

Hybrid Master's Degree Pulmonology



Hybrid Master's Degree Pulmonology

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 créditos ECTS

Website: www.techtute.com/us/medicine/hybrid-master-degree/mhybrid-master-degree-pulmonology

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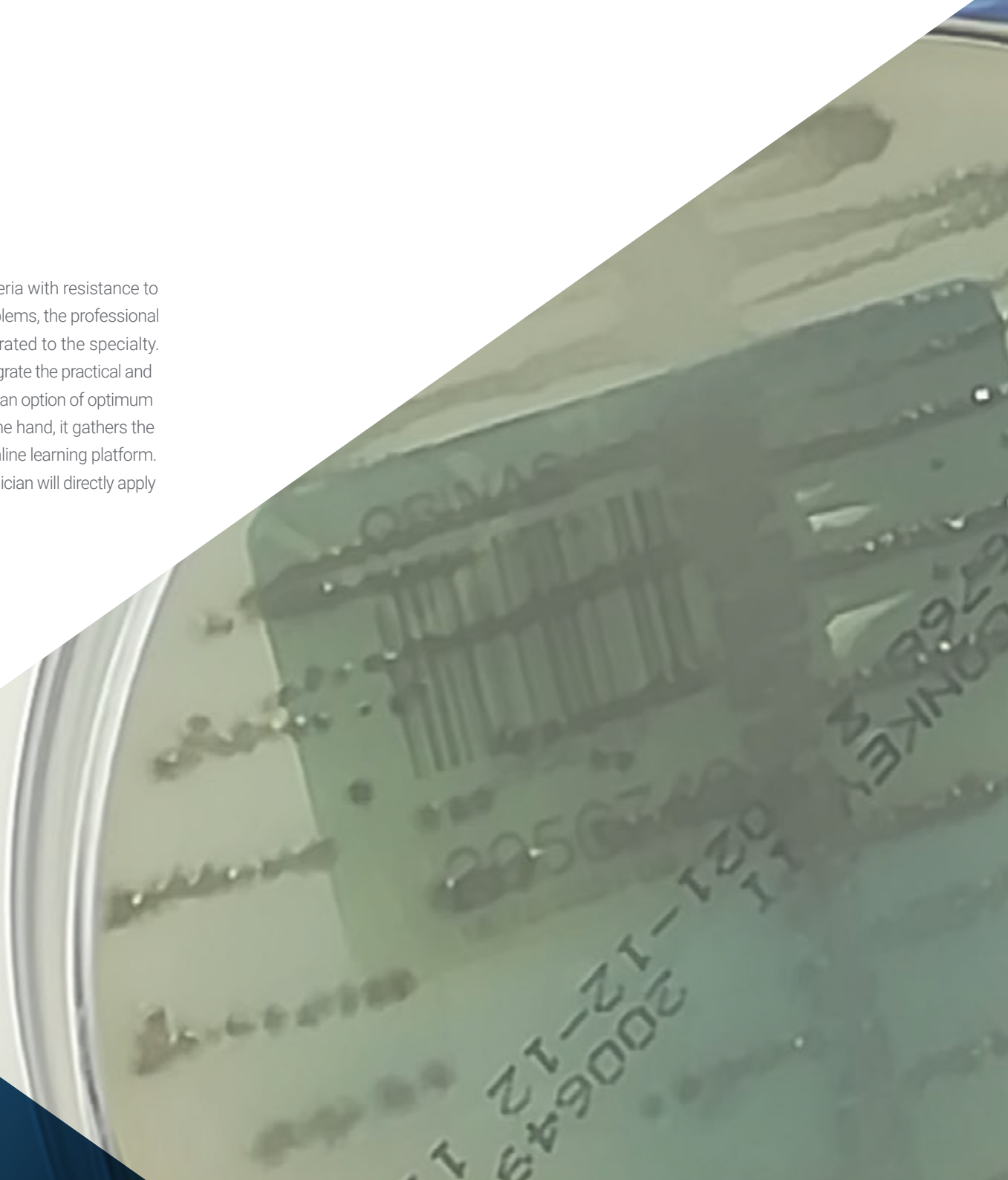
Certificate

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01

Introduction

Pulmonologists frequently face complex pathologies, such as respiratory bacteria with resistance to the most sophisticated pharmacological treatments. In order to solve these problems, the professional must keep up-to-date on the latest protocols and technological tools incorporated to the specialty. Paradoxically, the educational market does not offer pedagogical options that integrate the practical and theoretical mastery of these new elements. In view of this context, this program is an option of optimum quality since, with an innovative academic modality, it solves the issue. On the one hand, it gathers the theoretical contents in a comprehensive and accessible syllabus from a 100% online learning platform. On the other hand, it provides a 3-week intensive on-site internship, where the physician will directly apply their new skills in a prestigious health institution.



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This program accumulates 1,620 didactic hours through which you will obtain the most up-to-date theoretical and practical education in Pulmonology in the educational market”

In recent times, the scientific and technological evolution in the medical field has allowed the development of more efficient diagnostic and treatment procedures. Pulmonology has benefited considerably from this process and as a result, procedures are now applied, with maximum guarantees, for the comprehensive approach to complex pathologies such as pneumonia, cystic fibrosis or tuberculosis. In addition, the specialty also has protocols of greater impact in the management of asthmatic patients and other chronic respiratory diseases. Furthermore, new technologies have led to better surgical intervention strategies for patients who need lung transplants or the removal of tumors in any of the organs of this anatomical system.

Maintaining a mastery of all these advances is a challenge for the specialist. For this reason, TECH offers a Hybrid Master's Degree program that, like no other, will bring them up-to-date on all aspects of recent application in this field of health. With this program, the medical professional will have to complete 1,500 hours of theoretical learning, in a 100% online and interactive platform. It will provide concepts of interest, based on the latest scientific evidence, of mandatory knowledge for the professional practice of Pulmonology.

In addition, for the assimilation of these contents, they will be supported by modern didactic methodologies such as Relearning and the syllabus will be taught by a prestigious teaching staff. Specifically, a guest director of international renown will be in charge of giving several master classes on Pulmonary Hypertension and rehabilitation of the Respiratory System.

After completing these studies, the pulmonologist will participate in a practical and on-site internship in a first-class health facility in the field of Pulmonology. Through their transit through these institutions, they will be able to apply procedures learned in the previous phase on real patients, with pathologies of diverse complexity. Therefore, for 3 weeks, the specialist will be guided by experts of international prestige who will supervise their academic progress and will facilitate the management of the most distinctive innovations of this professional field of health.

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

- ♦ Development of more than 100 clinical cases presented by pulmonology professionals, showing the different methodologies for approaching pathologies in the respiratory system
- ♦ 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
- ♦ Assessment and monitoring of patients with pulmonology conditions in accordance with the latest recommendations for diagnosis and treatment
- ♦ Comprehensive systematized action plans for the main pulmonology pathologies
- ♦ 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 of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is accessible from any fixed or portable device with an Internet connection
- ♦ Furthermore, they will be able to carry out a clinical internship in one of the best hospitals

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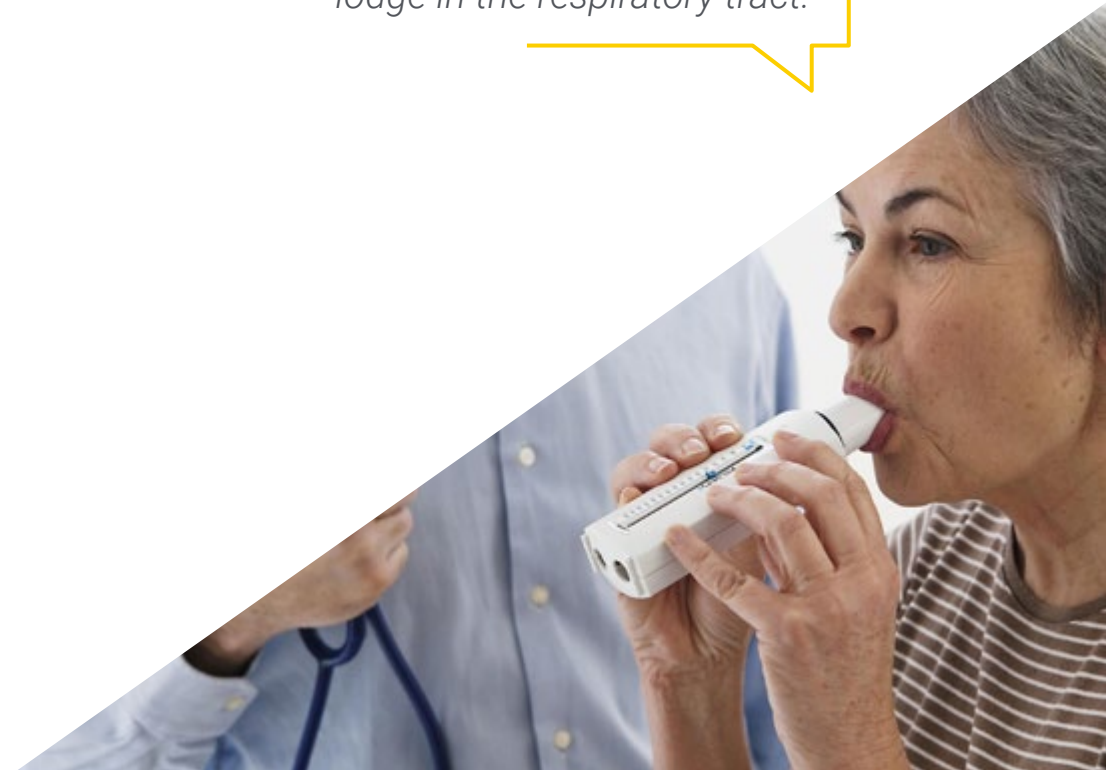
The clinical internship of this Hybrid Master's Degree, which lasts 3 weeks, is a unique opportunity to apply all your skills in the care of real patients with different respiratory pathologies”

In this Hybrid Master's Degree proposal, of a professionalizing ture and blended learning modality, the program is aimed at updating of Pulmonology rofessionals. The contents are based on the latest scientific evidence, and oriented in a educational way to integrate theoretical knowledge in the medical practice, and the theoretical-practical elements will 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, the student will be assisted by an innovative interactive video system created by renowned experts.

With this program you will apply the most innovative techniques for the management of patients with asthma and other chronic respiratory pathologies.

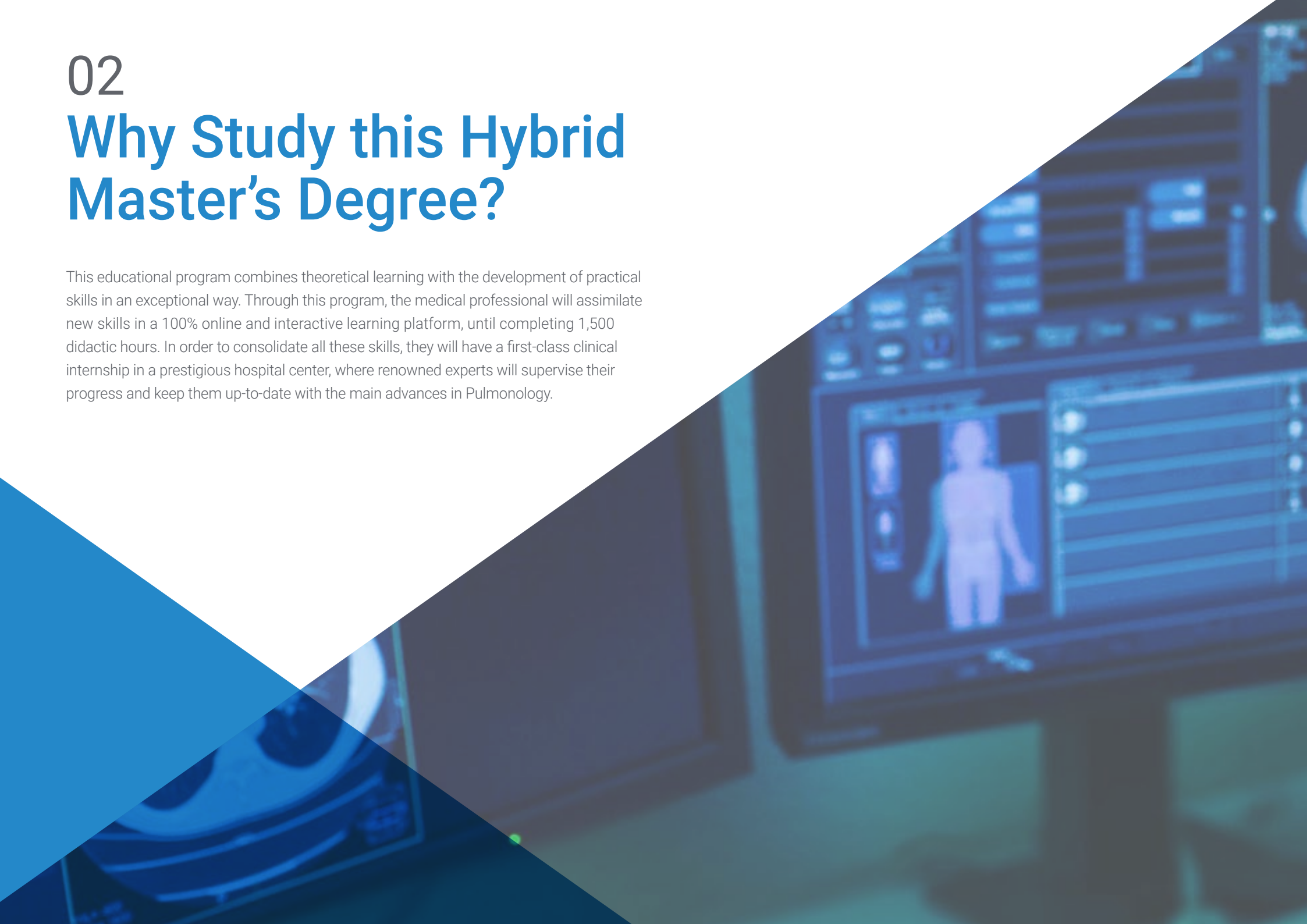
You will delve, thanks to TECH, into the latest pharmacological criteria and antimicrobial drugs that combat severe pathogens that lodge in the respiratory tract.



02

Why Study this Hybrid Master's Degree?

This educational program combines theoretical learning with the development of practical skills in an exceptional way. Through this program, the medical professional will assimilate new skills in a 100% online and interactive learning platform, until completing 1,500 didactic hours. In order to consolidate all these skills, they will have a first-class clinical internship in a prestigious hospital center, where renowned experts will supervise their progress and keep them up-to-date with the main advances in Pulmonology.



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This TECH Hybrid Master's Degree is superior to other programs on the educational market for its exceptional combination of theoretical and practical Pulmonology learning in a unique program”

1. Updating from the latest technology available

As a result of the constant scientific innovation in the field of Pulmonology, a variety of technological equipment has emerged, providing much clearer and more efficient diagnoses. At the same time, new tools have been developed to treat or support patients with severe respiratory pathologies, such as the use of artificial respirators. During this program, the physician will have access to the best resources in this field and will learn how to manage and integrate them fully into their professional practice.

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

During the two learning phases that make up this Hybrid Master's Degree, the specialist in Pulmonology will have access to the best specialists in this health sector. First of all, they will have access to an exceptional teaching staff, who will clarify doubts and concepts of interest in the theoretical stage.

In addition, during the clinical internship, they will work directly with distinguished experts in the most renowned and competitive hospital centers.

3. Entering First-Class Clinical Environments

For the clinical internship stage of this program, TECH has carried out a thorough selection process. In this way, the physician will have access to high-class healthcare environments and, from there, will be able to manage new technologies and apply strategies on real patients. In addition, these facilities have the best experts who will help them to be optimally up-to-date.





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

During a 3-week stay in a prestigious hospital center, the pulmonologist will put into practice everything they have learned in the theoretical phase of the program- From the very beginning, they will deal with real cases, with diverse and complex respiratory pathologies. Through this educational process, they will be up-to-date on the most advanced therapeutic techniques implemented today in their health specialty.

5. Expanding the Boundaries of Knowledge

TECH, the world's largest online university, aims for all its graduates to achieve an optimal level of care in Pulmonology. For this reason, it has integrated in this Hybrid Master's Degree a clinical internship in international reference hospitals. Thanks to them, the physician will expand the frontiers of their knowledge, accessing facilities located in different geographical situations.



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

03 Objectives

The design of this educational program is key to meeting all of its educational objectives. Composed of two stages, well structured, this Hybrid Master's Degree of TECH integrates, like no other program, the knowledge and skills essential for the practice of Pulmonology. Therefore, at first, the physician will have access to the latest theoretical advances in the specialty and then will be able to apply deep practical skills in an on-site, intensive and immersive stay in a hospital institution of international prestige.



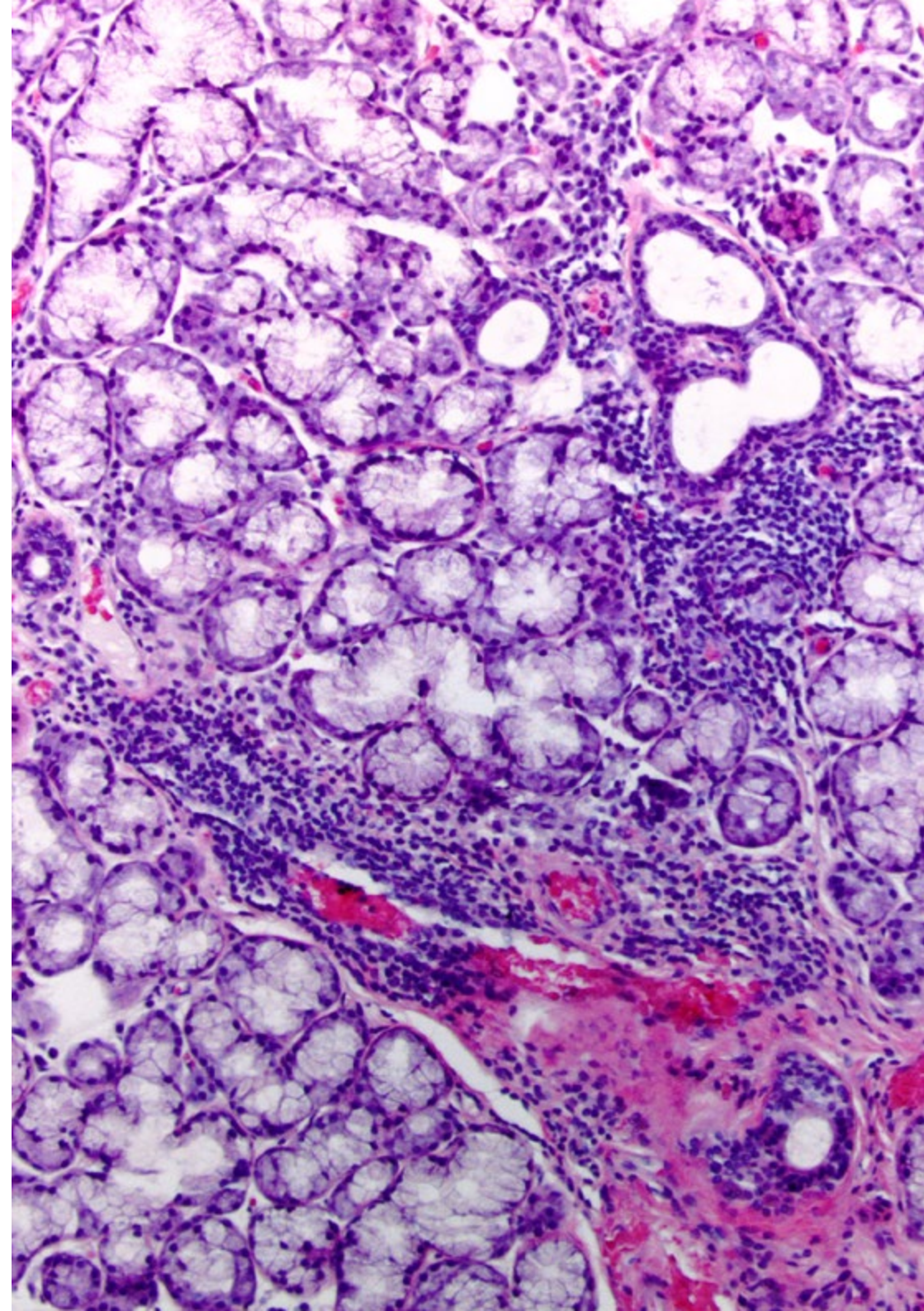
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During this program, you will achieve academic objectives such as the proper management of immunosuppressive and prophylactic treatments for the benefit of the transplant patient”



General Objective

- The aim of this program in Pulmonology is that, upon completion of their studies, graduates will be up-to-date with the latest scientific evidence in the field, based on results published in scientific articles, systematic reviews and recently applied methodologies. Throughout the course, the pulmonologist will be up-to-date on the most efficient current approaches for different respiratory pathologies, which include highly innovative diagnostic methods and treatments.





Specific Objectives

Module 1. Interstitial Lung Diseases

- ♦ Update the most relevant theoretical medical knowledge on ILD
- ♦ Deepen specific understanding of the scientific and technical aspects related to the most prevalent ILD
- ♦ Actively promote the continuing education of each professional in order to improve clinical care and their professional work

Module 2. Chronic Obstructive Pulmonary Disease

- ♦ Develop professional competencies aimed at optimizing comprehensive patient-centered care based on the latest available evidence
- ♦ Be able to interpret the most commonly used complementary tests in the diagnosis and follow-up of COPD patients
- ♦ Know how to manage the main comorbidities associated with COPD
- ♦ Gain up-to-date knowledge on the maintenance treatment of COPD

Module 3. Asthma

- ♦ Improve asthma control and patient quality of life through knowledge based on the latest scientific evidence available
- ♦ Interpret the most commonly used complementary tests in the diagnosis and monitoring of asthma patients
- ♦ Identify and manage the main comorbidities associated with asthma
- ♦ Gain up-to-date knowledge on the maintenance treatment of asthma

- ♦ Learn to identify the sub-group of patients with serious, uncontrolled asthma
- ♦ Know the different phenotypes and specific asthma treatment recommendations
- ♦ Know how to manage occupational asthma, pulmonary eosinophilias, as well as special circumstances such as asthma-pregnancy, exertion-induced asthma, aspirin-exacerbated respiratory disease, etc

Module 4. Respiratory Infections and Related Diseases

- ♦ Provide specific knowledge on the advances in infectious diseases and new antimicrobials, as well as other treatments and new diagnostic tests that allow us to give a satisfactory response to the current challenges of respiratory diseases
- ♦ Gain the necessary skills for an adequate identification and correct treatment of the main infectious pathologies of the respiratory system, being able to perform a better clinical management of the different entities
- ♦ Perform a review of recently published guidelines, scientific articles and systematic reviews, making a critical reading with learning from the best available scientific evidence

Module 5. Bronchopulmonary Neoplasms

- ♦ Provide a global and multidisciplinary perspective on the approach to lung cancer, including its epidemiology, etiology, histology, diagnostic and treatment process
- ♦ Provide up-to-date information on multidisciplinary issues important for daily clinical practice in lung cancer patients
- ♦ Delve into the latest, ever-changing advances in both the diagnosis and treatment of lung cancer

Module 6. Diseases of the Pleura and Mediastinum

- ♦ Update knowledge on the different diseases that affect the pleura and mediastinum
- ♦ Deepen knowledge of the different diagnostic techniques for the study of these pathologies, using a practical approach
- ♦ Optimize the therapeutic management of patients with pleural effusion, pneumothorax and mediastinal disease

Module 7. Pulmonary Circulation

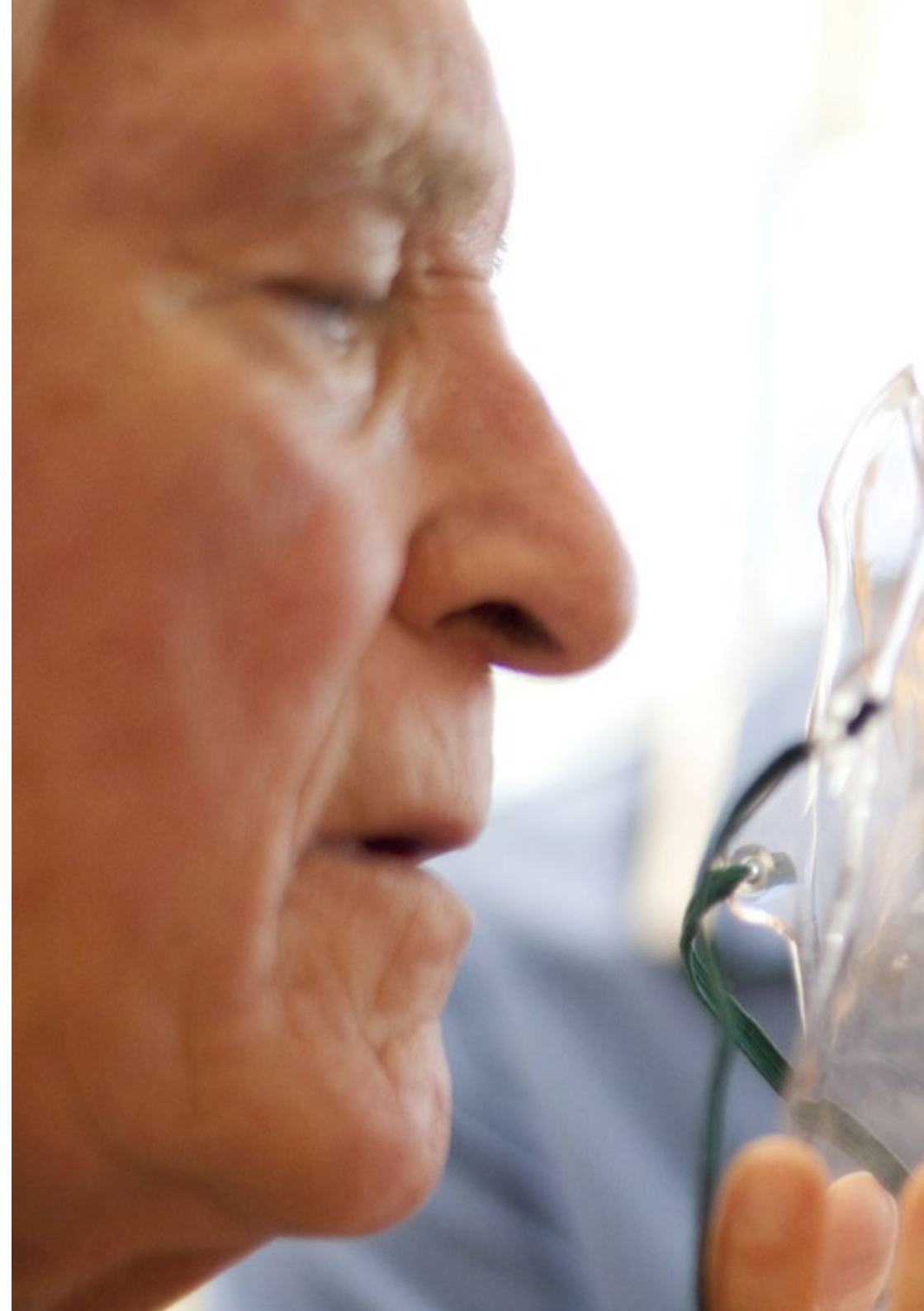
- ♦ Delve deeper into the medical management of the most frequent pathologies affecting the pulmonary vascular tree such as venous thromboembolic disease or pulmonary hypertension
- ♦ Gain up-to-date knowledge of other less frequent pathologies such as pulmonary vasculitis or alveolar hemorrhage

Module 8. Respiratory Disorders During Sleep

- ♦ Gain up-to-date knowledge of respiratory disorders during sleep
- ♦ Provide guidelines to enable the best decisions to be made in the care of patients with this disease based on a clinical summary of the most current literature
- ♦ Deepen specific understanding of the scientific and technical aspects related to respiratory sleep disorders

Module 9. Respiratory Failure. Non-Invasive Mechanical Ventilation. High-flow Oxygen Therapy

- ♦ Understand the pathophysiology and classification of respiratory failure and learn the keys to diagnosis for clinical practice
- ♦ Provide knowledge based on the best available evidence on the various treatment options for respiratory failure, including the application and contraindications of both NIV and HFO in acute and chronic respiratory failure
- ♦ Deepen knowledge in the main ventilatory modes and asynchronies during NIV
- ♦ Delve into the main features and clinical benefits of high-flow oxygen therapy



Module 10. Lung Transplant

- ♦ Know the indications and contraindications for the possible performance of a lung transplant, as well as the criteria for referral to a Lung Transplant Unit
- ♦ Know the criteria for being included on the lung transplant waiting list
- ♦ Know how donor selection and surgical techniques for lung transplantation are performed
- ♦ Know how to detect possible complications derived from lung transplants that may be encountered during the review of these patients in their office or during admission to a hospital that does not have a Lung Transplant Unit
- ♦ Gain a deeper understanding of the use of immunosuppressive treatments and prophylaxis in lung transplant patients, as well as in the complications derived from them
- ♦ Delve into the possible long-term complications of lung transplant patients
- ♦ Know how to determine when an urgent/preferential referral to the Lung Transplant Unit is necessary

“*Do not waste any more time and enroll in this program that offers theoretical and practical education based on the most solid and recent scientific evidence in Pulmonology*”

04 Skills

In order to achieve renown in the field of Pulmonology, specialists must master the latest procedures in the field with fluency and integrate the applications of different technologies. After completing this TECH program, the physician will have the indispensable skills to achieve an optimal professional performance in this field.



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After completing this program, you will be able to treat patients with such comprehensive pathologies as pleural effusion, pneumothorax and mediastinal disease”



General Skills

- Identify any pulmonary diseases in a timely manner and apply the most appropriate treatments for each patient according to their needs
- Incorporate into professional practice the main advances in this medical area and apply the latest techniques and treatments
- Achieve better results in the recovery of patients affected by pulmonary diseases



After completing this Hybrid Master's Degree, you will be able to fully interpret the results of the most innovative tests already implemented for the diagnosis and follow-up of patients with COPD"





Specific Skills

- ♦ Identify pulmonary diseases, offering the most appropriate treatment for each person
- ♦ Optimize comprehensive, patient-centered care based on the latest available evidence
- ♦ Improve the quality of life of asthma patients through the most effective treatments
- ♦ Recognize major advances in therapies for infectious diseases
- ♦ Master medical and surgical treatments in patients with lung cancer
- ♦ Delve into the nature of pleural effusion, visualize solid pleural pathology and identify the existence of pneumothorax
- ♦ Diagnose and treat venous thromboembolic disease and pulmonary hypertension
- ♦ Early treatment of respiratory disorders during sleep
- ♦ Apply conventional oxygen therapy, non-invasive mechanical ventilation and high-flow nasal cannula therapy in patients with respiratory insufficiency
- ♦ Know in depth all the processes involved in lung transplantation

05 Course Management

For this Hybrid Master's Degree, TECH has relied on experts with extensive experience in Pulmonology. The selected experts have excellent experience in clinical care and research. Their academic results have been collected in articles published by international journals. Based on their constant updating in the different areas of the specialty, the teaching staff has put together a very complete syllabus where the physician will be able to examine different concepts of recent application, as well as to understand the scope of new technological tools for diagnosis and treatment.





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The main theoretical developments in the field of Pulmonology will be at your disposal from the personalized guidance of this excellent teaching staff”

International Guest Director

Dr. Franck Rahaghi is one of the most prolific international figures in the field of Pulmonology. He is noted for his leadership in quality and medical care, as well as for his commitment to clinical research, and has held several important positions at the Cleveland Clinic, Florida. His most notable roles include President of Quality, Medical Director of the Department of Respiratory Care, and Director of the Pulmonary Hypertension Clinic.

Thanks to his studies and continuous preparation in this discipline, he has made several contributions in the rehabilitation of patients with various respiratory pathologies. These contributions and permanent academic improvement have allowed him to assume other responsibilities such as the position of Head of the Department of Education and Pulmonary Rehabilitation. In addition, he is a member of the Internal Review Committee, responsible for supervising the correct execution of research and clinical trials (Activated Protein C and IFN gamma-1b) inside and outside the aforementioned health institution.

In his solid background, he has established healthcare connections with centers of excellence such as the Rockefeller University Hospital in New York, as well as the Internal Medicine programs at the University of Illinois at Chicago and the University of Minnesota. He also specialized in the Department of Interventional Pulmonology and Pulmonary Hypertension at the University of California-San Diego. He has also participated in important academic projects as an instructor in Genetic Medicine.

Dr. Rahaghi has authored and co-authored numerous articles published in renowned scientific journals in the medical field. Among the most recent and significant studies he has unveiled are his researches on the impact of COVID-19 on the respiratory health of patients, specifically on its effects in controlling Pulmonary Hypertension.

His other fields of interest include Scleroderma, Sarcoidosis AATD and ILD/IPF. He is also a consulting member of MedEdCenter Incorporated, a non-profit corporation dedicated to providing educational materials focused on pulmonary pathologies. An initiative from where he is committed to promote the training of patients and physicians through new technologies.



Dr. Rahaghi, Franck

- Medical Director, Department of Respiratory Care, Cleveland Clinic Hospital, Florida, USA
- Director of the Pulmonary Hypertension Clinic attached to the Cleveland Clinic Hospital, Florida, USA
- Doctor of Medicine, University of San Francisco, San Francisco, USA
- Bachelor of Science (BS), Bioengineering and Biomedical Engineering from the University of San Diego
- Master's Degree in Health Sciences/Administration from the University of Berkeley, Berkeley, USA

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

Management



Dr. Jara Chinarro, Beatriz

- ♦ Head of the Pulmonology Department of the Puerta de Hierro University Hospital, Majadahonda
- ♦ Responsible for the Basic Sleep Unit, Puerta de Hierro University Hospital, Majadahonda, Madrid
- ♦ Specialist in the area of Pulmonology at Puerta De Hierro University Hospital, Majadahonda
- ♦ Clinical Researcher
- ♦ Author of several scientific publications on Pulmonology



Dr. Ussetti Gil, Piedad

- ♦ Head of the Pulmonology Department of the Puerta de Hierro University Hospital, Majadahonda
- ♦ Director of the Pneumology Research Group of the Puerta de Hierro-Segovia de Arana Health Research Institute
- ♦ Associate Professor of Pulmonology, Autonomous University of Madrid
- ♦ Specialist in Pulmonology
- ♦ Degree in Medicine and Surgery from the Central University of Barcelona
- ♦ Executive Master's Degree in Healthcare Leadership from ESADE
- ♦ Pulmonologist of the Year 2021 Award by the Madrid Society of Pulmonology and Thoracic Surgery (Neumomadrid)
- ♦ Member of the Spanish Society of Pulmonology and Thoracic Surgery (SEPAR)

Professors

Dr. Aguado Ibáñez, Silvia

- ♦ Attending Physician in the Pulmonology Department at Puerta De Hierro University Hospital, Majadahonda
- ♦ Specialist in Pulmonology
- ♦ Specialist in Pulmonology at the Southwestern University Hospital
- ♦ Author and co-author of various articles published in scientific journals

Dr. Aguilar Pérez, Myriam

- ♦ Specialist in the area of Pulmonology at Puerta De Hierro University Hospital. Majadahonda, Spain
- ♦ Professor in Cardiorespiratory Support Systems Courses
- ♦ Speaker at Pulmonology Conferences

Dr. Malo de Molina Ruiz, Rosa

- ♦ Pulmonologist at the Puerta de Hierro University Hospital, Majadahonda
- ♦ Specialist in Pulmonology
- ♦ Teacher in university studies in Medicine
- ♦ Author of numerous scientific publications

Dr. Izquierdo Pérez, Ainhoa

- ♦ Specialist in Pulmonology at the Puerta De Hierro University Hospital, Majadahonda
- ♦ Medical Specialist at the Emergency Hospital Nurse Isabel Zendal
- ♦ Graduate in Medicine from the University of Alcalá
- ♦ Master's Degree in Clinical Medicine from the Camilo José Cela University
- ♦ Master's Degree in ILD from the Catholic University of Murcia

Dr. Erro Iribarren, Marta

- ♦ Specialist in Pulmonology at the Puerta De Hierro University Hospital, Majadahonda
- ♦ Specialist in the Microbiology and Parasitology Department at the La Princesa University Hospital
- ♦ Researcher at the La Princesa Health Research Institute.
- ♦ Degree in Medicine and Surgery from the University of Navarra
- ♦ Specialist in Pulmonology
- ♦ International Expert Course in the Methodology of Non-Invasive Mechanical Ventilation
- ♦ Postgraduate Degree in the Control and Treatment of Smoking from the San Antonio Catholic University of Murcia

Dr. López García-Gallo, Cristina

- ♦ Attending Physician in the Pulmonology Department at Puerta De Hierro University Hospital, Majadahonda
- ♦ Teaching Collaborator, Autònoma University of Madrid
- ♦ Specialist in Pulmonology at the Puerta De Hierro University Hospital, Majadahonda
- ♦ PhD in Research Sufficiency Lung Retransplantation for Obliterative Bronchiolitis at the Autonomous University of Madrid
- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid
- ♦ Master's Degree in Pulmonary Hypertension from the Complutense University of Madrid.
- ♦ Master's Degree in "Expert in Pathology of the Pleura" from the University of Barcelona
- ♦ Master's Degree in Thoracic Ultrasound from the Institute of Continuing Education of the University of Barcelona

Dr. Mínguez Clemente, Patricia

- ♦ Medical Specialist in Pulmonology
- ♦ Attending Physician in the Pulmonology Department at Puerta De Hierro University Hospital, Majadahonda
- ♦ Master's Degree in Diagnosis and Treatment of Airway Diseases from the San Antonio Catholic University of Murcia
- ♦ Postgraduate Specialization in Bronchiectasis, Alcalá University
- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid

Dr. Trisán Alonso, Andrea

- ♦ Specialist in Pulmonology at the Puerta de Hierro University Hospital, Majadahonda
- ♦ Specialist in the area of Pulmonology at Puerta De Hierro University Hospital, Majadahonda
- ♦ Degree in Medicine from the University of Oviedo
- ♦ Master's Degree in Advances in Diagnosis and Treatment of Airway Diseases, San Antonio Catholic University of Murcia
- ♦ Postgraduate Diploma in Severe Asthma

Dr. Sánchez Azofra, Ana

- ♦ Pulmonologist, La Princesa University Hospital. Madrid
- ♦ Specialist in Pulmonology
- ♦ Author of several scientific publications on Pulmonology
- ♦ Doctor of Medicine from the University of the Basque Country/Euskal Herriko Unibertsitatea (UPV/EHU)

Dr. Choukri, Marwan Mohamed

- ♦ Specialist in Pulmonology at the Jiménez Díaz Foundation University Hospital
- ♦ Attending Specialist at the Puerta De Hierro University Hospital, Majadahonda
- ♦ Graduate in Medicine and Surgery from the Complutense University of Madrid

Dr. Herrero Huertas, Julia

- ♦ Physician of the Lung Clinical Management Area at the Central University Hospital of Asturias
- ♦ Specialist in Pulmonology
- ♦ Co-author of scientific articles published in specialized journals
- ♦ Author of communications for congresses and conferences on Pulmonology

Dr. Margallo Iribarnegaray, Juan

- ♦ Specialist Physician of Pulmonology, Marqués de Valdecilla University Hospital. Spain
- ♦ Pulmonologist at the Quironsalud University Hospital
- ♦ General Physician at Gabinete Médico SL
- ♦ Degree in Medicine from the University of Cantabria

Dr. Zambrano Chacón, María de los Ángeles

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- ♦ Medical Surgeon at Chacao Health
- ♦ Degree in Medicine from the Central University of Venezuela
- ♦ Master's Degree in Infectious Diseases and Antimicrobial Treatment from CEU Cardenal Herrera University
- ♦ Emergency Pulmonology Education by the Jiménez Díaz Foundation

Dr. Calderón Alcalá, Mariara Antonieta

- ♦ Specialist in Pulmonology at the Infanta Leonor University Hospital
- ♦ Specialist in Pulmonology at the Hospital Central de la Defensa Gómez Ulla
- ♦ Specialist in Pulmonology at the University Hospital of Getafe
- ♦ Specialist in Pulmonology at the Medical Center Carpetana
- ♦ Medical Specialist in Pulmonology at the Móstoles University Hospital
- ♦ Specialist in Pulmonology from the San Carlos Clinical Hospital
- ♦ Degree in Medical Surgeon from the Central University of Venezuela
- ♦ Postgraduate Diploma in Interstitial Lung Disease in
- ♦ Systemic Autoimmune Diseases from the Complutense University of Madrid

Dr. Zamarrón de Lucas, Ester

- ♦ Specialist in Pulmonology, La Paz University Hospital
- ♦ PhD in Medicine and Surgery with International Mention
- ♦ Master in Attention Integral Chronic Obstructive Pulmonary Disease, Complutense University of Madrid
- ♦ Master's Degree in Advances in Diagnosis and Treatment of Respiratory Diseases from the Catholic University of San Antonio of Murcia
- ♦ Postgraduate Diploma in the Approach to Pulmonary Hypertension Treatment with Prostacyclins from the Francisco de Vitoria University.
- ♦ Postgraduate Diploma in Emerging and High Risk Virus Pathology from the Autonomous University of Madrid (UAM)
- ♦ Postgraduate Diploma in Applied Statistics and Health Sciences from the National University of Distance Education
- ♦ Adult Diploma European Examination in Respiratory Medicine (HERMES Exam) from the European Respiratory Society (ERS)

Dr. Jaureguizar Oriol, Ana

- ♦ Pulmonologist, Ruber International Hospital
- ♦ Specialist in Pulmonology
- ♦ Specialist in Pulmonology, La Paz University Hospital
- ♦ Physician of the Pulmonology Department at the Ramón y Cajal University Hospital
- ♦ Degree in Medicine from the Complutense University of Madrid.

Dr. Barrios, Alba Esperanza

- ♦ Attending Medical Specialist in Pulmonology, Torrejón University Hospital
- ♦ Degree in Medicine from the University of Alcalá, Spain.
- ♦ Specialist Physician in Pulmonology, Puerta De Asturias University Hospital
- ♦ Master in Attention Integral Chronic Obstructive Pulmonary Disease, Complutense University of Madrid
- ♦ Professor at the Continuing Medical Education Course on Asthma of the Fundación Neumomadrid

Dr. Gómez Punter, Rosa Mar

- ♦ Specialist in Pulmonology, La Princesa University Hospital
- ♦ Master's Degree in Advances in Diagnosis and Treatment of Airway Diseases from the Catholic University San Antonio
- ♦ Master's Degree in Smoking, San Antonio Catholic University
- ♦ Degree in Medicine and Surgery from the University of Valencia

Dr. Alcorta Mesas, África

- ♦ Medical Specialist in Pulmonology at the Infanta Leonor University Hospital. Madrid
- ♦ Active member of the COPD, Tobacco and Sleep/Ventilation working groups of the Madrid Society of Pulmonology and Thoracic Surgery (Neumomadrid)
- ♦ Degree in Medicine from the Complutense University of Madrid.
- ♦ Specialist in Pulmonology, Gregorio Marañón General University Hospital
- ♦ Master's Degree in Clinical Management Units, San Antonio Catholic University
- ♦ Master's Degree in Smoking Control and Treatment, San Antonio Catholic University
- ♦ Master's Degree in Diagnosis and Treatment of Airway Diseases, San Antonio Catholic University
- ♦ Postgraduate Diploma in Methodology applied to Non-invasive Ventilation, International School of Non-Invasive Mechanical Ventilation
- ♦ Postgraduate Diploma in Smoking, Spanish Society of Pulmonology and Thoracic Surgery (SEPAR)

Dr. Rigual Bobillo, Juan

- ♦ Medical Specialist in Pulmonology at Ramón y Cajal University Hospital
- ♦ Participant in research projects and clinical trials
- ♦ Author of numerous scientific publications
- ♦ Co-author of book chapters on Pulmonology
- ♦ Professor in postgraduate university studies
- ♦ Member of: European Respiratory Society (ERS), Spanish Society of Pulmonology and Thoracic Surgery (SEPAR), Neumomadrid





Dr. Salgado Aranda, Sergio

- ♦ Specialist in Thoracic Oncology
- ♦ Pulmonologist at the Southeast University Hospital Arganda del Rey, Spain
- ♦ Pulmonologist at the Zuber Medical Center.
- ♦ Specialist in Pulmonology, Tajo University Hospital
- ♦ Professor in Thoracic Oncology in the postgraduate program.
- ♦ Degree in Medicine from the Complutense University of Madrid.
- ♦ Master's Degree in Advances in Diagnosis and Treatment of Airway Diseases from the Catholic University San Antonio
- ♦ Postgraduate Diploma in Bronchiectasis, University of Alcalá
- ♦ Postgraduate Diploma in Contamination and Respiratory Diseases, CEU San Pablo University

Dr. Quirós Fernández, Sarai

- ♦ Specialist in the Pulmonology Department, Basurto University Hospital
- ♦ Coordinator of the Tuberculosis and Respiratory Infections Area (TIR) in the Spanish Society of Pulmonology and Thoracic Surgery
- ♦ Degree in Medicine and Surgery from the University of Alcalá.
- ♦ Doctor of Medicine from the Autonomous University of Madrid
- ♦ Specialist in Pulmonology at Guadalajara General University Hospital
- ♦ Postgraduate Diploma in Bronchiectasis
- ♦ Postgraduate Diploma in Clinical Management of Tuberculosis and Other Mycobacteriosis

Dr. Mariscal Aguilar, Pablo

- ♦ Pulmonologist at the La Paz University Hospital
- ♦ Researcher Specializing in Respiratory Pathologies
- ♦ Degree in Medicine and Surgery from the University of Granada

06

Educational Plan

This academic syllabus, composed of 10 modules, will update the pulmonologist on the most recent trends in the diagnosis and treatment of pulmonary diseases. In particular, they will delve into the management criteria for complex pathologies such as cystic fibrosis, nosocomial pneumonia or tuberculosis. In addition, the program will delve into the most modern clinical criteria to determine the relevance of a lung transplant or the surgical approach to tumors in the respiratory tract. The entire program will be developed on a 100% online and interactive learning platform, without fixed schedules and supporting its contents with multimedia resources such as videos and infographics.



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In order to assimilate the academic and theoretical modules of this program, you will be assisted by multimedia resources such as infographics, videos and interactive summaries”

Module 1. Interstitial Lung Diseases

- 1.1. ILD's
 - 1.1.1. Classification and Epidemiology of ILD's
 - 1.1.2. Diagnostic Approximation
 - 1.1.2.1. Medical History. Physical Examination
 - 1.1.2.2. Clinical Laboratory and Pulmonary Function Laboratory
 - 1.1.2.3. Radiodiagnosis: Chest Radiography HRCT. Radiological Patterns
 - 1.1.2.4. Invasive Techniques: Bronchoalveolar Lavage (BAL), Transbronchial Biopsy (TBB) and Cryobiopsy. Surgical Biopsy. Indications and Pathologic Patterns
 - 1.1.2.5. Multidisciplinary Diagnosis
 - 1.1.3. Cellular Aging, Genetics and Biomarkers in ILD
 - 1.1.3.1. Pathogenesis of Cellular Aging
 - 1.1.3.2. Characteristics, Value, Prognosis and Treatment of Telomeric Disorders
 - 1.1.3.3. Familial Pulmonary Fibrosis. Biomarkers Diagnostic, Prognostic and Therapeutic Use
- 1.2. Idiopathic Pulmonary Fibrosis
 - 1.2.1. Epidemiology
 - 1.2.2. Risk Factors
 - 1.2.3. Natural History and Prognosis
 - 1.2.4. Diagnostic Approximation
 - 1.2.4.1. Clinical Manifestations Physical Examination
 - 1.2.4.2. Radiological Criteria
 - 1.2.4.3. Histopathological Criteria
 - 1.2.4.4. Useful Biomarkers in IPF
 - 1.2.5. Treatment
 - 1.2.6. Exacerbation of IPF
- 1.3. Idiopathic Non-specific Interstitial Pneumonia (NSIP) ILD Associated With Systemic Autoimmune Diseases (I): ILD Associated with Rheumatoid Arthritis (RA-ILD) and ILD associated with Systemic Sclerosis (SSc-IDP)
 - 1.3.1. Idiopathic NSIP
 - 1.3.1.1. Histopathological Forms
 - 1.3.1.2. Diagnostic Tests
 - 1.3.1.3. Treatment
 - 1.3.1.4. Prognosis
 - 1.3.2. ILD Associated With Systemic Autoimmune Diseases
 - 1.3.2.1. RA-ILD
 - 1.3.2.2. SSc-ILD
- 1.4. ILD Associated With Systemic Autoimmune Diseases (II)
 - 1.4.1. Dermatitis/Polymyositis
 - 1.4.2. Sjögren's Syndrome
 - 1.4.3. Mixed Connective Tissue Disease. "Overlap" Syndrome
 - 1.4.4. Interstitial Pneumonia with Autoimmune Features (IPAF)
- 1.5. Sarcoidosis
 - 1.5.1. Pathophysiology
 - 1.5.2. Histology
 - 1.5.3. Diagnostic Approximation
 - 1.5.4. Evolution and Prognosis
 - 1.5.5. Treatment
- 1.6. Hypersensitivity Pneumonitis
 - 1.6.1. Etiology
 - 1.6.2. Pathophysiology
 - 1.6.3. Classification. Clinical Forms
 - 1.6.4. Diagnostic Criteria. Differential Diagnosis
 - 1.6.5. Natural History and Prognosis
 - 1.6.6. Treatment
- 1.7. Cystic Pulmonary Diseases
 - 1.7.1. Lymphangioliomyomatosis (LAM)
 - 1.7.1.1. Clinical Manifestations
 - 1.7.1.2. Diagnostic Approximation
 - 1.7.1.3. Treatment
 - 1.7.2. Langerhans Cell Histiocytosis (HPCL)
 - 1.7.2.1. Clinical Manifestations
 - 1.7.2.2. Diagnostic Approximation
 - 1.7.2.3. Treatment
 - 1.7.3. Lymphocytic Interstitial Pneumonia (LIP)
 - 1.7.3.1. Clinical Manifestations
 - 1.7.3.2. Diagnostic Approximation
 - 1.7.3.3. Treatment

- 1.8. Cryptogenic Organizing Pneumonia (COP)
 - 1.8.1. Pathogenesis
 - 1.8.2. Clinical Manifestations
 - 1.8.3. Radiological Patterns
 - 1.8.4. Diagnostic Approximation
 - 1.8.5. Natural History
 - 1.8.6. Treatment
- 1.9. Work and Occupational Diseases
 - 1.9.1. Diseases Related to Asbestos
 - 1.9.1.1. Varieties of Asbestos. Sources of Exposure
 - 1.9.1.2. Pleural Fibrosis. Clinical Forms and Radiological Diagnosis
 - 1.9.1.3. Asbestosis. Clinical and Radiological Findings, Diagnostic Criteria and Treatment
 - 1.9.2. Silicosis
 - 1.9.3. Coal Pneumoconiosis
- 1.10. Pulmonary Eosinophilias. ILD Associated With Drugs. Other Rare ILDs: Pleuropulmonary Fibroelastosis. Alveolar Microlithiasis. Alveolar Proteinosis
 - 1.10.1. Acute Eosinophilic Pneumonia
 - 1.10.1.1. Epidemiology and Risk Factors
 - 1.10.1.2. Pathogenesis
 - 1.10.1.3. Clinical, Radiological, Functional and Anatomopathological Diagnosis
 - 1.10.1.4. Treatment
 - 1.10.2. ILD Associated With Drugs
 - 1.10.2.1. Epidemiology
 - 1.10.2.2. Pathogenesis and Risk Factors
 - 1.10.2.3. Diagnostic Approximation
 - 1.10.2.4. Main Causative Agents
 - 1.10.3. Differential Diagnosis of Pulmonary Eosinophilias
 - 1.10.4. Other Rare ILDs: Pleuropulmonary Fibroelastosis, Alveolar Microlithiasis and Alveolar Proteinosis: Diagnostic Approximation, Evolution and Treatment

Module 2. Chronic Obstructive Pulmonary Disease

- 2.1. Etiopathogenesis
 - 2.1.1. Epidemiology
 - 2.1.2. Risk Factors
 - 2.1.3. Pathogenesis
- 2.2. Pathophysiology of COPD and Clinical Presentation
 - 2.2.1. Pathophysiology
 - 2.2.2. Clinical Manifestations
- 2.3. Diagnosis and Characterization
 - 2.3.1. Diagnosis: Medical History, Physical Examination, Imaging Tests, Clinical Analysis and Functional Respiratory Examination
 - 2.3.2. Characterization
 - 2.3.2.1. By Severity of the Pulmonary Obstruction
 - 2.3.2.2. By Clinical Type: Emphysema and Chronic Bronchitis
 - 2.3.2.3. By Exacerbation Risk
 - 2.3.2.4. By Symptoms
- 2.4. Classification of COPD According to the Guides of COPD: GOLD (Global Initiative for Chronic Obstructive Lung Disease)
 - 2.4.1. GesEPOC BORRAR
 - 2.4.1.1. Low Risk COPD
 - 2.4.1.2. High Risk COPD
 - 2.4.1.3. Classification Based on Clinical Impact and Stability
 - 2.4.2. GOLD Guide
 - 2.4.2.1. GOLD A
 - 2.4.2.2. GOLD B
 - 2.4.2.3. GOLD C
 - 2.4.2.4. GOLD D
 - 2.4.2.5. Monitoring
- 2.5. Pharmacological Treatment of Maintenance
 - 2.5.1. Treatment Objectives
 - 2.5.2. Drugs:
 - 2.5.2.1. Inhaled Treatment
 - 2.5.2.1.1. Bronchodilators
 - 2.5.2.1.2. Inhaled Corticosteroids

- 2.5.2.2. Oral Treatment
 - 2.5.2.2.1. Theophylline
 - 2.5.2.2.2. Roflumilast
 - 2.5.2.2.3. Azithromycin
- 2.6. Smoking Management in COPD
 - 2.6.1. Epidemiology
 - 2.6.2. Diagnosis of Smoking in COPD
 - 2.6.3. Non-Pharmacological Therapeutic Interventions
 - 2.6.4. Pharmacological Therapeutic Interventions
- 2.7. Non-Pharmacological Treatment
 - 2.7.1. Oxygen Therapy and NIMV
 - 2.7.2. Vaccines
 - 2.7.3. Nutrition
 - 2.7.4. Palliative Treatment of Dyspnea
 - 2.7.5. Reduction of Pulmonary Volume Due to Bronchoscopy
 - 2.7.6. Surgery: Reduction of Volume and Pulmonary Transplant
- 2.8. Exacerbation of COPD
 - 2.8.1. Etiology and Pathogenesis
 - 2.8.2. Classification of Severity
 - 2.8.3. Treatment
- 2.9. Comorbidities
 - 2.9.1. Prevalence
 - 2.9.2. Impact on Mortality
 - 2.9.3. Screening and Management
- 2.10. Rehabilitation and Physical Activity in COPD
 - 2.10.1. Rehabilitation in COPD
 - 2.10.1.1. Benefits
 - 2.10.1.2. Indications
 - 2.10.1.3. Structure of a Rehabilitation Project
 - 2.10.1.4. Rehabilitation After the Exacerbation of COPD
 - 2.10.1.5. Special Situations
 - 2.10.2. Physical Activity
 - 2.10.2.1 Measurement
 - 2.10.2.2 Interventions

Module 3. Asthma

- 3.1. Etiopathogenesis
 - 3.1.1. Epidemiology
 - 3.1.2. Risk Factors
 - 3.1.3. Pathogenesis
- 3.2. Diagnosis
 - 3.2.1. Clinical Symptoms
 - 3.2.2. Spirometry and Bronchodilator Test
 - 3.2.3. Bronchial Provocation Tests
 - 3.2.4. Determination of FeNO
 - 3.2.5. Induced Sputum
 - 3.2.6. Electronic Nose
 - 3.2.7. Volatile Organic Compounds in Exhaled Air
 - 3.2.8. Diagnostic Algorithm
- 3.3. Classification of the Control and Severity
 - 3.3.1. Control
 - 3.3.2. Severity
- 3.4. Treatment of Maintenance
 - 3.4.1. Treatment Objectives
 - 3.4.2. Drugs:
 - 3.4.3. Step Treatment
 - 3.4.4. Allergen and Environmental Avoidance
 - 3.4.5. Education and Written Action Plans
- 3.5. Treatment of Asthma Attacks
 - 3.5.1. Risk Factors
 - 3.5.2. Severity Assessment
 - 3.5.3. Treatment According to Severity
 - 3.5.4. High Emergency Criteria
 - 3.5.5. Criteria for Hospitalization
 - 3.5.6. Criteria for Discharge After Hospitalization
 - 3.5.7. Outpatient Monitoring After the Attack



- 3.6. Uncontrolled Severe Asthma
 - 3.6.1. Epidemiology
 - 3.6.2. Diagnostic Procedure
 - 3.6.3. Phenotypes of Severe Asthma
 - 3.6.4. Treatment Algorithm
- 3.7. Occupational Asthma
 - 3.7.1. Causative Agents
 - 3.7.2. Classification
 - 3.7.3. Diagnosis
 - 3.7.4. Treatment
 - 3.7.5. Asthma Worsened by Work
- 3.8. Nasal Pathology Associated with Asthma
 - 3.8.1. Rhinitis
 - 3.8.1.1. Diagnosis
 - 3.8.1.2. Classification
 - 3.8.1.3. Treatment
 - 3.8.2. Rhinosinusitis and Nasal Polyposis
 - 3.8.2.1. Diagnosis
 - 3.8.2.2. Treatment
- 3.9. Pulmonary Eosinophilias Associated With Asthma
 - 3.9.1. Chronic Eosinophilic Pneumonia
 - 3.9.2. Allergic Bronchopulmonary Aspergillosis
 - 3.9.3. Eosinophilic Granulomatosis with Polyangiitis
- 3.10. Special Situations
 - 3.10.1. Asthma and COPD Overlap (ACOS)
 - 3.10.2. Respiratory Disease Exacerbated by Acetylsalicylic Acid
 - 3.10.3. Asthma and Pregnancy
 - 3.10.4. Exercise-Induced Asthma
 - 3.10.5. Pseudo Asthmas

Module 4. Respiratory Infections and Related Diseases

- 4.1. Community-Acquired Pneumonia (CAP)
 - 4.1.1. Epidemiology
 - 4.1.2. Risk Factors
 - 4.1.3. Comorbidities and Risk of CAP
 - 4.1.4. Etiology
 - 4.1.5. Clinical Manifestations
 - 4.1.6. Diagnosis
 - 4.1.7. Assessment of the Severity of the CAP
 - 4.1.8. Treatment
 - 4.1.9. Clinical Response
 - 4.1.10. Complications
 - 4.1.11. Prevention: Vaccination
- 4.2. Nosocomial Pneumonia (Hospital-Acquired Pneumonia and Ventilator-Associated Pneumonia)
 - 4.2.1. Pathogenesis
 - 4.2.2. Risk Factors
 - 4.2.3. Intrahospital Pneumonia
 - 4.2.4. Pneumonia Associated with Mechanical Ventilation
 - 4.2.5. Etiology
 - 4.2.6. Diagnosis
 - 4.2.7. Treatment
 - 4.2.8. Preventive Measures
- 4.3. Pulmonary Abscess
 - 4.3.1. Pathogenesis
 - 4.3.2. Differences with Necrotizing Pneumonia
 - 4.3.3. Microbiology
 - 4.3.4. Clinical Manifestations
 - 4.3.5. Diagnosis
 - 4.3.6. Differential Diagnosis
 - 4.3.7. Treatment
- 4.4. Coronavirus: COVID 19
 - 4.4.1. The 2019 Pandemic
 - 4.4.2. Epidemiology
 - 4.4.3. Pathogenesis
 - 4.4.4. Clinical Symptoms
 - 4.4.5. Diagnosis
 - 4.4.6. Treatment
 - 4.4.7. Complications
 - 4.4.8. Prevention
 - 4.4.8.1. Hygienic Measures and Social Distancing
 - 4.4.8.2. Vaccines
- 4.5. Non-Cystic Fibrosis Bronchiectasis
 - 4.5.1. Epidemiology and Costs
 - 4.5.2. Pathophysiology
 - 4.5.3. Etiology
 - 4.5.4. Diagnosis
 - 4.5.5. Differential Diagnosis
 - 4.5.6. Microbiology
 - 4.5.7. Severity and Prognostic Factors
 - 4.5.8. Treatment
 - 4.5.9. Monitoring
 - 4.5.10. Consensus Treatment of CBI in COPD and Bronchiectasis
- 4.6. Cystic fibrosis
 - 4.6.1. Etiopathogenesis
 - 4.6.2. Epidemiology
 - 4.6.3. Clinical Manifestations
 - 4.6.4. Diagnosis
 - 4.6.5. Quality of Life Related to Health
 - 4.6.6. Treatment
 - 4.6.6.1. Of Exacerbation
 - 4.6.6.2. Of Chronic Bronchial Infection
 - 4.6.6.3. Of Bronchial Inflammation
 - 4.6.6.4. Of Mucociliary Clearance
 - 4.6.6.5. New Drugs (CFRT Protein Repairers)

- 4.6.7. Rehabilitation
- 4.6.8. Nutritional Treatment
- 4.6.9. Treating Complications
- 4.7. Pulmonary Tuberculosis: Epidemiology, Clinical Symptoms, Diagnosis, Complications and Prognosis
 - 4.7.1. Epidemiology
 - 4.7.2. Etiology
 - 4.7.3. Pathogenesis and Pathophysiology
 - 4.7.4. Clinical Manifestations
 - 4.7.5. Diagnosis. Concept of Infection and Tuberculous Disease
 - 4.7.5.1. Tuberculous Infection
 - 4.7.5.2. Tuberculous Disease
 - 4.7.5.2.1. Clinical and Radiological Diagnosis
 - 4.7.5.2.2. Anatomical and Pathological Diagnosis
 - 4.7.5.2.3. Microbiological Diagnosis
 - 4.7.6. Complications and Prognosis
- 4.8. Pulmonary Tuberculosis: Treatment Chemoprophylaxis
 - 4.8.1. Types of Bacillary Populations
 - 4.8.2. Standard Treatment. Appropriate Selection of Drug Combinations
 - 4.8.3. Treatment in Special Situations
 - 4.8.3.1. Immunodeficiencies
 - 4.8.3.2. Pregnancy and Breastfeeding
 - 4.8.3.3. Advanced Chronic Liver Failure
 - 4.8.3.4. Advanced Chronic Kidney Disease
 - 4.8.4. Adverse Effects
 - 4.8.5. Interrupting the Treatment
 - 4.8.6. Resistance
 - 4.8.7. Chemoprophylaxis. Treatment of Latent Tuberculous Infection
 - 4.8.8. Therapeutic Schemes for the Treatment of Multidrug-Resistant or Extensively Resistant Pulmonary TB

- 4.9. Atypical Mycobacteria
 - 4.9.1. Taxonomy and Epidemiology
 - 4.9.2. Pathogenesis and Susceptibility of the Host
 - 4.9.3. Clinical Forms
 - 4.9.4. Diagnostic Criteria for Atypical Mycobacterial Disease
 - 4.9.5. Treatment
- 4.10. Pulmonary Aspergillosis and Other Mycoses
 - 4.10.1. Pulmonary Aspergillosis
 - 4.10.2. Candidiasis Broncopulmonar
 - 4.10.3. Cryptococcosis
 - 4.10.4. Mucormycosis
 - 4.10.5. Pneumocystis

Module 5. Bronchopulmonary Neoplasms

- 5.1. Epidemiology
 - 5.1.1. Incidence and Prognosis of Lung Cancer
 - 5.1.2. Risk Factors: Tabacco, Jobs, Other Carcinogens
 - 5.1.3. Screening
- 5.2. Solitary Pulmonary Nodule
 - 5.2.1. Etiology
 - 5.2.2. Factors Associated With Malignancy
 - 5.2.2.1. Estimation of Malignancy
 - 5.2.2.2. Sequential Evaluation. Management Algorithm
- 5.3. Classification
 - 5.3.1. Histological Subtypes
 - 5.3.1.1. Non-Small Cell: Adenocarcinoma, Epidermoid, Large Cell
 - 5.3.1.2. Small Cell
 - 5.3.2. Biomarkers with Diagnostic and Therapeutic Value
- 5.4. Diagnosis
 - 5.4.1. Symptoms and Signs
 - 5.4.1.1. Paraneoplastic Syndromes
 - 5.4.2. Radiodiagnostics
 - 5.4.3. Invasive Diagnostic Methods

- 5.5. Staging
 - 5.5.1. General Aspects
 - 5.5.2. TNM 8th Edition Classification
- 5.6. Multidisciplinary Evaluation in the Therapeutic Approach
 - 5.6.1. Operability Criteria
 - 5.6.2. Resectability Criteria
 - 5.6.2.1. Resectable
 - 5.6.2.2. Unresectable
 - 5.6.2.3. Potentially Resectable
- 5.7. Treatment in Initial Stages
 - 5.7.1. Surgical Management
 - 5.7.1.1. Lobectomy and Lymphadenectomy
 - 5.7.1.2. Pneumonectomy
 - 5.7.1.3. Atypical Resections
 - 5.7.2. Adjuvants
- 5.8. Locally Advanced Disease Treatment
 - 5.8.1. Neoadjuvant
 - 5.8.2. Radical Treatment with Chemoradiotherapy
- 5.9. Advanced Disease
 - 5.9.1. Oligometastatic Disease
 - 5.9.2. Chemotherapy
 - 5.9.3. Immunotherapy
 - 5.9.4. Directed Treatment
- 5.10. Support Treatments
 - 5.10.1. Radiotherapy
 - 5.10.2. Management of Complications Related to the Airway: Dyspnea, Superior Vena Cava Syndrome, Hemoptysis, Endobronchial Resection
 - 5.10.3. Other Complications



Module 6. Diseases of the Pleura and Mediastinum

- 6.1. Pleura
 - 6.1.1. Anatomy
 - 6.1.2. Histology
- 6.2. Pathophysiology of the Pleura
 - 6.2.1. Pleural Pressure
 - 6.2.2. Formation of Pleural Fluid
 - 6.2.3. Absorption of Pleural Fluid
- 6.3. Definition and Epidemiology of Pleural Diseases
 - 6.3.1. Pleural Effusion
 - 6.3.2. Hemothorax
 - 6.3.3. Chylothorax
 - 6.3.4. Pneumothorax
 - 6.3.5. Solid Pleural Pathology
- 6.4. Clinical Diagnosis of Pleural Pathology
 - 6.4.1. Symptoms
 - 6.4.2. Physical Examination
- 6.5. Imaging Diagnosis of Pleural Pathology
 - 6.5.1. Chest X-ray
 - 6.5.2. Chest CAT Scan
 - 6.5.3. Thoracic Ultrasound Scan
- 6.6. Invasive Techniques for the Diagnosis of Pleural Effusion
 - 6.6.1. Diagnostic Thoracentesis
 - 6.6.2. Closed Pleural Biopsy
 - 6.6.3. Medical Thoracoscopy
- 6.7. Solid Pleural Pathology
 - 6.7.1. Pleural Fibrous Tumor
 - 6.7.2. Pleural Pathology Due to Asbestos
 - 6.7.3. Mesothelioma
 - 6.7.4. Metastatic Cancer
- 6.8. Management of the Patient with Pleural Effusion
 - 6.8.1. Diagnostic Approximation
 - 6.8.2. Etiological Diagnosis
 - 6.8.3. Treatment

- 6.9. Caring for a Patient with Pneumothorax
 - 6.9.1. Classification
 - 6.9.2. Diagnosis
 - 6.9.3. Treatment
- 6.10. Mediastinal Diseases
 - 6.10.1. Anatomy
 - 6.10.2. Epidemiology
 - 6.10.3. Mediastinitis
 - 6.10.4. Mediastinal Tumors
 - 6.10.5. Diagnostic Approximation of a Mediastinal Mass

Module 7. Pulmonary Circulation

- 7.1. Pathophysiology of Pulmonary Circulation
 - 7.1.1. Anatomical-Functional Review
 - 7.1.2. Physiological Changes with Age and Exercise
 - 7.1.3. Pathophysiology
- 7.2. Acute Pulmonary Thromboembolism
 - 7.2.1. Epidemiology and Etiopathogenesis of an Acute Pulmonary Thromboembolism
 - 7.2.2. Clinical Presentation and Probability
 - 7.2.3. Diagnosis of a Pulmonary Embolism
 - 7.2.4. Prognostic Stratification
- 7.3. Therapeutic Management of Acute Pulmonary Thromboembolism
 - 7.3.1. Treatment of Acute Pulmonary Thromboembolism
 - 7.3.2. Prophylaxis of Venous Thromboembolic Disease
 - 7.3.3. Pulmonary Embolism in Special Situations
 - 7.3.3.1. Pulmonary Embolism in Oncologic Patients
 - 7.3.3.2. Pulmonary Embolism in Pregnant Women
- 7.4. Pulmonary Arterial Hypertension
 - 7.4.1. Epidemiology
 - 7.4.2. Diagnosis and Clinical Assessment of Pulmonary Hypertension

- 7.5. Classification and Types of Pulmonary Hypertension
 - 7.5.1. ERS/ESC Classification of Pulmonary Hypertension
 - 7.5.2. Group 1 - Pulmonary Arterial Hypertension
 - 7.5.2.1. Pulmonary Veno-Occlusive Disease/Pulmonary Capillary Hemangiomatosis
 - 7.5.2.2. Persistent Pulmonary Hypertension of a Newborn
 - 7.5.3. Group 2 - Pulmonary Hypertension Secondary to Left Ventricle Cardiomyopathy
 - 7.5.4. Group 3 - Pulmonary Hypertension Secondary to Lung Diseases and Hypoxia
 - 7.5.5. Group 4 - Chronic Thromboembolic Pulmonary Hypertension and Other Pulmonary Artery Obstructions
 - 7.5.6. Group 5 - Pulmonary Hypertension of Unestablished and/or Multifactorial Mechanism
- 7.6. Therapeutic Management of Pulmonary Arterial Hypertension
 - 7.6.1. PHT Group 1
 - 7.6.2. PHT Group 2
 - 7.6.3. PHT Group 3
 - 7.6.4. PHT Group 4
 - 7.6.5. PHT Group 5
- 7.7. Hemoptysis
 - 7.7.1. Epidemiology, Etiology
 - 7.7.2. Differential Diagnosis
 - 7.7.3. Diagnostic Management
 - 7.7.4. Treatment
 - 7.7.5. Prognosis
- 7.8. Pulmonary Vasculitis
 - 7.8.1. Epidemiology and Etiopathogenesis
 - 7.8.2. Classification. Specific Vasculitis According to the CHCC 2012 Classification
 - 7.8.3. Diagnosis
 - 7.8.4. Treatment
 - 7.8.5. Prophylaxis
 - 7.8.6. Prognosis





- 7.9. Alveolar Hemorrhage
 - 7.9.1. Diagnosis of an Alveolar Hemorrhage
 - 7.9.1.1. Pathologic Anatomy
 - 7.9.1.2. Differential Diagnosis
 - 7.9.2. Treatment
- 7.10. Intrapulmonary *Shunts*
 - 7.10.1. Hepatopulmonary Syndrome
 - 7.10.2. Arteriovenous Fistulae

Module 8. Respiratory Disorders During Sleep

- 8.1. Physiology and Epidemiology
 - 8.1.1. Sleep Disorders Classification
 - 8.1.2. Obstructive Sleep Apnea (OSA)
 - 8.1.3. Pathophysiology
 - 8.1.4. Epidemiology
 - 8.1.5. OSA as a Public Health Problem
- 8.2. Risk Factors for OAS
 - 8.2.1. Age and Sex
 - 8.2.2. Obesity
 - 8.2.3. Menopause
 - 8.2.4. Craniofacial Anatomy and Heredity
 - 8.2.5. Tobacco, Alcohol and Drugs
 - 8.2.6. Supine Position
- 8.3. OAS and Comorbidities
 - 8.3.1. OAS and Respiratory Diseases
 - 8.3.2. AHT and cardiovascular risk
 - 8.3.3. Endocrine Disorders
 - 8.3.4. Neurological Alterations:
 - 8.3.5. Cancer
- 8.4. Clinical Manifestations of OSA
 - 8.4.1. Symptoms and Signs
 - 8.4.2. Physical Examination
 - 8.4.3. Complementary Evaluations
 - 8.4.4. Criteria for Referral to the Sleep Unit

- 8.5. Diagnosis
 - 8.5.1. Medical History
 - 8.5.2. Polysomnography
 - 8.5.3. Respiratory Polygraphy
 - 8.5.4. Simplified Methods
 - 8.5.5. Other Complementary Tests
- 8.6. Treatment
 - 8.6.1. General Measures
 - 8.6.2. Continuous Positive Airway Pressure (CPAP) Treatment
 - 8.6.3. Other Modes of Positive Pressure: BPAP and Servoventilator
 - 8.6.4. Different Positive Pressure Options
- 8.7. OSA in Special Population Groups
 - 8.7.1. Children and Adults
 - 8.7.2. Elderly People
 - 8.7.3. Women
 - 8.7.4. OSA and Pregnancy
- 8.8. Central Apnea syndrome
 - 8.8.1. Clinical Manifestations
 - 8.8.2. Diagnosis
 - 8.8.3. Treatment
- 8.9. Hypoventilation Syndrome
 - 8.9.1. Classification of Alveolar Hypoventilation Syndromes
 - 8.9.2. Obesity Hypoventilation Syndrome
 - 8.9.3. Idiopathic Central Alveolar Hypoventilation
 - 8.9.4. Congenital Central Alveolar Hypoventilation Syndrome
 - 8.9.5. Hypoventilation During Sleep Related to Medication or Substances
 - 8.9.6. Hypoventilation During Sleep Related to Medical Disorders
- 8.10. Other Sleep Disorders
 - 8.10.1. Hypersomnias
 - 8.10.2. Parasomnias and Restless Leg Syndrome
 - 8.10.3. Insomnia and Drowsiness

Module 9. Respiratory Failure. Non-Invasive Mechanical Ventilation. High-flow Oxygen Therapy

- 9.1. Respiratory Failure
 - 9.1.1. Pathophysiology-Specific (Partial, Global, Postoperative or Hypoperfusion/Shock)
 - 9.1.1.1. According to Time of Onset (Acute, Chronic and Acute Chronic)
 - 9.1.1.2. According to Alveolar-Arterial Gradient (Normal or Elevated)
 - 9.1.1.3. Pathophysiological Mechanisms
 - 9.1.2. Decrease in Oxygen Partial Pressure
 - 9.1.2.1. Presence of a Circuit Breaker or Shunt
 - 9.1.2.2. Ventilation/Perfusion Imbalance (V/Q)
 - 9.1.2.3. Alveolar Hypoventilation
 - 9.1.2.4. Diffusion Alteration
- 9.2. Diagnosis
 - 9.2.1. Clinical Symptoms
 - 9.2.2. Arterial Blood Gas Analysis Interpretation
 - 9.2.3. Pulse Oximetry
 - 9.2.4. Imaging Tests
 - 9.2.5. Others: Respiratory Function Tests, ECG, Blood Analysis, etc
 - 9.2.6. Etiology of Respiratory Failure
 - 9.2.7. Treatment of Respiratory Failure
 - 9.2.7.1. General Measures
 - 9.2.7.2. Oxygen Therapy, NIMV and HFO (See Next Sections)
- 9.3. Conventional Oxygen Therapy
 - 9.3.1. Indications of Acute Oxygen Therapy
 - 9.3.2. Indications for Chronic Home Oxygen Therapy
 - 9.3.3. Systems and Sources of Administration
 - 9.3.4. Oxygen Sources
 - 9.3.5. Special Situations: Flights
- 9.4. Non-Invasive Mechanical Ventilation (NIMV)
 - 9.4.1. Pathophysiological Effects
 - 9.4.1.1. On the Respiratory System
 - 9.4.1.2. On the Cardiovascular System

- 9.4.2. Components
 - 9.4.2.1. Interfaces
 - 9.4.2.2. Complications of the Interface: Skin Lesions, Leaks
 - 9.4.2.3. Accessories
- 9.4.3. Monitoring
- 9.5. Indications and Contraindications NIMV
 - 9.5.1. In the Acute Phase
 - 9.5.1.1. In Emergency Situations Prior to Concrete Diagnosis
 - 9.5.1.2. Acute Hypercapnic Respiratory Failure (Acute COPD, Decompensation of OHS Patient, Respiratory Center Depression, etc.)
 - 9.5.1.3. De Novo Hypoxemic ARF / ARDS / Immuno-Compromised
 - 9.5.1.4. Neuromuscular Diseases
 - 9.5.1.5. Post-Surgery
 - 9.5.1.6. *Weaning* and Extubation
 - 9.5.1.7. Patients Ordered Not to Intubate
 - 9.5.2. In the Chronic Phase
 - 9.5.2.1. COPD
 - 9.5.2.2. Restrictive Diseases (Thoracic Wall, Diaphragm, Neuromuscular, etc)
 - 9.5.2.3. Palliative Situation
 - 9.5.3. Contraindications
 - 9.5.4. NIMV Failure
- 9.6. Basic Concepts of NIMV
 - 9.6.1. Respiratory Parameters of the Ventilator
 - 9.6.1.1. Trigger
 - 9.6.1.2. Cycling
 - 9.6.1.3. Ramp
 - 9.6.1.4. IPAP
 - 9.6.1.5. EPAP
 - 9.6.1.6. Pressure Support
 - 9.6.1.7. PEEP
 - 9.6.1.8. I/E Relationship
 - 9.6.2. Interpretation of Respiratory Curves
- 9.7. Main Ventilatory Modes
 - 9.7.1. Pressure-Limited
 - 9.7.1.1. Continuous Positive Airway Pressure (CPAP)
 - 9.7.1.2. Bilevel Positive Airway Pressure (BiPAP)
 - 9.7.2. Volume-Limited
 - 9.7.3. New Modes: AVAPS, IVAPS, NAVA, *Autotrack*
- 9.8. Main Asynchronies
 - 9.8.1. Due to Leakage
 - 9.8.1.1. Autocycled
 - 9.8.1.2. Prolonged Inspiration
 - 9.8.2. Due to Ventilator
 - 9.8.2.1. Short Cycle
 - 9.8.2.2. Double Trigger
 - 9.8.2.3. Ineffective Effort
 - 9.8.3. Due to the Patient
 - 9.8.3.1. AutoPEEP
 - 9.8.3.2. Reverse Trigger
- 9.9. High-Flow Nasal Cannula Therapy (HFNCT)
 - 9.9.1. Components
 - 9.9.2. Clinical Effects and Mechanism of Action
 - 9.9.2.1. Improvement in Oxygenation
 - 9.9.2.2. Dead Space Lavage
 - 9.9.2.3. PEEP Effect
 - 9.9.2.4. Reduction in Respiratory Work
 - 9.9.2.5. Hemodynamic Effects
 - 9.9.2.6. Comfort

- 9.10. Clinical Applications and Contradictions of TAF
 - 9.10.1. Clinical Applications
 - 9.10.1.1. Acute Hypoxemic Respiratory Failure / ARDS / Immunocompromised
 - 9.10.1.2. Hypercapnic Respiratory Failure in COPD
 - 9.10.1.3. Acute Heart Failure and Acute Pulmonary Edema
 - 9.10.1.4. Invasive (Fibrobronchoscopy) and Post-Surgery Procedures
 - 9.10.1.5. Pre-Oxygenation before Intubation and Post-Extubation Respiratory Failure Prevention
 - 9.10.1.6. Patients in a Palliative Situation
 - 9.10.2. Contraindications
 - 9.10.3. Complications

Module 10. Lung Transplant

- 10.1. Lung Transplant
 - 10.1.1. Historical Recollection
 - 10.1.2. Evolution in Recent Years: Demographic Revision, Analysis by Pathologies and Survival
- 10.2. Selection of Receptors
 - 10.2.1. Absolute Contra-indications
 - 10.2.2. Relative Contra-indications
 - 10.2.3. Indications for Referral to a Lung Transplant Unit Due to Pathologies
 - 10.2.3.1. Common Interstitial Pneumonia / Non-Specific Interstitial Pneumonia
 - 10.2.3.2. Chronic Obstructive Pulmonary Disease
 - 10.2.3.3. Cystic fibrosis
 - 10.2.3.4. Pulmonary Hypertension
 - 10.2.4. Indications for Referral to a Lung Transplant Unit Due to Pathologies
 - 10.2.4.1. Common Interstitial Pneumonia / Non-Specific Interstitial Pneumonia
 - 10.2.4.2. Chronic Obstructive Pulmonary Disease
 - 10.2.4.3. Cystic fibrosis
 - 10.2.4.4. Pulmonary Hypertension



- 10.3. Selection of Donor
 - 10.3.1. Brain-Dead Donor
 - 10.3.2. Donor in Asystole
 - 10.3.3. Exvivo Evaluation System
- 10.4. Surgical Technique
 - 10.4.1. Removal of the Affected Lung
 - 10.4.2. Bench Surgery
 - 10.4.3. Graft Implantation
- 10.5. Cardio-Respiratory Care
 - 10.5.1. ECMO as a Bridge to a Transplant
 - 10.5.2. Intra-Operative ECMO
 - 10.5.3. Post-Operative Radiotherapy
- 10.6. Early Complications of Lung Transplants
 - 10.6.1. Hyperacute Rejection
 - 10.6.2. Primary Dysfunction of the Graft
 - 10.6.3. Complications from Surgery
 - 10.6.4. Peri-Operative Infections
- 10.7. Post-Operative Care
 - 10.7.1. Immunosuppressive Treatments
 - 10.7.2. Infectious Prophylaxis
 - 10.7.3. Monitoring
- 10.8. Delayed Complications of Lung Transplants
 - 10.8.1. Acute Cellular Rejection (Early or Delayed)
 - 10.8.2. Chronic Dysfunction of the Graft. *Chronic Lung Allograft Dysfunction (CLAD)*
 - 10.8.2.1. Types
 - 10.8.2.2. Treatment
 - 10.8.3. Tumours
 - 10.8.3.1. Cutaneous Tumors
 - 10.8.3.2. Post-Transplant Lymphoproliferative Syndrome
 - 10.8.3.3. Solid Tumors
 - 10.8.3.4. Kaposi's Sarcoma

- 10.8.4. Infections
- 10.8.5. Other Frequent Complications
 - 10.8.5.1. Diabetes Mellitus
 - 10.8.5.2. Hyperlipidemia
 - 10.8.5.3. Arterial Hypertension
 - 10.8.5.4. Acute and Chronic Kidney Failure
- 10.9. Quality of Life and Suffering
 - 10.9.1. Quality of Life Analysis
 - 10.9.2. Survival Rate; Evaluation of Subgroups
- 10.10. Re-Transplant
 - 10.10.1. Indications and Limitations
 - 10.10.2. Survival and Quality of Life



You will assimilate the contents of this program in a fast and flexible way, thanks to innovative learning methodologies such as Relearning"

07

Clinical Internship

The study modality of this Hybrid Master's Degree includes 1,500 hours of theoretical learning, from an innovative 100% online learning platform. At the end of this didactic stage, the pulmonologist will continue to update their knowledge by means of an on-site and intensive clinical internship, to be carried out in a rigorous and prestigious health institution.



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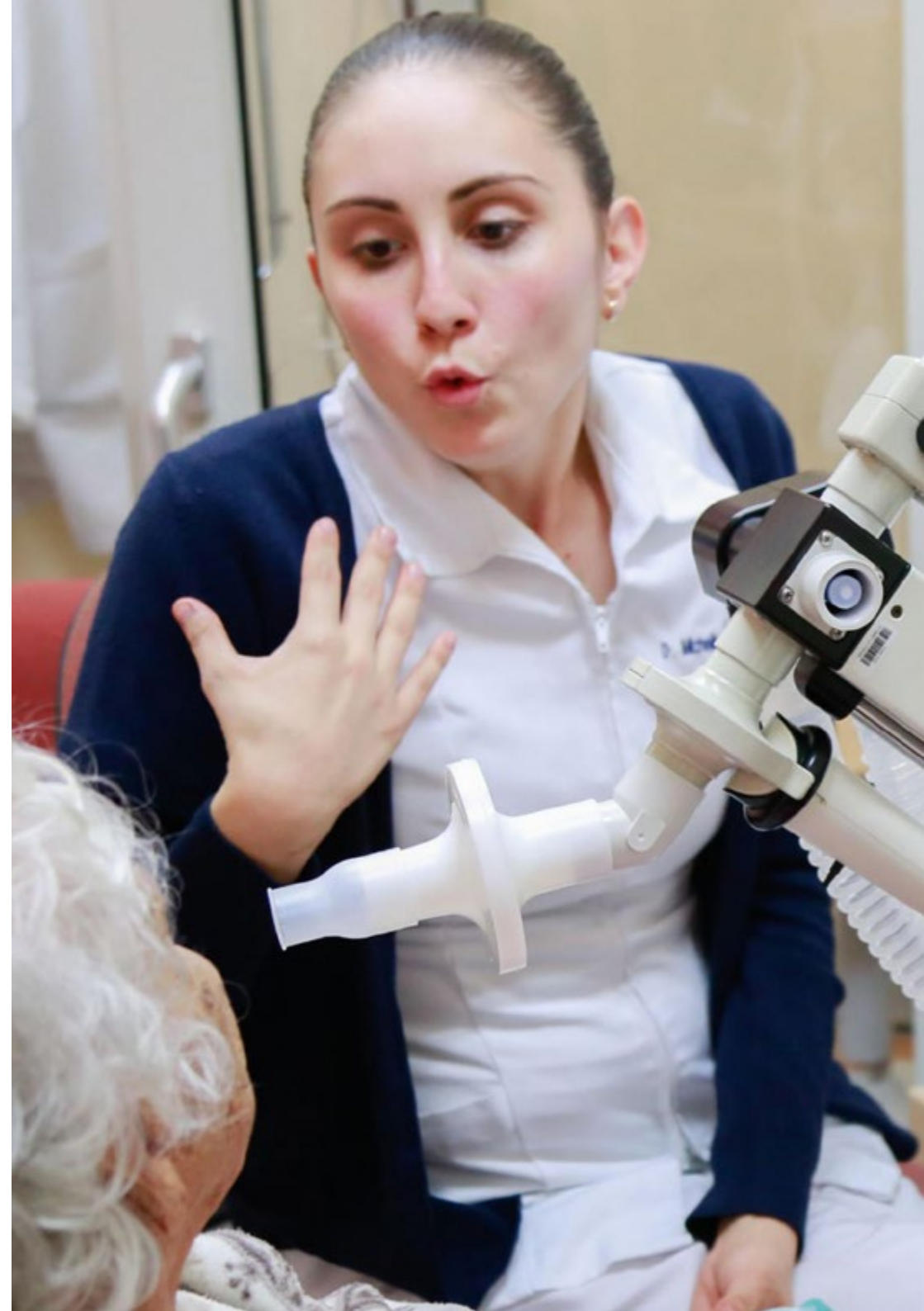
With this Hybrid Master's Degree, you will be able to access the health institution that best suits your interests and the geographic location where you live”

This internship consists of 120 educational hours, which are distributed from Monday to Friday, for 3 weeks. During this study period, the physician will be incorporated into the most demanding healthcare dynamics in a renowned healthcare facility. At this institution, the pulmonologist will apply the procedures and strategies, previously assimilated in the theoretical phase, in real patients who need to overcome pathologies such as respiratory infections or who need a lung transplant.

During this 100% on-site and intensive internship, the pulmonology professional will work alongside the best experts in the sector, directly acquiring their best experiences. They will also have the support of an attending tutor, an academic figure created to supervise their progress and introduce the specialist to the more complex tasks of these units.

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 Medicine (learning to be and learning to relate).

“*During the clinical internship of this Hybrid Master's Degree, you will complete several tasks that will update your skills as a pulmonologist, according to the most recent healthcare criteria*”





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
Chronic Obstructive Pulmonary Disease and Interstitial Lung Diseases	Interpret the latest complementary tests used to establish the diagnosis and follow up the COPD patient. diagnosis and follow-up of the COPD patient
	Treat with solvency the different comorbidities that may occur in a COPD patient
	Diagnose and treat the different types of interstitial lung diseases based on the latest scientific evidence
Asthma Respiratory Infections and Related Diseases	Carry out the management of patients suffering from diseases such as occupational asthma or pulmonary such as occupational asthma or pulmonary eosinophilias
	Follow-up of a patient with Asthma to ensure the optimization of his health status optimization of their health status
	Use new antimicrobial and diagnostic tests that allow rapid diagnosis and treatment of respiratory infections
Diseases of the Pleura and Mediastinum and Hepatic Circulation	Use the most advanced diagnostic techniques that allow the detection of pleural and mediastinal that allow the detection of diseases of the pleura and mediastinum
	Treat patients suffering from pathologies such as pleural effusion, pneumothorax and mediastinal disease
	Diagnose pulmonary hypertension and to establish a treatment adapted to the needs of each patient
Lung Transplant	Discern which patient should undergo lung transplantation, applying the most up-to-date scientific criteria in this field
	Treat patients who have suffered various complications from lung transplantation
	Use immunosuppressive and prophylaxis treatments in patients who have undergone lung transplantation

Civil Liability Insurance

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

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

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



General Conditions of the Internship Program

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

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

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

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

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

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

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

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

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

08

Where Can I Do the Clinical Internship?

This program culminates with a practical and on-site internship in a first-class hospital institution. For this purpose, TECH has chosen state-of-the-art centers, equipped with the latest technology and healthcare resources that facilitate the professional practice of the pulmonologist. In addition, each physician will have the opportunity to complete this educational phase in an institution that meets their pedagogical needs and geographical location. This is possible thanks to the fact that this Hybrid Master's Degree has coordinated this modality in facilities located in different latitudes.





“

During this intensive on-site internship, you will be able to apply everything you have learned during the theoretical educational process on real patients”

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



Medicine.

Hospital HM Modelo

Country City
Spain 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
- Spine Surgery



Medicine.

Hospital HM Rosaleda

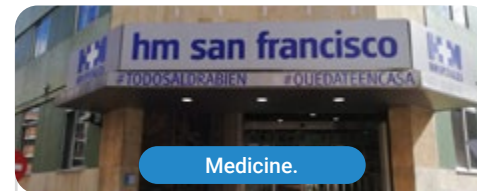
Country City
Spain La Coruña

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



Medicine.

Hospital HM San Francisco

Country City
Spain 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



Medicine.

Hospital HM Regla

Country City
Spain León

Address: Calle Cardenal Landázuri, 2,
24003, León

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

Related internship programs:

- Psychiatric Treatments Update
in Minor Patients



Medicine.

Hospital HM Nou Delfos

Country City
Spain 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



Medicine.

Hospital HM Madrid

Country City
Spain 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:

- Clinical Analysis
- Anaesthesiology and Resuscitation



Medicine.

Hospital HM Montepíncipe

Country City
Spain Madrid

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

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

Related internship programs:

- Child Orthopedics
- Aesthetic Medicine



Medicine.

Hospital HM Torrelodones

Country City
Spain 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
- Hospital Pediatrics



Medicine.

Hospital HM Sanchinarro

Country City
Spain 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
- Sleep Medicine



Medicine.

Hospital HM Puerta del Sur

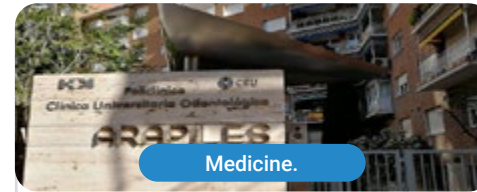
Country City
Spain Madrid

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

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

Related internship programs:

- Pediatric Emergencies
- Clinical Ophthalmology



Medicine.

Policlínico HM Arapiles

Country City
Spain Madrid

Address: C. de Arapiles, 8, 28015, Madrid

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

Related internship programs:

- Anaesthesiology and Resuscitation
- Pediatric Dentistry



Medicine.

Policlínico HM Cruz Verde

Country City
Spain 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



Medicine.

Policlínico HM Gabinete Velázquez

Country City
Spain Madrid

Address: C. de Jorge Juan, 19, 1º 28001, 28001, Madrid

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

Related internship programs:

- Clinical Nutrition in Medicine
- Aesthetic Plastic Surgery



Medicine.

Policlínico HM Matogrande

Country City
Spain La Coruña

Address: R. Enrique Mariñas Romero, 32G, 2º, 15009, A Coruña

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

Related internship programs:

- Sports Physiotherapy
- Neurodegenerative Diseases



Medicine.

Policlínico HM Rosaleda Lalín

Country City
Spain Pontevedra

Address: Av. Buenos Aires, 102, 36500, Lalín, Pontevedra

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

Related internship programs:

- Advances in Hematology and Hemotherapy
- Neurological Physiotherapy

09

Methodology

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

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



“

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

At TECH we use the Case Method

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

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



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

“

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

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

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



Relearning Methodology

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

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

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



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

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

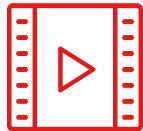
Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

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

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



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



Study Material

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

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



Surgical Techniques and Procedures on Video

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



Interactive Summaries

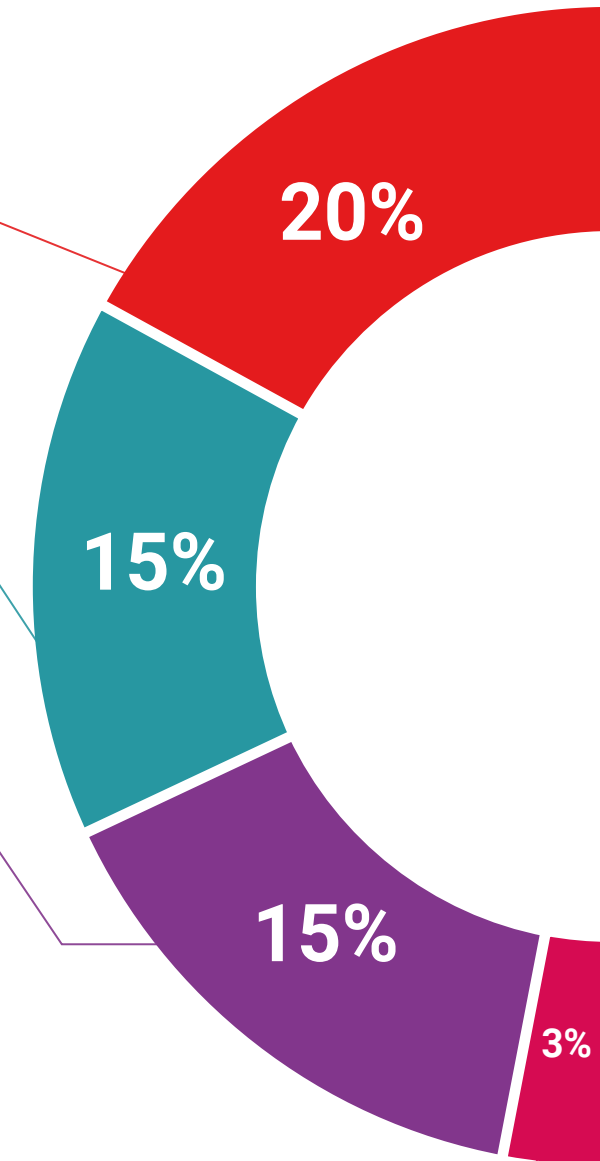
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

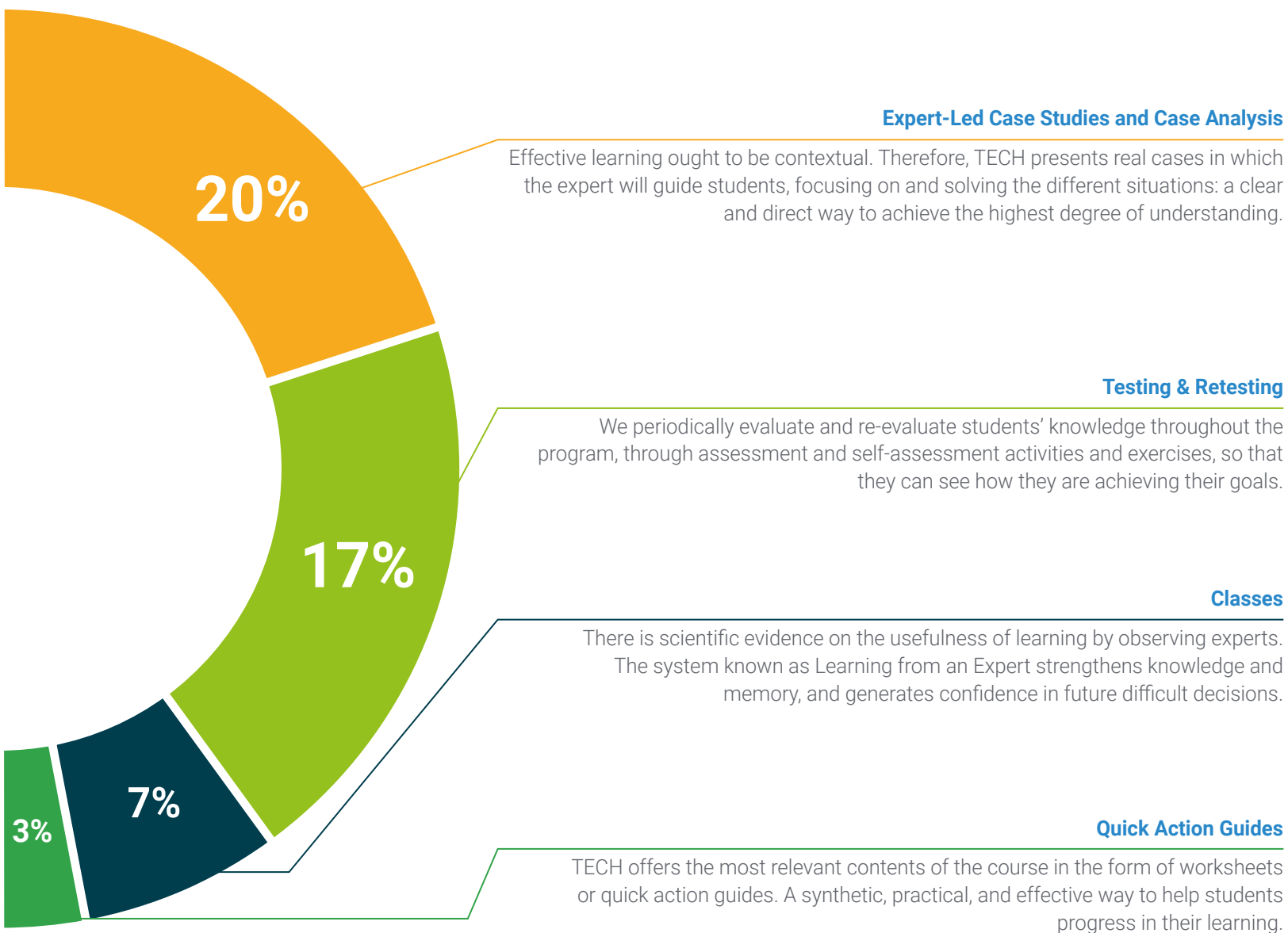
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

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





10 Certificate

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



“

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

This program will allow you to obtain your **Hybrid Master's Degree diploma in Pulmonology** endorsed by **TECH Global University**, the world's largest online university.

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

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

Title: **Hybrid Master's Degree in Pulmonology**

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

Duration: **12 months**

Certificate: **TECH Global University**

Recognition: **60 + 5 ECTS Credits**





Hybrid Master's Degree Pulmonology

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 créditos ECTS

Hybrid Master's Degree Pulmonology

