villalba
- Director of Information Systems (IT) at the Rey Juan Carlos University Hospital
- Technical Engineer in Computer Systems from the University of Salamanca
- Master's Degree in Management of Information and Communications Systems and Technologies for Health from the Carlos III Health Institute
- Master's Degree in Big Data Analysis (Big Data) MBA European University of Madrid



Dr. Paniagua Correa, Cándida

- Medical Specialist in Nuclear Medicine at the University Hospital of Getafe
- Medical Specialist in Nuclear Medicine in the Nuclear Medicine Department at the Quirónsalud University Hospital, Madrid
- Professor in the Resident Training of the Specialty of Nuclear Medicine at the University Hospital of Getafe
- Doctor in Dermatology from the Complutense University of Madrid
- Degree in Medicine and Surgery from the Complutense University of Madrid
- Radioactive Facilities Supervisor License issued by the Nuclear Safety Council (CSN)
- Member of the Spanish Society of Nuclear Medicine and Molecular Imaging (Semnim)

Dr. Rodríguez Alfonso, Begoña

- Specialist in Nuclear Medicine at the Puerta de Hierro University Hospital in Majadahonda, Spain
- Specialist in Nuclear Medicine at the General University Hospital of Ciudad Real, Spain
- Degree in Medicine and Surgery from the Complutense University of Madrid

Dr. Muros de Fuentes, María Angustias

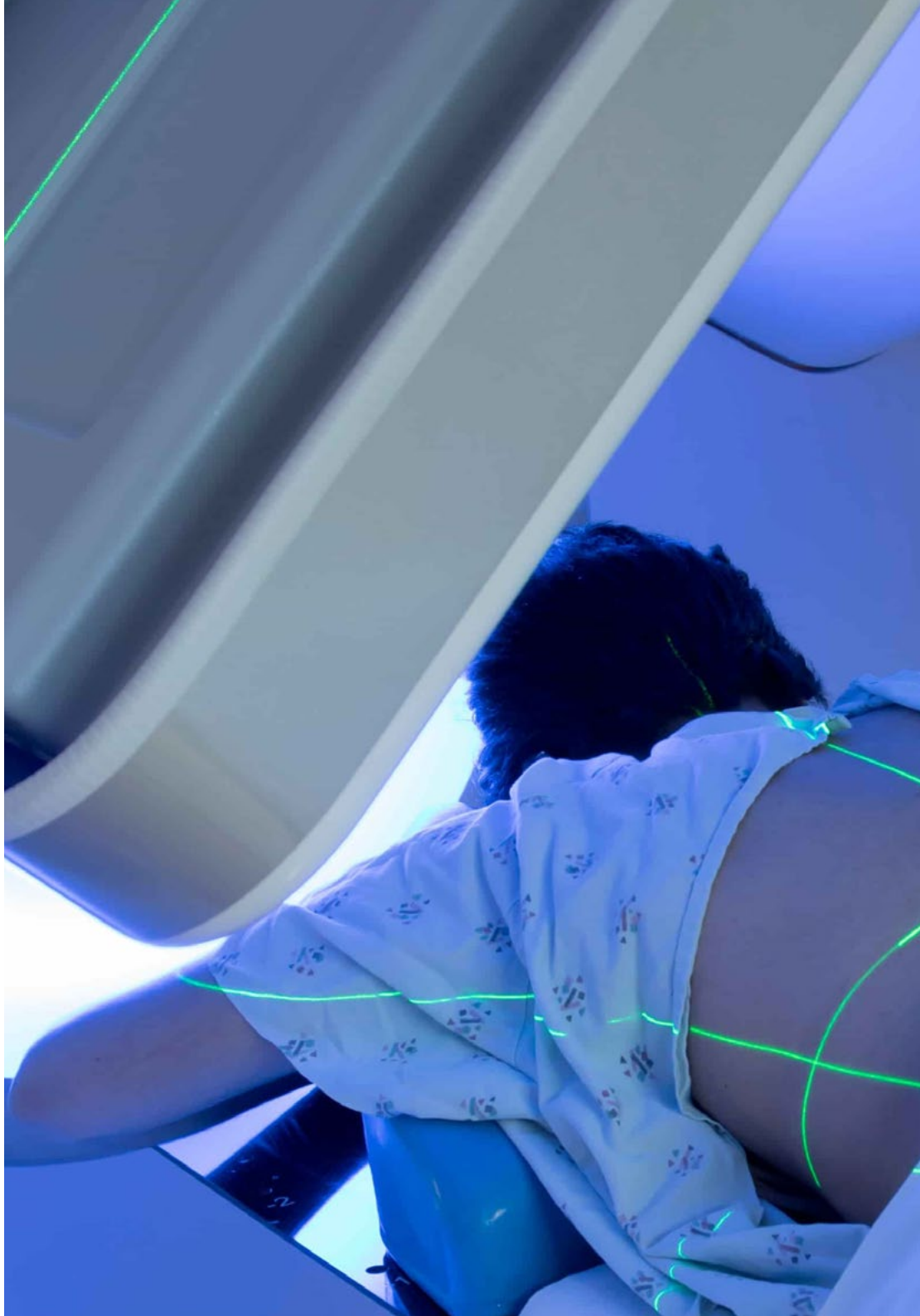
- Physician in charge of the Metabolic Therapy Unit of the Nuclear Medicine Department at the Virgen de las Nieves University Hospital
- Doctor in Medicine and Surgery of the University of Granada
- Degree in Medicine and Surgery from the University of Granada
- President of the Nuclear Endocrinology Group of the Spanish Society of Nuclear Medicine and Molecular Imaging (Semnim)

Dr. García Cañamaque, Lina

- Head of the Nuclear Medicine Department at the University Hospital HM Sanchinarro
- Medical Specialist of the Nuclear Medicine Department at the Hospital Vithas Nuestra Señora de América
- Medical Specialist in the Nuclear Medicine Department of the University Hospital HM Puerta del Sur
- Nuclear Physician at the Alcorcón Foundation University Hospital
- Supervisor of Radioactive Facilities of the second category of the Nuclear Safety Council
- Collaborating Professor at the San Pablo CEU University Foundation
- Professor of Nuclear Medicine at the San Carlos Clinical Hospital
- Official Doctorate Program in Biomedicine and Pharmacy at the CEU San Pablo University

Dr. Goñi Gironés, Elena

- Head of Nuclear Medicine Department at the University Hospital of Navarra
- Specialist of the Nuclear Medicine Department at the University Hospital of Badajoz
- Specialist of the Nuclear Medicine Department at the Clinical University Hospital of Santiago de Compostela
- President of the Working Group of Radioguided Surgery in the Spanish Society of Nuclear Medicine and Molecular Imaging (Semnim)
- Doctorate from the Public University of Navarra
- Degree in Medicine and Surgery from the University of Zaragoza
- Member of the Breast and Melanoma Unit at the Navarra Hospital Complex (CHN), and the Nuclear Medicine Quality Assurance Committee at the CHN (Navarra Hospital Complex)



Dr. Mucientes Rasilla, Jorge

- Medical Specialist of the Nuclear Medicine Area at the Puerta de Hierro Majadahonda University Hospital
- Quality Coordinator of the Nuclear Medicine Department at the Puerta de Hierro Majadahonda University Hospital
- Medical Specialist in Nuclear Medicine at Quirónsalud Hospital Group
- Resident Medical Intern at the San Carlos Clinical Hospital, Madrid
- Doctor of Medicine *Cum Laude* from the Complutense University of Madrid
- Degree in Medicine and Surgery from the University of Alcalá
- Master's Degree in Clinical Management, Medical and Health Care Management from the CEU San Pablo University
- Radioactive Facilities Supervisor Certificate from the Nuclear Safety Council (CSN)

Dr. Cardona, Jorge

- Medical Specialist in Nuclear Medicine. Puerta de Hierro University Hospital of Majadahonda
- Professor of Nuclear Medicine Module. Puerta de Hierro Specific Professional Training Center
- Doctor of Medicine *Cum Laude* with Doctoral Thesis in the Department of Radiology and Physical Medicine. Complutense University of Madrid
- Degree in Medicine and Surgery. Complutense University of Madrid
- Diploma of Advanced Studies. Complutense University of Madrid, obtained with the work, Use of *Intraoperative Portable Gamma Camera in Breast Sentinel*

Dr. Martí Climent, Josep M.

- Director of the Radiophysics and Radiological Protection Service Navarra University Clinic
- Head of the Radiation Protection Service. Nuclear Safety Council
- Deputy Director of the Nuclear Medicine Department. Navarra University Clinic
- Specialist in Hospital Radiophysics recognized by the Ministry of Education and Science
- D. in Science. Autonomous University of Barcelona
- Degree in Sciences. Autonomous University of Barcelona
- University Specialist in Radiological Protection in Medical Facilities. Complutense University of Madrid

Learn and master the latest advances in Nuclear Medicine from the best experts in this discipline, who practice in prestigious hospitals"

06

Educational Plan

The syllabus of this program is composed of 10 modules through which the student will receive an expansion and updating of their diagnostic and therapeutic knowledge in the field of Nuclear Medicine. In addition, the didactic resources to which you will have access during the duration of this Hybrid Master's Degree will be available in a variety of formats such as explanatory video, evaluative tests or additional readings. Thanks to this, and to its 100% online methodology, students will achieve an optimized learning process adapted to their personal and academic needs.

Access to multimedia and textual teaching content in a variety of formats for efficient teaching adapted to your personal needs"

Module 1. Management

1.1. Strategic Planning
- 1.1.1. Benefits
- 1.1.2. Vision, Mission and Values of the Health Institution and the Nuclear Medicine Unit
- 1.1.3. Models: SWOT Analysis

1.2. Organization and Management
- 1.2.1. Organizational and Functional Structure
- 1.2.2. Technical Equipment
- 1.2.3. Human resources.

1.3. Information Systems
- 1.3.1. Indicators and Indexes

1.4. Knowledge Management

1.5. Quality Program
- 1.5.1. ISO Standards
- 1.5.2. Clinical Audits
- 1.5.3. Objectives of Clinical Audits
- 1.5.4. The Audit Cycle
- 1.5.5. Evidence-Based Medicine
- 1.5.6. Elements of Quality: Structure, Process and Results

1.6. Economic Assessment of Nuclear Medicine Processes

1.7. Adequacy of Imaging Tests
- 1.7.1. What Should Be Done?
- 1.7.2. What Not to Do?

1.8. Risk Management
- 1.8.1. Levels of Responsibility
- 1.8.2. Patient Security

1.9. Nuclear Medicine Teleworking
- 1.9.1. Technical Requirements
- 1.9.2. Legislation: Employment Relationship, Data Protection Act BORRAR

Module 2. Radiomics

2.1. Artificial Intelligence, *Machine Learning, Deep Learning*
- 2.2. Radiomics Today
- 2.3. Imaging Biomarkers
- 2.4. Multidimensionality in Imaging
- 2.5. Applications: Diagnosis, Prognosis and Prediction of Response
- 2.6. Evidence Levels
- 2.7. Combination with Other "omics": Radiogenomics

Module 3. Single Photon Emission Nuclear Medicine: *"pearls and pitfalls"*

3.1. Pneumology
- 3.1.1. Perfusion/Ventilation
- 3.1.2. Pulmonary Thromboembolism
- 3.1.3. Pulmonary Hypertension
- 3.1.4. Lung Transplant
- 3.1.5. Pleuroperitoneal Fistula: Cirrhotic Patient, Peritoneal Dialysis

3.2. Cardiology
- 3.2.1. Perfusion: Ischemic Heart Disease, Cellular Viability, Contribution
- 3.2.2. GATED, Myocarditis
- 3.2.3. *Shunt:* Left-Right, Right-Left
- 3.2.4. Ventricular Function: Ischemic Cardiopathy, Cardiotoxicity
- 3.2.5. Cardiac Innervation: Cardiac Pathology, Neurological Pathology

3.3. Vascular and Lymphatic System
- 3.3.1. Peripheral Endothelial Function
- 3.3.2. Lower Limb Perfusion
- 3.3.3. Lymphogrammagraphy

3.4. Osteoarticular
- 3.4.1. Primary Benign and Malignant Tumor Pathology: Planar Imaging
- 3.4.2. Hybrid Image Contribution
- 3.4.3. Bone Metastasis: Contributions of SPECT and SPECT/CT, Usefulness in Diagnosis and Monitoring
- 3.4.4. Benign Pathology: Metabolic Disease, Sports Pathology

3.5. and
- 3.5.1. Assessment of Renal Malformations
- 3.5.2. Obstructive Pathology: Hydronephrosis in Pediatric Age: Diagnosis and Monitoring, Adult Hydronephrosis, Urinary Diversion Study
- 3.5.3. Pyelonephritis: Initial Diagnosis, Evolution
- 3.5.4. Renal Transplantation: Rejection, Tubular Necrosis, Nephrotoxicity, Urinary Leakage
- 3.5.5. Vasculorenal Hypertension: Diagnosis and Monitoring
- 3.5.6. Glomerular Filtration and Effective Renal Plasma Flow
- 3.5.7. Cystogammagraphy: Direct and Indirect in the Diagnosis and Monitoring of Vesicoureteral Reflux

3.6. Gastroenterology
- 3.6.1. Salivary Glands: Autoimmune Pathology, Post-radiation Damage, Salivary Gland Tumors
- 3.6.2. Digestive Transit: Esophageal Transit, Gastroesophageal Reflux, Pulmonary Aspiration, Gastric Emptying
- 3.6.3. Gastrointestinal Bleeding: Study with Labeled Red Blood Cells, Study with Radiocolloids
- 3.6.4. Hepatobiliary Pathology: Aliasic Cholecystitis, Hepatic Functional Reserve Assessment, Hepatic Transplantation (Rejection, Biliary Leakage), Biliary Tract Atresia
- 3.6.5. Bile Acid Malabsorption
- 3.6.6. Inflammatory Bowel Disease: Diagnosis, Monitoring and Complications
- 3.6.7. Hepatic Space-Occupying Lesion: Hepatic Hemangioma, Focal Nodular Hyperplasia vs. Adenoma
- 3.6.8. Cell Labeling: Method and Indications
- 3.6.9. Red Blood Cells: In Vivo, In Vitro, In Vivitro
- 3.6.10. Leukocytes

3.7. Splenic Pathology
- 3.7.1. Hepatic Space-Occupying Lesions: Hemangioma, Hamartoma
- 3.7.2. Splenosis: Study with Denatured Labeled Red Cells
- 3.7.3. Cell Hijacking

3.8. Endocrinology
- 3.8.1. Thyroid: Hyperfunctioning Thyroid (Autoimmune, Thyroiditis), Thyroid Nodule, Differentiated Thyroid Carcinoma
- 3.8.2. Parathyroid: Hyperfunctioning Gland Location
- 3.8.3. Adrenal Glands: Adrenal Cortex Pathology (Hypercortisolism, Hyperaldosteronism), Adrenal Medulla Pathology (Hyperplasia, Pheochromocytoma), Adrenal Incidentaloma

3.9. Neurology SPECT vs. PET:
- 3.9.1. Cognitive Impairment: Characteristic Patterns and Differential Diagnosis
- 3.9.2. Movement Disorders: Parkinson's Disease, Parkinson Plus and Differential Diagnosis
- 3.9.3. Epilepsy: Preoperative Assessment, Acquisition Protocols

3.10. Oncology: Tumor Viability, Radionecrosis vs. Progression
- 3.10.1. Brain Death
- 3.10.2. Cerebrospinal Fluid (CSF)-Cysternogammography Kinetics: Hydrocephalus, CSF Leakage

Module 4. Infection/Inflammation: Gammagraphic Studies and PET Tracers

4.1. Osteoarticular
- 4.1.1. Osteomyelitis: Previously Healthy Bone, Diabetic Patient, Spine Surgery
- 4.1.2. Prosthesis: Septic vs. Aseptic Mobilization

4.2. Cardiac
- 4.2.1. Endocarditis: Native Valve, Prosthetic Valve
- 4.2.2. Myocarditis: Infectious vs. Inflammatory
- 4.2.3. Intracardiac Devices

4.3. Vascular
- 4.3.1. Inflammatory Vasculitis
- 4.3.2. Prosthetic Graft Infection

4.4. Encephalitis: PET-FDG Study
- 4.4.1. Paraneoplastic
- 4.4.2. Infectious: Patterns and Differential Diagnosis

4.5. Fever of Unknown Origin
- 4.5.1. Immunosuppressed Patients
- 4.5.2. Postoperative Fever and Recurrent Sepsis

4.6. Systemic Disease
- 4.6.1. Sarcoidosis: Diagnosis, Extent and Response to Treatment
- 4.6.2. IgG4-related Disease

4.7. Other Locations
- 4.7.1. Hepatorenal Polycystic Kidney Disease: Localization of the Infectious Focus
- 4.7.2. Hepatobiliary: Post-surgical Patient

4.8. Covid-19
- 4.8.1. Nuclear Medicine Studies in Acute Phase: Pulmonary Inflammation, Pulmonary Thromboembolism, Oncology Patient and Covid-19
- 4.8.2. Utility of Nuclear Medicine in Postcovid Pathology: Pulmonary, Systemic
- 4.8.3. Organizational Changes in a Pandemic Situation

Module 5. Nuclear Medicine in Pediatrics

5.1. Pediatric Nuclear Medicine
- 5.1.1. Management of the Child in Nuclear Medicine: Information to Parents and/or Guardians, Preparation and Scheduling, Appropriate Environments
- 5.1.2. Dose Optimization
- 5.1.3. Sedation and Anaesthesia
- 5.1.4. Physical Aspects in Pediatric Patients: Image Acquisition and Processing

5.2. PET/PET-CT/PET-MRI in Pediatric and Young Adult Patients
- 5.2.1. Protocol Optimization
- 5.2.2. Indications
- 5.2.3. Non-FDG Tracers

5.3. Central Nervous System/LCR
- 5.3.1. Brain Maturation Patterns
- 5.3.2. Epilepsy and Vascular Disorders
- 5.3.3. Brain Tumors
- 5.3.4. Hydrocephalus and Cerebrospinal Fluid Fistula

5.4. Endocrine
- 5.4.1. Thyroid Pathology: Hypothyroidism, Hyperthyroidism, Thyroid Nodule
- 5.4.2. Hyperinsulinism

5.5. Cardiopulmonary
- 5.5.1. Congenital Heart Disease: *Shunt* Right-Left, *Shunt* Left-Right
- 5.5.2. Bronchopulmonary Pathology: Congenital and Acquired

5.6. Gastrointestinal System
- 5.6.1. Dynamic Esophagogastric Studies
- 5.6.2. Gastroesophageal Reflux, Bronchopulmonary Aspiration
- 5.6.3. Hepatobiliary Gammagraphy: Biliary Tract Atresia
- 5.6.4. Intestinal Bleeding: Mekel's Diverticulum, Intestinal Duplication

5.7. Nephrourology
- 5.7.1. Hydronephrosis Assessment
- 5.7.2. Renal Cortical Assessment: in Infections, Ectopy
- 5.7.3. Vesicoureteral Reflux: Diagnosis and Monitoring
- 5.7.4. Others: Renal Malformations, Renal Transplantation, Kidney Transplantation

5.8. Osteoarticular System
- 5.8.1. Benign Lesions in Pediatric Patients: Fractures, Tumors
- 5.8.2. Avascular Necrosis: Perthes' Disease and Others
- 5.8.3. Sympathetic - Reflex Dystrophy
- 5.8.4. Low Back Pain
- 5.8.5. Infection: Osteomyelitis, Spondylodiscitis

5.9. Neuroblastoma.
- 5.9.1. Diagnostic Studies: Bone Scintigraphy, MIBG and other PET Radiotracers
- 5.9.2. Radiometabolic Treatment: MIBG, 177Lu-DOTATATE

5.10. Other tumours
- 5.10.1. Osteosarcoma: Diagnosis, Response Assessment and Monitoring
- 5.10.2. Bone Tracers and 18F-FDG-PET/CT PET/CT Study
- 5.10.3. Ewing's Disease: Diagnosis, Response Assessment and Monitoring
- 5.10.4. Bone Tracers and 18F-FDG-PET/CT Study
- 5.10.5. Lymphoma: 18F-FDG PET/CT in Diagnosis, Response Assessment, Monitoring
- 5.10.6. Rhabdomyosarcoma and Soft Tissue Sarcomas: 18F-FDG PET/CT in Diagnosis, Response Assessment and Monitoring

Module 6. Neuroendocrine Tumors

6.1. Causes and Risk Factors
- 6.1.1. Hereditary Syndromes

6.2. Clinical Presentation
- 6.2.1. Signs
- 6.2.2. Symptoms: Endocrine Syndromes

6.3. Anatomopathologic Diagnosis.
- 6.3.1. Degrees of Cellular Differentiation
- 6.3.2. Classification

6.4. Subtypes and Locations
- 6.4.1. Extrapancreatic
- 6.4.2. Pancreatic

6.5. Staging
- 6.5.1. Endoscopic Technique
- 6.5.2. Imaging Techniques
- 6.5.3. Echo, CT, MRI

6.6. Molecular Techniques
- 6.6.1. 111In, 99mTc, 8Ga-labeled Somatostatin Analogs
- 6.6.2. Advantages and Disadvantages of Each of Them Best Choice Based on Availability
- 6.6.3. 18F-FDG: Contributions to Patient Management
- 6.6.4. Combined FDG-Somatostatin Analogues Studies
- 6.6.5. Other Targets

6.7. Treatment
- 6.7.1. Treatments Available
- 6.7.2. Radiometabolic Therapy: When and How?

6.8. Assessment of Response to Treatment
- 6.8.1. Clinical-Biochemistry
- 6.8.2. Morphological
- 6.8.3. Functional Criteria

6.9. Monitoring
- 6.9.1. Clinical-Biochemistry
- 6.9.2. Image: Morphological and Functional Best Sequence

6.10. Clinical Trials
- 6.10.1. Therapy Sequencing
- 6.10.2. Association: Combined Treatments

Module 7. Radioguided Surgery

7.1. Selective Biopsy of the Sentinel Ganglion (SBSG)
- 7.1.1. Detection with Radiopharmaceutical and Combined Techniques
  - 7.1.1.1. Radiocolloids, Dyes
  - 7.1.1.2. BSGC Breast Cancer
- 7.1.2. Initial Staging
- 7.1.3. In Neoadjuvant

7.2. BSGC Gynecologic Tumors
- 7.2.1. Vulva
- 7.2.2. Cervix
- 7.2.3. Endometrium
- 7.2.4. Ovaries

7.3. BSGC Skin Cancer
- 7.3.1. Melanoma
- 7.3.2. Non-melanoma

7.4. BSGC Head and Neck Tumors
- 7.4.1. Thyroid Cancer
- 7.4.2. Oral Cavity

7.5. BSGC Gastrointestinal Tumors
- 7.5.1. Oesophageal Cancer
- 7.5.2. Stomach Cancer
- 7.5.3. Colorectal Carcinoma

7.6. BSGC Urological Cancers
- 7.6.1. Penis
- 7.6.2. Prostate.

7.7. Combined Technique of BSGC and Radioguided Occult Lesion Localization (ROLL)
- 7.7.1. Breast
- 7.7.2. Other Locations

7.8. ROLL
- 7.8.1. Radiopharmaceuticals 99mTc, Seeds 125-I
- 7.8.2. Indications: Tumor Pathology and Other Applications

7.9. Radioguided Surgery in Primary Hyperparathyroidism
- 7.9.1. Indications
- 7.9.2. Protocols According to Radiopharmaceuticals

Module 8. PET/CT- PET/MRI in Oncology Clinical Guidelines

8.1. Nuclear Medicine in Different Tumors
- 8.1.1. Staging and Prognosis
- 8.1.2. Response to Treatment
- 8.1.3. Monitoring and Diagnosis of Recurrence

8.2. Lymphomas
- 8.2.1. Hodking's Lymphoma
- 8.2.2. Diffuse Large B-cell Lymphoma
- 8.2.3. Other Lymphomas

8.3. Breast Cancer
- 8.3.1. Initial Staging
- 8.3.2. Response to Neoadjuvant
- 8.3.3. Monitoring

8.4. Gynecologic Tumors
- 8.4.1. Vagina Cervix: Staging, Response to Treatment and Monitoring
- 8.4.2. Endometrium: Staging, Response to Treatment and Monitoring
- 8.4.3. Ovaries: Staging, Response to Treatment and Monitoring

8.5. Lung Cancer
- 8.5.1. Non-small Cell Lung Carcinoma
- 8.5.2. Small Cell Lung Carcinoma
- 8.5.3. Response Assessment: Radiotherapy, Immunotherapy

8.6. Digestive System Tumors
- 8.6.1. Esophago-Gastric
- 8.6.2. Colorectal
- 8.6.3. Pancreas.
- 8.6.4. Hepatobiliary: Hepatocarcinoma, Cholangiocarcinoma

8.7. Sarcomas
- 8.7.1. Bones
- 8.7.2. Soft Parts

8.8. Urogenitals
- 8.8.1. Prostate.
- 8.8.2. Renal
- 8.8.3. Bladder
- 8.8.4. Testicle

8.9. Endocrine
- 8.9.1. Thyroid
- 8.9.2. Adrenal Gland

8.10. Radiotherapy Planning
- 8.10.1. Acquisition of Exploration
- 8.10.2. Volume Delimitation

Module 9. Radioligand Targeted Therapy

9.1. Teragnosis
- 9.1.1. Clinical and Therapeutic Implications

9.2. Thyroid
- 9.2.1. Hyperthyroidism
- 9.2.2. Differentiated Thyroid Carcinoma
- 9.2.3. Goiter

9.3. Neuroendocrine, Gastroenteropancreatic and Other Tumors: Radiolabeled Peptides
- 9.3.1. Indications
- 9.3.2. Administration.

9.4. Pheochromocytoma and Paragangliomas: 131I-MIBG
- 9.4.1. Indications and Patient Selection
- 9.4.2. Administration Protocols
- 9.4.3. Results

9.5. Bone Metastases
- 9.5.1. Pathophysiology of Bone Metastases
- 9.5.2. Basis of Radiometabolic Therapy
- 9.5.3. Radiopharmaceuticals Used: Indications and Results

9.6. Selective Internal Radiation Therapy (SIRT): Labeled Microspheres
- 9.6.1. Basis of Therapy with Radiolabeled Microspheres
- 9.6.2. Available Devices: Differential Characteristics
- 9.6.3. Calculation of the Activity to be Administered and Dosimetric Assessment according to the Device
- 9.6.4. Hepatocellular Carcinoma: Application and Results
- 9.6.5. Hepatic Metastases: Application and Results in Colorectal Carcinoma, Neuroendocrine and Other Tumors
- 9.6.6. Contributions of SIRT to Liver Surgery
- 9.6.7. Potentially Resectable Patient
- 9.6.8. Hepatic Lobe Hypertrophy

9.7. Synoviorthesis
- 9.7.1. Pathophysiological Basis of Treatment
- 9.7.2. Radiopharmaceuticals Used
- 9.7.3. Indications and Clinical Experience in Different Locations and Pathologies: Rheumatoid Arthritis, Other Arthritis, Vellonodular Synovitis
- 9.7.4. Applications in Pediatrics: Hemophilic Patient

9.8. Metastatic Prostate Cancer: 177Lu-PSMA
- 9.8.1. Pathophysiological Bases
- 9.8.2. Patient selection
- 9.8.3. Management Protocols and Results

9.9. Lymphomas: Radioimmunotherapy
- 9.9.1. Pathophysiological Bases
- 9.9.2. Indications
- 9.9.3. Administration Protocols

9.10. Future
- 9.10.1. Search for New Ligands and Radioisotopes
- 9.10.2. Translational Research
- 9.10.3. Research Lines

Module 10. Nuclear Medicine

10.1. Physical Bases of Ionizing Radiations
- 10.1.1. Ionizing Radiation and Radioactive Isotopes
- 10.1.2. Types of Radiation

10.2. Biological Effects of Ionizing Radiations
- 10.2.1. Classification of Effects according to: Time of Cccurrence
- 10.2.2. Biological and Dose Dependent Effect
- 10.2.3. Interaction of Ionizing Radiation with Matter
- 10.2.4. Ionizing Radiation-Cell Interaction: Characteristics, Direct and Non-Direct Effects
- 10.2.5. Radiosensitivity
- 10.2.6. Adaptive Response

10.3. Radiopharmaceuticals
- 10.3.1. The Radiopharmaceutical
- 10.3.2. Conventional Diagnostic Radiopharmaceuticals
- 10.3.3. Radionuclide Generators
- 10.3.4. Localization Mechanisms
- 10.3.5. Positron Emission Tomography Radiopharmaceuticals
- 10.3.6. Synthesis Scheme
- 10.3.7. Metabolic Pathway Substrates
- 10.3.8. Radiopharmaceuticals with Therapeutic Effect
  - 10.3.8.1. Characteristics that Must be Met
  - 10.3.8.2. Design and Approval

10.4. Radiopharmacy
- 10.4.1. Regulatory Framework.
- 10.4.2. Operation
- 10.4.3. Quality Control

10.5. Image Acquisition and Processing
- 10.5.1. Planar Image
- 10.5.2. Components
- 10.5.3. Performance: Resolution and Sensitivity
- 10.5.4. Acquisition Modes: Static, Dynamic, Synchronized
- 10.5.5. Reconstruction
- 10.5.6. Single Photon Tomography (SPECT)
- 10.5.7. Acquisition
- 10.5.8. Reconstruction
- 10.5.9. Positron Emission Tomography (PET)
- 10.5.10. Components
- 10.5.11. Acquisition of Data
- 10.5.12. Operating Parameters

10.6. Quantification Techniques: Basis
- 10.6.1. In Cardiology
- 10.6.2. In Neurology
- 10.6.3. Metabolic Parameters
- 10.6.4. The Image of TC

10.7. Image Generation
- 10.7.1. Acquisition and Reconstruction Parameters
- 10.7.2. Protocols and Contrast Media
- 10.7.3. Head and Neck
- 10.7.4. Thorax: Cardiology, Lung
- 10.7.5. Abdomen: General, Liver, Renal

10.8. The Image of RM
- 10.8.1. Resonance Phenomenon
- 10.8.2. Tissue Contrast: Sequence Knowledge
- 10.8.3. Dissemination
- 10.8.4. Paramagnetic Contrasts

10.9. The Multimodality Image
- 10.9.1. SPECT/TC
- 10.9.2. PET/TC
- 10.9.3. PET/RM

10.10. Radioprotection
- 10.10.1. The Radioprotection
- 10.10.2. Special Situations: Pediatrics, Pregnancy and Lactation
- 10.10.3. Regulatory Framework: Implementation
- 10.10.4. Dosimetry

The most up-to-date didactic contents in Nuclear Medicine will be at your disposal 24 hours a day to enable you to study at any time and anywhere"

07

Clinical Internship

The final stage of the Hybrid Master's Degree in Nuclear Medicine includes a clinical internship of 3 weeks in a prestigious hospital center where, integrated in a large multidisciplinary team, the student will transfer to the work field all the theoretical knowledge acquired throughout the program.

This program will enable you to access the internship in a hospital that is known for having the most advanced technology in the field of Nuclear Medicine"

The practical stage of this Hybrid Master's Degree is designed to be developed through a 3-week hospital internship in a first-class center, from Monday to Friday, with 8 consecutive hours of work under the supervision of an attending specialist. Thanks to this practical period, the student will have the opportunity to deal with patients suffering from various pathologies, using the most avant-garde procedures in Nuclear Medicine for their detection.

In this clinical internship, the activities are aimed at developing and perfecting the skills necessary to provide medical care in areas and conditions that require highly qualified professionals, and are oriented towards specific expertise for practicing the activity, in a safe environment for the patient and with highly professional performance.

Therefore, this unique opportunity that TECH offers its students is ideal to enhance medical skills through professional practice in a hospital center where the application of the most advanced technology is the key to provide a rigorous and advanced diagnosis and treatment for each of their patients.

The practical teaching will be carried out with the active participation of the student performing the activities and procedures of each area of knowledge (learning to learn and learning to do), with the accompaniment and guidance of teachers and other fellow trainees that facilitate teamwork and multidisciplinary integration as transversal competencies for the medical practice (learning to be and learning to relate).

The procedures described below will form the basis of the practical part of the training, and their implementation is subject to both the suitability of the patients and the availability of the center and its workload, with the proposed activities being as follows:

Module	Practical Activity
Management of the Nuclear Medicine Unit	Coordinate the Nuclear Medicine Unit to guarantee its adequate functional structure and the correct operation of all the human teams involved in it
	Carry out a strategic plan adapted to the environment of the health institution, its needs and resources, with the aim of optimizing patient care
	Implement a quality program aimed at continuous improvement in hospital care centered on the patient
Oncological Tumors and PET/CT - PET/MR for Oncology	Assess the response of a patient suffering from an oncological tumor to radiometabolic therapy using clinical-biochemical or morphological criteria
	Perform imaging follow-up of patients with various types of oncological tumors
	Follow up a patient with breast cancer to observe their response to treatment
Radioligand Targeted Therapy	Carry out therapy with radiolabeled peptides for patients suffering from neuroendocrine and gastroenteropancreatic tumors
	Administer different types of radiopharmaceuticals in patients with bone metastases and analyze the results obtained by such treatment
Nuclear Medicine in Pediatrics	Interpret the images extracted in Nuclear Medicine tests for the detection of different cardiovascular pathologies in pediatric patients
	Detect thyroid pathology in the child from the interpretation of Nuclear Medicine tests
	Perform the corresponding tests for the pediatric patient suspected of having an oncologic tumor

Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.

General Conditions of the Internship Program

The general terms and conditions of the internship program agreement shall be as follows:

1. TUTOR: During the Hybrid Master's Degree, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

2. DURATION: The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

3. ABSENCE: If the students does not show up on the start date of the Hybrid Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

4. CERTIFICATION: Professionals who pass the Hybrid Master's Degree will receive a certificate accrediting their stay at the center.

5. EMPLOYMENT RELATIONSHIP: the Hybrid Master's Degree shall not constitute an employment relationship of any kind.

6. PRIOR EDUCATION: Some centers may require a certificate of prior education for the Hybrid Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

7. DOES NOT INCLUDE: The Hybrid Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

08

Where Can I Do the Clinical Internship?

For these hospital internships, TECH has chosen a wide range of centers distributed throughout different geographical locations, with the intention of allowing students to develop their medical skills in a hospital close to their usual place of residence in order to promote maximum comfort.

Carry out the clinical internship in a facility that is located close to your usual residence"

The student will be able to complete the internship of this Hybrid Master's Degree at the following centers:

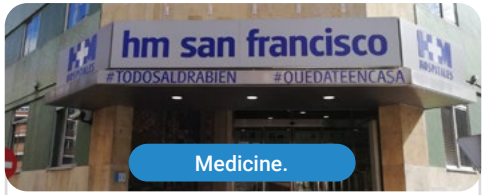
Hospital HM Modelo

Country: Spain
City: La Coruña

Address: Rúa Virrey Osorio, 30, 15011, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Anaesthesiology and Resuscitation
- Palliative Care



Hospital HM San Francisco

Country: Spain
City: León

Address: C. Marqueses de San Isidro, 11, 24004, León

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Update in Anesthesiology and Resuscitation
- Trauma Nursing

Hospital HM Nou Delfos

Country: Spain
City: Barcelona

Address: Avinguda de Vallcarca, 151, 08023 Barcelona

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Aesthetic Medicine
- Clinical Nutrition in Medicine

Hospital HM Sanchinarro

Country: Spain
City: Madrid

Address: Calle de Oña, 10, 28050, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Anaesthesiology and Resuscitation
- Palliative Care

Hospital HM Puerta del Sur

Country: Spain
City: Madrid

Address: Av. Carlos V, 70, 28938, Móstoles, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Palliative Care
- Clinical Ophthalmology

Hospital HM Vallés

Country: Spain
City: Madrid

Address: Calle Santiago, 14, 28801, Alcalá de Henares, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Gynecologic Oncology
- Clinical Ophthalmology

Take advantage of this opportunity to surround yourself with expert professionals and learn from their work methodology"

09

Methodology

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

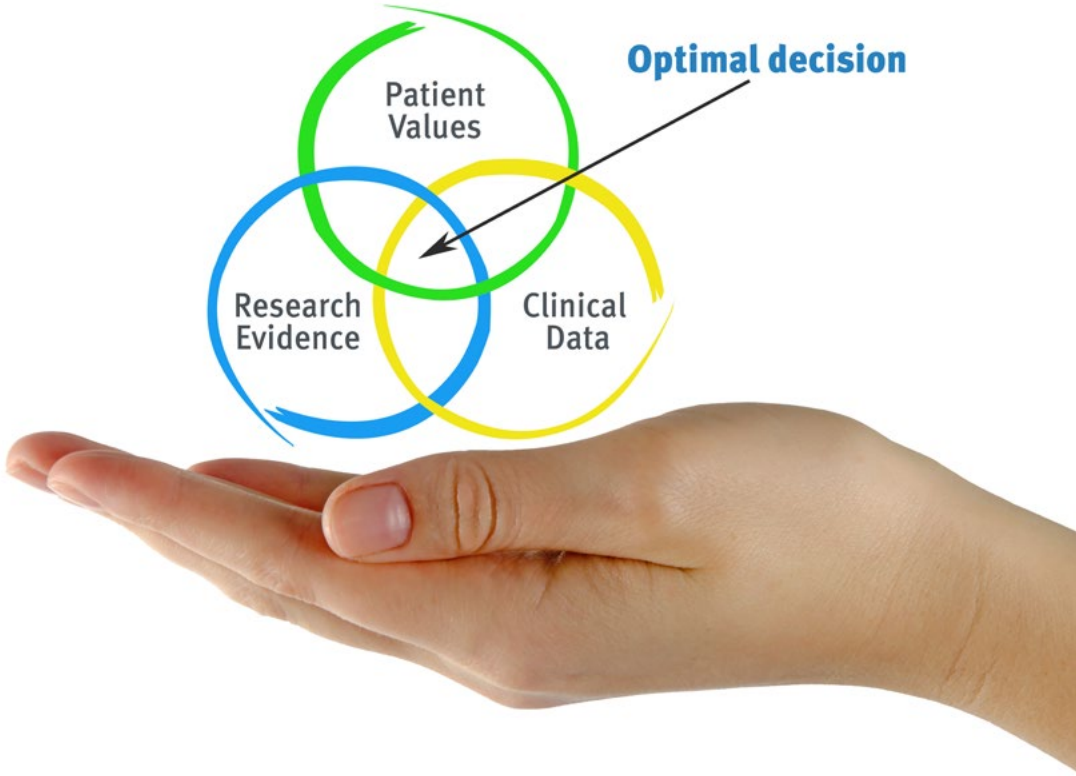
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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:

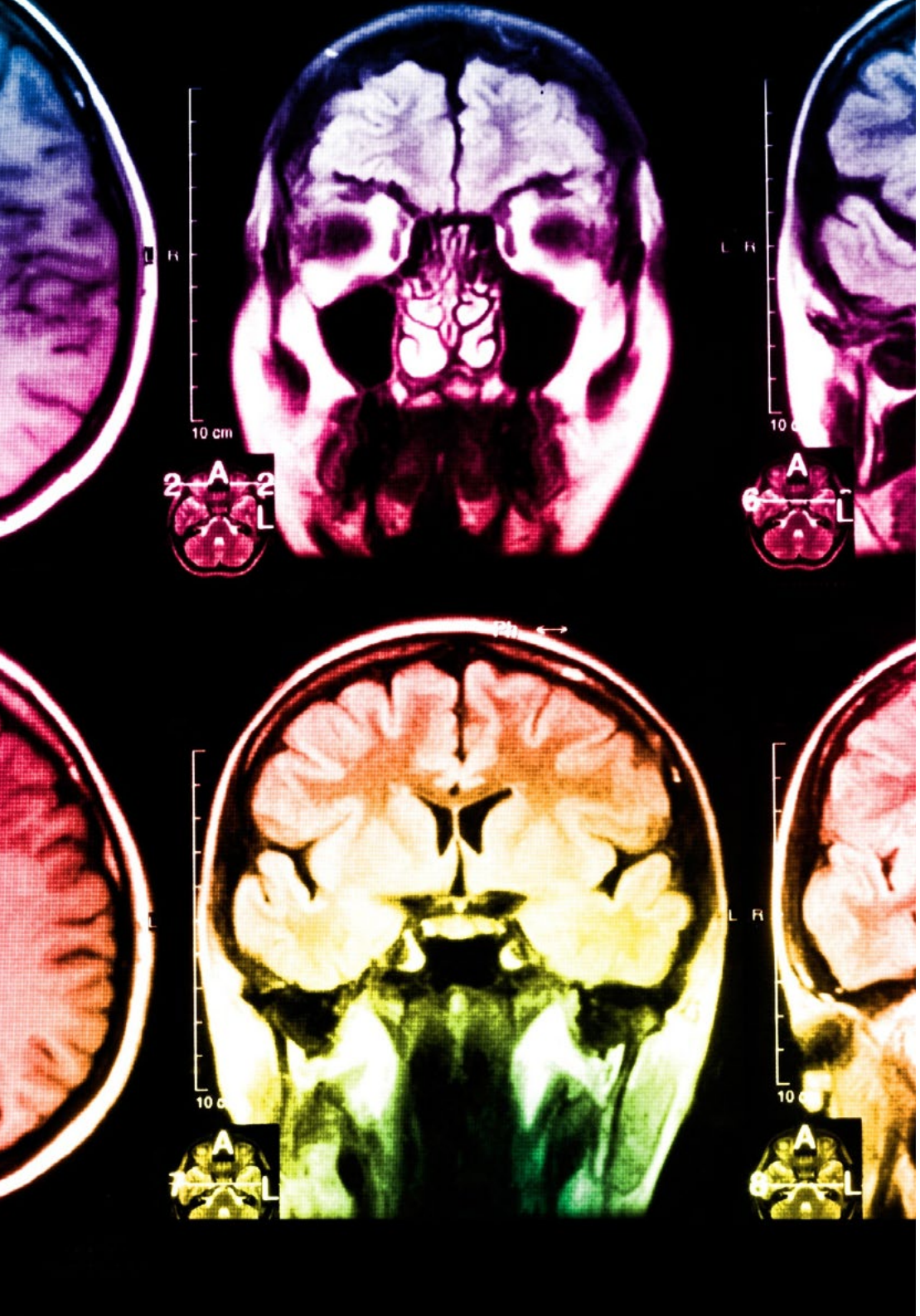
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better 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.

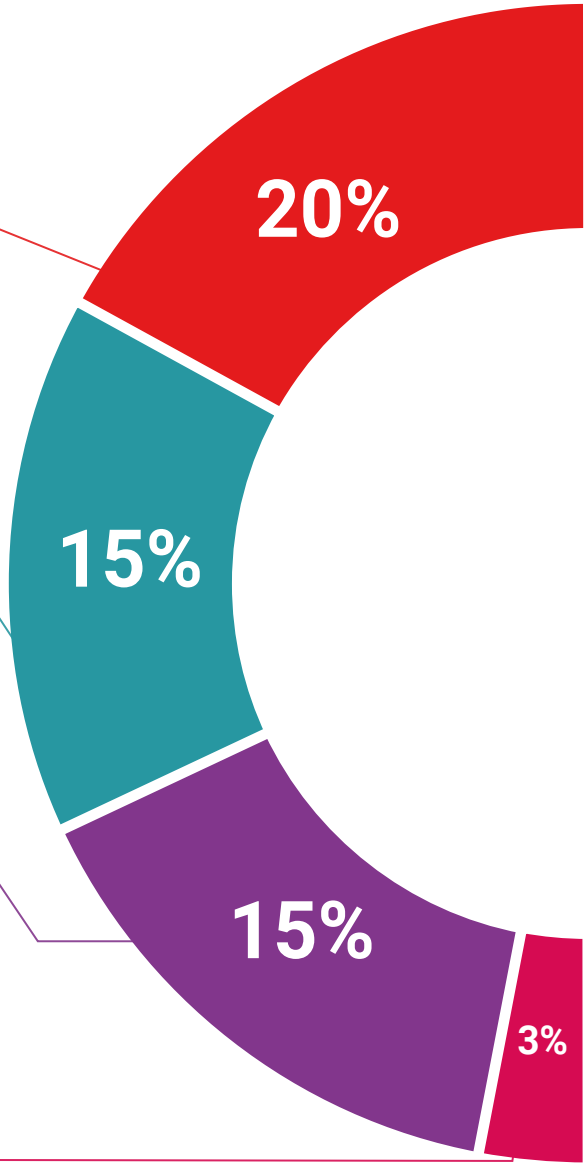
Interactive Summaries

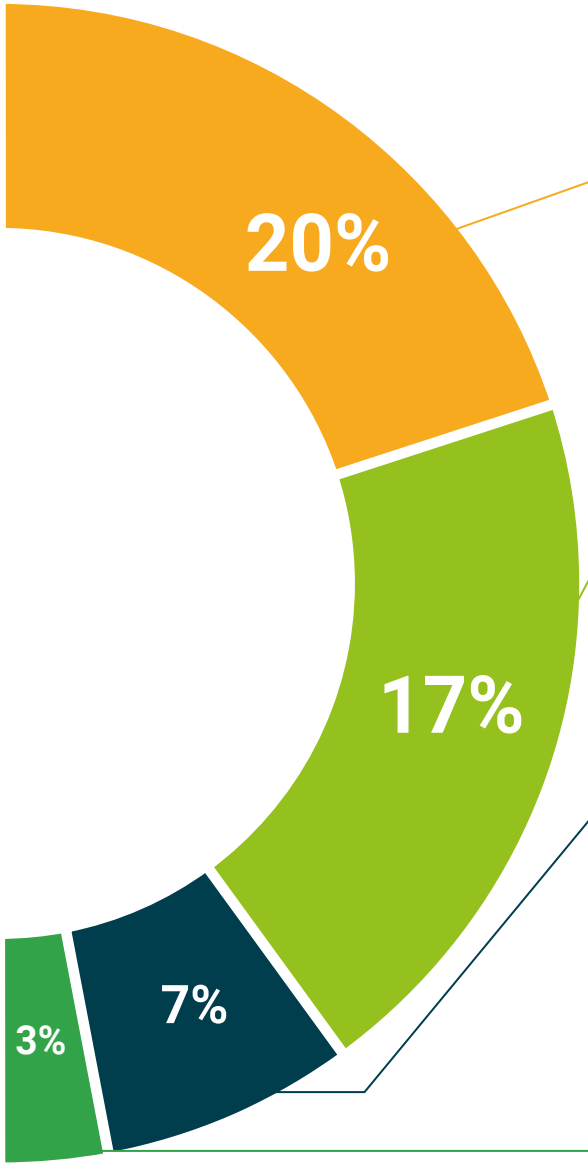
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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.

10

Certificate

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

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

This program will allow you to obtain your **Hybrid Master's Degree diploma in Nuclear Medicine** 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.

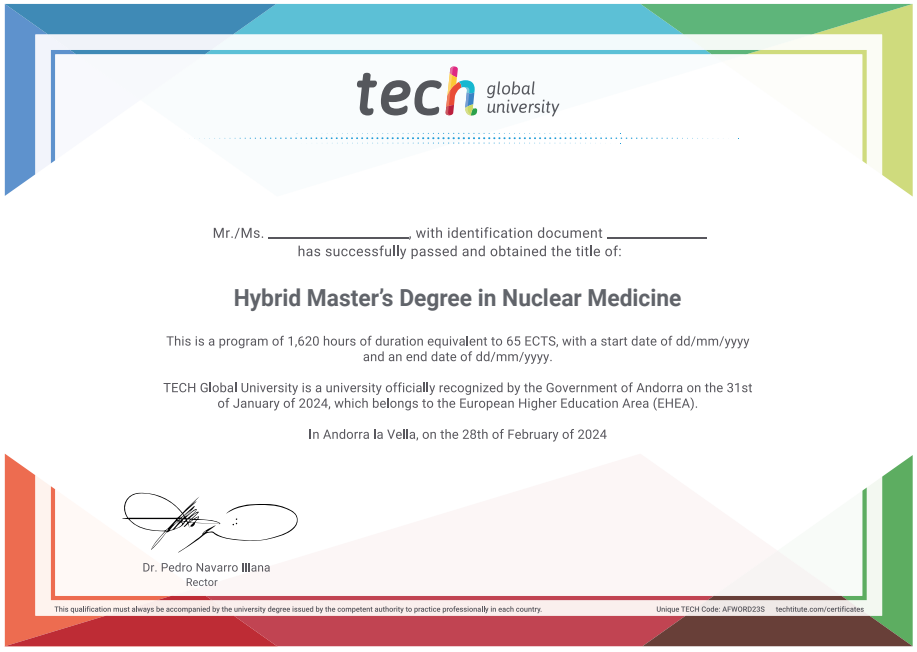
Title: **Hybrid Master's Degree in Nuclear Medicine**

Course Modality: **Hybrid (Online + Clinical Internship)**

Duration: **12 months**

Certificate: **TECH Global University**

Recognition: **60 + 5 ECTS Credits**



tech global university

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

Hybrid Master's Degree in Nuclear Medicine

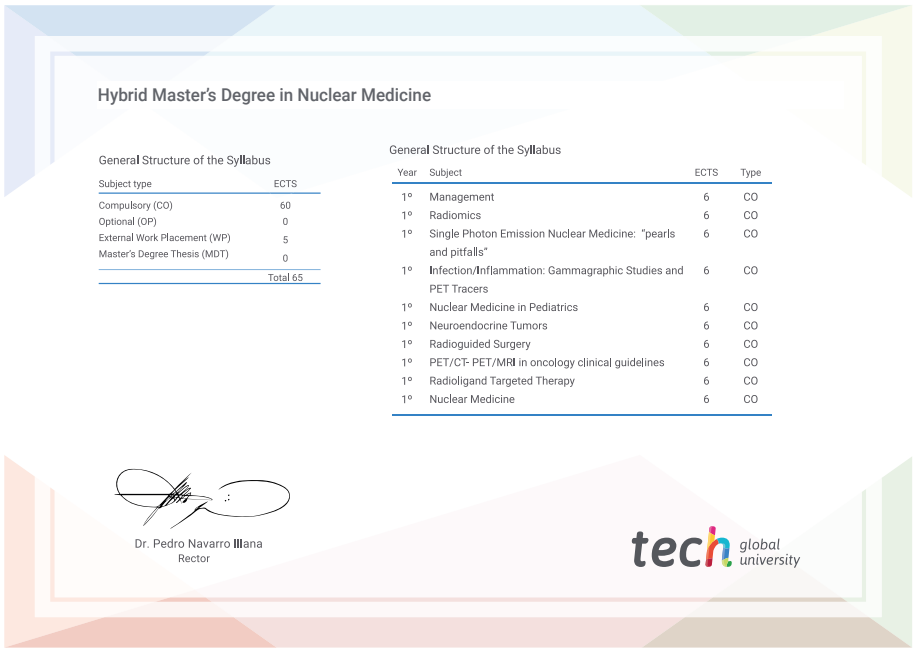
This is a program of 1,620 hours of duration equivalent to 65 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

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



Hybrid Master's Degree in Nuclear Medicine

General Structure of the Syllabus

Subject type	ECTS
Compulsory (CO)	60
Optional (OP)	0
External Work Placement (WP)	5
Master's Degree Thesis (MDT)	0
	Total 65

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	Management	6	CO
1º	Radiomics	6	CO
1º	Single Photon Emission Nuclear Medicine: "pearls and pitfalls"	6	CO
1º	Infection/Inflammation: Gammagraphic Studies and PET Tracers	6	CO
1º	Nuclear Medicine in Pediatrics	6	CO
1º	Neuroendocrine Tumors	6	CO
1º	Radioguided Surgery	6	CO
1º	PET/CT- PET/MRI in oncology clinical guidelines	6	CO
1º	Radioligand Targeted Therapy	6	CO
1º	Nuclear Medicine	6	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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Hybrid Master's Degree

Nuclear Medicine

Modality: **Hybrid (Online + Clinical Internship)**

Duration: **12 months**

Certificate: **TECH Global University**

60 + 5 créditos ECTS

Hybrid Master's Degree

Nuclear Medicine

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