Professional Master's Degree

Applied Mastology and Breast Cancer Treatment

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Professional Master's Degree

Applied Mastology and Breast Cancer Treatment

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

Website: www.techtitute.com/in/medicine/professional-master-degree/master-applied-mastology-breast-cancer-treatment

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01

Introduction

In the last decade there has been an almost unstoppable growth in the prevalence of breast pathology, especially in the area of cancer. The WHO Global Cancer Observatory warns of a significant increase in emerging countries, generating notable health and socioeconomic problems. This has led to further research and experimentation in this field, which has produced significant advances in diagnostics and, above all, in patient management. This program reviews the main developments that the specialist must know in order to perform a complete update in Applied Mastology and Breast Cancer Treatment, presented by a teaching staff with extensive experience. All this in a 100% online format that respects the personal and professional responsibilities of the specialist.

The latest scientific, medical and healthcare advances in Applied Mastology and Breast Cancer Treatment, compiled in a comprehensive, high-performance program"

In the so-called precision oncology paradigm, the criteria of multimodality, individuality and patient-centeredness are constantly being renewed. This means that specialists must update their knowledge frequently, adapting to the exponential growth of scientific evidence and discoveries that are taking place in breast cancer research.

The increasing complexity of new treatments, as well as the introduction of neoadjuvant chemotherapy in the treatment of malignant pathology, oblige specialists to be informed about the most efficient management of resources and to obtain the best possible results in the approach to patients with breast pathology.

This program focuses precisely on updating the specialist through the latest education. All the content of the program has been prepared by a group of experts in Applied Mastology and Breast Cancer Treatment, who have placed special emphasis on uniting the most recent scientific postulates with the most effective clinical practice, improved over the years by their own professional experience.

To guarantee total flexibility for the specialist, TECH has promoted a completely online format for all the contents of this program. This means that they can be downloaded from any device with an internet connection, with no on-site classes or fixed schedules of any kind. The specialists are free to decide how to manage their own study time, adapting it to their own requirements.

This **Professional Master's Degree in Applied Mastology and Breast Cancer Treatment** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Practical cases presented by experts in breast pathology
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where the self-assessment process can be carried out to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions for experts and individual reflection work
- Access to content from any fixed or portable device with an Internet connection

The virtual classroom will be available 24 hours a day, so you decide when, where and how to take on the teaching load"

A unique Professional Master's Degree that perfectly combines the most effective pedagogy with the most innovative knowledge and techniques in the sector, with the flexibility that the active specialist needs"

The latest advances in the field of Applied Mastology and Breast Cancer Treatment compiled together in a highly efficient training program which will optimize your effort with the best results possible.

A program designed to allow you to implement the knowledge that you acquire almost immediately in your daily practice.

The program's teaching staff includes professionals from the sector who contribute their work experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive training 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 and experienced experts.

02

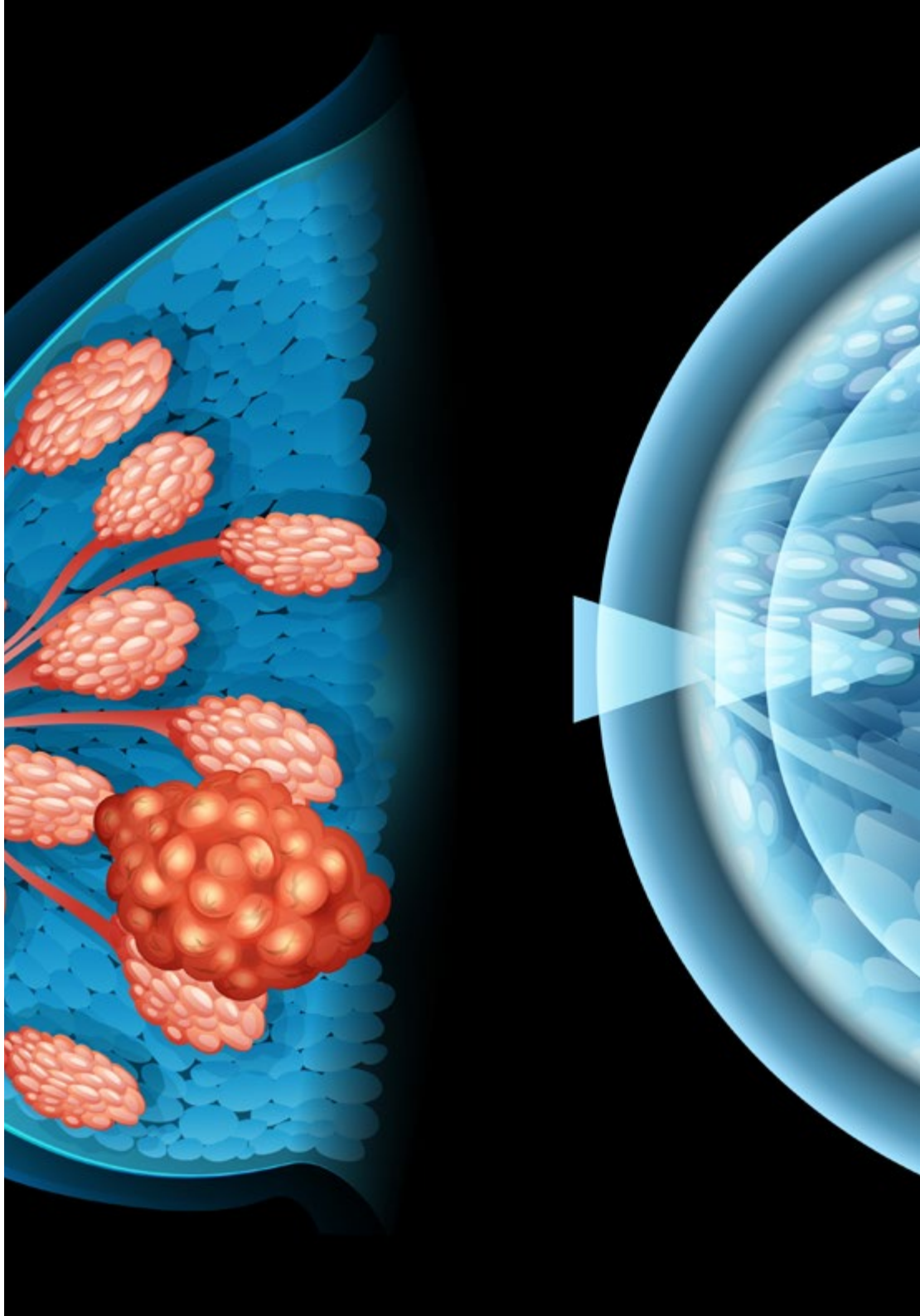
Objectives

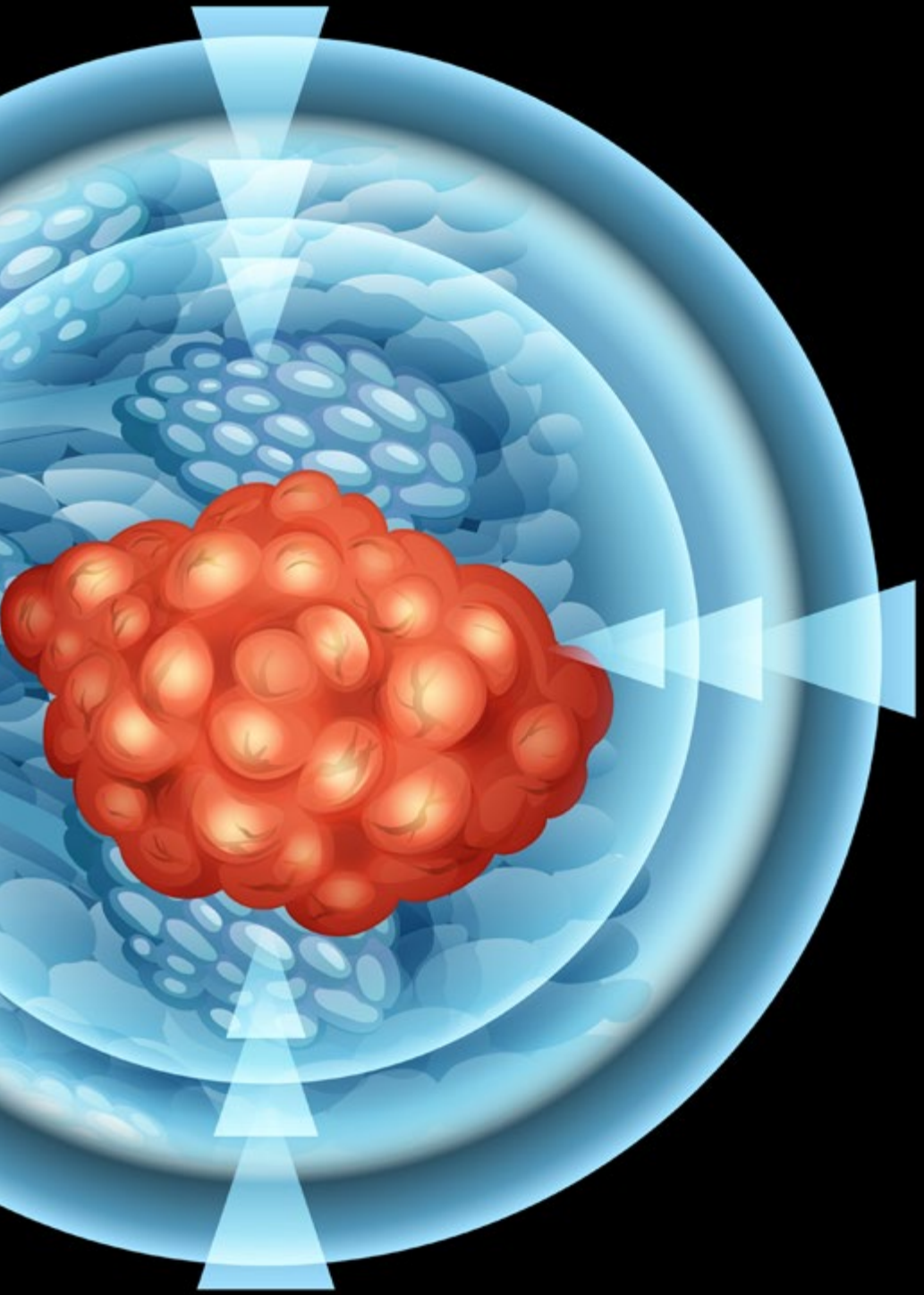
The objective of this Professional Master's Degree in Applied Mastology and Breast Cancer Treatment is to offer medical professionals a complete pathway to acquire advanced knowledge, abilities and skills for routine clinical practice, or get up to date on the latest developments in this area of intervention. A practical and effective way to keep you at the forefront of a constantly evolving profession.

Our objective is simple: help you to achieve the most complete up-to-date knowledge of new techniques and advances in Mastology and Breast Cancer in a Professional Master's Degree which is totally compatible with your personal and work commitments"

General Objectives

- Gain knowledge about all the concepts of embryology, anatomy, physiology and genetics applicable to the breast
- Know the natural history of breast cancer and its biological aspects
- Learn about early diagnostic techniques in breast diseases
- Gain knowledge about all the multidisciplinary teams and platforms related to mastology
- Get to know the different histological types of benign and malignant breast tumors
- Gain knowledge of how to deal with special situations in breast cancer
- Establish a series of alternatives for the management of benign breast pathology
- Gain knowledge of the surgical treatment of breast cancer
- Learn preoperative and postoperative care for breast pathology
- Apply prophylactic medical treatment of breast cancer
- Learn to deal with chemotherapy treatments in mammary carcinoma
- Know the different alternative immunotherapies and support therapies
- Apply different appropriate molecular techniques in each specific clinical case
- Provide tools to deal with situations of poor response and recurrence
- Learn how to deal with metastatic breast cancer
- Understand the aspects related to research and clinical trials in breast pathology
- Get to know the associations and support groups for patients





Specific Objectives

Module 1. Definition, History, Ethical Concepts, Epidemiology

- Acquire a broad and developed knowledge of Mastology and Senology and their historical perspective from classical antiquity to the present day
- In-depth study of the European Specialty Law and Specialty Law accreditation in America
- Know the role of the Spanish colleges of surgery as pioneers of Mastology applied to the treatment of Breast Cancer

Module 2. Diagnostics in Mastology

- Interpretation of radiology in breast pathology
- Properly manage the diagnosis of microcalcifications and distortion of breast architecture
- Explore pre-treatment clinical staging in breast cancer
- Learn in detail about the latest advances in diagnostic and interventional breast surgery

Module 3. Pathological Anatomy

- Delve into the characteristics of mammary embryology to obtain a broad and exhaustive knowledge of its characteristics
- Gain knowledge about the molecular types of breast cancer and the subtypes of triple negative breast cancer
- Get to know the latest scientific evidence related to the treatment of fibroepithelial and mesenchymal tumors
- Special emphasis on special clinicopathological situations in which genetic tumor syndromes are present

Module 4. Functional Anatomy

- Delve into the key points of vascularization in skin and areola preservation, as well as muscle preservation and local flaps
- In-depth knowledge of the latest developments in lymphatic drainage
- Study the radiological anatomy of the breast region and donor sites in reconstructive surgery
- Obtain a broad and specialized knowledge of the vascular, nervous and ganglionic content of the axillary cavity

Module 5. Embriology, Malformations and Intersexual States

- Delve into the embryology and physiology of the breast
- Have adequate medical knowledge to identify the different types of breast malformations and their characteristics
- Delve into the specifics of macromastia and micromastia for better clinical management
- Learn in detail about the latest oncological advances in the treatment of inflammatory breast diseases

Module 6. Locoregional Surgical Treatment in Malignant Breast Pathology

- Highlight the basics of breast conserving surgery and the incidence of lumpectomy
- In-depth understanding of the role of loco regional treatment within a multimodal, patient-based approach
- Identify the most current drugs in the treatment of malignant breast pathology, focusing on antibiotic and thromboembolic prophylaxis
- Describe the current modified radical mastectomy, with special emphasis on its indications and alternatives

Module 7. Plastic and Reconstructive Surgery

- Be able to implement in the professional practice of the graduate the most innovative strategies and techniques in augmentation, reduction and mastopexy
- Get to know the most effective indications, modalities and current techniques in prosthetic reconstruction in detail
- Obtain a comprehensive and up-to-date knowledge of the possible sequelae of breast-conserving surgery and their treatment
- Understand the importance of specialized scar management with patients who have undergone plastic and reconstructive surgery

Module 8. Systemic Therapy in Breast Cancer

- Update the graduate on cell cycle, oncogenesis and pharmacogenomics in Breast Cancer
- Perform a detailed approach to chemotherapy and its advances
- Learn about the latest developments with respect to target therapies and support
- Delve into the possible complications of breast cancer and their management depending on the affected area

Module 9. Radiotherapy

- Specify the indications for treatment with radiotherapy in patients with breast cancer
- Obtain a broad and comprehensive view of radiology and immunotherapy
- Gain knowledge about the new techniques of partial breast irradiation: IORT, SBRT and External Beam Radiation Therapy
- Detail the recommendations regarding the patient's lifestyle during radiological treatment

Module 10. Precision Oncology and Cancer

- Learn about the evolution of precision medicine, especially in its application in breast cancer
- Delve into targeted therapies based on personalized diagnosis through genetic testing
- Obtain a broad, specialized and up-to-date knowledge of epigenetics
- Improve their skills in intervention and management of breast cancer patients according to the most current and innovative therapies in the field of oncology

A unique, key and decisive educational experience to boost your professional development that will put you at the forefront of the professional world"

03

Skills

This Professional Master's Degree in Applied Mastology and Breast Cancer Treatment has been created as a training tool, through an intensive course that combines theory with practice, supported by real cases and an innovative learning concept. This intensive program allows you to acquire real skills that professionals need in their daily practice. A qualitative leap that will represent a significant advance in your professional and personal skills as a professional in this demanding sector.

With this Professional Master's Degree, you will be able to acquire the skills that will provide you with new ways to intervene and proceed in the field of mastology and breast cancer"

General Skills

- Possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context
- Apply acquired knowledge and problem-solving skills, in new or unfamiliar environments, within broader (or multidisciplinary) contexts related to the area 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 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

Specific Skills

- Have detailed knowledge of all the aspects related to the breast anatomy, physiology and genetics and its practical application with patients
- Establish diagnostic test systems for the various breast conditions both in a prophylactic manner and to determine the extent of malignant disease
- Determine the needs for the creation of and access to the different multidisciplinary units for benign and malignant breast pathology
- Perform an appropriate assessment and clinical orientation of the breast pathology
- Have exhaustive knowledge of the different types of benign breat pathology and the correct management and treatment for them
- Use surgical treatment of benign and malignant breast pathology in a minimally invasive and conventional manner
- Identify and classify the different types of axillary mammary conditions and implement the appropriate treatment for each of them
- Identify the situations in which it is necessary to implement breast and/or axillary radiotherapy
- Establish the appropriate systemic treatment for each patient along with the correct management of the complications that arise in association with it
- Describe new target therapies and the management of biologic treatments and immunotherapy in breast cancer
- Provide appropriate care to patients with early and locally advanced breast cancer
- Identify the peculiarities of locoregional recurrences and metastatic breast cancer
- Establish medical practice, according to the latest scientific evidence, in the application of breast cancer clinical trials
- Highlight the main scientific and patient associations in the field of breast pathology

This program will help you acquire the skills you need to excel in providing quality patient care"

04

Course Management

This comprehensive Master's Degree is presented by specialists in this field of work. Trained in different fields of clinical care and practice, they are all experienced in teaching and research and with the necessary management knowledge to provide a broad, systematic and realistic vision within the complexity of this field, this group of experts will accompany you throughout the program, putting their real and up-to-date experience at your service.

Learn the latest advances in medical procedures from leading professionals"

Management

Dr. Muñoz Madero, Vicente

- PhD in Medicine and Surgery, from the Complutense University of Madrid with Outstanding Cum Laude Qualification
- Postgraduate Degree: Audit of our 5-year experience in the surgical treatment of breast cancer: In search of a quality guide
- Specialization: European Board of Oncologic Surgery Qualification
- More than 25 courses and seminars of medical and scientific specialization in surgery and oncology at the best institutions in the world
- Numerous publications, research and presentations of international relevance in the medical and research fields in oncology, surgery and breast oncology

Professors

Dr. Benito Moreno, Luis M.

- Radiologist. Head of Breast Interventional Radiology Section for more than ten years at the Central de la Defensa "Gómez Ulla" Hospital in Madrid
- Clinical Professor of the Faculty of Medicine at Alcalá de Henares University and Coordinator of Breast Screening Program of the Autonomous Community of Madrid. Expert in International Cooperation in Cancer

Dr. Borobia Melero, Luis

- Degree in Medicine and Surgery from the Faculty of Medicine from the University of Zaragoza (1968-74)
- PhD in Medicine and Surgery from the Complutense University of Madrid (1987)

Dr. Flores Sánchez, Álvaro

- Specialist in Oncology Radiotherapy

Dr. García, Graciela

- Degree in Medicine and Surgery from the Medical University of Oviedo

Dr. García Marirrodriga, Ignacio

- Degree in Medicine and Surgery from the Autonomous University of Madrid (1995)
- Specialist in General and Digestive System Surgery (2008). Registered in Madrid

Ms. González Ageitos, Ana María

- Attending Oncology Physician, HVS Hospital Complex, Toledo

Dr. Hernández Gutiérrez, Jara

- RMI in General and Digestive System Surgery Department. Toledo Hospital Complex - Castilla-La-Mancha Health Service

Ms. Martín López, Irene

- Clinical Research Associate Trainee en OncoDNA-BioSequence
- Biotechnology Graduate
- Master's Degree in Biomedicine and Molecular Oncology
- Professional Master's Degree in Direction and Monitoring of Clinical Trials
- Expert in the scientific-technical field and clinical research project management in oncology, genetic and molecular biology
- Has worked as a scientific-technical coordinator in a company specializing in genetic and molecular diagnostic services and products, and as a Science Research Intern in a Molecular Medicine Laboratory

Dr. Muñoz Jiménez, Beatriz

- Resident Intern of General and Digestive System Surgery. Observership - Foregut Surgery Service (Dr SR DeMeester)

Dr. Muñoz Muñoz, Paula

- Degree in Medicine, Resident Intern of General and Digestive System Surgery of 5th year in the Ramón y Cajal Hospital (Madrid)

Dr. López, Escarlata

- Chief Medical Officer (CMO) of GenesisCare-Spain. Member of the Spanish National Commission of the Specialty. Accredited by the Health Quality Agency of the Andalusian Health Service (SAS) as an Expert in Radiation Oncology

Ms. Rodrigo Martínez, Ana Belén

- Responsible for national project coordination, scientific support and marketing (publications) and operations at OncoDNA-BioSequence
- Degree in Biotechnology
- Master's Degree in Clinical Trials and Clinical Research Associate (CRA) in OncoDNA-BioSequence
- Expert in Moelcular Biology, Genetics and Microbiology. Has worked in speciaized laboratories both in the Molecular Diagnostic Department as when as in the R&D Department developing new diagnostic kits and genetic tests
- Project management in research and development, oncology and laboratory work

Dr. Ruiz Martín, Juan

- PhD in Medicine since 2008, developed his diagnostic practice as a Pathologist in Toledo Hospital Complex. Head of Breast Pathology Department||

Dr. Serradilla, Ana

- Degree in Medicine and General Surgery. Specialist in Oncology Radiotherapy
- Postgraduate Doctorate Courses
- Obtaining Research Sufficiency

05

Structure and Content

The structure and contents of this program has been designed by a team of professionals who are aware of the relevance of training to be able to progress in the labor market with security and competitiveness, and to provide professional practice with the excellence that is only possible with the best training.

This Professional Master's Degree in Applied Mastology and Breast Cancer Treatment contains the most complete and up-to-date scientific program on the market"

Module 1. Definition, History, Ethical Concepts, Epidemiology

1.1. Introduction
1.2. Concept of Mastology-Senology
1.3. Historical Perspective of Mastology
1.4. First Historical References: Classical Greco-Roman Antiquity
1.5. The Middle Ages, Modern Times, the Enlightenment
1.6. Contemporary Era 19th century-present day
1.7. The Teaching of Mastology in Curricula Through the Ages
1.8. Spanish Colleges of Surgeons as Pioneers
1.9. Accreditation in the Law of Specialities in Europe
Accreditation in the Law of Specialities in America

Module 2. Diagnostics in Mastology

2.1. Introduction to Imaging Diagnosis in Mastology
2.2. Radiological Interpretation in Breast Pathology
2.3. Nodule and Asymmetric Breasts
2.4. Diagnostic Management of Microcalcifications and Distortion of the Breast Architecture
2.5. Mammary Interventionism
2.6. Pre-Treatment Clinical Staging in Breast Cancer
2.7. Other Indications of Mammary Magnetic Resonance
2.8. Treated and Operated Breast
2.9. Rare Breast Pathology: Special Situations
2.10. Advances in Mammary Diagnosis and Interventionism

Module 3. Pathologic Anatomy/Pathogenesis

3.1. Introduction to Breast Pathological Anatomy
3.1.1. Concepts. Anatomopathological Language
3.1.2. Methods for Studying Pathological Anatomy
3.1.3. Types of Samples
3.1.4. Clinical and Radiological Correlation
3.1.4.1. Surgical Specimen Orientation
3.1.5. Diagnosis: The Anatomopathological Report
3.1.6. Normal Breast

3.2. Benign Epithelial Tumors Papillary Neoplasms Premalignant Lesions
- 3.2.1. Benign Epithelial Proliferations and Precursors
  - 3.2.1.1. Usual Ductal Hyperplasia
  - 3.2.1.2. Columnar Cell Lesions, Including Flat Epithelial Atypia
  - 3.2.1.3. Atypical Ductal Hyperplasia
- 3.2.2. Adenosis and Benign Sclerosing Lesions
  - 3.2.2.1. Sclerosing Adenosis
  - 3.2.2.2. Adenosis and Apocrine Adenoma
  - 3.2.2.3. Adenosis Microglandular
  - 3.2.2.4. Radial Scar and Complex Sclerosing Lesion
- 3.2.3. Adenomas
  - 3.2.3.1. Tubular Adenoma
  - 3.2.3.2. Lactational Adenoma
  - 3.2.3.3. Ductal Adenoma
- 3.2.4. Epithelial-Myoepithelial Tumors
  - 3.2.4.1. Pleomorphic Adenoma
  - 3.2.4.2. Adenomyoepithelioma
- 3.2.5. Papillary Neoplasms
  - 3.2.5.1. Intraductal Papilloma
  - 3.2.5.2. Papillary Ductal Carcinoma in situ
  - 3.2.5.3. Encapsulated Papillary Carcinoma
  - 3.2.5.4. Solid Papillary Carcinoma in situ
- 3.2.6. Non-Invasive Lobular Neoplasia
  - 3.2.6.1. Atypical Lobular Hyperplasia
  - 3.2.6.2. Lobular Carcinoma in situ
- 3.2.7. Ductal Carcinoma in situ

3.3. Malignant Epithelial Tumors
- 3.3.1. Infiltrating Carcinoma and Subtypes
  - 3.3.1.1. Infiltrating Carcinoma Without a Special Subtype
  - 3.3.1.2. Microinfiltrating Carcinoma
  - 3.3.1.3. Infiltrating Lobular Carcinoma
  - 3.3.1.4. Tubular Carcinoma
  - 3.3.1.5. Cribriform Carcinoma
  - 3.3.1.6. Mucinous Carcinoma
  - 3.3.1.7. Mucinous Cystadenocarcinoma
  - 3.3.1.8. Infiltrating Micropapillary Carcinoma
  - 3.3.1.9. Infiltrating Solid Papillary Carcinoma
  - 3.3.1.10. Infiltrating Papillary Carcinoma
  - 3.3.1.11. Carcinoma with Apocrine Differentiation
  - 3.3.1.12. Metaplastic Carcinoma
- 3.3.2. Saliva Gland Type Carcinomas
  - 3.3.2.1. Acinar Cell Carcinoma
  - 3.3.2.2. Adenoid Cystic Carcinoma
  - 3.3.2.3. Secretor Carcinoma
  - 3.3.2.4. Mucoepidermoid Carcinoma
  - 3.3.2.5. Polymorphous Adenocarcinoma
  - 3.2.2.6. Tall Cell Carcinoma with Reverse Polarization
- 3.3.3. Neuroendocrine Neoplasms
  - 3.3.3.1. Neuroendocrine Tumor
  - 3.3.3.2. Neuroendocrine Carcinoma

3.4. Fibroepithelial Tumors Nipple-Areola Complex Tumors Hematolymphoid Tumors
- 3.4.1. Fibroepithelial Tumors
  - 3.4.1.1. Hamartoma
  - 3.4.1.2. Fibroadenoma
  - 3.4.1.3. Tumor Phyllodes
- 3.4.2. Nipple-Areola Complex Tumors
  - 3.4.2.1. Syringomatous Tumor
  - 3.4.2.2. Nipple Adenoma
  - 3.4.2.3. Paget's Disease of the Breast
- 3.4.3. Hematolymphoid Tumors
  - 3.4.3.1. MALT Lymphoma
  - 3.4.3.2. Follicular Lymphoma
  - 3.4.3.3. Diffuse Large B-cell Lymphoma
  - 3.4.3.4. Burkitt Lymphoma
  - 3.4.3.5. Anaplastic Large Cell Lymphoma Associated with Breast Implantation

3.5. Mesenchymal Tumors
- 3.5.1. Vascular Tumours
  - 3.5.1.1. Hemangioma
  - 3.5.1.2. Angiomatosis
  - 3.5.1.3. Atypical Vascular Lesions
  - 3.5.1.4. Primary Angiosarcoma
  - 3.5.1.5. Post-Radiation Angiosarcoma
- 3.5.2. Fibroblastic and Myofibroblastic Tumors
  - 3.5.2.1. Nodular Fascitis
  - 3.5.2.2. Myofibroblastoma
  - 3.5.2.3. Desmoid Fibromatosis
  - 3.5.2.4. Inflammatory Myofibroblastic Tumor
- 3.5.3. Peripheral Nerve Sheath Tumors
  - 3.5.3.1. Schwannoma
  - 3.5.3.2. Neurofibroma
  - 3.5.3.3. Granular Cells Tumor
- 3.5.4. Smooth Muscle Tumors
  - 3.5.4.1. Leiomyoma
  - 3.5.4.2. Leiomyosarcoma
- 3.5.5. Adipocytic Tumors
  - 3.5.5.1. Lipoma
  - 3.5.5.2. Angiolipoma
  - 3.5.5.3. Liposarcomas

3.6. Clinical Pathological Special Situations Genetic Tumor Syndromes
- 3.6.1. Clinical Pathological Special Situations
  - 3.6.1.1. Young Woman
  - 3.6.1.2. Pregnancy and Lactation
  - 3.6.1.3. Elderly Woman
  - 3.6.1.4. Men
  - 3.6.1.5. Hidden
  - 3.6.1.6. Inflammatory Carcinoma
- 3.6.2. Genetic Tumor Syndromes
  - 3.6.2.1. BRCA1/2-Associated Hereditary Breast and Ovarian Cancer Syndrome
  - 3.6.2.2. Cowden Syndrome
  - 3.6.2.3. Ataxia-Telangiectasia
  - 3.6.2.4. TP53-Associated Li-Fraumeni Syndrome
  - 3.6.2.5. CHEK2-Associated Li-Fraumeni Syndrome
  - 3.6.2.6. CDH1-Associated Breast Cancer
  - 3.6.2.7. Cancer Associated with PALB2
  - 3.6.2.8. Peutz-Jeghers Syndrome
  - 3.6.2.9. Neurofibromatosis Type I

3.7. Non-Tumorous Pathology
- 3.7.1. Pseudoangiomatous Stromal Hyperplasia
- 3.7.2. Diabetic Mastopathy
- 3.7.3. Fibrosis
- 3.7.4. Mondor Disease
- 3.7.5. Changes Due to Breastfeeding
- 3.7.6. Mastitis
  - 3.7.6.1. Mastitis Granulomatosa
  - 3.7.6.2. Mastitis Non-Granulomatosa

3.8. Prognosis
- 3.8.1. Tumor Grade
- 3.8.2. Pathological Staging
- 3.8.3. Surgical Border
- 3.8.4. Sentinel Lymph Node
  - 3.8.4.1. OSNA
- 3.8.5. Treatment-Oriented Immunohistochemistry Classes
- 3.8.6. Nomograms
  - 3.8.6.1. Cases

3.9. Prediction
- 3.9.1. Evaluation of Response to Neoadjuvant Treatment
- 3.9.2. Prediction of the Response to Chemotherapy Treatment
  - 3.9.2.1. Genetic Platforms Oncotye DX, Mamaprint, PAM50

3.9.3. Therapeutic Targets
3.9.4. NGS
3.9.5. Digital and Computational Pathology
3.9.5.1. Cases
3.10. Multimodality
3.10.1. Positive, Negative or Uncertain
3.10.2. Interpretation of Data in the Clinical Context
3.10.2.1. Statistics and Probability
3.10.3. Quality Control
3.10.3.1. Protocols
3.10.4. Pathologists in the Breast Unit
3.10.4.1. Difficult Cases: Rare tumors, Cccult Primary Tumors, Non-Breast OSNA, Very Long Monitoring Processes
3.10.5. Conclusions

Module 4. Functional Anatomy

4.1. Radiological Anatomy of the Mammary Region
4.2. Radiological Anatomy of the Donor Regions in Reconstructive Breast Surgery
4.3. Surgical Anatomy in Oncology and Reconstructive Surgery Topography, Anatomic Relations
4.4. Muscular Surroundings
4.5. Arterial and Venous Vascularization
4.5.1. Key Points of Vascularization in the Conservation of Skin and Areola
4.5.1. Key Points of Vascularization in the Muscular Preservation and Local Flaps
4.6. Lymphatic Drainage
4.7. Innervation
4.8. Axillary Cavity
4.8.1. Limits
4.8.2. Vascular Content
4.8.3. Nerve Content
4.8.4. Ganglionic Content, Berg Levels, Surgical Approaches to the Axilla
4.9. Internal Mammary Role in Free Flaps
4.10. Supraclavicular Region

Module 5. Embriology, Malformations, Intersexual States

5.1. Embryology
5.2. Physiology
5.3. Mammary malformations
  5.3.1. Polymastia
  5.3.2. Muscle Abnormalities and Agenesis Poland Syndrome
  5.3.3. Tubular Breasts
  5.3.4. Alterations of the Nipple-areola Complex
5.4. Macromastia and Micromastia
5.5. Gynecomastia
5.6. Intersexual Syndromes
5.7. Breast Cancer in Childhood and Adolescence:
  5.7.1. Environmental Causes
  5.7.2. Genetic Causes
5.8. Inflammatory Disease
  5.8.1. Acute Mastitis Abscess
  5.8.2. Chronic Mastitis
  5.8.3. Mondor Disease
  5.8.4. Plasmatic Cell Mastitis
  5.8.5. Periductal Mastitis
5.9. Systemic
  5.9.1. Sarcoidosis
  5.9.2. Granulomatosis
5.10. Burns in the Mammary Area in Childhood and Adolescence

Module 6. Locoregional Surgical Treatment in Malignant Breast Pathology

6.1. Role of Locoregional Treatment within a Patient-Based Multimodal Effort
  6.1.1. Pre-Therapeutic Diagnostic Assessment and Strategy
  6.1.2. Importance of Neoadjuvant Therapy
  6.1.3. Importance of Inflammation: Healing Reaction
  6.1.4. R0 Resection, Residual Disease and Therapeutic Consolidation Surgical
  6.1.5. Pre and Perioperative Care
    6.1.5.1. Antibiotic Prophylaxis
    6.1.5.2. Thromboembolic Prophylaxis
    6.1.5.3. MRSA Screening
    6.1.5.4. Position in the Operating Room
    6.1.5.5. Locoregional Analgesia
    6.1.5.6. Care Management
  6.1.6. Types of Surgical Procedure in Breast Cancer Selection Criteria
6.2. Conservative Breast Surgery: Fundamentals and Lumpectomy
  6.2.1. Indications
  6.2.2. Oncologic Principles
  6.2.3. Plastic Principles
  6.2.4. Guided Surgery
    6.2.4.1. Wire
    6.2.4.2. Markers
    6.2.4.3. Isotopic (ROLL)
    6.2.4.4. Seeds
  6.2.5. Tumorectomy
    6.2.5.1. Lymph Node Involvement
    6.2.5.2. Incisions
    6.2.5.3. Drainages
6.3. Conservative Breast Surgery: Oncoplastic Surgery
  6.3.1. Foundations, Pioneers and History
  6.3.2. Oncoplastic Procedures Quadrant by Quadrant
  6.3.3. Oncoplastic Procedures Divided into Central Breast, Mid Breast; Social Breast and Peripheral Breast
  6.3.4. Tubular Breasts and Breast Cancer

6.4. Reduction Mamoplasties and Breast Cancer
- 6.4.1. Indications
- 6.4.2. Types

6.5. Reduction Mammoplasties Quadrant by Quadrant
- 6.5.4. Contralateral Breast Symmetrization Mammoplasty

6.6. Mastectomy
- 6.6.1. Modified Radical Mastectomy Current Status
  - 6.6.1.1. Description of the Modified Radical Mastectomy in the Current Day: Indications and Alternatives
  - 6.6.1.2. Other Radical Mastectomies
- 6.6.2. Skin and CAP Conservative Mastectomy
- 6.6.3. Skin-Sparing Mastectomy
- 6.6.4. Reconstructive Aspects of Conservative Mastectomies
  - 6.6.4.1. Prosthesis, Meshes and Matrices
  - 6.6.4.2. Autologous Tissues
  - 6.6.4.3. Immediate Reconstruction - Deferred

6.7. Stage IV Surgery, Recurrence and Metastases
- 6.7.1. When and How to Operate on a Metastatic Breast Cancer
- 6.7.2. Role of Surgery in Locoregional Recurrence, Within a Multidisciplinary Effort
- 6.7.3. Role of Surgery in Locoregional Palliation Within a Multidisciplinary Effort
- 6.7.4. Surgery in Locally Advanced Cancer
- 6.7.5. Electrochemotherapy

6.8. Lymphatic Surgery in Breast Cancer Significance and Importance
- 6.8.1. Importance of Preoperative Axillary Diagnosis and Marking

6.9. Selective Sentinel Node Biopsy

6.10. Surgical Management of the Axilla Postneoadjuvant Therapy

Module 7. Plastic and Reconstructive Surgery

7.1. Augmentation Mammoplasty
- 7.1.1. In Benign Pathology
- 7.1.2. In Symmetrization Augmentation Mammoplasty vs. Contralateral Glandectomy and Reconstruction
- 7.1.3. In Reparation of Sequelae of Conservative Surgery Local Flaps

7.2. Reduction Mammoplasty and Mastopexy

7.3. Breast Reconstruction: Immediate, Deferred and Immediate-Deferred
- 7.3.1. Radiological and Surgical Anatomy of the Breast Reconstruction
- 7.3.2. Preoperative Vascular Map

7.4. Prosthetic Reconstruction: Indications, Modes and Techniques

7.5. Pedicled Autologous Flaps
- 7.5.1. Local: Thoracodorsal Flap
- 7.5.2. Distance Broad Dorsal
  - 7.5.2.2. TRAM Flap

7.6. Free Autologous Flaps
- 7.6.1. DIEP
- 7.6.2. Gracilis
- 7.6.3. Glute
- 7.6.4. Miscellaneous
- 7.6.5. CAP Reconstruction. Postoperative Management of Reconstructive Surgery

7.7. Sequelae Surgery

7.8. Sequelae of Conservative Breast Surgery and its Treatment

7.9. Scar Management

7.10. Lymphedema Surgery
- 7.10.1. Axillary Reverse Map
- 7.10.2. Surgical Management of Established Lymphedema

Module 8. Systemic Therapy in Breast Cancer

8.1. Cellular Cycle, Oncogenesis and Pharmacogenomics in Breast Cancer
8.2. Pharmacokinetics and Tumor Response
8.3. Hormone Therapy
  8.3.1. Basics of Hormone Therapy
  8.3.2. Drugs Used
    8.3.2.1. Selective Estrogen Receptor Modulators
    8.3.2.2. GnRH Analogs
    8.3.2.3. Aromatase Inhibitors
    8.3.2.4. Antiestrogens
    8.3.2.5. Antiprogestorens
    8.3.2.6. Antiandrogens
  8.3.3. Prophylactic
    8.3.3.1. Indications
    8.3.3.2. Drugs Used
      8.3.3.2.1. Tamoxifen
      8.3.3.2.2. Raloxifen
      8.3.3.2.3. Others
        8.3.3.2.3.1. Retinoids
        8.3.3.2.3.2. Cycloxygenase Inhibitors
        8.3.3.2.3.3. Phytoestrogens
        8.3.3.2.3.4. Statins
        8.3.3.2.3.5. Tibolone
        8.3.3.2.3.6. LHRH Analogs
        8.3.3.2.3.7. Bisphosphonates
        8.3.3.2.3.8. Calcium
        8.3.3.2.3.9. Selenium
        8.3.3.2.3.10. Vitamin D and E
        8.3.3.2.3.11. Lapatinib
        8.3.3.2.3.12. Metformin
  8.3.4. Adjuvant Therapy
    8.3.4.1. Indications
    8.3.4.2. Duration
    8.3.4.3. Early Disease
      8.3.4.3.1. Tamoxifen
      8.3.4.3.2. Aromatase Inhibitors
      8.3.4.3.3. LHRH Analogs
    8.3.4.4. Advanced Disease
      8.3.4.4.1. Tamoxifen
      8.3.4.4.2. Aromatase Inhibitors
      8.3.4.4.3. LHRH Analogs and Surgical Castration
      8.3.4.4.4. Cyclin 4-6 Inhibitors
  8.3.5. Neoadjuvant Therapy
    8.3.5.1. Indications
    8.3.5.2. Schemes
    8.3.5.3. Duration
8.4. Chemotherapy General Concepts
  8.4.1. Basics of Chemotherapy
    8.4.1.1. Importance of Dosage
    8.4.1.2. Resistance to Chemotherapy
  8.4.2. Drugs Used
8.5. First Line
  8.5.1. Anthracyclines
  8.5.2. Taxanes
  8.5.3. Paclitaxel
  8.5.4. Nab-Paclitaxel
  8.5.5. Docetaxel
  8.5.6. Others
    8.5.6.1. Other Lines
8.6. Adjuvant
  8.6.1. Early Disease
    8.6.1.1. Schemes

8.6.2. Advanced Disease
8.6.2.1. Indications
8.6.2.2. Schemes
8.6.3. Neoadjuvant
8.6.3.1. Indications and Outlines
8.7. Target Therapies
8.7.1. Drugs Used
8.7.1.1. Anti Her2
8.7.1.2. Anti Angiogenics
8.7.1.3. mTor Inhibitors
8.7.1.4. Cyclin Inhibitor
8.7.1.5. Tirosin Kinasa Inhibitor
8.7.2. Adjuvant
8.7.2.1. Indications
8.7.2.2. Schemes
8.7.3. Neoadjuvant
8.7.3.1. Indications
8.7.3.2. Schemes
8.8. Immunotherapy
8.9. Support Therapies
8.9.1. Colony Stimulators
8.9.2. Antiemetics
8.9.3. Heart Protectors
8.9.4. Anti-alopecia
8.10. Complications
8.10.1. Infection in the Neutropenic Patient
8.10.2. Fungal and Viral Infections in Patients During Chemotherapy
8.10.3. Endocrine and Metabolic Complications in Patients During Chemotherapy
8.10.4. Emergency Oncology

Module 9. Radiotherapy

9.1. Basis of Radiotherapy
9.1.1. Radiobiology
9.1.2. Immunotherapy
9.2. Indications of Radiotherapy Treatment in the Breast
9.2.1. Radiotherapy after Conservative Treatment
9.2.2. Radiotherapy after Mastectomy
9.2.3. Radiation Therapy After Neoadjuvant Chemotherapy
9.2.4. Radiotherapy on Ganglionic Chains
9.3. Fractionation in Breast Cancer
9.3.1. Normofractionation
9.3.2. Hypofractionation
9.4. New Techniques
9.4.1. Partial Breast Irradiation: IORT, SBRT, External Beam Radiation Therapy
9.5. Radiotherapy in E IV patients: Oligometastatic Disease Palliative Radiotherapy
9.6. Reirradiation in Breast Cancer Radioprophylaxis Radiation Induced Breast Neoplasms
9.7. Radiotherapy and Quality of Life
9.7.1. Toxicity
9.7.2. Life Habits During Radiotherapy Treatment
9.8. Surgery Coordinated with Radiotherapy: Advantages

Module 10. Precision Oncology and Breast Cancer

10.1. Genomic Phenomena in the Progression of Breast Cancer
10.2. Genome, Transcripto|me, Proteinome
10.3. Epigenetics
10.4. Germinal Line
10.5. Somatic Line
10.6. Fluid Biopsy
10.7. Risk signatures
10.8. Poor Responders
10.9. Relapse
10.10. Future

06

Methodology

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

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

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

At TECH we use the Case Method

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

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

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

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

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

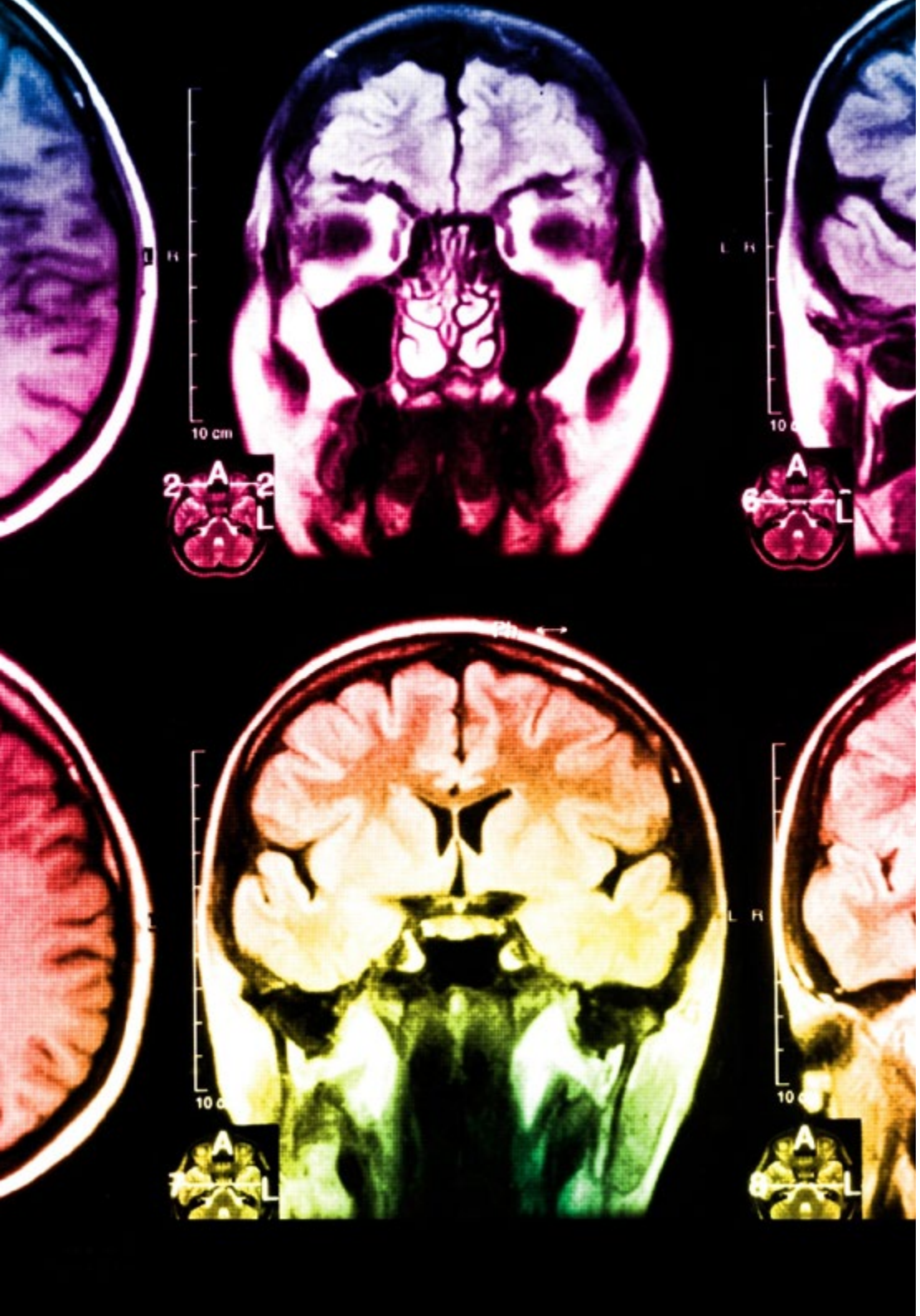
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better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

Relearning Methodology

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

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

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



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

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

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

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

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

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

Study Material

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

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

Surgical Techniques and Procedures on Video

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

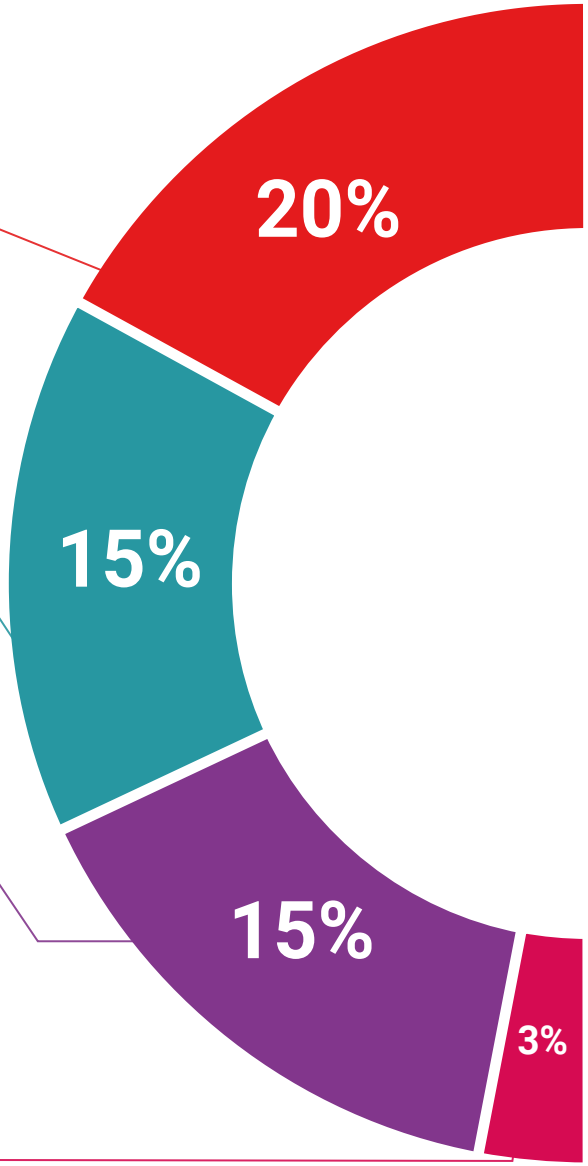
Interactive Summaries

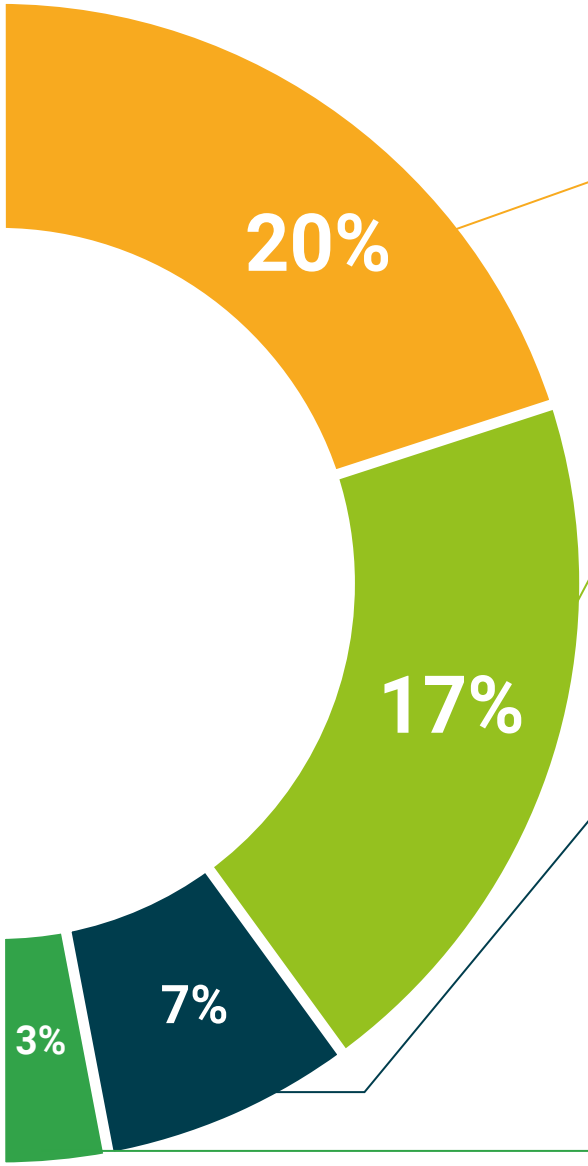
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

Additional Reading

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





Expert-Led Case Studies and Case Analysis

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

Testing & Retesting

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

Classes

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

Quick Action Guides

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

07

Certificate

The Professional Master's Degree in Applied Mastology and Breast Cancer Treatment guarantees you, in addition to the most rigorous and updated training, access to a Professional Master's Degree issued by TECH Global University.

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

Certificate

This program will allow you to obtain your **Professional Master's Degree certificate in Applied Mastology and Breast Cancer Treatment** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra (***official bulletin***). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

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

Title: **Professional Master's Degree in Applied Mastology and Breast Cancer Treatment**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**

tech global university

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

Professional Master's Degree in Applied Mastology and Breast Cancer Treatment

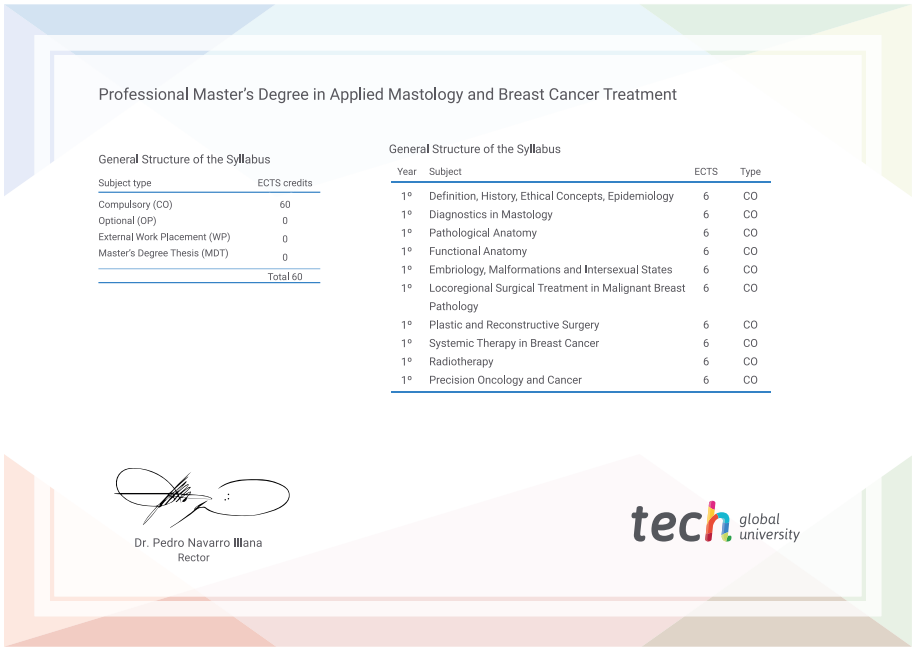
This is a program of 1,500 hours of duration equivalent to 60 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates



Professional Master's Degree in Applied Mastology and Breast Cancer Treatment

General Structure of the Syllabus

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

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	Definition, History, Ethical Concepts, Epidemiology	6	CO
1º	Diagnostics in Mastology	6	CO
1º	Pathological Anatomy	6	CO
1º	Functional Anatomy	6	CO
1º	Embriology, Malformations and Intersexual States	6	CO
1º	Locoregional Surgical Treatment in Malignant Breast Pathology	6	CO
1º	Plastic and Reconstructive Surgery	6	CO
1º	Systemic Therapy in Breast Cancer	6	CO
1º	Radiotherapy	6	CO
1º	Precision Oncology and Cancer	6	CO

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

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Professional Master's Degree

Applied Mastology and Breast Cancer Treatment

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

Professional Master's Degree

Applied Mastology and Breast Cancer Treatment

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