



Postgraduate Certificate

Pathological Anatomy in Mastology

Course Modality: Online

Duration: 6 weeks

Certificate: TECH Technological University

6 ECTS Credits

Teaching Hours: 150 hours.

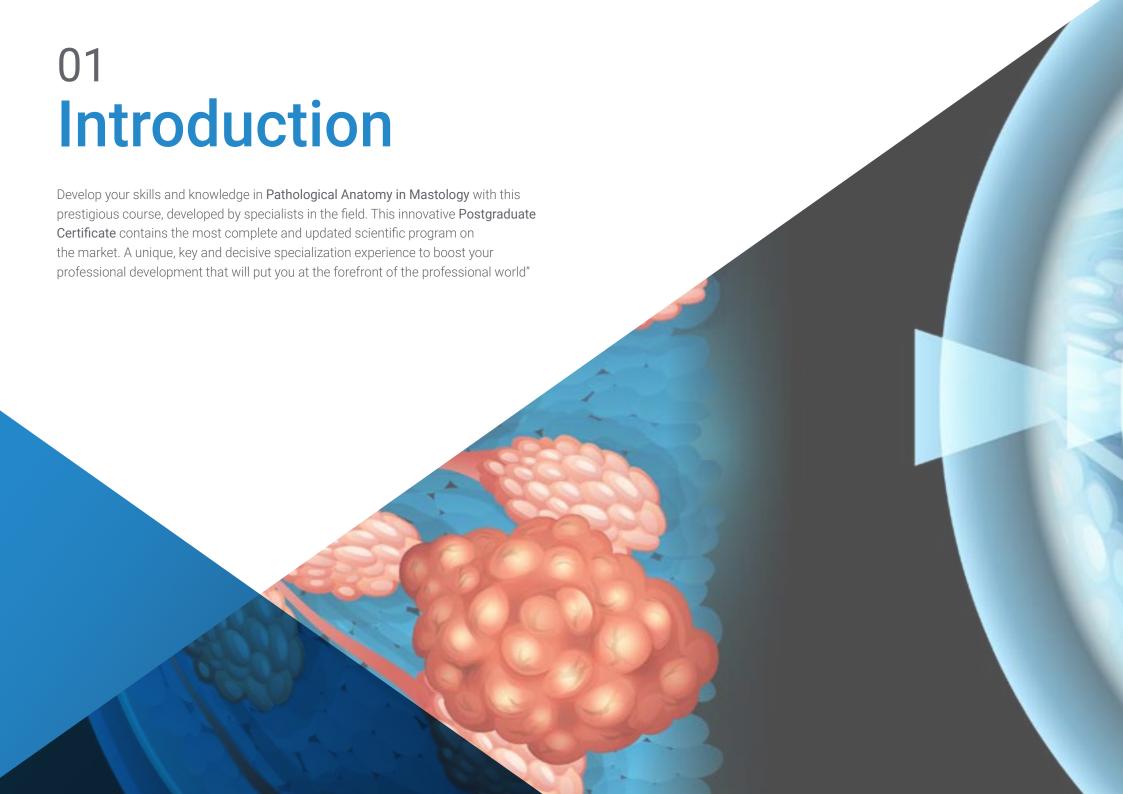
Website: www.techtitute.com/medicine/postgraduate-certificate/pathological-anatomy-mastology

Index

 $\begin{array}{c|c} 01 & 02 \\ \hline & & Objectives \\ \hline 03 & 04 & 05 \\ \hline Course Management & Structure and Content \\ \hline & & p. 12 \\ \hline \end{array}$ Methodology $\begin{array}{c|c} 05 & \\ \hline & & P. 22 \\ \hline \end{array}$

Certificate

p. 30





tech 06 | Introduction

The aspect concerning surgical, chemotherapy, radiotherapy and oncogenetic treatment during specialized medical training is relatively short and insufficient due to the lack of the necessary curricular time to go into it in depth. Because of this, many medical professionals in formation and specialists are demanding more training in this area. This is in addition to the evolution experienced in this field in recent years, both in the diagnostic space and, above all, in the management of patients; in this respect, the so-called precision oncology, with criteria of multimodality, individuality and patient-centeredness, would be a paradigm. Circumstances that make the constant renewal of knowledge necessary, since the current evolution is one of exponential growth to which it is difficult to adapt without the appropriate continuous training.

The growing complexity of new treatments and decision making, as well as the introduction of neoadjuvant chemotherapy in the treatment of malignant pathology, means that the physician responsible for the treatment of these patients must be familiar with all the new aspects in order to manage resources more efficiently and obtain the best results.

This **Postgraduate Certificate** has been developed to provide an effective and quality response to the intensive and compatible preparation needs that professionals in this area are requiring. A tour of the highest quality, from the hand of the best professionals in the sector.

This Postgraduate Certificate in Pathological Anatomy in Mastology contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- A large number of case studies presented by experts.
- Graphic, schematic, and highly practical contents.
- The latest developments and cutting-edge advances in this area
- Practical exercises where the self-evaluation process can be carried out to improve learning.
- Innovative and highly efficient methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments.
- Content that is accessible from any fixed or portable device with an Internet connection.





The latest advances in the area of Pathological Anatomy in Mastology compiled in a Postgraduate Certificate of high preparatory efficiency, which will optimize your effort with the best results"

The development of this **Postgraduate Certificate** is focused on the practice of the proposed theoretical learning. Through the most effective teaching systems, proven methods imported from the most prestigious universities in the world, you will be able to acquire new knowledge in a practical way. In this way, we strive to convert your efforts into real and immediate skills.

Our online system is another of the strengths of our training course. With an interactive platform that has the advantages of the latest technological developments, we put the most interactive digital tools at your service. This way, we can offer you a learning method that can be completely adapted to your needs, so that you can perfectly combine this training program with your personal or professional life.

A unique Postgraduate Certificate that perfectly combines preparatory intensity with the most innovative knowledge and techniques in the sector, with the flexibility that the working professional needs.

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



02 Objectives

The objective of this Postgraduate Certificate in Anatomic Pathology in Mastology is to offer medical professionals a comprehensive pathway to acquire advanced knowledge, competencies and skills for routine clinical practice, or to update 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.

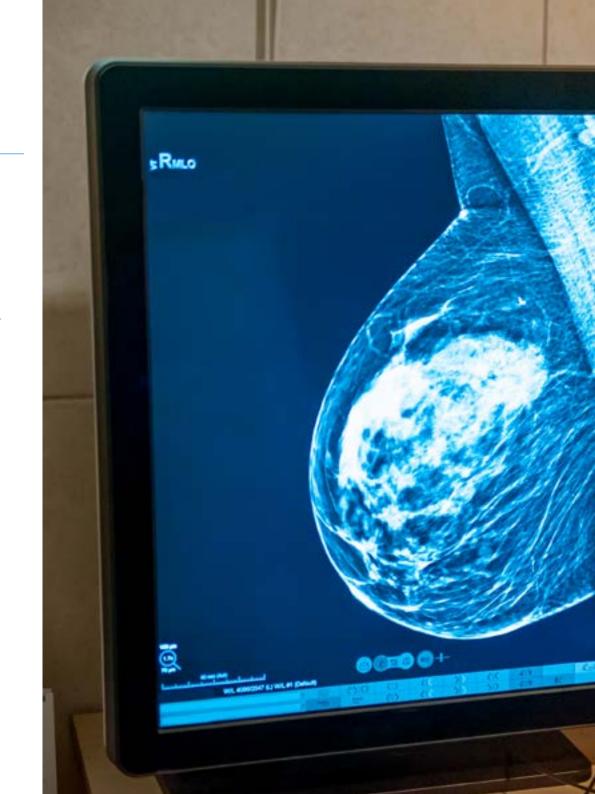


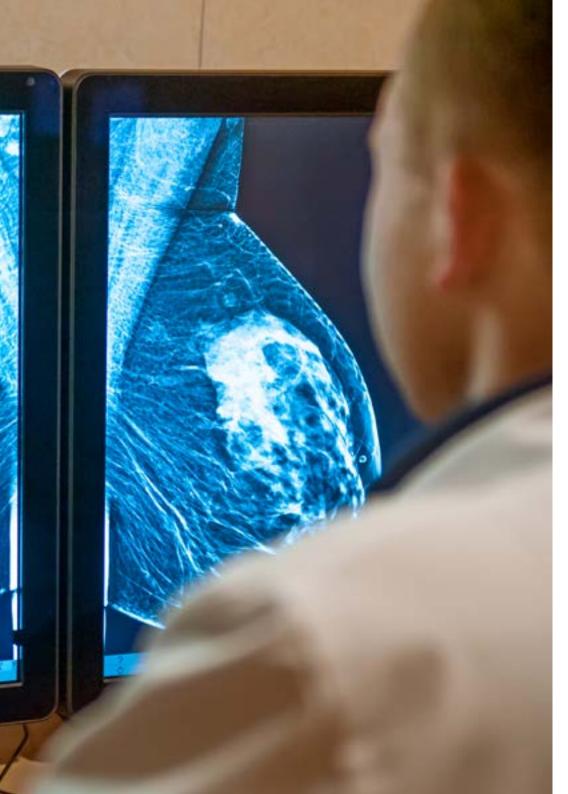
tech 10 | Objectives



General Objectives

- Gain knowledge of all concepts of embryology, anatomy, physiology and genetics applicable to the breast.
- Gain knowledge of the natural history of breast cancer and its biological aspects.
- Learn about early diagnostics techniques and breast pathology.
- Gain knowledge of all the multidisciplinary teams and platforms related to Mastology.
- Gain knowledge of the different histological types of benign and and malignant 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.
- Gain knowledge of the preoperative and postoperative care related to breast pathology.
- Apply prophylactic medical treatment of breast cancer.
- Learn how to deal with chemotherapy treatments in mammary carcinoma.
- Gain knowledge of the different immunotherapies and support therapies.
- Apply the different appropriate molecular techniques in each specific clinical case.
- Gain understanding of the provision of tools to deal with poor response and relapse situations.
- Learn how to deal with metastatic breast cancer.
- Gain knowledge of the aspects related to the research and clinical trials in breast pathology.
- Gain knowledge of the associations and support groups available to patients.







Don't miss the opportunity and get up to date on the latest developments in Pathological Anatomy in Mastology to incorporate them into your daily medical practice"

03 Course Management

This comprehensive **Postgraduate Certificate** is taught by specialists in this area of work. Trained in different fields of clinical care and practice, all of them are experienced in teaching and research. They have the necessary management knowledge to provide a broad, systematic and realistic vision within the complexity of this area. This group of experts will accompany you throughout the training, making their real and updated experience available to you.



tech 14 | Course Management

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. Luis Borobia Melero

- 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. Beatriz Muñoz Jiménez

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

Dr. Paula Muñoz Muñoz

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

Dr. Jara Hernández Gutiérrez

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

Dr. D.Ignacio García Marirrodriga

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

Dr. D Juán Ruiz Martín

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

Dr. D. Luis M. Benito Moreno

- 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.

Ana María González Ageitos

• Attending Oncology Physician, HVS Hospital Complex, Toledo.

Dr. Escarlata López

 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.

Dr. Graciela García

• Degree in Medicine and Surgery from the Medical University of Oviedo.

Dr. Ana Serradilla

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

Dr. Álvaro Flores Sánchez

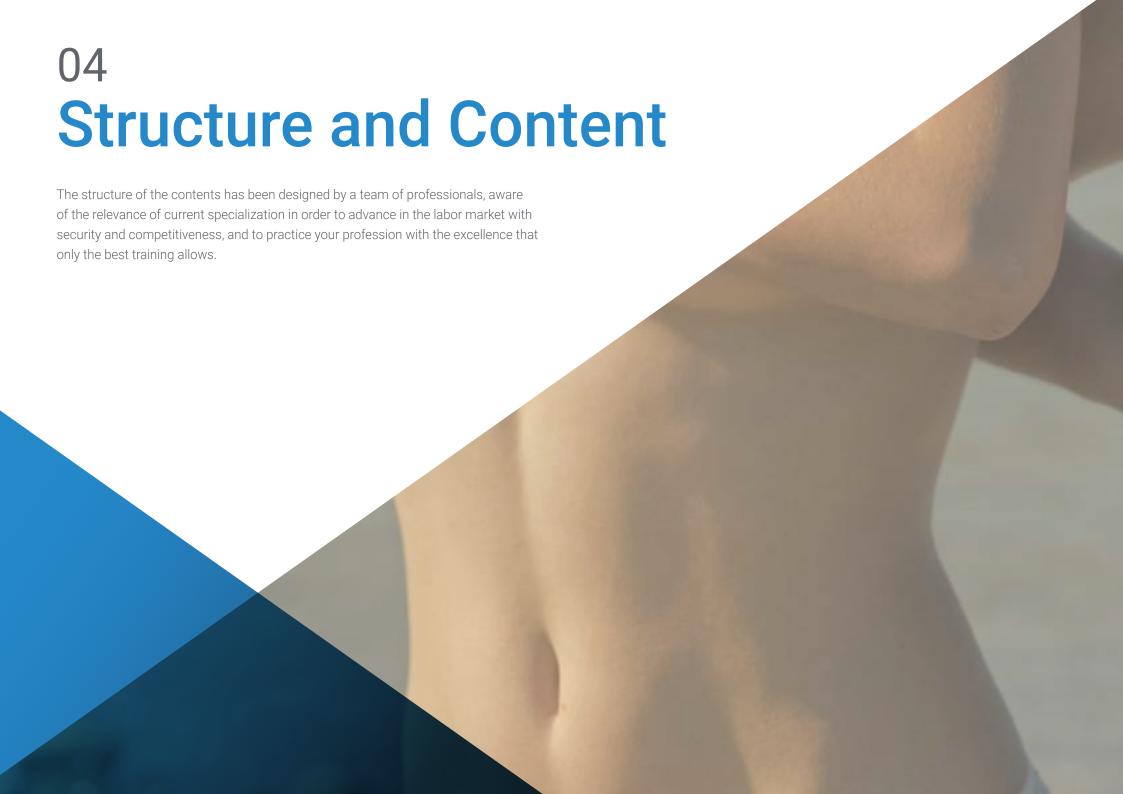
• Specialist in Oncology Radiotherapy.

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 Molecular Biology, Genetics and Microbiology, she has worked in specialized laboratories both in the molecular diagnostics department and in the R+D department developing new diagnostic kits and genetic tests.
- Project management in research and development, oncology and laboratory work.

Dr. Martín López, Irene

- Clinical Research Associate Trainee en OncoDNA-BioSequence.
- Biotechnology Graduate.
- Master's Degree in Biomedicine and Molecular Oncology.
- Master's Degree in Management 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.





tech 18 | Structure and Content

Module 1. Pathologic Anatomy/Pathogenesis

- 1.1. Introduction to Breast Pathological Anatomy.
 - 1.1.1. Concepts. Anatomopathological Language
 - 1.1.2. Methods for Studying Pathological Anatomy.
 - 1.1.3. Types of Samples.
 - 1.1.4. Clinical and Radiological Correlation.
 - 1.1.4.1. Surgical Specimen Orientation.
 - 1.1.5. Diagnostics: The Anatomopathological Report.
 - 1.1.6. Normal Breast
- 1.2. Benign Epithelial Tumors Papillary Neoplasms Premalignant Lesions.
 - 1.2.1. Benign Epithelial Proliferations and Precursors.
 - 1.2.1.1. Usual Ductal Hyperplasia.
 - 1.2.1.2. Columnar Cell Lesions, Including Flat Epithelial Atypia.
 - 1.2.1.3. Atypical Ductal Hyperplasia.
 - 1.2.2. Adenosis and Benign Sclerosing Lesions.
 - 1.2.2.1. Sclerosing Adenosis
 - 1.2.2.2. Adenosis and Apocrine Adenoma.
 - 1.2.2.3. Adenosis Microglandular
 - 1.2.2.4. Radial Scar and Complex Sclerosing Lesion.
 - 1.2.3. Adenomas
 - 1.2.3.1. Tubular Adenoma
 - 1.2.3.2. Lactational Adenoma
 - 1.2.3.3. Ductal Adenoma
 - 1.2.4. Epithelial-Myoepithelial Tumors.
 - 1.2.4.1. Pleomorphic Adenoma
 - 1.2.4.2. Adenomyoepithelioma
 - 1.2.5. Papillary Neoplasms
 - 1.2.5.1. Intraductal Papilloma
 - 1.2.5.2. Papillary Ductal Carcinoma in situ.
 - 1.2.5.3. Encapsulated Papillary Carcinoma.
 - 1.2.5.4. Solid Papillary Carcinoma in situ.

- 1.2.6. Non-Invasive Lobular Neoplasia.
 - 1.2.6.1. Atypical lobular hyperplasia
 - 1.2.6.2. Lobular Carcinoma in situ.
- 1.2.7. Ductal Carcinoma in situ.
- 1.3. Malignant Epithelial Tumors.
 - 1.3.1. Infiltrating Carcinoma and Subtypes.
 - 1.3.1.1. Infiltrating Carcinoma Without a Special Subtype.
 - 1.3.1.2. Microinfiltrating Carcinoma
 - 1.3.1.3. Infiltrating Lobular Carcinoma.
 - 1.3.1.4. Tubular Carcinoma
 - 1.3.1.5. Cribriform Carcinoma
 - 1.3.1.6. Mucinous Carcinoma
 - 1.3.1.7. Mucinous Cystadenocarcinoma
 - 1.3.1.8. Infiltrating Micropapillary Carcinoma.
 - 1.3.1.9. Infiltrating Solid Papillary Carcinoma.
 - 1.3.1.10. Infiltrating Papillary Carcinoma
 - 1.3.1.11. Carcinoma with Apocrine Differentiation.
 - 1.3.1.12. Metaplastic Carcinoma
 - 1.3.2. Saliva Gland Type Carcinomas.
 - 1.3.2.1. Acinar Cell Carcinoma.
 - 1.3.2.2. Adenoid Cystic Carcinoma.
 - 1323 Secretor Carcinoma
 - 1.3.2.4. Mucoepidermoid Carcinoma
 - 1.3.2.5. Polymorphous Adenocarcinoma
 - 1.2.2.6. Tall Cell Carcinoma with Reverse Polarization.
 - 1.3.3. Neuroendocrine Neoplasms
 - 1331 Neuroendocrine Tumor
 - 1.3.3.2. Neuroendocrine Carcinoma
- 1.4. Fibroepithelial Tumors Nipple-areola complex Tumors Hematolymphoid Tumors
 - 1.4.1. Fibroepithelial Tumors
 - 1.4.1.1. Hamartoma
 - 1.4.1.2. Fibroadenoma.
 - 1.4.1.3. Tumor Phyllodes

Structure and Content | 19 tech

- 1.4.2. Nipple-areola Complex Tumors.
 - 1.4.2.1. Syringomatous Tumor
 - 1.4.2.2. Nipple Adenoma
 - 1.4.2.3. Paget's Disease of the Breast.
- 1.4.3. Hematolymphoid Tumors
 - 1.4.3.1. MALT Lymphoma
 - 1.4.3.2. Follicular Lymphoma
 - 1.4.3.3. Diffuse Large B-cell Lymphoma.
 - 1.4.3.4. Burkitt's lymphoma.
 - 1.4.3.5. Anaplastic Large Cell Lymphoma Associated with Breast Implantation.
- 1.5. Mesenchymal Tumors
 - 1.5.1. Vascular Tumors.
 - 1.5.1.1. Hemangioma
 - 1.5.1.2. Angiomatosis
 - 1.5.1.3. Atypical Vascular Lesions.
 - 1.5.1.4. Primary Angiosarcoma
 - 1.5.1.5. Post-Radiation Angiosarcoma
 - 1.5.2. Fibroblastic and Myofibroblastic Tumors.
 - 1.5.2.1. Nodular Fascitis
 - 1.5.2.2. Myofibroblastoma
 - 1.5.2.3. Desmoid Fibromatosis
 - 1.5.2.4. Inflammatory Myofibroblastic Tumor.
 - 1.5.3. Peripheral Nerve Sheath Tumors.
 - 1.5.3.1. Schwanoma
 - 1.5.3.2. Neurofibroma
 - 1.5.3.3. Granular Cells Tumor.
 - 1.5.4. Smooth Muscle Tumors.
 - 1.5.4.1. Leiomyoma
 - 1.5.4.2. Leiomyosarcoma
 - 1.5.5. Adipocytic Tumors.
 - 1.5.5.1. Lipoma
 - 1.5.5.2. Angiolipoma
 - 1.5.5.3. Liposarcomas

- 1.6. Clinical Pathological Special Situations Genetic Tumor Syndromes.
 - 1.6.1. Clinical Pathological Special Situations
 - 1.6.1.1. Young Woman
 - 1.6.1.2. Pregnancy and Lactation.
 - 1.6.1.3. Elderly Woman
 - 1.6.1.4. Men
 - 1.6.1.5. Hidden
 - 1.6.1.6. Inflammatory Carcinoma
 - 1.6.2. Genetic Tumor Syndromes.
 - 1.6.2.1. BRCA1/2-Associated Hereditary Breast and Ovarian Cancer Syndrome.
 - 1.6.2.2. Cowden Syndrome.
 - 1.6.2.3. Ataxia-Telangiectasia.
 - 1.6.2.4. TP53-Associated Li-Fraumeni Syndrome.
 - 1.6.2.5. CHEK2-Associated Li-Fraumeni Syndrome.
 - 1.6.2.6. CDH1-Associated Breast Cancer
 - 1.6.2.7. Cancer Associated with PALB2.
 - 1.6.2.8. Peutz-Jeghers Syndrome.
 - 1.6.2.9. Neurofibromatosis Type I.
- 1.7. Non-Tumorous Pathology.
 - 1.7.1. Pseudoangiomatous Stromal Hyperplasia.
 - 1.7.2. Diabetic Mastopathy
 - 173 Fibrosis
 - 1.7.4. Mondor Disease
 - 1.7.5. Changes Due to Breastfeeding.
 - 1.7.6. Mastitis
 - 1.7.6.1. Mastitis Granulomatosa
 - 1.7.6.2. Mastitis Non-Granulomatosa.

tech 20 | Structure and Content

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- 1.8.1. Tumor Grade
- 1.8.2. Pathological Staging
- 1.8.3. Surgical Border
- 1.8.4. Sentinel Lymph Node.

1.8.4.1. OSNA

- 1.8.5. Treatment-Oriented Immunohistochemistry Classes.
- 1.8.6. Nomograms

1.8.6.1. Cases

1.9. Prediction

- 1.9.1. Evaluation of Response to Neoadjuvant Treatment.
- 1.9.2. Prediction of the Response to Chemotherapy Treatment.

1.9.2.1. Genetic Platforms Oncotye DX, Mamaprint, PAM50.

- 1.9.3. Therapeutic Targets
- 1.9.4. NGS
- 1.9.5. Digital and Computational Pathology.

1.9.5.1. Cases

1.10. Multimodality

- 1.10.1. Positive, Negative or Uncertain.
- 1.10.2. Interpretation of Data in the Clinical Context.

1.10.2.1. Statistics and Probability.

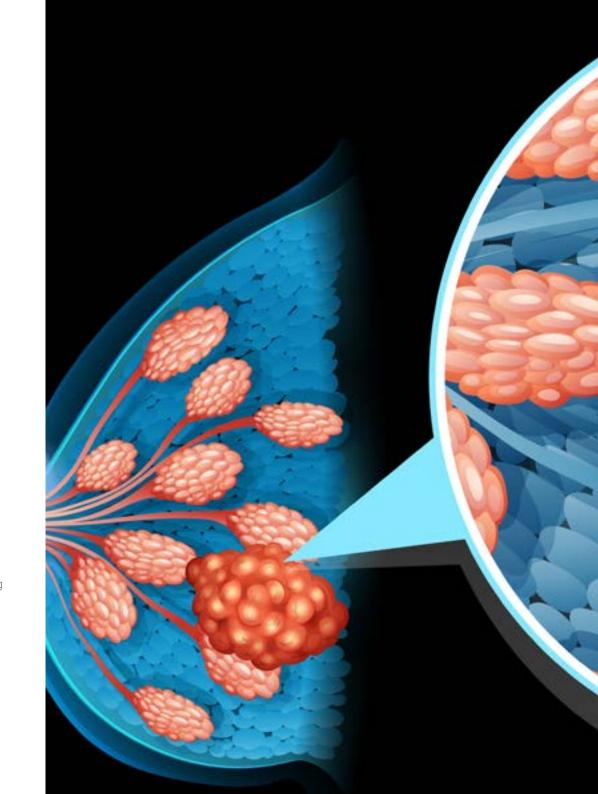
1.10.3. Quality Control

1.10.3.1. Protocols.

1.10.4. Pathologists in the Breast Unit.

1.10.4.1. Difficult Cases: are tumors, occult primary, non-breast OSNA, very long monitoring processes.

1.10.5. Conclusions

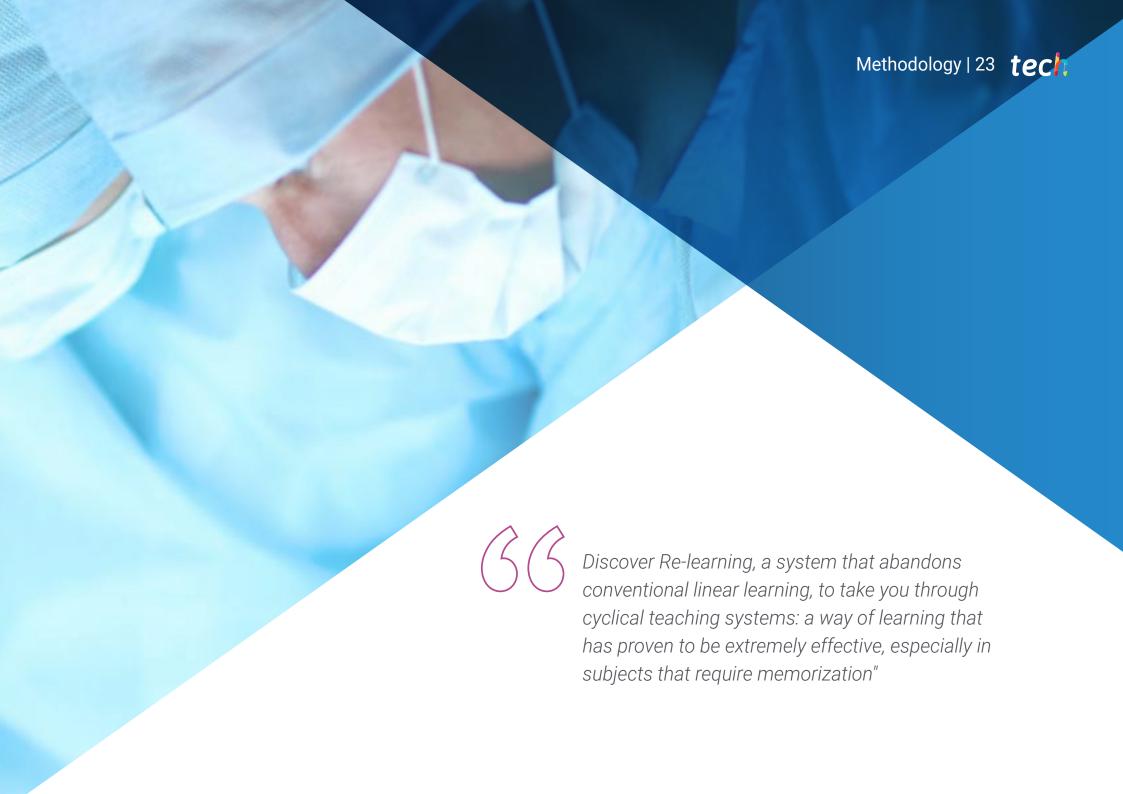






A unique, key and decisive training experience to boost your professional development"





tech 24 | Methodology

At TECH we use the Case Method

In a given situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you can 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 potential 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:

- Students who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
- 2. The learning process has a clear focus on 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.
- 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.

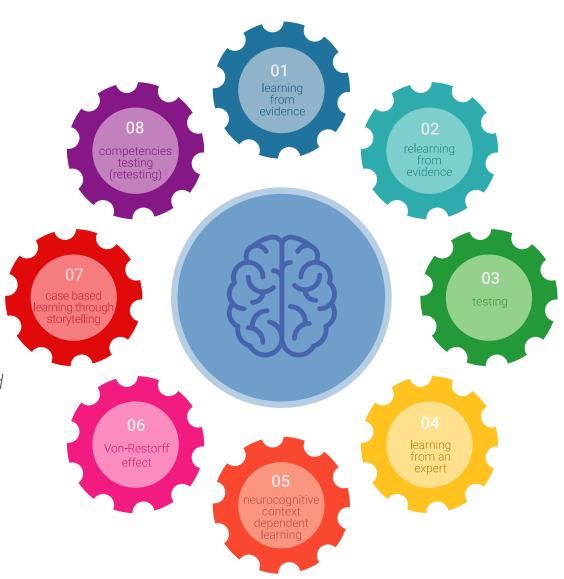


Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our 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, which represent a real revolution with respect to simply studying and analyzing cases.

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





Methodology | 27 tech

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

With this methodology we have trained more than 250,000 physicians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socioeconomic profile and an average age of 43.5 years.

Re-learning will allow you to learn with less effort and better performance, involving you more in your training, 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 (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

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

In this program you will have access to the best educational material, prepared with you 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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Latest Techniques and Procedures on Video

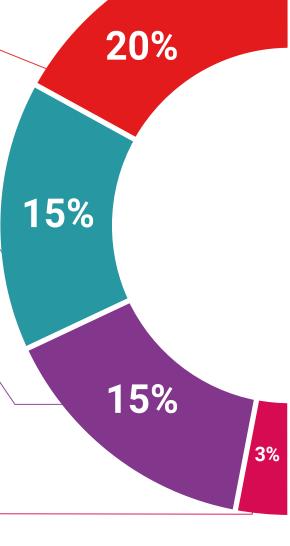
We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



Interactive Summaries

We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

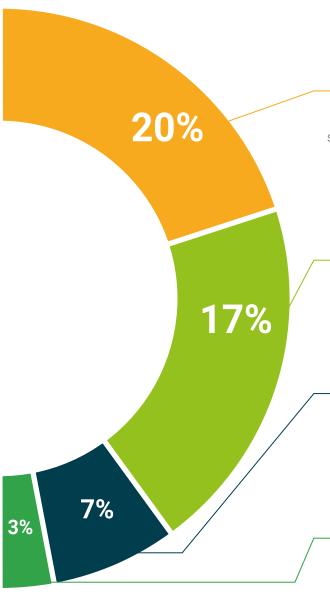
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".





Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.



Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



Testing & Re-testing

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



Classes

There is scientific evidence suggesting that observing third-party experts can be useful.





Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.







tech 32 | Certificate

This **Postgraduate Certificate in Pathological Anatomy in Mastology** contains the most complete and up-to-date scientific program on the market.

After the student has passed the evaluations, they will receive by mail with acknowledgment of receipt their corresponding **Postgraduate Certificate** issued by **TECH Technological University.**

The diploma issued by **TECH Technological University** will specify the qualification obtained through the **Postgraduate Certificate**, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: Postgraduate Certificate in Pathological Anatomy in Mastology

ECTS: 6

Official Number of Hours: 150



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



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