Hybrid Professional Master's Degree

Radiation Oncology

tech global university

tech global university

Hybrid Professional Master's Degree

Radiation Oncology

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

Duration: **12 months**

Certificate: **TECH Global University**

60 + 5 créditos ECTS

Website: **www.techtitute.com/us/medicine/hybrid-professional-master-degree/hybrid-professional-master-degree-radiation-oncology**

Index

01

Introduction

In just a few years, Brachytherapy, Systemic Radiotherapy and other recently implemented techniques have come to the forefront of a specialty as complex as Radiation Oncology. Managing this equipment and applying through it, accurate anti-tumor treatments, is not an easy task. For this reason, the specialist must keep up-to-date on innovations in this field. In order to achieve this update, they have this program, which combines theoretical and practical learning like no other on the educational market. First of all, the program consists of a period of 100% online academic education, followed by an on-site and immersive internship in a hospital facility equipped to perform the latest treatments in the medical specialty in question.

In this Hybrid Professional Master's Degree you will find the latest advances in Radiation Oncology and learn how to integrate them efficiently in your professional medical praxis"

Innovations in cancer research are constantly occurring due to the high incidence of tumors in the global population. Therefore, every year, science provides new therapeutic solutions of great value. One of the fields that has experienced the greatest growth so far has been Radiation Oncology, where new equipment of varying complexity has appeared, facilitating procedures such as intraoperative radiotherapy, systemic radiotherapy or brachytherapy models. Keeping up-to-date on all these advances has become a priority for specialists. However, there are not many educational programs on the market that cover the latest trends in this professional area.

For this reason, TECH has designed this Hybrid Professional Master's Degree where theoretical specifications and practical management of the most powerful techniques and tools of Radiation Oncology are combined, like no other program. In its design, the program consists of two distinct stages. The first one dedicates 1,500 hours to the conceptual approach of these latest developments, from a 100% online learning platform, where there is a proliferation of interactive resources and audiovisual materials to accompany the study process. Its very complete syllabus has been designed by top experts, who will offer a personalized guide to the physician for its complete mastery.

Also, in a second phase, the specialist will be able to develop a clinical practice in a prestigious health institution of the highest level in terms of applications of Radiation Oncology. From this center, and under the supervision of leading experts, the graduate will manipulate advanced technologies for the benefit of the therapeutic care of real patients. The on-site internship, which lasts 3 weeks, will expand their skills on everything they have assimilated in the first stage of their learning process. Therefore, they will acquire a preparation of excellence and will be at the forefront of this field of health.

This **Hybrid Professional Master's Degree in Radiation Oncology** contains the most complete and up-to-date program on the market. Its most outstanding features are:

- More than 100 clinical cases presented by professionals in Radiation Oncology
- 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
- Comprehensive systematized action plans for the main pathologies in the Radiation Oncology unit
- Presentation of practical workshops on diagnostic and therapeutic techniques for oncology patients
- An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- Practical clinical guides on approaching different pathologies
- 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, you will be able to carry out a clinical internship in one of the best hospitals

You will master, through this Hybrid Professional Master's Degree, the criteria to be taken into account to indicate the modality of neoadjuvant or concomitant radiotherapy, according to the condition of each patient"

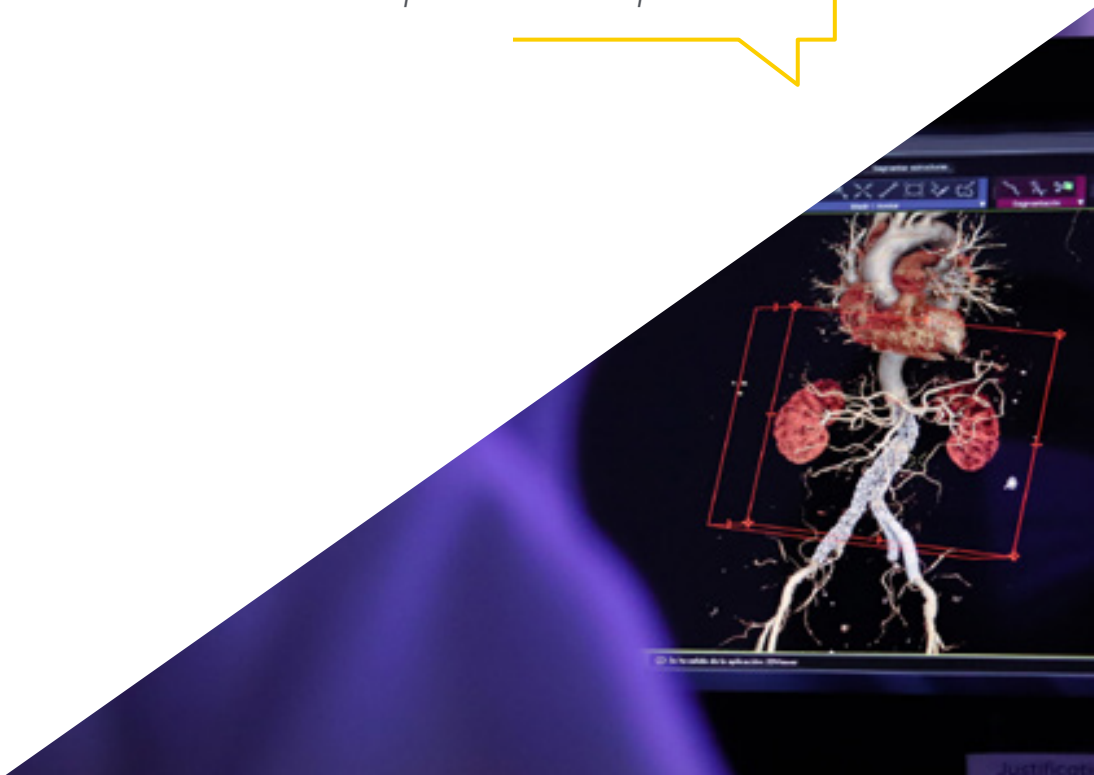
You will have, thanks to TECH, 3 weeks of internship in one of the best clinical centers, which will be a complete immersion in the latest developments in Radiation Oncology"

With this innovative Hybrid Professional Master's Degree, you will have access to multiple theoretical contents, up-to-date according to international trends.

This immersive, comprehensive and intensive program brings together the most up-to-date trends in Radiation Oncology so that you can become a specialist with a broad professional spectrum.

This Hybrid Professional Master's Degree program, which has a professionalizing nature and a hybrid learning modality, is aimed at updating professionals in Radiation Oncology who require a high level of qualification. The contents are based on the latest scientific evidence, and oriented in a educational way to integrate theoretical knowledge in the medical practice, to facilitate the updating of knowledge and allow decision-making in patient management.

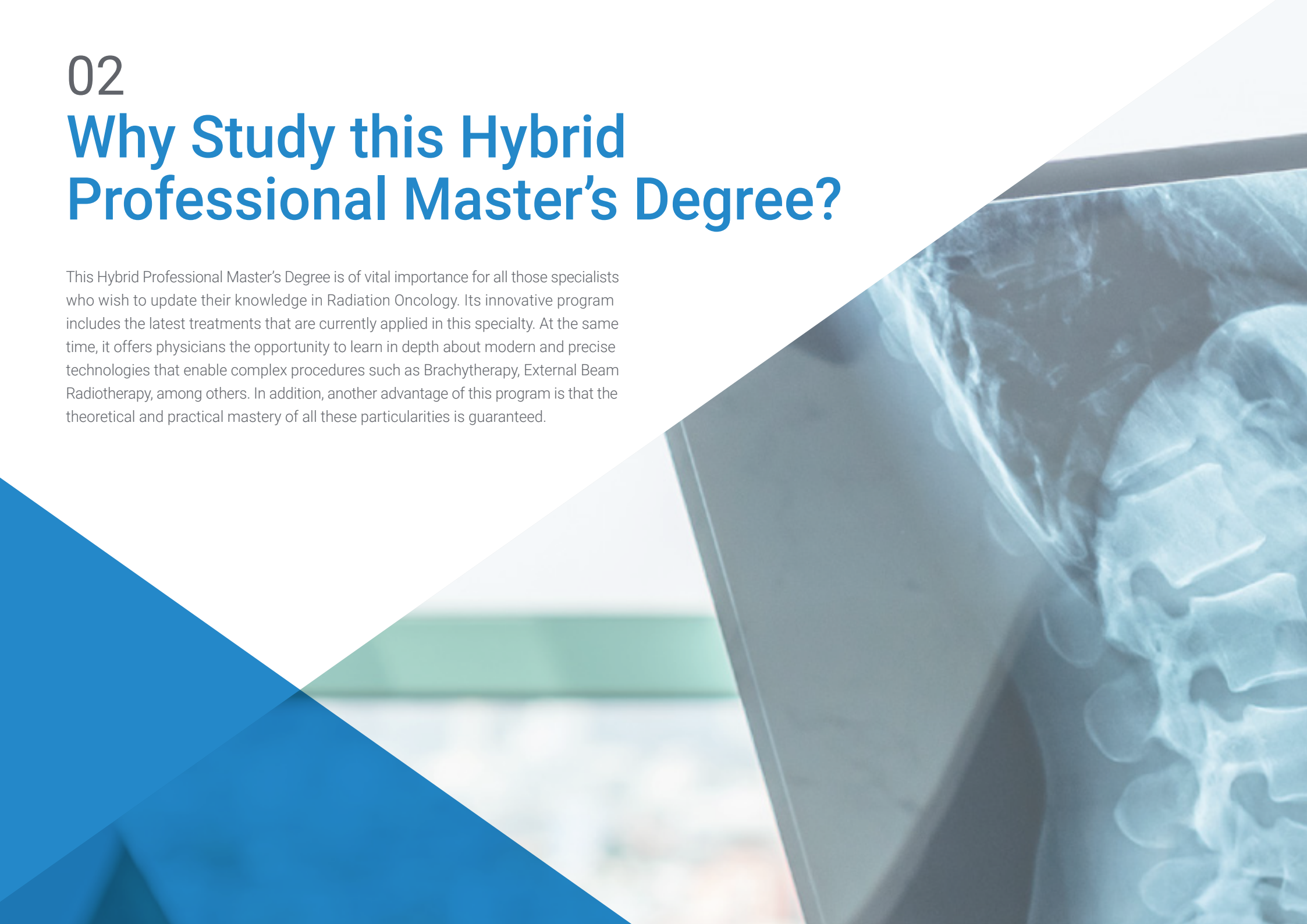
Thanks to the multimedia content, developed with the latest educational technology, will allow the medical professional a situated and contextual learning, i.e., a simulated environment that will provide immersive learning programmed to train in real situations. This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.



02

Why Study this Hybrid Professional Master's Degree?

This Hybrid Professional Master's Degree is of vital importance for all those specialists who wish to update their knowledge in Radiation Oncology. Its innovative program includes the latest treatments that are currently applied in this specialty. At the same time, it offers physicians the opportunity to learn in depth about modern and precise technologies that enable complex procedures such as Brachytherapy, External Beam Radiotherapy, among others. In addition, another advantage of this program is that the theoretical and practical mastery of all these particularities is guaranteed.



Radiation Oncology has become one of the leading methodologies in the fight against cancer. This Hybrid Professional Master's Degree is ideal for you to master all its specificities"

1. Updating from the latest technology available

Medical technologies are constantly evolving to combat cancer more effectively. The field of Radiation Oncology is no exception and, in addition, this discipline is committed to the use of highly advanced instruments for which a higher professional qualification is required. Theoretical and practical knowledge for the management of all of them will be available to the specialist through this excellent Hybrid Professional Master's Degree.

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

Throughout this program, the physician will have a first-class teaching staff who will provide personalized guidance at all times. Also, in the practical phase, they will be supported by prestigious experts to develop skills with greater rigor and flexibility. This is definitely a program that strengthens the bond between the graduates and the specialists with the greatest professional experience and renown.

3. Entering First-Class Clinical Environments

In the second stage of this program, TECH has foreseen the needs of the physician in terms of the management of the most complex technological tools for the specialty of Radiation Oncology. Therefore, it has developed a practical, on-site and intensive internship, where the medical professional will acquire the most avant-garde skills from hospital facilities of international scope.

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

At the academic level, few study programs manage to combine the theoretical field with practical activity with greater excellence than TECH. From its model of Hybrid Professional Master's Degree, physicians get a holistic mastery of the trends and techniques embodied in its educational content. They also have 3 weeks of on-site activity in a prestigious center to apply everything they have learned in healthcare interventions.

5. Expanding the Boundaries of Knowledge

This program aims to enable all its students to expand their professional horizons from an international perspective. This is possible thanks to the wide range of contacts and collaborators available at TECH, the largest digital university in the world. In this way, specialists will have the opportunity to interact with experts from different latitudes and become familiar with global standards.

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

03

Objectives

In order to extend the specialist's control over the most innovative methods of Radiation Oncology, TECH has developed this very complete program. In addition to covering the most innovative theoretical aspects of this medical area, it provides scope for the development of specific practical skills. Therefore, the physician will be able to get up-to-date with speed, flexibility and on the basis of the latest scientific evidence available. In a little more than 1620 educational hours, they will have managed to raise their professional practice to the forefront of a health sector in full growth and expansion

This program will ensure that you meet your academic goals as rigorously and rigorously as possible"

General Objective

- This Hybrid Professional Master's Degree in Radiation Oncology, designed by TECH, aims for the physician to acquire the most advanced knowledge of the sector from the practical and theoretical point of view. For this purpose, it has combined with excellence a rigorous academic syllabus with a clinical internship, on-site and intensive, where the specialist will have the opportunity to expand their understanding of technological innovations, therapeutic resources, methods of pain management and other specificities

With this comprehensive and innovative program, you will implement in your practice the most significant advances in Brachytherapy for urological, gynecological and head and neck tumors"

Specific Objectives

Module 1. Principles of Radiotherapy: Radiobiology

- Acquire an overview of the different types of radiotherapeutic treatments available and their future evolution

Module 2. Update on Radiotherapy for Central Nervous System Tumors (Adults)

- Review the different types of cancer that warrant radiotherapeutic management and show the specific issues for each tumor

Module 3. Update on Radiotherapy for ENT Tumors

- Learn the basics of radiotherapy, as well as the different techniques available and their efficacy in order to know the role of each one in the management of different ENT tumors

Module 4. Update on Radiotherapy for Thoracic Tumors (Pulmonary, Pleural, Cardiac)

- Gain knowledge about the different types of lung cancer, its diagnosis and treatment

Module 5. Update on Radiotherapy for Breast Tumors

- Analyze how the advances of the last decades in both diagnosis and treatment of cancer have managed to increase survival

Module 6. Update on Radiotherapy for Digestive Tumors

- Delve into the most up-to-date knowledge on hepatobiliary tumors and their effects on the digestive system

Module 7. Update on Radiotherapy for Gynecologic Tumors

- Master the radiotherapeutic advances that allow differential diagnosis, enable precise definition of the resection field, and provide information on prognosis and monitoring after treatment of the different types of gynecological cancers

Module 8. Update on Radiotherapy for Prostate and Other Urologic Tumors

- Identify the conditions of a high-risk situation with respect to prostate tumors

Module 9. Update on Radiotherapy for Low Incidence and Miscellaneous Tumors

- Apply all techniques of treatment and approach to hematological tumors

Module 10. Pain and Nutrition in Radiation Oncology

- Analyze the causes and consequences of malnutrition in oncology patients, as well as nutritional risk factors

04

Skills

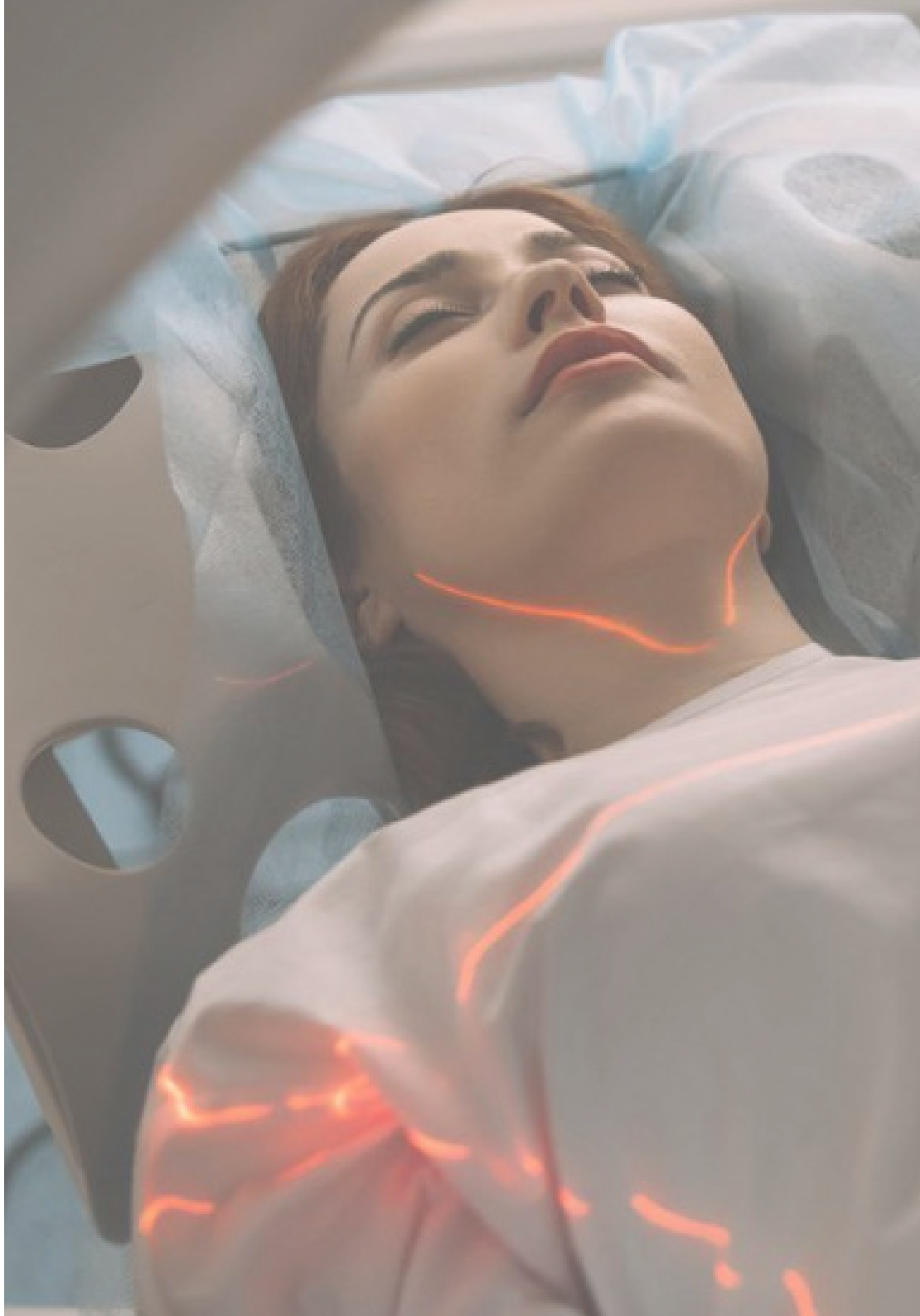
For the professional practice of Radiation Oncology, the most up-to-date knowledge and the development of sharp competencies are essential. TECH provides the physician with all of them in a study modality that combines, unprecedentedly, the theoretical and practical approach to this area of Medicine

You will update, in a theoretical and practical way, your knowledge on the modalities of Radiation Oncology through the most complete study program in the educational market"

General Skills

- Apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to the field of study
- Integrate knowledge and face the complexity of making judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments
- Communicate its conclusions and the ultimate knowledge and rationale behind them- to specialized and non-specialized audiences in a clear and unambiguous manner
- Acquire the learning skills that will enable further studying in a largely self-directed or autonomous manner

Through this Hybrid Professional Master's Degree, you will be up-to-date on the main equipment that, in recent years, have revolutionized the field of Radiation Oncology"



Specific Skills

- Identify the main techniques of oncological radiotherapy
- Develop advanced knowledge for the treatment of oncology from radiotherapy
- Analyze the role of radiotherapy and its benefit to oncology
- Assess which technique of oncological radiotherapy is best suited to each specific tumor condition
- Examine new trends such as intraoperative radiotherapy, its advantages and disadvantages
- Master the use of recently implemented techniques, such as systemic radiotherapy, with emphasis on their safe implementation
- Manage the main radiological safety measures in the hospital environment
- Apply the intra- and in-hospital care protocols for outpatient sessions of Radiation Oncology consultation
- Implement the most up-to-date criteria for the nutritional and pain approach in the patient under radiotherapeutic treatment

05

Course Management

The selection of the teaching staff for this program has been a meticulous process to which TECH has applied the greatest possible rigor. Each of the chosen experts has a distinguished clinical background and continuously applies the most advanced technologies in the field of Radiation Oncology in their patient care. They also have extensive research experience, collaborating with scientific societies and specialized academic publications. The teaching staff took on the challenge of designing the syllabus for this Hybrid Professional Master's Degree and, as a result, they now offer physicians the most complete syllabus on the educational market.

Take advantage of the access to highly prestigious specialists that TECH provides you with this program and expand your professional horizons immediately"

International Guest Director

Awarded by the Royal College of Radiologists of the United Kingdom for his BCRM presentation, Christopher Nutting is a prestigious **Oncologist** specialized in the areas of **Radiotherapy** and **Chemotherapy.** He has an extensive professional background of more than 30 years, where he has been part of reference health institutions such as the Royal Marsden Hospital or the Institute of Cancer Research in London.

In his firm commitment to optimize the quality of life of his patients, he contributed to the installation of **Magnetic Resonance Imaging** machines for the first time in Great Britain, incorporating a scanner and Linear Accelerator to locate tumors with greater precision. In addition, his clinical research has contributed to the development of several advances in the oncological field. His most outstanding contribution is **Intensity-Modulated Radiation Therapy,** a technique that improves the efficacy of cancer treatments by directing radiation to a specific target so as not to damage nearby healthy tissue.

In turn, he has performed more than 350 clinical studies and scientific publications that have facilitated the understanding of malignant tumors. For example, its **"PARSPOT"** trial provided relevant clinical data on the efficacy of Linear Accelerator Intensity Modulated Radiation Therapy in terms of local carcinoma control and patient survival. Thanks to these results, the UK Department of Health established practices to optimize both the accuracy and effectiveness of Radiotherapy in the treatment of **Head and Neck Cancer.**

He is a regular speaker at **Scientific Congresses,** where he shares his solid knowledge in subjects such as Radiotherapy Technology or innovative therapies for the approach of people with Dysphagia. In this way, he helps medical professionals to stay at the forefront of advances in these fields in order to provide excellent services.

Dr. Nutting, Christopher

- Medical Director and Oncology Consultant at The Royal Marsden Hospital in London, United Kingdom
- Chairman of the Oncology Section at the Royal Society of Medicine, London, United Kingdom
- Clinical Head of Head and Neck Cancer at the Department of Health and Social Care, United Kingdom
- Consultant Oncologist at The Harley Street Clinic in London, United Kingdom
- Chairman of the National Cancer Research Institute in London, United Kingdom
- President of the Association of British Oncology in London, United Kingdom
- Senior Research Fellow at the National Institute for Health and Care Research, United Kingdom
- PhD in Medicine and Cellular Pathology from the University of London
- Member of: UK College of Physicians, UK College of Radiologists

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

Management

Dr. Belinchón Olmeda, Belén

- Attending Physician of the Radiation Oncology Department Ruber International Hospital
- Resident Medical Intern in the field of Radiation Oncology Puerta de Hierro Majadahonda University Hospital
- Degree in Medicine and Surgery. Alcalá de Henares University
- Diploma of Advanced Studies. Autonomous University of Madrid
- Attending Physician of the Radiation Oncology Department La Paz University Hospital
- Author of various articles in high impact scientific journals and frequent collaborator in chapters of books and presentations at congresses
- Member of: Sarcomas and Soft Tissue Tumors Group, Spanish Group of Breast Radiation Oncology (GEORM), Brachytherapy and Digestive Tumors (GEORGI), Spanish Society of Radiation Oncology (SEOR)

Dr. Rodríguez Rodríguez, Isabel

- Specialist in Radiation Oncology La Paz University Hospital (Madrid)
- Coordinator of the Brachytherapy Unit of the Radiation Oncology Department. La Paz University Hospital (Madrid)
- Collaborator in Basic and Clinical Research in the Spanish Pharmaceutical Industry. PharmaMar
- Coordinator of the National Alliance for the Prevention of Colon and Rectal Cancer
- Research Coordinator. Clinic of the Biomedical Research Foundation. Ramón y Cajal University Hospital
- Participation as Head Researcher and Collaborator in a large number of Clinical Research projects
- Editor of several dozen articles in high-impact scientific journals

Dr. Morera López, Rosa María

- Specialist in Oncology Radiotherapy
- Head of the Radiation Oncology Department. La Paz University Hospital
- Head of the Radiation Oncology Department. Ciudad Real General University Hospital
- Specialist Physician of the Radiation Oncology Department Ramón y Cajal University Hospital
- Coordinator of the Tomotherapy Unit "La Milagrosa" Clinic
- Coordinator of the Stereotactic Body Radiotherapy Working Group (SBRT). Spanish Society of Radiation Therapy Oncology
- Spokesperson of the Spanish National Commission of Radiation Oncology
- Doctor of Medicine Complutense University of Madrid
- Degree in Medicine and General Surgery. Complutense University of Madrid
- Specialist in Radiation Oncology 12 de Octubre University Hospital
- Master's Degree in Health Services Management and Administration. Pompeu Fabra University
- Member of the National Executive Committee of the Spanish Association Against Cancer (AECC)

Professors

Dr. Romero Fernández, Jesús

- Specialist in Radiation Oncology
- Head of the Radiation Oncology Department. Puerta de Hierro University Hospital
- Speaker at different congresses and specialized conferences of national scope

Dr. Samper Ots, Pilar María

- Head of the Radiation Oncology Department. Rey Juan Carlos Hospital
- Head of Department. Rey Juan Carlos Hospital
- Specialist in Radiation Oncology
- Attending Physician of Radiation Oncology. Gómez Ulla Central de la Defensa Hospital
- Medical Specialist of the Ministry of Defense
- Radiation Oncologist. Gómez Ulla Central de la Defensa Hospital
- Doctor. University of Alicante
- Degree in Medicine and Surgery. University of Alicante
- Radioactive Facilities Supervisor License Field of Application: Radiotherapy Nuclear Safety Council
- Member of: Quality Working Group of the Spanish Society of Radiation Oncology (SEOR)

Dr. Gómez Camaño, Antonio

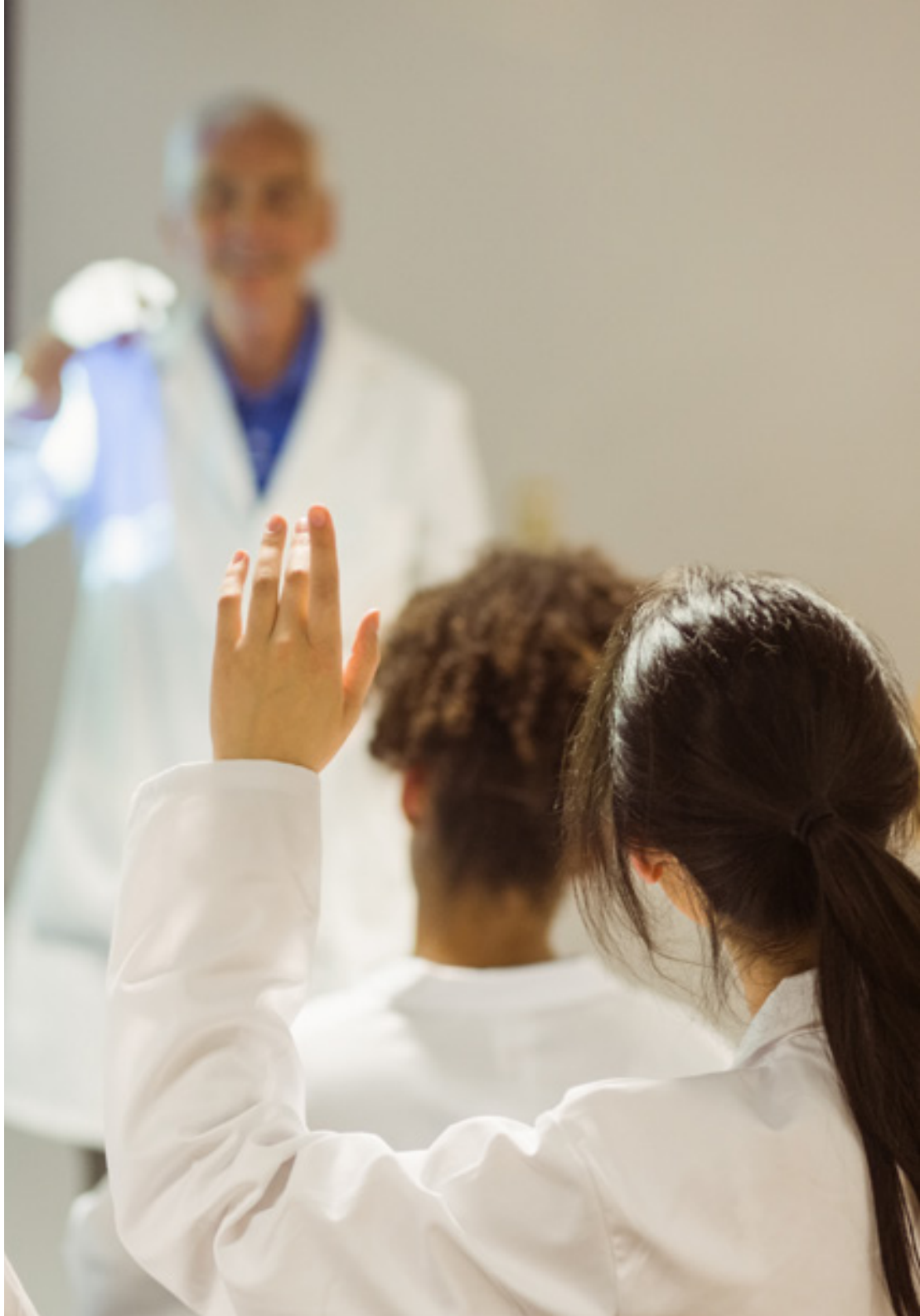
- Head of the Radiation Oncology Department. Santiago de Compostela University Clinical Hospital
- President of the Spanish Society of Radiation Oncology (SEOR)
- Professor. Spanish School of Radiation Oncology
- Director of the University Program. Continuing Education University Campus of Oncology SEOR. Francisco de Vitoria University
- Associate Professor of Health Sciences. University of Santiago de Compostela
- Degree in Medicine and Surgery. University of Santiago de Compostela
- Specialist in Radiation Oncology Santiago de Compostela University Hospital Complex
- Member: IDIS Foundation, Molecular Imaging and In vivo Physics Group (GI2133). University of Santiago de Compostela and the International Radiogenomic Consortium

Dr. Rubio Rodríguez, Carmen

- Head of Radiation Oncology Service of HM Hospitals
- Head of Radiation Oncology. HM Sanchinarro University Hospital
- Head of Radiation Oncology. HM Puerta del Sur University Hospital
- Radiation Oncologist. San Francisco de Asís University Hospital. Institute of Ocular Microsurgery (IMO) Group
- Radiation Oncologist. Jiménez Díaz Foundation Hospital
- Doctor of Medicine and Surgery. University of Salamanca
- Vice-President of the Spanish Society of Radiation Oncology (SEOR)
- Member of the Board of Directors of the Spanish Society of Radiosurgery

Dr. Celada Álvarez, Francisco Javier

- Radiation Oncology Service. La Fe Polytechnic University Hospital, Valencia
- Specialist. Resident Tutor



Dr. Conde Moreno, Antonio José

- Head of the Radiation Oncology Department. La Fe Polytechnic and University Hospital
- Head of the Radiation Oncology Department. Castellón Provincial Hospital Consortium
- Professor of Postgraduate in Medicine
- Author and Co-author of scientific articles
- Speaker at Oncology Congresses

Dr. Palacios Eito, Amalia

- Head of Radiation Oncology Service Reina Sofía University Hospital
- Associate Professor, School of Medicine University of Córdoba
- Physician Specialist of the Radiation Oncology Department. Reina Sofía Hospital of Córdoba
- Doctor of Medicine University of Zaragoza
- Specialist in Radiation Oncology via Resident Medical Intern. Lozano Blesa Clinical University Hospital

Dr. Lozano Martín, Eva María

- Head of the Radiation Oncology Department. Toledo University Hospital
- Head of the Radiation Oncology Department. Ciudad Real General University Hospital
- Physician Specialist of the Radiation Oncology Department. Ruber International Hospital
- Speaker at several seminars and congresses related to Oncology

Dr. Rodríguez Pérez, Aurora

- Head of Radiation Oncology Service Ruber International Hospital
- Acting Chief. Fuenlabrada University Hospital
- Commander and Military Physician, participating in several international missions
- Professor-Collaborator Rey Juan Carlos University
- Professor-Collaborator CEU San Pablo University
- Specialist in Radiation Oncology Gómez Ulla Central de la Defensa Hospital
- Doctor Cum Laude in Medicine Complutense University of Madrid
- Total Quality Management Systems. Industrial Organization School
- Degree in Medicine and Surgery. Autonomous University of Madrid
- Member of: General Secretary of the Spanish Society of Radiation Oncology (SEOR), Member of the Board of Directors of the Clinical Research Group in Radiation Oncology (GICOR), Spanish Group of Breast Radiation Oncology (GEORM), Spanish Group of Lung Cancer (GECP) and Spanish Group of Bramchitherapy (GEB) of the Spanish Society of Radiation Oncology (SEOR)

Dr. Vallejo Ocaña, Carmen

- Head of Radiation Oncology Service Ramón y Cajal University Hospital (Madrid)
- Degree in Medicine and Surgery

06

Educational Plan

The syllabus of this Hybrid Professional Master's Degree consists of several academic modules where the physician will find a broad overview of the basics of radiotherapy treatment and radiobiology. In addition, they will examine the most modern techniques that best suit specific conditions such as gynecological, urological, thoracic and central nervous system tumors, among others. In addition, the academic plan devotes special attention to the approach to pain in cancer patients and the nutritional care that these patients require. In order to master all these aspects, TECH will provide the specialist with a 100% online and interactive learning platform of the highest level.

The theoretical materials of this program are supported by multimedia resources, such as videos and infographics, of great didactic value for your learning"

Module 1. Principles of Radiotherapy: Radiobiology

1.1. Biological Effects of Ionizing Radiations
  1.1.1. DNA Damage
  1.1.2. Non-clonal Effects
1.2. Dose Fractionation
  1.2.1. Linear-Quadratic Model
  1.2.2. Time Factor in Radiotherapy
  1.2.3. Altered Subdivisions
1.3. Oxygen Effect and Tumor Hypoxia
1.4. Radiobiology of Brachytherapy
1.5. Effects of Irradiation on Healthy Tissues
1.6. Combination of Irradiation with Drugs
1.7. Predictive Assays of Response to Radiotherapy
1.8. Radiobiology of Re-Irradiation
1.9. Effects of Irradiation on the Embryo and Fetus
1.10. Radiation-Induced Carcinogenesis

Module 2. Update on Radiotherapy for Central Nervous System Tumors (Adults)

2.1. Low-Grade Gliomas
2.2. High-Grade Gliomas
2.3. Benign Brain Tumors
  2.3.1. Meningiomas
  2.3.2. Vestibular Schwannoma
  2.3.3. Neurinoma
2.4. Pituitary Tumors
  2.4.1. Non-Functioning Adenomas
  2.4.2. Prolactinoma
  2.4.3. GH-Producing Adenoma
  2.4.4. Cushing's Disease
  2.4.5. TSH Secreting Adenomas, GnRH-Secreting Adenomas.
  2.4.6. Pituitary Carcinomas
2.5. Spinal Cord Tumors
  2.5.1. Astrocytoma
  2.5.2. Ependymoma
  2.5.3. Meningioma
  2.5.4. Chordoma
  2.5.5. Chondrosarcoma
  2.5.6. Miscellaneous Spinal Tumors
  2.5.7. Spinal Cord Compression
  2.5.8. Medulloblastoma
  2.5.9. Craneofaringioma
2.6. Orbital, Ocular and Optic Nerve Tumors
  2.6.1. Rhabdomyosarcoma
  2.6.2. Pineal Gland Tumors
  2.6.3. Orbital Lymphoma
  2.6.4. Ocular Melanoma
  2.6.5. Ocular Metastases
  2.6.6. Optic Nerve Glioma
  2.6.7. Optic Nerve Meningioma
2.7. Primary cerebral Lymphoma
2.8. Cerebral Metastases
2.9. Arteriovenous Malformations

Module 3. Update on Radiotherapy for ENT Tumors

3.1. Oral Cavity
  3.1.1. Lip
  3.1.2. Tongue
  3.1.3. Floor of Mouth
  3.1.4. Gum
  3.1.5. Hard Palate
  3.1.6. Retromolar Trigone
  3.1.7. Jugal Mucosa

3.2. Oropharynx
- 3.2.1. Soft Palate
- 3.2.2. Tonsils
- 3.2.3. Oropharyngeal Wall
- 3.2.4. Base of the Tongue

3.3. Nasopharynx

3.4. Larynx and Hypopharynx
- 3.4.1. Larynx.
  - 3.4.1.1. Glottis
  - 3.4.1.2. Supraglottis
  - 3.4.1.3. Subglottis
- 3.4.2. Hypopharynx
  - 3.4.2.1. Pyriform Sinus
  - 3.4.2.2. Hypopharyngeal Wall
  - 3.4.2.3. Postcricoid Tumors
- 3.4.3. Epidermoid Carcinoma Variants
  - 3.4.3.1. Verrucous Carcinoma
  - 3.4.3.2. Sarcomatoid Carcinoma
  - 3.4.3.3. Neuroendocrine Carcinoma

3.5. Nasal and Paranasal Sinuses
- 3.5.1. Nasal Vestibule
- 3.5.2. Nasal Cavity and Ethmoid Sinus
- 3.5.3. Maxillary Sinus

3.6. Salivary Glands

3.7. Thyroid
- 3.7.1. Papillary Carcinoma
- 3.7.2. Follicular Carcinoma
- 3.7.3. Spinal Cord Carcinoma
- 3.7.4. Anaplastic Carcinoma
- 3.7.5. Primary Thyroid Lymphoma

3.8. Cervical Lymph Node Metastases of Unknown Origin

Module 4. Update on Radiotherapy for Thoracic Tumors (Pulmonary, Pleural, Cardiac)

4.1. Non-Small Cell Lung Cancer
- 4.1.1. General Information on Non-Small Cell Lung Cancer
- 4.1.2. Early Stage Radiotherapy Treatment
- 4.1.3. Radical Radiotherapeutic Treatment in Locally Advanced Stages
- 4.1.4. Postoperative Radiotherapy Treatment
- 4.1.5. Palliative Radiotherapy Treatment

4.2. Small Cell Lung Cancer
- 4.2.1. General Information on Small-Cell Lung Cancer
- 4.2.2. Thoraxic Radiotherapy Treatment in Limited-Disease
- 4.2.3. Radiotherapeutic Treatment in Extended-Disease
- 4.2.4. Prophylactic Cranial Irradiation
- 4.2.5. Palliative Radiotherapy Treatment

4.3. Uncommon Thoracic Tumors
- 4.3.1. Thymic Tumors
  - 4.3.1.1. General Information on Thymic Tumors
  - 4.3.1.2. Radiotherapeutic Treatment of Thymic Carcinoma
  - 4.3.1.3. Radiotherapeutic Treatment of Thymomas
- 4.3.2. Carcinoid Lung Tumors
  - 4.3.2.1. General Information on Carcinoid Lung Tumors
  - 4.3.2.2. Radiotherapeutic Treatment of Carcinoid Lung Tumors
- 4.3.3. Mesothelioma
  - 4.3.3.1. General Information on Mesotheliomas
  - 4.3.3.2. Radiotherapy Treatment of Mesotheliomas (Adjuvant, Radical, Palliative)

4.4. Primary Cardiac Tumors
- 4.4.1. General Information on Cardiac Tumors
- 4.4.2. Radiotherapeutic Treatment of Cardiac Tumors

4.5. Pulmonary Metastases
- 4.5.1. General Information on Pulmonary Metastases
- 4.5.2. Definition of Oligometastatic Lung Status
- 4.5.3. Radiotherapeutic Treatment in Pulmonary Oligometastases

Module 5. Update on Radiotherapy for Breast Tumors

5.1. Introduction Infiltrating Breast Cancer
- 5.1.1. Etiology
- 5.1.2. Epidemiology
- 5.1.3. Advantages of Screening: Overdiagnosis and Cost Overruns
- 5.1.4. Clinical and Pathological Staging
- 5.1.5. Radiological Diagnosis
- 5.1.6. Histological Diagnosis: Molecular Subtypes
- 5.1.7. Prognosis

5.2. General Information on Radiotherapeutic Treatment of Breast Cancer
- 5.2.1. Simulation Process: Positioning and Immobilization Systems
- 5.2.2. Image Acquisition and Volume Delimitation
- 5.2.3. Techniques: 3D-CRT, Evidence of IMRT/VMAT Use in Breast Cancer
- 5.2.4. Dosage, Fractionation and Constraints
- 5.2.5. Breath Hold
- 5.2.6. Image-Guided Radiation Therapy (IGRT)
- 5.2.7. Radiotherapy in the Presence of Cardiac Devices

5.3. Indications for Radiotherapy on the Breast After Conservative Treatment in Infiltrating Breast Cancer
- 5.3.1. Exclusive Preoperative Radiotherapy
- 5.3.2. Adjuvant Radiotherapy After Conservative Surgery and/or Primary Systemic Therapy
- 5.3.3. Evidence in Subdivisions
- 5.3.4. Better Conservative Treatment than Mastectomy?
- 5.3.5. Radiotherapy according to Molecular Subtype?

5.4. Indications for Radiotherapy after Mastectomy in Infiltrating Breast Cancer
- 5.4.1. Radiotherapy Post Mastectomy According to Type of Surgery
- 5.4.2. Radiotherapy Post Mastectomy in N0 Cancer Radiotherapy according to Molecular Subtype?
- 5.4.3. Radiotherapy Post Mastectomy in Complete Response After Primary Systemic Treatment
- 5.4.4. Rib Wall Hypofractionation
- 5.4.5. Inflammatory Carcinoma

5.5. Radiotherapy and Postmastectomy Breast Reconstruction
- 5.5.1. Types of Surgery (Radical Mastectomy, Skin Sparing, CAP Preservation, etc)
- 5.5.2. Types of Reconstruction and Advantages/Disadvantages of RT Before or After RT
- 5.5.3. Hypofractionation in Reconstructed Patient

5.6. Management of the Axilla for the Radiation Oncologist Radiotherapy Indication in Chains
- 5.6.1. Nodal Staging in Diagnosis and Sentinel Node Detection Methods
- 5.6.2. RT After Lymphadenectomy and After Positive Sentinel Gland at the Time of Surgery
- 5.6.3. RT After Sentinel Node Before/After Primary Systemic Therapy
- 5.6.4. Hypofractionation in Chains
- 5.6.5. Risk of Plexopathy

5.7. Boost: Indications and Radiotherapy Techniques
- 5.7.1. Justification for the Implementation of the Boost
- 5.7.2. Indications After Conservative Surgery, Oncoplastic Surgery and Mastectomy
- 5.7.3. External Radiotherapy Techniques Simultaneous Integrated Boost (SIB)
- 5.7.4. Brachytherapy
- 5.7.5. Intraoperative Radiotherapy (IORT)

5.8. Partial Breast Irradiation: Indications and Radiotherapy Techniques
- 5.8.1. Justification for Performing Magnetic Particle Imaging (MPI)
- 5.8.2. Preoperative Radiotherapy
- 5.8.3. External Radiotherapy RTC3D. Intensity-Modulated Radiation Therapy (IMRT) SBRT
- 5.8.4. Brachytherapy
- 5.8.5. Intraoperative Radiotherapy (IORT)

5.9. Radiotherapy in Non-Invasive Carcinoma
- 5.9.1. I ntroduction
  - 5.9.1.1. Etiology
  - 5.9.1.2. Epidemiology
  - 5.9.1.3. Advantages of Screening
- 5.9.2. Indications After Conservative Surgery and Evidence After Mastectomy
- 5.9.3. Genetic platform in Ductal Carcinoma In Situ (DCIS)

5.10. Radiotherapy and Systemic Treatment
- 5.10.1. Concomitant Radiotherapy/Chemotherapy
  - 5.10.1.1. Neoadjuvant.
  - 5.10.1.2. Inoperable
  - 5.10.1.3. Adjuvant

5.10.2. Sequence with Systemic Treatment. Is it Possible to Administer Radiotherapy Prior to Chemotherapy After Surgery?
5.10.3. Radiotherapy and Hormonal Therapy (Tamoxifen, Aromatase Inhibitors): Evidence for their Sequential Administration: Is Concomitance Better?
5.10.4. Chemotherapy Followed by Radiotherapy Without Surgery?
5.10.5. Association Radiotherapy and Anti-Her2 Teatment (Trastuzumab and Pertuzumab)
5.10.6. Possible Toxicities of the Association
5.11. Evaluation of the Response Follow up. Treatment of Locoregional Recurrences: Re-Irradiation
5.12. Locoregional Radiotherapy in Metastatic Breast Cancer Treatment of Oligometastases. Stereotactic Body Radiotherapy (SBRT). Radiotherapy and Immunotherapy
5.13. Male Breast Cancer and Other Breast Tumors: Paget's Disease; Phyllodes; Primary Lymphoma

Module 6. Update on Radiotherapy for Digestive Tumors

6.1. Esophageal Tumors
6.1.1. General Information on Esophageal Tumors
6.1.2. Radical Treatment of Cervical Esophageal Cancer
6.1.3. Radical Treatment of Thoracic Esophageal Cancer
6.1.4. Adjuvant Treatment of Thoracic Esophageal Cancer
6.1.5. Palliative Radiotherapy Treatment
6.2. Gastric and Gastroesophageal Junction Tumors
6.2.1. General Information About Gastric and Gastroesophageal Junction Cancer
6.2.2. Neoadjuvant Radiochemotherapy
6.2.3. Adjuvant Radiochemotherapy
6.2.4. Role of Radiotherapy in the Context of Perioperative Chemotherapy
6.2.5. Radical Radiochemotherapy
6.2.6. Palliative Radiotherapy Treatment
6.3. Pancreatic Tumors
6.3.1. Overview of Pancreatic Cancer
6.3.2. Role of Radiotherapy in Resectable Tumors
6.3.3. Role of Radiotherapy in Potentially Resectable Tumors (Borderline)
6.3.4. Role of Radiation Therapy in Unresectable Tumors
6.3.5. Role of Radiotherapy in Inoperable Tumors
6.3.6. Palliative Radiotherapy Treatment
6.4. Hepatobiliary Tumors
6.4.1. General Information on Hepatobiliary Tumors
6.4.2. Hepatocellular Carcinoma
6.4.3. Gallbladder Cancer
6.4.4. Cholangiocarcinoma
6.4.5. Liver Metastases
6.5. Colorectal Cancer
6.5.1. General Information on Colorectal Tumors
6.5.2. Neoadjuvant Treatment in Rectal Cancer
6.5.3. Adjuvant Treatment in Rectal Cancer
6.5.4. Radical Treatment in Rectal Cancer
6.5.5. Radiotherapeutic Treatment of Recurrences Reirradiation
6.5.6. Role of Radiation Therapy in Colon Cancer
6.5.7. Palliative Radiotherapy Treatment
6.6. Anal Canal and Perianal Skin Cancer
6.6.1. Overview of Anal Canal and Perianal Skin Cancer
6.6.2. Role of Radiotherapy in Early Tumors and Carcinoma In Situ
6.6.3. Radical Treatment of Locally Advanced Tumors
6.6.4. Palliative Radiotherapy Treatment

Module 7. Update on Radiotherapy for Gynecologic Tumors

7.1. Endometrial Cancer
7.1.1. Epidemiological Aspects
7.1.2. Risk Factors
7.1.3. Anatomy Recap.
7.1.4. Histological Type
7.1.5. Dissemination Pathways
7.1.6. Classification
7.1.7. Prognostic Factors

7.1.8. Surgical Management
7.1.9. Adjuvant Early Stage Radiotherapy Treatment
7.1.10. Advanced Disease
7.1.11. Local, Regional, Distant Recurrence
7.1.12. Monitoring
7.2. Uterine Sarcomas
7.2.1. Epidemiological Aspects
7.2.2. Risk Factors
7.2.3. Anatomy Recap.
7.2.4. Histological Type
7.2.5. Dissemination Pathways
7.2.6. Classification
7.2.7. Prognostic Factors
7.2.8. Surgical Management
7.2.9. Adjuvant Early Stage Radiotherapy Treatment
7.2.10. Advanced Disease
7.2.11. Local, Regional, Distant Recurrence
7.2.12. Monitoring
7.3. Cervical Cancer
7.3.1. Epidemiological Aspects
7.3.2. Risk Factors
7.3.3. Anatomy Recap.
7.3.4. Histological Type
7.3.5. Dissemination Pathways
7.3.6. Classification
7.3.7. Prognostic Factors
7.3.8. Surgical Management
7.3.9. Adjuvant Early Stage Radiotherapy Treatment
7.3.10. Advanced Disease
7.3.11. Local, Regional, Distant Recurrence
7.3.12. Monitoring
7.4. Vulvar Cancer
7.4.1. Epidemiological Aspects
7.4.2. Risk Factors
7.4.3. Anatomy Recap.
7.4.4. Histological Type
7.4.5. Dissemination Pathways
7.4.6. Classification
7.4.7. Prognostic Factors
7.4.8. Surgical Management
7.4.9. Adjuvant Early Stage Radiotherapy Treatment
7.4.10. Advanced Disease
7.4.11. Local, Regional, Distant Recurrence
7.4.12. Monitoring
7.5. Vagina Cancer
7.5.1. Epidemiological Aspects
7.5.2. Risk Factors
7.5.3. Anatomy Recap.
7.5.4. Histological Type
7.5.5. Dissemination Pathways
7.5.6. Classification
7.5.7. Prognostic Factors
7.5.8. Surgical Management
7.5.9. Adjuvant Early Stage Radiotherapy Treatment
7.5.10. Advanced Disease
7.5.11. Local, Regional, Distant Recurrence
7.5.12. Monitoring
7.6. Fallopian Tube and Ovarian Cancer
7.6.1. Epidemiological Aspects
7.6.2. Risk Factors
7.6.3. Anatomy Recap.
7.6.4. Histological Type

7.6.5. Dissemination Pathways
7.6.6. Classification
7.6.7. Prognostic Factors
7.6.8. Surgical Management
7.6.9. Adjuvant Early Stage Radiotherapy Treatment
7.6.10. Advanced Disease
7.6.11. Local, Regional, Distant Recurrence
7.6.12. Monitoring

Module 8. Update on Radiotherapy for Prostate and Other Urologic Tumors

8.1. Prostate Cancer
8.1.1. Low-Risk
8.1.2. Intermediate Risk
8.1.2.1. Definition of Intermediate Risk Prostate Cancer
8.1.2.2. Subclassification of Intermediate Risk Prostate Cancer
8.1.2.2.1. Importance of Gleason 7
8.1.2.3. Diagnosis and Extension Study
8.1.2.4. Treatment
8.1.2.4.1. Active Surveillance
8.1.2.4.2. Radical Prostatectomy
8.1.2.4.3. Radiotherapy Techniques and Requirements
8.1.2.4.3.1. Role of External Radiation Therapy
8.1.2.4.3.2. The Role of Brachytherapy
8.1.2.4.3.3. The Role of Stereotactic Body Radiotherapy SBRT
8.1.2.4.3.4. Combined Treatments
8.1.2.4.4. Hormone Therapy. When and How Much?
8.1.2.4.5. The Best Option for Each Patient
8.1.2.5. Monitoring
8.1.2.6. Conclusions
8.1.3. High-Risk
8.1.4. Local and/or Distant Relapse Treatment
8.1.4.1. Treatment of Local Relapse
8.1.4.1.1. After Prostatectomy
8.1.4.1.2. After Radiotherapy
8.1.4.1.2.1. Rescue Surgery
8.1.4.1.2.2. Rescue Cryotherapy
8.1.4.1.2.3. Rescue Brachytherapy
8.1.4.1.2.4. High Intensity Focused Ultrasound (HIFU)
8.1.4.1.2.5. Intermittent Hormone Rescue
8.1.4.2. Treatment of Distant Relapse
8.1.4.2.1. Metastatic Patient
8.1.4.2.2. Oligorecurrent Patient
8.1.4.2.2.1. Hormonal Treatment
8.1.4.2.2.2. Surgical Management
8.1.4.2.2.3. SBRT treatment
8.2. Preoperative and Postoperative Radiotherapy in Bladder Cancer
8.2.1. Introduction
8.2.2. Preoperative Radiotherapy
8.2.2.1. Bibliographic Review
8.2.2.2. Indications
8.2.3. Postoperative Radiotherapy
8.2.3.1. Bibliographic Review
8.2.3.2. Indications
8.2.4. Organ Conservative Treatment
8.3. Testicular Tumors
8.3.1. Introduction
8.3.2. Histological Type
8.3.3. TNM Classification and Prognostic Groups
8.3.4. Germinal Tumors: Treatment According to Stage and Prognostic Group
8.3.4.1. Seminoma
8.3.4.2. Non-Seminoma
8.3.5. Toxicity of Chemotherapy and Radiotherapy
8.3.6. Secondary Neoplasms
8.3.7. Non-Germ Cell Tumours

8.4. Renal, Ureteral, and Urethral Tumors
- 8.4.1. Renal Tumors
  - 8.4.1.1. Clinical Presentation
  - 8.4.1.2. Diagnosis
  - 8.4.1.3. Localized Disease Treatment
  - 8.4.1.4. Advanced Disease Treatment
- 8.4.2. Urethral Tumors
  - 8.4.2.1. Clinical Presentation: Men vs. Women
  - 8.4.2.2. Diagnosis
  - 8.4.2.3. Treatment
- 8.4.3. Ureter and Renal Pelvis Tumors
  - 8.4.3.1. Risk Factors
  - 8.4.3.2. Presentation: Primary Tumor-Metastasis
  - 8.4.3.3. Symptoms/Clinical
  - 8.4.3.4. Diagnosis
  - 8.4.3.5. Localized Disease Treatment
  - 8.4.3.6. Advanced Disease Treatment

8.5. Penile Cancer
- 8.5.1. Adjuvant Treatment
- 8.5.2. Radical Treatment

8.6. Treatment of Adrenal Metastases
- 8.6.1. Introduction
- 8.6.2. Surgery
- 8.6.3. SBRT

Module 9. Update on Radiotherapy for Low Incidence and Miscellaneous Tumors

9.1. Orbital and Ocular Tumors
- 9.1.1. Orbital tumors
  - 9.1.1.1. Rhabdomyosarcoma
  - 9.1.1.2. Lacrimal Gland Tumors
  - 9.1.1.3. Orbital Metastases
  - 9.1.1.4. Orbital Pseudotumor
  - 9.1.1.5. Graves-Basedow Ophthalmopathy

9.1.2. Tumors and Ocular Pathology
9.1.2.1. Choroidal Melanoma
9.1.2.2. Choroidal Metastasis
9.1.2.3. Primary Ocular Lymphoma
9.1.2.4. Pterigyum
9.1.2.5. Macular Degeneration
9.1.2.6. Choroidal Hemangioma

9.2. Cutaneous Tumors
9.2.1. Melanoma
9.2.2. Non-Melanoma Skin Tumors
9.2.2.1. Basal Cell Carcinoma
9.2.2.2. Squamous cell carcinoma
9.2.2.3. Merkel Cells Carcinoma
9.2.2.4. Adnexal Carcinomas

9.3. Soft Tissue Sarcomas and Bone Tumors
9.3.1. Soft Tissue Sarcomas of the Extremities and Trunk
9.3.2. Retroperitoneal and Pelvic Sarcomas
9.3.3. Head and Neck Sarcomas
9.3.4. Dermatofibrosarcoma Protuberans
9.3.5. Desmoid Tumor
9.3.6. Bone Sarcomas
9.3.6.1. Ewing Sarcoma
9.3.6.2. Osteosarcoma
9.3.6.3. Chondrosarcoma
9.3.6.4. Chordoma

9.4. Hematological Tumors and Associated Techniques
9.4.1. Hodgkin's Lymphomas
9.4.2. Non-Hodgkin's Lymphomas
9.4.3. Multiple Myeloma
9.4.4. Plasmacytoma
9.4.5. Mycosis Fungoides
9.4.6. Kaposi's Sarcoma
9.4.7. Total Body Irradiation, Total Nodal Irradiation

9.5. Pediatric Tumors
- 9.5.1. Central Nervous System Tumors
- 9.5.2. Soft Tissue Sarcomas
- 9.5.3. Bone Sarcomas
- 9.5.4. Wilms Tumor
- 9.5.5. Retinoblastoma
- 9.5.6. Neuroblastoma
- 9.5.7. Leukemias and Lymphomas

9.6. Benign Pathology
- 9.6.1. Benign Joint and Tendon Diseases
- 9.6.2. Benign Connective and Skin Diseases
  - 9.6.2.1. Keloids
  - 9.6.2.2. Plantar Fasciitis
  - 9.6.2.3. Gynecomastia
- 9.6.3. Benign Bone Tissue Diseases
  - 9.6.3.1. Heterotopic Ossification
  - 9.6.3.2. Vertebral Hemangiomas
  - 9.6.3.3. Pigmented Villonodular Synovitis
  - 9.6.3.4. Aneurysmal Bone Cyst

Module 10. Pain and Nutrition in Radiation Oncology

10.1. General Information on Oncologic Pain
- 10.1.1. Epidemiology
- 10.1.2. Prevalence
- 10.1.3. Impact of Pain
- 10.1.4. Multidimensional Concept of Cancer Pain

10.2. Characterization of Pain
- 10.2.1. Types of Oncologic Pain
- 10.2.2. Evaluation of Oncologic Pain
- 10.2.3. Prognosis of Pain
- 10.2.4. Classification
- 10.2.5. Diagnostic Algorithm

10.3. General Principles of Pharmacological Treatment
10.4. General Principles of Radiotherapy Treatment
- 10.4.1. External Radiotherapy
- 10.4.2. Dosages and Fractions

10.5. Bisphosphonates
10.6. Radiopharmaceuticals in the Management of Metastatic Bone Pain
10.7. Pain in Long-Term Survivors
10.8. Nutrition and Cancer
- 10.8.1. Concept of Malnutrition
- 10.8.2. Prevalence of Malnutrition
- 10.8.3. Causes and Consequences of Malnutrition in Oncology Patients
- 10.8.4. Mortality and Survival
- 10.8.5. Nutritional Risk Factors in Oncology Patients
- 10.8.6. Objectives of Nutritional Support

10.9. Cachexia
10.10. Initial Nutritional Assessment in a Radiation Oncology Service
- 10.10.1. Diagnostic Algorithm
- 10.10.2. Specific Treatment
- 10.10.3. General Dietary Recommendations
- 10.10.4. Specific Individualized Recommendations

10.11. Nutritional Assessment During Monitoring in a Radiation Oncology Service

The syllabus of this Hybrid Professional Master's Degree has been designed so that you can overcome its contents in a fast and flexible way, based on the innovative learning methodology of Relearning"

07

Clinical Internship

At the end of the theoretical period of this Hybrid Professional Master's Degree program, the physician must complete an on-site, practical and intensive internship at an international renowned institution in the field of Radiation Oncology. This educational process has been designed to provide you with the most advanced skills in the management of the most complex and modern resources of this medical field.

Do not miss the opportunity to acquire practical knowledge about Radiation Oncology in a 100% on-site and intensive way. Enroll now with TECH!"

The clinical internship, integrated as the second stage of this program, consists of 120 educational hours. In order to complete these hours, the specialist will be received in a hospital center from Monday to Friday, until completing 3 weeks of teaching. Professionals will have access to state-of-the-art radiotherapeutic equipment and advanced computer programs that allow their manipulation and adjustment at the institution that best suits their academic interests and geographic location. In this way, they will acquire a holistic view of the main advances in the sector and will improve their care skills.

In addition, they will develop new experiences together with experts with extensive medical careers. They will also have the educational support and advice of an attending tutor to be able to quickly and flexibly assimilate all those tasks that are mandatory during this clinical internship in order to achieve their pedagogical objectives in an optimal manner.

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 practice of Radiation Oncology (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
Current Modalities of Radiation Oncology	Apply neoadjuvant radiotherapy to those patients who need, as a first treatment, to reduce the tumor that affects them
	Administer a single dose of radical radiotherapy to cure the disease and/or maintain organ function
	Assess the use of adjuvant radiotherapy, after a previous treatment such as surgery, to destroy the malignant cells that may have remained
	Treat with concomitant radiotherapy patients who are already receiving a parallel treatment, such as chemotherapy, to improve their results
	Perform intraoperative radiotherapy during surgery, specifically after removal of the tumor, to increase the control of the treatment
Main Equipment for the Development of Radiation Oncology Techniques	Implement the use of Simulation CT equipment to define more precisely the tumor and the volumes to be irradiated
	Determine the radioactive source (Iridium, Cesium or Cobalt) that best fits the type of cancer of the patient to be treated
	Manage the necessary calculations to indicate the treatment of patients with devices such as Linear Accelerators that allow Intensity Modulated Radiotherapy
	Design treatment plans based on strategic systems such as iPlan Net and RayStation
Latest Trends in Radiation Therapy for Urologic and Gynecologic Tumors	Address cervical and uterine cancer by means of Brachytherapy (Internal Radiotherapy) with high dose rates and on an outpatient basis
	Follow up the evolution of the malignant tumor during treatment by means of image-guided external radiotherapy
	Identify the main side effects of radiation that the patient may be suffering and indicate different methods to reduce their impact
	Plan the treatment with permanent Iodine 125 implant in real time

Module	Practical Activity
Radiotherapies for the Management of Thoracic, Digestive and Oral Tumors	Use external beam radiotherapy to treat lung cancer and avoid damage to secondary tissues
	Inject or administer a liquid radioactive source in patients with digestive tumors requiring systemic radiotherapy
	Implement molecular or radionuclide radiotherapy in patients suffering from rare conditions such as neuroendocrine gastroenteropancreatic tumor
Up-to-date Criteria for the Nutritional and Pain Approach in the Patient under Radiotherapeutic Treatment	Assess the use and contraindications of Morphine, oral Oxycodone and transdermal Fentanyl as major opioids for patients with acute oncologic pain
	Implement pharmacological therapy with non-steroidal anti-inflammatory drugs in the control of oncologic pain
	Check that the patient consumes adequate protein and calories to heal, fight infections and have enough energy
	Prevent cachexia or lack of fat fixation in oncology patients through specific diets
	Assess the relevance of enteral (tube feeding) or parenteral (directly into the bloodstream) nutrition in oncology patients who need assistance in swallowing food

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 for Practical Training

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

1. TUTOR: During the Hybrid Professional 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 Professional 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 Professional Master's Degree will receive a certificate accrediting their stay at the center.

5. EMPLOYMENT RELATIONSHIP: the Hybrid Professional 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 Professional 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. DOS NOT INCLUDE: The Hybrid Professional 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?

In order to ensure the best possible update, TECH offers specialists the opportunity to carry out this clinical internship in a prestigious health facility. From these facilities, they will have access to state-of-the-art resources and technologies for the performance of advanced Radiation Oncology procedures. In this way, they will be able to expand their vision of this medical field, developing the indispensable skills for its adequate development.

Get up-to-date on the most important developments in Radiation Oncology together with prestigious experts who master their theoretical and practical specificities with excellence"

The student will be able to complete the internship of this Hybrid Professional 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 Rosaleda

Country: Spain
City: La Coruña

Address: Rúa de Santiago León de Caracas, 1, 15701, Santiago de Compostela, A Coruña

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

Related internship programs:
- Hair Transplantation
- Orthodontics and Dentofacial Orthopedics

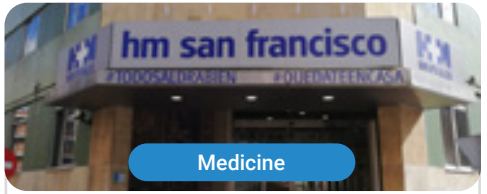
Hospital HM La Esperanza

Country: Spain
City: La Coruña

Address: Av. das Burgas, 2, 15705, Santiago de Compostela, A Coruña

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

Related internship programs:
- Oncology Nursing
- Clinical Ophthalmology



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 Madrid

Country: Spain
City: Madrid

Address: Pl. del Conde del Valle de Súchil, 16, 28015, Madrid

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

Related internship programs:
- Palliative Care
- Anaesthesiology and Resuscitation

Hospital HM Montepríncipe

Country: Spain
City: Madrid

Address: Av. de Montepríncipe, 25, 28660, Boadilla del Monte, Madrid

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

Related internship programs:
- Palliative Care
- Aesthetic Medicine

Hospital HM Torrelodones

Country: Spain
City: Madrid

Address: Av. Castillo Olivares, s/n, 28250, Torrelodones, Madrid

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

Related internship programs:
- Anaesthesiology and Resuscitation
- Palliative Care

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 Nuevo Belén

Country: Spain
City: Madrid

Address: Calle José Silva, 7, 28043, Madrid

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

Related internship programs:
- General and Digestive System Surgery
- Clinical Nutrition in Medicine

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

HM CIOCC - Centro Integral Oncológico Clara Campal

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:
- Gynecologic Oncology
- Clinical Ophthalmology

HM CIOCC Barcelona

Country: Spain
City: Barcelona

Address: Avenida de Vallcarca, 151, 08023, Barcelona

Network of private clinics, hospitals and specialized centers distributed throughout the spanish geography

Related internship programs:
- Advances in Hematology and Hemotherapy
- Oncology Nursing

HM CIOCC Galicia

Country: Spain
City: La Coruña

Address: Avenida das Burgas, 2, 15705, Santiago de Compostela

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

Related internship programs:
- Gynecologic Oncology
- Clinical Ophthalmology

Policlínico HM Cruz Verde

Country: Spain
City: Madrid

Address: Plaza de la Cruz Verde, 1-3, 28807, Alcalá de Henares, Madrid

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

Related internship programs:
- Advanced Clinical Podiatry
- Optical Technologies and Clinical Optometry

09

Methodology

This program offers students a different way of learning. Our methodology follows a cyclical learning process***: 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:

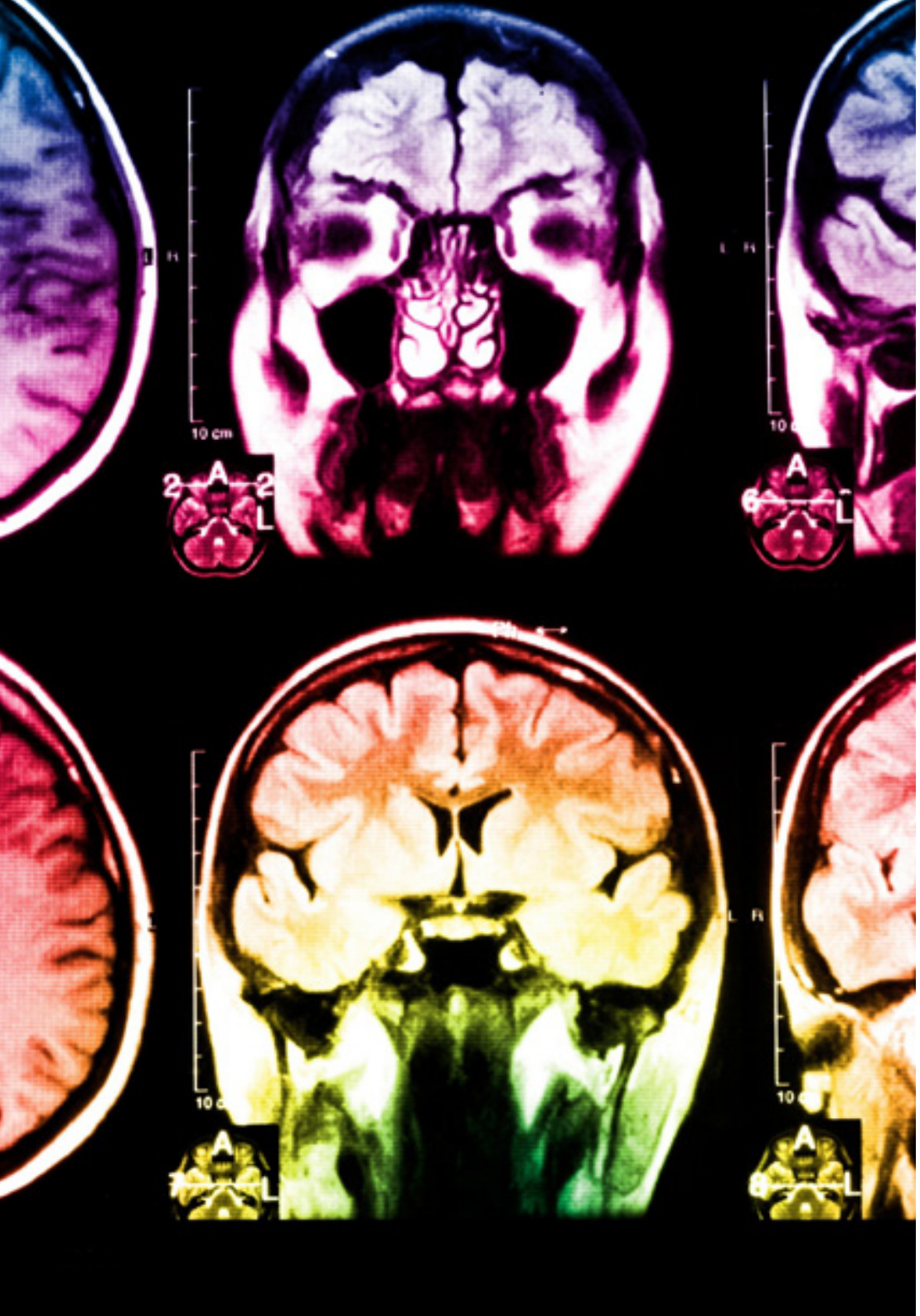
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better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

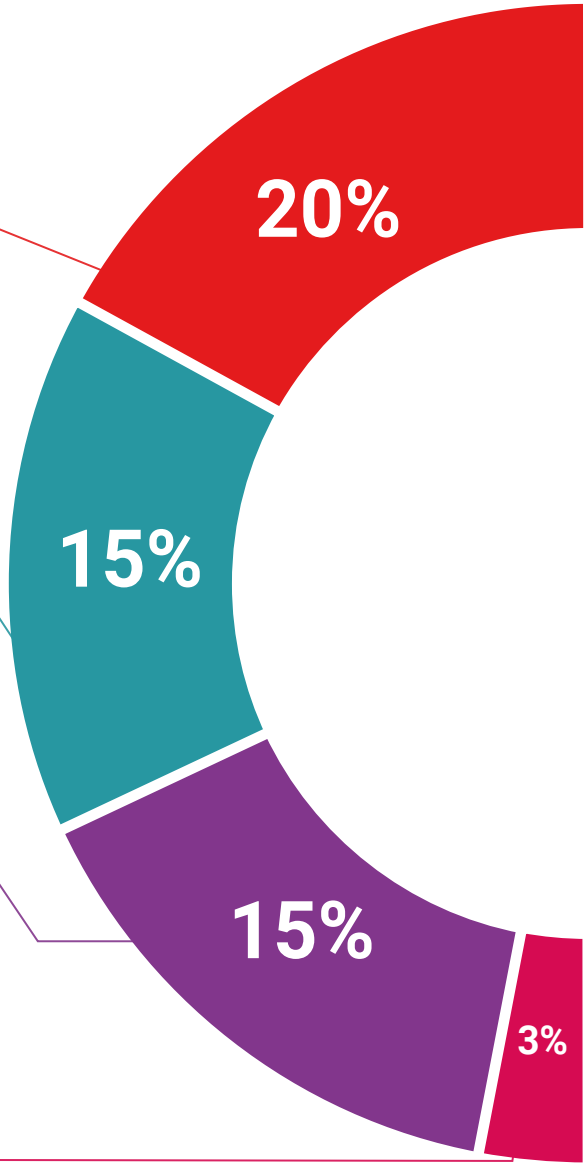
Interactive Summaries

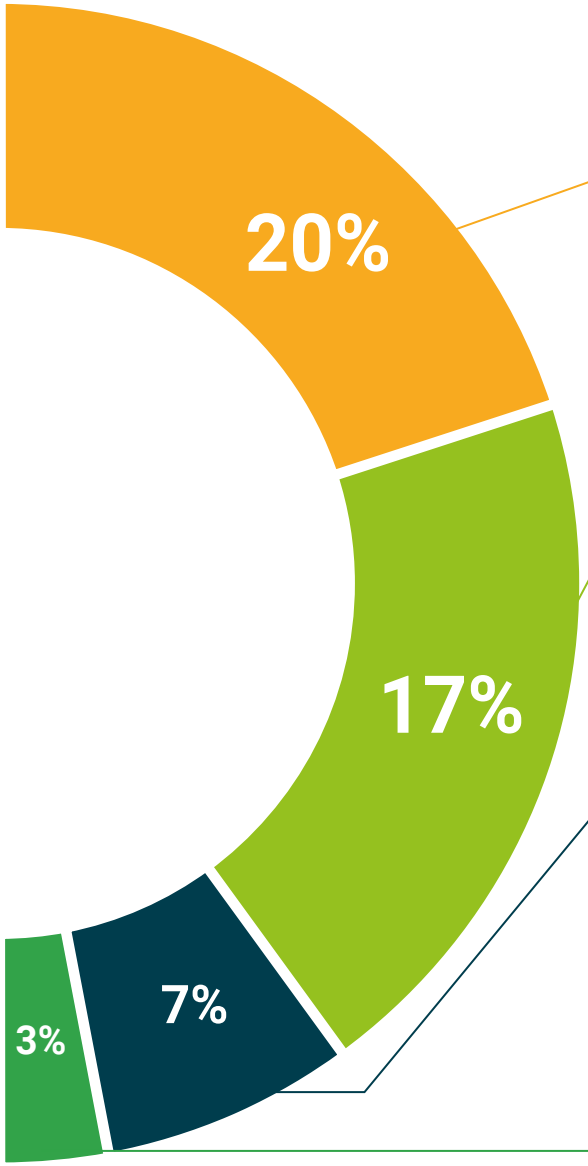
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Professional Master's Degree in Radiation Oncology guarantees students, in addition to the most rigorous and up-to-date education, access to a Hybrid Professional 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 Professional Master's Degree diploma in Radiation Oncology** 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 Professional Master's Degree in Radiation Oncology**

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 Professional Master's Degree in Radiation Oncology

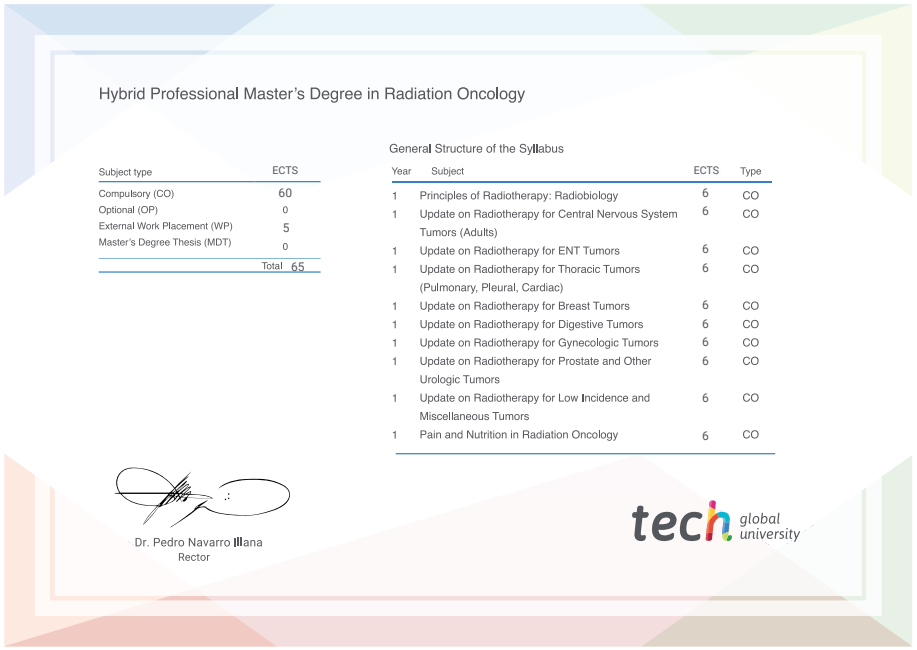
This is a program of 1,620 hours of duration equivalent to 65 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

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 Professional Master's Degree in Radiation Oncology

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
1	Principles of Radiotherapy: Radiobiology	6	CO
1	Update on Radiotherapy for Central Nervous System Tumors (Adults)	6	CO
1	Update on Radiotherapy for ENT Tumors	6	CO
1	Update on Radiotherapy for Thoracic Tumors (Pulmonary, Pleural, Cardiac)	6	CO
1	Update on Radiotherapy for Breast Tumors	6	CO
1	Update on Radiotherapy for Digestive Tumors	6	CO
1	Update on Radiotherapy for Gynecologic Tumors	6	CO
1	Update on Radiotherapy for Prostate and Other Urologic Tumors	6	CO
1	Update on Radiotherapy for Low Incidence and Miscellaneous Tumors	6	CO
1	Pain and Nutrition in Radiation Oncology	6	CO

Dr. Pedro Navarro Illana
Rector

tech global university

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

tech global university

Hybrid Professional Master's Degree

Radiation Oncology

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

Duration: **12 months**

Certificate: **TECH Global University**

60 + 5 créditos ECTS

Hybrid Professional Master's Degree

Radiation Oncology

tech global university