Professional Master's Degree

Minimally Invasive Thoracic Surgery

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Professional Master's Degree
Minimally Invasive Thoracic Surgery

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Global University**
- Accreditation: **90 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/us/medicine/professional-master-degree/master-minimally-invasive-thoracic-surgery

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01

Introduction to the Program

Minimally Invasive Thoracic Surgery has seen significant advances in recent years, allowing complex procedures to be performed through small incisions without the need to separate the ribs. In fact, this technique reduces postoperative pain, shortens hospital stays and speeds up patient recovery. One prominent example is single-port video-assisted thoracoscopy, which uses a single incision to access the thorax, improving both cosmetic and functional results. In this context, TECH has developed a comprehensive 100% online program, which will adapt perfectly to the work and personal schedules of graduates. All this, always with the support of the revolutionary Relearning methodology, a pioneer at this institution.

With this 100% online program, you will acquire state-of-the-art knowledge in less invasive procedures, reducing recovery times, complications and hospital stays"

The adoption of Minimally Invasive Thoracic Surgery has shown benefits in reducing postoperative complications and accelerating the functional recovery of patients. For example, at the University Hospital Son Espases, half of the thoracic surgery procedures are performed using minimally invasive techniques, resulting in a shorter hospital stay and faster recovery.

This is how this program was developed, which will offer doctors a solid theoretical and practical basis, integrating the latest technological advances and innovative approaches. In this sense, they will acquire a deep understanding of minimally invasive techniques, such as Video-Assisted Thoracoscopy (VATS) and Robotic-Assisted Thoracic Surgery (RATS), as well as the fundamental principles that underpin these methodologies. In addition, critical topics such as postoperative pain management, the prevention and treatment of frequent complications, and strategies to optimize patient recovery time will be addressed.

Likewise, one of the most outstanding aspects of the degree will be its practical and interactive approach, backed up by high-quality teaching resources. In this way, professionals will have access to an extensive library of surgical videos that document procedures in real time, allowing a detailed understanding of the techniques and the honing of specific skills.

Finally, graduates will not only be trained in the application of minimally invasive techniques, but will also be prepared to become agents of change in their institutions, promoting the adoption of less invasive procedures that improve clinical outcomes and quality of life for patients.

In this way, TECH has designed a complete program that is completely online, requiring only an electronic device with an Internet connection to access all the teaching resources, avoiding problems such as the need to travel to a physical center or adapt to a fixed schedule. In addition, it will be based on the innovative Relearning methodology, consisting of the reiteration of key concepts for the optimal and organic assimilation of the contents.

This **Professional Master's Degree in Minimally Invasive Thoracic Surgery** contains the most complete and up-to-date scientific program on the market. The most important features include:

- The development of case studies presented by experts with a deep knowledge of the latest techniques in Minimally Invasive Thoracic Surgery, which simplifies the work of doctors in clinics, hospitals and other healthcare centers
- The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable for professional practice
- Practical exercises where the self-assessment process can be carried out to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions 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.

You will be equipped to establish yourself as a leader in Thoracic Surgery, contributing to the advancement of a field that combines technological innovation, surgical precision and a focus on patient well-being"

You will address critical issues such as postoperative pain management, the most common complications and best practices to speed up patient recovery. With TECH's quality assurance!"

You will cover everything from the fundamental principles of Minimally Invasive Surgery to the most advanced techniques, such as Video-Assisted Thoracoscopy (VATS) and Robotic-Assisted Thoracic Surgery (RATS). What are you waiting for to enroll?

This academic qualification is backed by the latest technological advances in Thoracic Surgery, which will allow you to keep up to date with the most current trends and methods in this rapidly evolving field.

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

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to prepare for real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

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Why Study at TECH?

TECH is the world's largest online university. With an impressive catalog of more than 14,000 university programs available in 11 languages, it is positioned as a leader in employability, with a 99% job placement rate. In addition, it relies on an enormous faculty of more than 6,000 professors of the highest international renown.

Study at the world's largest online university and guarantee your professional success. The future starts at TECH"

The world's best online university, according to FORBES

The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

The best top international faculty

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistumba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

The world's largest online university

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.

The most complete syllabuses on the university scene

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

A unique learning method

TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.

Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.

The top-rated university by its students

Students have positioned TECH as the world's top-rated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.

03

Syllabus

Unlike more general programs, this Professional Master's Degree will focus exclusively on minimally invasive techniques, such as Robotic Surgery (RATS) and Video-Assisted Thoracoscopy (VATS), offering intensive education that combines rigorous theory with applied practice. High-quality surgical videos will also be available, allowing students to observe complex procedures and acquire directly applicable practical knowledge. In addition, the degree will be backed by a faculty of internationally renowned surgeons, who will contribute their pioneering experience and an innovative perspective.

The syllabus of the Minimally Invasive Thoracic Surgery program is distinguished by its specialized and deeply interactive approach, designed for physicians seeking to master the most advanced techniques in this area"

Module 1. Approach to Minimally Invasive Thoracic Surgery

1.1. Minimally Invasive Thoracic Surgery. Historical Aspects
- 1.1.1. Evolution of Surgical Techniques
- 1.1.2. Influence of Technology on the Development of Thoracic surgery
- 1.1.3. Pioneers in Minimally Invasive Thoracic Surgery

1.2. Simulation and Experimental Surgery in Minimally Invasive Thoracic Surgery
- 1.2.1. Simulation Models in Surgical Training
- 1.2.2. Training Programs in Minimally Invasive Thoracic Surgery
- 1.2.3. Ethics and Considerations in Experimental Surgery

1.3. Material for Minimally Invasive Thoracic Surgery
- 1.3.1. Basic Surgical Instruments
- 1.3.2. Specialized Surgical Instruments
- 1.3.3. Imaging and Visualization Devices

1.4. Thoracic Robotic Surgery. Historical Development
- 1.4.1. Development of the First Robotic Systems
- 1.4.2. Learning Curve and Adoption in Clinical Practice
- 1.4.3. Global Expansion of Robotic Surgery

1.5. Unique Systems and Aspects of Robotic Thoracic Surgery
- 1.5.1. Components of the Robotic Surgical System
- 1.5.2. Technical Advantages over Traditional Surgery and VATS
- 1.5.3. Current Limitations and Challenges

1.6. Surgical Anatomy for Minimally Invasive Surgery
- 1.6.1. Anatomical Structures Involved in Minimally Invasive Approaches
- 1.6.2. Anatomical View in the Different Minimally Invasive Approaches
- 1.6.3. Anatomical Limits in the Thorax in Minimally Invasive Surgery
  - 1.6.3.1. Thoracic Duct, Transcervical Approach

1.7. Single-port and Multiport Minimally Invasive Intercostal Approaches
- 1.7.1. Single-port Approach
- 1.7.2. Biportal Approach
- 1.7.3. Multiportal Approach

1.8. Others Minimally Invasive Approaches. Subxiphoid, Video-assisted Mediastinoscopic, VAMLA, TEMLA
- 1.8.1. Subxiphoid Approach
- 1.8.2. VAMLA Approach
- 1.8.3. TEMLA Approach

1.9. Ergonomics in Minimally Invasive Thoracic Surgery
- 1.9.1. Space Distribution in the Operating Room
- 1.9.2. Surgeon's Position in Minimally Invasive Thoracic Surgery
- 1.9.3. Strategies to Reduce Fatigue and Improve Ergonomics

1.10. Indications and Advantages of Supine, Lateral or Prone Positioning in Minimally Invasive Thoracic Surgery
- 1.10.1. Supine Approach
- 1.10.2. Lateral Approach
- 1.10.3. Prone Approach

Module 2. Anesthesia in Minimally Invasive Thoracic Surgery

2.1. Evolution of Anesthesia towards Minimally Invasive Surgery
- 2.1.1. Background and Evolution of Anesthesia in Minimally Invasive Thoracic Surgery
- 2.1.2. Advances in Anesthetic Techniques
- 2.1.3. One-Lung Ventilation
- 2.1.4. New Analgesic Blockades
- 2.1.5. Technological Advances
  - 2.1.5.1. Thoracoscopic Surgery (VATS)
  - 2.1.5.2. Robotic Surgery

2.2. Pre-anesthetic Assessment in Minimally Invasive Surgery
- 2.2.1. Identification of Risk Factors
  - 2.2.1.1. Risk Assessment Scales
  - 2.2.1.2. Immediate Postoperative Complications
  - 2.2.1.3. Respiratory Factors
  - 2.2.1.4. Cardiovascular Factors
  - 2.2.1.5. Metabolic Risk Factors and Comorbidities

2.2.2. Pulmonary Function Tests
2.2.2.1. Respiratory Function Tests
2.2.2.2. Unilateral Function Tests
2.2.2.3. Stress Tests
2.2.3. Optimization of the Patient's General Condition
2.2.3.1. Respiratory Optimization
2.2.3.2. Cardiovascular Optimization
2.2.3.3. Metabolic and Nutritional Optimization
2.2.3.4. Optimization of Preoperative Anemia
2.2.3.5. Respiratory Physiotherapy
2.2.3.5.1. Rehabilitation
2.2.3.5.2. Psychological Support

2.3. Minimally Invasive Anesthetic Management of the Thoracic Patient
2.3.1. Anesthetic Techniques
2.3.1.1. General Anesthesia
2.3.1.2. One-Lung Ventilation
2.3.1.3. Protective Lung Ventilation
2.3.2. Monitoring
2.3.2.1. Standard Monitoring
2.3.2.2. Diuresis
2.3.2.2.1. Anesthetic Depth
2.3.2.2.2. Progressive Muscle Relaxation. Temperature
2.3.3. Others. Positioning
2.3.3.1. Fluid Therapy
2.3.3.2. Multimodal Analgesia

2.4. Airway Management: Double-Lumen Tube Placement
2.4.1. Background and Evolution of Double-Lumen Tube in Minimally Invasive Surgery
2.4.2. Indications for the Use of Double-Lumen Tubes
2.4.2.1. Advantages and Disadvantages of the Use of Double-Lumen Tubes
2.4.3. Types of Double-Lumen Tubes
2.4.3.1. With Camera
2.4.3.2. Without Camera
2.4.3.3. Positioning of Double-Lumen Tubes

2.5. Airway Management: Bronchial Blockers and Endotracheal Intubation
2.5.1. Background and Evolution of Bronchial Blockers in Minimally Invasive Surgery
2.5.2. Indications for the Use of Bronchial Blockers
2.5.2.1. Difficult Airway in One-Lung Ventilation
2.5.2.2. Segmental Pulmonary Isolation
2.5.2.3. One-Lung Ventilation in Pediatric Patients or Patients of Small Stature
2.5.2.4. Altered Tracheobronchial Anatomy
2.5.3. Types of Bronchial Blockers
2.5.3.1. Independent
2.5.3.2. Incorporated into the Endotracheal Tube
2.5.3.3. Advantages and Disadvantages of Using Bronchial Blockers
2.5.3.4. Positioning of Bronchial Blockers

2.6. Airway Management: Thoracic Surgery Without Intubation
2.6.1. Preoperative Assessment. Inclusion and Exclusion Criteria
2.6.2. Intraoperative Anesthetic Management
2.6.2.1. Monitoring
2.6.2.2. Airway Management
2.6.2.3. Anesthetic Induction
2.6.2.4. Postoperative Pain Management
2.6.3. Postoperative Care. Complications

2.7. Airway Management: Intraoperative Bronchoscopy
2.7.1. Anatomy of the Tracheobronchial Tree
2.7.2. Indications for Intraoperative Bronchoscopy
2.7.2.1. Placement and Verification of the Lung Isolation Device
2.7.2.2. Readjustment of Lung Isolation
2.7.2.3. Control of Intraoperative Secretions and Bleeding
2.7.2.4. Detection and Handling of Intraoperative Complications
2.7.2.5. Guidance in Complex Surgeries
2.7.2.6. Confirmation of Bronchial Patency after Resection
2.7.2.7. Evaluation of Bronchial Leaks
2.7.2.8. Assistance in the Management of Bronchopleural Fistulas
2.7.3. Management of Fiberoptic Bronchoscopy in the Difficult Airway

2.8. Analgesic Management: Spinal Erector Plane Block and Other Selective Blockades
- 2.8.1. Pain in Minimally Invasive Thoracic Surgery. Anatomy of the Thoracic Wall
- 2.8.2. Intercostal Blockade
- 2.8.3. Interfascial Blockade
  - 2.8.3.1. Features
  - 2.8.3.2. Types of Blockades
    - 2.8.3.2.1. Erector Spinal Blockade
    - 2.8.3.2.2. Serratus Plane Blockade PECS Blockade

2.9. Analgesic Management: Epidural and Paravertebral Blockade
- 2.9.1. Epidural Blockade. Effects. Complications
- 2.9.2. Paravertebral Blockade. Techniques. Complications
- 2.9.3. Comparison of Epidural Blockade vs. Paravertebral Blockade

2.10. Postoperative and Discharge Analgesic Management
- 2.10.1. Pain Assessment
  - 2.10.1.1. One-dimensional Scales
  - 2.10.1.2. Multidimensional Scales
- 2.10.2. Multimodal Pain Management
  - 2.10.2.1. Analgesics
  - 2.10.2.2. Regional Techniques
  - 2.10.2.3. Adjuvant Drugs
- 2.10.3. Chronic Post-Thoracotomy Pain
  - 2.10.3.1. Incidence
  - 2.10.3.2. Risk Factors

Module 3. Surgical Indications in Minimally Invasive Thoracic Surgery

3.1. From Pleuroscopy to Sublobar Resections. Historical Development
- 3.1.1. Pleuroscopy. Videothoracoscopy in Pleural Disease and Wedge Resections
- 3.1.2. Lobectomies and Pneumonectomies. Anatomical Segmentectomies
- 3.1.3. Contribution of Robotic Surgery to the Improvement of Resectability through Minimally Invasive Techniques

3.2. Neoplastic Lung Disease. Treatment
- 3.2.1. Treatment in Neoplastic Lung Disease
- 3.2.2. Treatment Contraindications
- 3.2.3. Key Points for Each Indication. Current State of the Art

3.3. Neoplastic Lung Disease. Treatment
- 3.3.1. Benign Neoplasms
- 3.3.2. Pleural Metastases
- 3.3.3. Malignant Pleural Mesothelioma
- 3.3.4. Management of Malignant Pleural Effusion

3.4. Mediastinal Tumor. Treatment
- 3.4.1. Anterior Mediastinal Tumors. Posterior Mediastinal Tumors
- 3.4.2. Mediastinoscopy and Mediastinotomy. TEMLA. VAMLA
- 3.4.3. Lymphadenectomy in Lung Cancer

3.5. Thoracic Wall Disease. Treatment
- 3.5.1. Thoracic Wall Deformities
- 3.5.2. First Rib Resection
- 3.5.3. Malignant Tumor Resection of the Thoracic Wall
- 3.5.4. Benign Tumor Disease of the Thoracic Wall

3.6. Esophageal Disease. Treatment
- 3.6.1. Achalasia
- 3.6.2. Diverticulum
- 3.6.3. Tumors of the Gastroesophageal Junction
- 3.6.4. Benign Tumors of the Esophagus

3.7. Infectious Diseases. Treatment
- 3.7.1. Bronchiectasis. TB. Fungal Infections. Pulmonary Hydatidosis
- 3.7.2. Empyema
- 3.7.3. Descending Necrotizing Mediastinitis
- 3.7.4. Pulmonary Hydatidosis

3.8. Lung Malformations. Current Indications
- 3.8.1. Pulmonary Sequestration
- 3.8.2. Cystic Adenomatoid Malformation
- 3.8.3. Congenital Lobar Emphysema
- 3.8.4. Bronchogenic Cysts

3.9. Other Specifications in Minimally Invasive Thoracic Surgery
- 3.9.1. Surgery of the Diaphragm
- 3.9.2. Pericardial Disease. Cardiac Surgery
- 3.9.3. Thoracic Spine Procedures

3.10. General Contraindications in Minimally Invasive Surgery
- 3.10.1. Contraindications of the Multiport VATS Approach
- 3.10.2. Contraindications of Robotic Approaches
- 3.10.3. Alternatives to the Minimally Invasive Approach: Hybrid Approaches

Module 4. VATS Preoperative Planning and Care in Minimally Invasive Thoracic Surgery

4.1. Resectability Criteria in Minimally Invasive Surgery
- 4.1.1. Resectability
- 4.1.2. Methods for Evaluating Resectability
- 4.1.3. Strategies to Improve Resectability

4.2. Operability Criteria in Minimally Invasive Surgery
- 4.2.1. Operability
- 4.2.2. Preoperative Functional Evaluation Algorithms
- 4.2.3. Other Operability Conditions

4.3. Marking of Pulmonary Nodules
- 4.3.1. Indications for the Use of Pulmonary Nodule Marking
- 4.3.2. Types of Percutaneous Marking and Bronchoscopic Marking
- 4.3.3. Advantages and Disadvantages of the Different Types of Marking

4.4. Usefulness of 3D Reconstruction
- 4.4.1. 3D Reconstruction. Uses
- 4.4.2. Applications in Minimally Invasive Surgery
- 4.4.3. Advantages of 3D Reconstruction for Minimally Invasive Surgery: Evidence in Literature

4.5. Patient Prehabilitation in Minimally Invasive Surgery
- 4.5.1. Evidence for Patient Prehabilitation
- 4.5.2. Candidates for Prehabilitation
- 4.5.3. Practical Recommendations for Patient Prehabilitation

4.6. ERAS Program: Preoperative in Minimally Invasive Surgery
- 4.6.1. Quitting Smoking. Management of Alcohol Dependence
- 4.6.2. Optimization of Hemoglobin Levels. Optimization of Nutritional Status. Pre-operative Fasting
- 4.6.3. Prophylaxis of Thromboembolic Disease. Antibiotic Prophylaxis

4.7. ERAS Program: Intraoperative in Minimally Invasive Surgery
- 4.7.1. Prevention of Hypothermia
- 4.7.2. Anesthetic Protocol
- 4.7.3. Regional Analgesia

4.8. ERAS Program: Postoperative in Minimally Invasive Surgery
- 4.8.1. Nausea and Vomiting Control. Prevention and Treatment of the Arrhythmia
- 4.8.2. Pain Management
- 4.8.3. Early Physiotherapy and Mobilization

4.9. Drainage Management in Minimally Invasive Surgery. Specific Aspects
- 4.9.1. Pleural Space Physiology
- 4.9.2. Types of Thoracic Drainage Systems
- 4.9.3. Management of Drainages

4.10. Prevention of Late Complications and Urgent Readmissions
- 4.10.1. Incidence
- 4.10.2. Risk Factors. Main Causes
- 4.10.3. Impact on Survival

Module 5. Sublobular Lung Resections

5.1. Sublobar Lung Resections for the Treatment of Lung Cancer
- 5.1.1. Sublobar Resections for Functional Impairment
- 5.1.2. Elective Sublobar Resections
- 5.1.3. Lymphadenectomy

5.2. Lung Sublobar Resections for Lung Metastases and Other Tumors
- 5.2.1. Surgical Treatment of Lung Metastases
- 5.2.2. Surgical Treatment of Neuroendocrine Neoplasms
- 5.2.3. Surgical Treatment of Other Diseases by Sublobar Resection

5.4. Transegmentary Resections
- 5.3.1. Anatomical Principles
- 5.3.2. Surgical Technique Using VATS Approach
- 5.3.3. Complications and Postoperative Results

5.4. Anatomical Sublobar Resections of the Right Upper Lobe
- 5.4.1. Right Apical Segmentectomy (S1)
- 5.4.2. Right Posterior Segmentectomy (S2)
- 5.4.3. Right Anterior Segmentectomy (S3)

5.5. Anatomical Sublobar Resections of the Middle Lobe
- 5.5.1. Potential Indications
- 5.5.2. Lateral Segmentectomy (S4)
- 5.5.3. Medial Segmentectomy (S5)

5.6. Anatomical Sublobar Resections of the Right Lower Lobe
- 5.6.1. Right S6 Segmentectomy
- 5.6.2. Anteromedial Basal Bisegmentectomy (S7+S8)
- 5.6.3. Lateroposterior Basal Bisegmentectomy (S9+S10)

5.7. Anatomical Sublobar Resections of the Left Upper Lobe
- 5.7.1. Left Apicoposterior Bisegmentectomy (S1+2)
- 5.7.2. Left Anterior Segmentectomy (S3)
- 5.7.3. Left Upper Lobe Trisegmentectomy (S1+2+ S3). Lingulectomy (S4+ S5)

5.8. Anatomical Sublobar Resections of the Left Lower Lobe
- 5.8.1. Left S6 Segmentectomy
- 5.8.2. Anterior Basal Segmentectomy (S8)
- 5.8.3. Lateroposterior Basal Bisegmentectomy (S9+S10)

5.9. Combined Anatomical Sublobar Resections
- 5.9.1. Potential Indications
- 5.9.2. Bisegmentectomy S1+S3
- 5.9.3. Bisegmentectomy S6+S10

5.10. Management of Intraoperative Complications
- 5.10.1. Incorrect Interpretation of Segmental Anatomy
- 5.10.2. Bleeding and Bronchial Lesions
- 5.10.3. Complications After Pulmonary Re-expansion

Module 6. VATS Lobar Lung Resections

6.1. VATS Lobar Lung Resections
- 6.1.1. Historical Evolution of Surgical Technique: From Thoracotomy to VATS
- 6.1.2. Patient Positioning, Operating Room and Instrumental Organization
- 6.1.3. Indications and Contraindications

6.2. General Surgical Technique
- 6.2.1. Approaches
- 6.2.2. Principles of Dissection and Exposure
- 6.2.3. Hilum of the Lung. Division of Lung Fissure

6.3. VATS Right Upper Lobectomy
- 6.3.1. Specific Lobar Anatomy
- 6.3.2. Surgical Strategy
- 6.3.3. Tips and Tricks

6.4. VATS Middle Lobectomy
- 6.4.1. Specific Lobar Anatomy
- 6.4.2. Surgical Strategy
- 6.4.3. Tips and Tricks

6.5. VATS Right Lower Lobectomy
- 6.5.1. Specific Lobar Anatomy
- 6.5.2. Surgical Strategy
- 6.5.3. Tips and Tricks

6.6. VATS Left Upper Lobectomy
- 6.6.1. Specific Lobar Anatomy
- 6.6.2. Surgical Strategy
- 6.6.3. Tips and Tricks

6.7. VATS Left Lower Lobectomy
- 6.7.1. Specific Lobar Anatomy
- 6.7.2. Surgical Strategy
- 6.7.3. Tips and Tricks

6.8. Bilobectomy and Pneumonectomy
- 6.8.1. Bilobectomy
- 6.8.2. Right Pneumonectomy
- 6.8.3. Left Pneumonectomy

6.9. Complex Resections
- 6.9.1. Bronchoplasty
- 6.9.2. Angioplasty
- 6.9.3. Extended Resection to the Thoracic Wall

6.10. Management of Complications
- 6.10.1. Conversion to Open Surgery
- 6.10.2. Intraoperative Bleeding
- 6.10.3. Ventilation Problems and Intraoperative Respiratory Management

Module 7. Minimally Invasive Airway Surgery, Malformations, Pneumothorax and Pulmonary Emphysema

7.1. Study of the Patient with Airway Disease
- 7.1.1. General Patient Assessment: Resectability and Operability Criteria
- 7.1.2. Imaging and Functional Tests
- 7.1.3. Histological Diagnosis

7.2. Minimally Invasive Tracheal Surgery
- 7.2.1. Surgical Anatomy of the Trachea
- 7.2.2. Anesthetic Approach. Surgical Technique
- 7.2.3. Results Complications

7.3. Minimally Invasive Management of Airway Obstruction
- 7.3.1. Diagnosis of Acute Airway Obstruction
  - 7.3.1.1. Imaging Techniques
  - 7.3.1.2. Role of Bronchoscopy
- 7.3.2. Anesthetic Approach
  - 7.3.2.1. Surgical Technique
  - 7.3.2.2. Treatment of Associated Lesions
- 7.3.3. Results and Complications

7.4. Left Bronchoplasty Surgery
- 7.4.1. Surgical Anatomy of the Left Bronchial Tree. Diseases that Can Affect It
- 7.4.2. Anesthetic Approach. Surgical Technique
- 7.4.3. Results Complications

7.5. Right Bronchoplasty Surgery
- 7.5.1. Surgical Anatomy of the Right Bronchial Tree. Diseases that Can Affect It
- 7.5.2. Anesthetic Approach. Surgical Technique
- 7.5.3. Results Complications

7.6. Resection and Reconstruction of the Carina of Trachea
- 7.6.1. Surgical Anatomy of the Carina of Trachea. Diseases that Can Affect It
- 7.6.2. Anesthetic Approach. Surgical Technique
- 7.6.3. Results Complications

7.7. Minimally Invasive Surgery for Airway Malformations: Bronchi and Vessels
- 7.7.1. Most Common Bronchial and Vascular Malformations
- 7.7.2. Anesthetic Approach. Surgical Technique
- 7.7.3. Results Complications

7.8. Minimally Invasive Treatment of Pneumothorax
- 7.8.1. Pathophysiological Basis of Primary and Secondary Spontaneous Pneumothorax. Leading Causes of Injury
- 7.8.2. Surgical Technique
  - 7.8.2.1. Pleurodesis: Justification and Types
- 7.8.3. Results. Complications

7.9. Minimally Invasive Surgery for Bullous Emphysema
- 7.9.1. Pathophysiology of Emphysema
- 7.9.2. Anesthetic Approach. Surgical Technique
- 7.9.3. Results. Complications

7.10. Lung Volume Reduction Surgery
- 7.10.1. Physiological and Functional Justification for Performing this Technique
- 7.10.2. Surgical Technique. Non-surgical Alternatives
- 7.10.3. Results. Complications

Module 8. Minimally Invasive Surgery of the Thoracic Wall, Diaphragm and Pleura

8.1. Videothoracoscopic Thoracic Sympathectomy: Techniques, Indications and Results
- 8.1.1. Anatomy of the Sympathetic System. Pathophysiology of the Sympathetic Nervous System Disorders
- 8.1.2. VATS Sympathectomy
  - 8.1.2.1. Hyperhidrosis and Facial Flushing
  - 8.1.2.2. VATS Sympathectomy: Other Specifications
- 8.1.3. Results and Complications of Videothoracoscopic Thoracic Sympathectomy

8.2. Minimally Invasive Resections of the Thoracic Wall
- 8.2.1. Indications for Minimally Invasive Resections of the Thoracic Wall. Techniques and Approach
- 8.2.2. Minimally Invasive Reconstruction after Resection of the Thoracic Wall
- 8.2.3. Results

8.3. Usefulness of the Hybrid Approach in Resection and Reconstruction of the Thoracic Wall
- 8.3.1. Hybrid Approach
- 8.3.2. Indications for the Hybrid Approach
- 8.3.3. Surgical Variants of the Hybrid Approach

8.4. Congenital Deformities of the Thoracic Wall. Pectus Excavatum and Pectus Carinatum
- 8.4.1. Indication for Surgery
- 8.4.2. Pectus Excavatum. Minimally Invasive Techniques
- 8.4.3. Pectus Carinatum. Minimally Invasive Techniques

8.5. Minimally Invasive Technique for Upper Thoracic Stenosis Surgery
- 8.5.1. Surgical Anatomical Considerations
- 8.5.2. Indications and Diagnosis of Upper Thoracic Stenosis Syndrome
- 8.5.3. VATS Surgery of Upper Thoracic Stenosis Syndrome. RATS Surgery of Upper Thoracic Stenosis Syndrome

8.6. Minimally Invasive Resection of Tumors of the Pleura
- 8.6.1. Types of Pleural Tumors
- 8.6.2. Minimally Invasive Surgery for Benign Pleural Tumors
- 8.6.3. Role of VATS in Malignant Pleural Disease

8.7. Pleural Empyema. Minimally Invasive Treatment
- 8.7.1. Expert Consensus Guidelines for the Surgical Treatment of Pleural Empyema
- 8.7.2. VATS in the Early Stages of Empyema
- 8.7.3. VATS in the Late Stage of Empyema

8.8. Pleural Decortication
- 8.8.1. Trapped Lung
- 8.8.2. Surgical Technique
- 8.8.3. Results

8.9. Congenital and Acquired Diaphragmatic Hernias. Treatment
- 8.9.1. Types and Classification of Diaphragmatic Hernias
- 8.9.2. Surgical Strategy: Thoracic vs. Abdominal Approach
- 8.9.3. Surgical Indications and Technique

8.10. Diaphragmatic Plication
- 8.10.1. Etiology and Indications for Diaphragmatic Plication
- 8.10.2. VATS and RATS Approaches
- 8.10.3. Short- and Long-Term Results of Diaphragmatic Plication

Module 9. Minimally Invasive Mediastinal Surgery

9.1. VATS Thymectomy
- 9.1.1. Indications for Thymectomy
- 9.1.2. Surgical Technique for Thymectomy
- 9.1.3. Results and conclusions

9.2. VATS Thyroidectomy
- 9.2.1. Indications for Thyroidectomy
- 9.2.2. Surgical Technique
- 9.2.3. Results and Conclusions

9.3. VATS Parathyroidectomy
- 9.3.1. Indications for Parathyroidectomy
- 9.3.2. Surgical Technique
- 9.3.3. Results and Conclusions

9.4. Cysts and Other Tumors of the Mediastinum
- 9.4.1. Pathological Classification
- 9.4.2. Surgical Indications
- 9.4.3. Results and Conclusions

9.5. Left Lymphadenectomy
- 9.5.1. Indications for Left Lymphadenectomy
- 9.5.2. Surgical Technique
- 9.5.3. Conclusions

9.6. Right Lymphadenectomy
- 9.6.1. Indications for Right Lymphadenectomy
- 9.6.2. Surgical Technique
- 9.6.3. Conclusions

9.7. Surgical Management of Benign Esophageal Disease
- 9.7.1. Achalasia
- 9.7.2. Esophageal Cysts, Cystic Duplications. Esophageal Diverticulum
- 9.7.3. Benign Esophageal Tumors

9.8. Indications for Minimal Invasive Surgery in Esophageal Cancer
- 9.8.1. Classification of Malignant Neoplasms of the Esophagus
- 9.8.2. Indication and Patient Selection
- 9.8.3. Surgical Technique. Results and Conclusions

9.9. Minimally Invasive Approach to Mediastinitis
- 9.9.1. Anatomic Considerations
- 9.9.2. Classification of Mediastinitis. Clinical Diagnosis
- 9.9.3. Minimally Invasive Surgical Treatment. Results and Conclusions

9.10. Management of Intraoperative Complications
- 9.10.1. Management of Vascular, Nerve and Esophageal Injuries
- 9.10.2. Management of Pulmonary Injuries
- 9.10.3. Others Intraoperative Complications
  - 9.10.3.1. Management of Thoracic Duct Injuries

Module 10. Robotic Thoracic Surgery

10.1. Robotic Systems, Characteristics, Components and Placement
- 10.1.1. Components of Robotic Systems
- 10.1.2. Differences between the Main Current Robotic Systems
- 10.1.3. Preparation and Positioning of the Patient. General Operating Room Organization

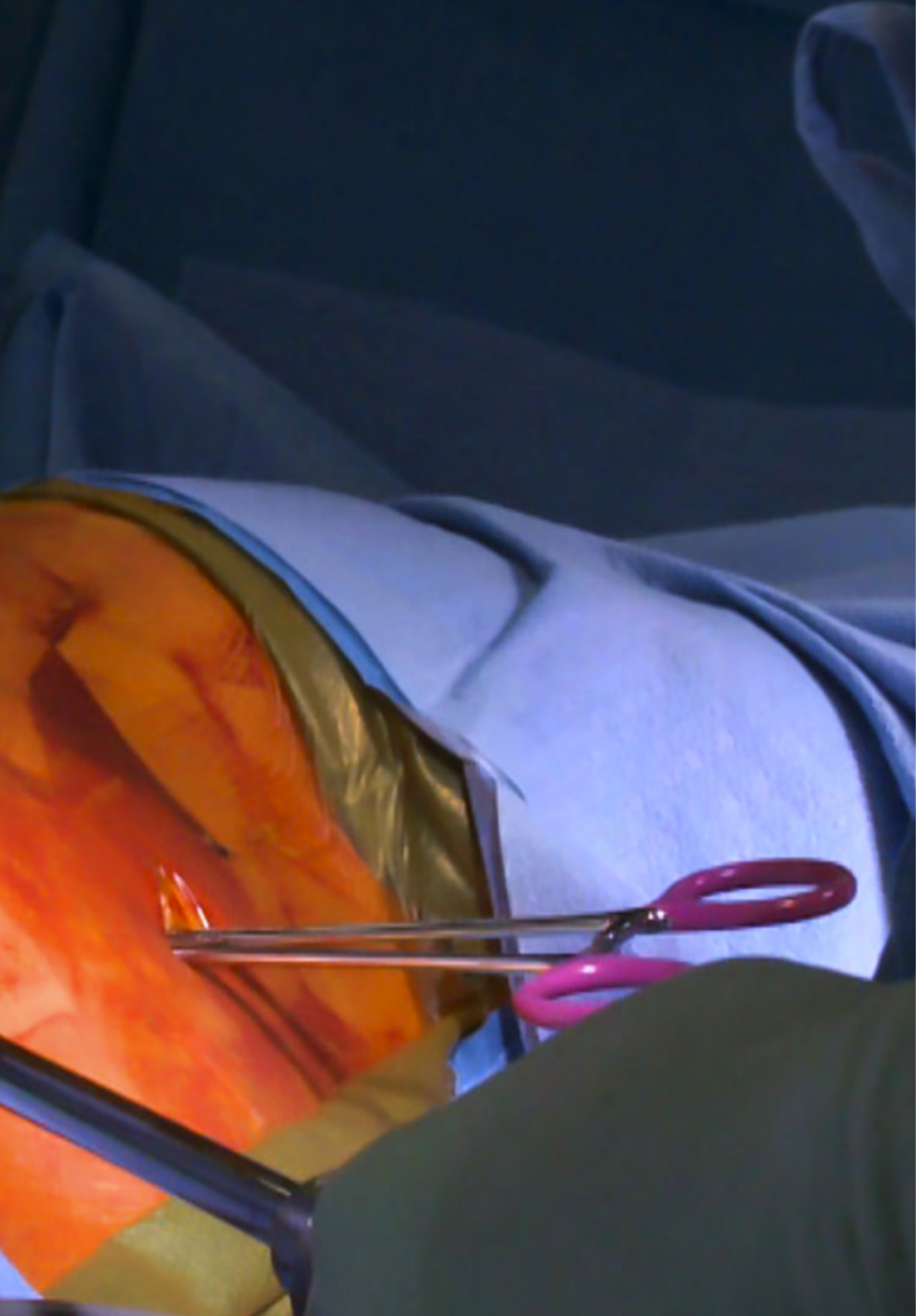
10.2. Right Lobar Resections and Lymphadenectomy
- 10.2.1. Trocar Placement
- 10.2.2. Technical Aspects of Right Upper Lobectomy. Intrafissural. Fisureless
- 10.2.3. Technical Aspects of Meddle Lobectomy
- 10.2.4. Technical Aspects of Right Lower Lobectomy
- 10.2.5. Tips and Tricks

10.3. Left Lobar Resections and Lymphadenectomy
- 10.3.1. Trocar Placement
- 10.3.2. Technical Aspects of Right Upper Lobectomy. Intrafissural. Fisureless
- 10.3.3. Technical Aspects of Left Upper Lobectomy
- 10.3.4. Technical Aspects of Left Lower Lobectomy
- 10.3.5. Tips and Tricks

10.4. Right Sublobar Resections
- 10.4.1. Specific Anatomical Considerations
- 10.4.2. Technical Aspects
- 10.4.3. Tips and Tricks

10.5. Left Sublobar Resections
- 10.5.1. Specific Anatomical Considerations
- 10.5.2. Technical Aspects
- 10.5.3. Tips and Tricks

10.6. Thymus and Posterior Mediastinal Surgery
- 10.6.1. Trocar Placement and Technical Aspects in Anterior Mediastinal Lesions
- 10.6.2. Solid Lesions
- 10.6.3. Myasthenia Gravis Surgery
- 10.6.4. Trocar Placement and Technical Aspects in Posterior Mediastinal Lesions
- 10.6.5. Tips and Tricks



10.7. Robotic Surgeries in Borderline Regions
- 10.7.1. Thoracic Wall Surgery
- 10.7.2. Surgery of the Diaphragm
- 10.7.3. Role of Robotic Surgery in Cervicothoracic Lesions

10.8. Robotic Approaches: multiRATS, URATS, Bi-RATS
- 10.8.1. Material and Technical Aspects According to Each Approach
- 10.8.2. Advantages and Limitations of Each Approach
- 10.8.3. New Challenges: Subxiphoid and Bilateral Robotic Approach. Application in Lung Transplantation

10.9. Resolution of Complications in RATS
- 10.9.1. Ways of Reconversion: VATS vs. Open Surgery
- 10.9.2. Emergency Protocol
- 10.9.3. Resolution of Bronchovascular Complications

10.10. Development of a Robotic Surgery Program
- 10.10.1. Initiation for Team Training
- 10.10.2. Incorporation of Complex and Technically Demanding Surgeries
- 10.10.3. Training of the Resident in Robotic Surgery

You will have access to high-quality teaching resources, including surgical videos, which will allow you to observe procedures in real time and improve your practical skills in a controlled environment"

04

Teaching Objectives

Through in-depth and up-to-date knowledge, this university program will prepare professionals to implement minimally invasive procedures, offering safer, less painful alternatives with faster recovery times. In addition, they will be prepared to face complex cases with greater confidence and precision, strengthening their ability to lead surgical teams and promote innovative practices in their clinical settings. Upon completion, physicians will be equipped to lead the transformation towards modern Thoracic Surgery, acting as agents of change who will contribute to the progress of Medicine in their communities.

The main objective of this program will be to teach you the most advanced surgical techniques, to elevate your skills and strengthen the care you provide to your patients”

General Objectives

- Analyze the main minimally invasive surgical approaches in thoracic surgery
- Assess the systems and materials used in minimally invasive thoracic surgery, both in robotics and other advanced technologies
- Analyze the key points in the development of anesthesia and its impact on minimally invasive thoracic surgery
- Identify current analgesic techniques that allow for pain management
- Identify the diseases most frequently suitable for minimally invasive surgery
- Identify the key points of minimally invasive surgery for each procedure
- Determine the multimodal perioperative care protocols in thoracic surgery to minimize complications and improve clinical outcomes
- Analyze preoperative planning techniques according to the latest 3D reconstruction technologies
- Analyze the current role of sublobar pulmonary resections in the treatment of lung cancer and other diseases
- Develop advanced technical skills in the performance of anatomical and transegmentary sublobar resections, using minimally invasive surgery
- Define the fundamental principles and present the historical evolution of the surgical technique
- Examine recent technological advances in the field of video-assisted surgery and its application in VATS lobar lung resections
- Examine the different diseases of the central airway, malformations and some specific diseases that can benefit from minimally invasive approaches
- Address the different technical possibilities for the surgical treatment of these diseases, taking into account the existing limitations
- Identify the surgical indications for minimally invasive surgery in this group of diseases, as well as its limits
- Present the latest developments in minimally invasive surgical treatment in this subgroup of patients
- Define the most frequent indications for minimally invasive surgery in the mediastinum
- Generate the knowledge necessary to correctly approach the different mediastinal diseases through minimally invasive surgery
- Examine the different robotic systems, their characteristics and particularities, as well as their technological evolution
- Evaluate their effectiveness, benefits and challenges, in order to provide a comprehensive view of their current role and future potential in clinical practice

Specific Objectives

Module 1. Approach to Minimally Invasive Thoracic Surgery

- Compile information on the historical evolution of minimally invasive thoracic surgery, highlighting key milestones and their impact on current practice
- Determine the main characteristics of the different intercostal (uniportal, multiport), subxiphoid or transcervical surgical approaches
- Demonstrate the importance of surgical ergonomics in the context of minimally invasive thoracic surgery, improving operative efficiency and patient safety
- Present recent technological innovations in thoracoscopic surgery and thoracic robotics

Module 2. Anesthesia in Minimally Invasive Thoracic Surgery

- Analyze the different anesthetic techniques used in minimally invasive thoracic surgery
- Develop the ventilation modalities used in minimally invasive procedures in thoracic surgery
- Evaluate the necessary monitoring in the different minimally invasive thoracic surgery procedures
- Present the anesthetic management of thoracic surgery without intubation, recall the characteristics of this anesthetic management and analyze its use in medical practice
- Define fluid therapy in these minimally invasive procedures
- Examine the different analgesic techniques and their implications in the intraoperative period, as well as in the postoperative period, and establish their relationship with chronic pain

Module 3. Surgical Indications in Minimally Invasive Thoracic Surgery

- Identify the technical details of each minimally invasive approach
- Define the differentiating aspects between conventional minimally invasive thoracic surgery and robotic surgery
- Reasonedly assess the indication or contraindication of minimally invasive surgery depending on the clinical case and the type of disease
- Analyze and understand the technical development of robotic surgery

Module 4. VATS Preoperative Planning and Care in Minimally Invasive Thoracic Surgery

- Identify the selection criteria for different thoracic surgery techniques
- Apply advanced imaging tools and localization of pulmonary nodules in preoperative planning, improving the precision and efficacy of interventions
- Guarantee the comprehensive management of the patient from the preoperative to the postoperative stage, ensuring optimal recovery and minimization of complications

Module 5. Sublobular Lung Resections

- Carry out sublobar resections in the treatment of early-stage lung cancer, lung metastases and other thoracic neoplasms
- Perform VATS transegmentary resections correctly, mastering the key anatomical and surgical aspects to preserve functional lung tissue
- Perform VATS anatomical segmentectomies with precision in each of the pulmonary lobes, adapting the technique to the most common anatomical variants
- Develop strategies for the combination of anatomical sublobar resection techniques, being able to tackle tumors that involve more than one segment or lobe
- Prevent and effectively manage the most common intraoperative complications in sublobar resections

Module 6. VATS Lobar Lung Resections

- Analyze the specific anatomical variations of each pulmonary lobe and their impact on the surgical strategy
- Detail the specific technical steps of each of the VATS lobectomies
- Explore strategies for complex resections, including bronchoplasty, angioplasty and extended chest wall resections
- Develop a comprehensive approach to the identification and management of intraoperative complications, as well as to decision-making on conversion to open surgery

Module 7. Minimally Invasive Airway Surgery, Malformations, Pneumothorax and Pulmonary Emphysema

- Provide an in-depth understanding of the anatomy of the structures that make up the central airway, anatomical relationships, possibilities for resection and subsequent reconstruction using minimally invasive approaches
- Provide technical tips and tricks for the successful performance of this type of surgery
- Be aware of the current limitations that rule out this minimally invasive approach in some cases
- Determine the possibilities of anaesthetic management, natural airway intubation, devices, intracorporeal membrane oxygenation and intubation
- Determine the most common complications, as well as their early diagnosis and treatment, if necessary
- Analyze the specific risks of this surgical approach compared to the traditional one

Module 8. Minimally Invasive Surgery of the Thoracic Wall, Diaphragm and Pleura

- Define existing surgical techniques and identify the different approaches to the sympathetic system
- Identify the subgroup of patients who can benefit from a minimally invasive or hybrid resection of the thoracic wall and propose their approach routes
- Delve into the indication and minimally invasive surgical techniques for resection of the first rib
- Justify the benefits of minimally invasive treatment of pleural empyema, as well as examining the current guidelines for the treatment of this disease

Module 9. Minimally Invasive Mediastinal Surgery

- Establish the correct surgical techniques to be performed by means of minimally invasive surgery for the resection of thymic, thyroid or parathyroid tumors or lesions
- Define how to perform a correct lymphadenectomy by minimally invasive approach in the treatment of lung carcinoma
- Analyze the esophageal pathology approachable by means of minimally invasive techniques, establishing the access routes
- Demonstrate that minimally invasive surgery in the treatment of mediastinal infections is an option as valid as open surgery
- Develop the possible complications that we may encounter after a minimally invasive approach to the different diseases of the mediastinum

Module 10. Robotic Thoracic Surgery

- Analyze the specific technical aspects of each type of thoracic surgery intervention from a robotic approach
- Detail the benefits associated with this type of approach compared to other minimally invasive surgery techniques
- Establish a strategy and protocol for action in the event of a complication in order to resolve it safely

You will be able to apply minimally invasive techniques in your daily clinical practice, which translates into a significant improvement in surgical outcomes and a positive impact on your patients' recovery"

05

Career Opportunities

Graduates will be qualified to lead Minimally Invasive Thoracic Surgery programs in hospitals and health centers, implementing innovative techniques that improve surgical outcomes and the patient experience. Likewise, they will be able to act as referents in the development of new clinical practices, form part of cutting-edge multidisciplinary teams and contribute to the advancement of the specialty through research and teaching. They will also be prepared to assume strategic roles in the promotion of less invasive approaches within their institutions, consolidating their leadership in a constantly evolving field.

The program in Minimally Invasive Thoracic Surgery will open up a wide range of professional opportunities for physicians seeking to specialize in this high-demand field"

Graduate Profile

Graduates will be highly qualified professionals with advanced skills in the use of minimally invasive techniques such as video-assisted thoracoscopy (VATS) and robotic-assisted thoracic surgery (RATS). They will also be characterized by a comprehensive mastery of the most innovative procedures in Thoracic Surgery, together with a critical ability to evaluate and apply best practices in their clinical environment. In addition, they will be prepared to lead multidisciplinary teams, implement improvements in surgical protocols and promote a patient-centered approach. Your education also includes research and teaching skills, enabling you to contribute to the development of the specialty, generate new knowledge and train future generations of thoracic surgeons.

Through this innovative academic degree, you will become a true clinical and academic leader, always committed to excellence and innovation in the field of modern Thoracic Surgery.

- **Leadership and Management of Surgical Teams:** Ability to coordinate and lead multidisciplinary teams, promoting a collaborative and efficient approach in the surgical environment
- **Effective Communication:** Skills to communicate clearly and empathetically with patients, family members and members of the medical team, facilitating patient-centered care and expectation management
- **Evidence-based Clinical Decision Making:** Development of skills to make informed decisions, integrating the latest technological and scientific advances in Thoracic Surgery, always aimed at optimizing results for the patient
- **Innovation Management and Continuous Improvement:** Ability to identify, apply and promote innovative practices in Thoracic Surgery, contributing to the continuous improvement of the quality of care in the institutions where they work

After completing the program, you will be able to use your knowledge and skills in the following positions:

1. **Thoracic Surgeon Specializing in Minimally Invasive Techniques:** Professional in charge of performing thoracic surgical procedures using minimally invasive techniques, such as Video-Assisted Thoracoscopy (VATS) and Robotic-Assisted Thoracic Surgery (RATS).
2. **Chief of Thoracic Surgery Department:** Leader of the Thoracic Surgery department in hospitals or clinics, responsible for the management and supervision of all operations related to the specialty.
3. **Consultant in Minimally Invasive Thoracic Surgery:** Highly qualified professional who advises and consults on the implementation of minimally invasive techniques in medical institutions.
4. **University Professor in Thoracic Surgery:** Teacher responsible for preparing future surgeons in Minimally Invasive Thoracic Surgery techniques, through theoretical and practical classes.
5. **Clinical Researcher in Thoracic Surgery:** Physician specialized in Thoracic Surgery who leads research on new procedures, techniques and treatments in the specialty.
6. **Head of Innovation and Surgical Technology:** Professional responsible for integrating advanced technologies into Thoracic Surgery, including robotic systems and minimally invasive techniques.
7. **Robotic Surgery Program Coordinator:** Physician responsible for coordinating the use of Robotic Surgery within the hospital or clinic, ensuring its correct implementation in thoracic procedures.
8. **Head of Thoracic Surgery Department in Hospitals:** Leader of the Thoracic Surgery department, responsible for the organization and functioning of the unit within a hospital institution.
9. **International Consultant in Minimally Invasive Thoracic Surgery:** Professional with international experience who offers consultancy services on best practices and innovative techniques in Thoracic Surgery.
10. **Head of Surgical Quality and Safety:** A physician specialized in ensuring that surgical procedures, especially minimally invasive ones, are performed in accordance with quality and safety regulations.

You will become a leader in the implementation and promotion of Minimally Invasive Surgeries within your institution, consolidating your position as a true reference in a field of medicine that continues to advance by leaps and bounds"

06

Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.

TECH will prepare you to face new challenges in uncertain environments and achieve success in your career"

The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.
The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

"At TECH you will NOT have live classes (which you might not be able to attend)"

The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

> *TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want"*

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.

Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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.

A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

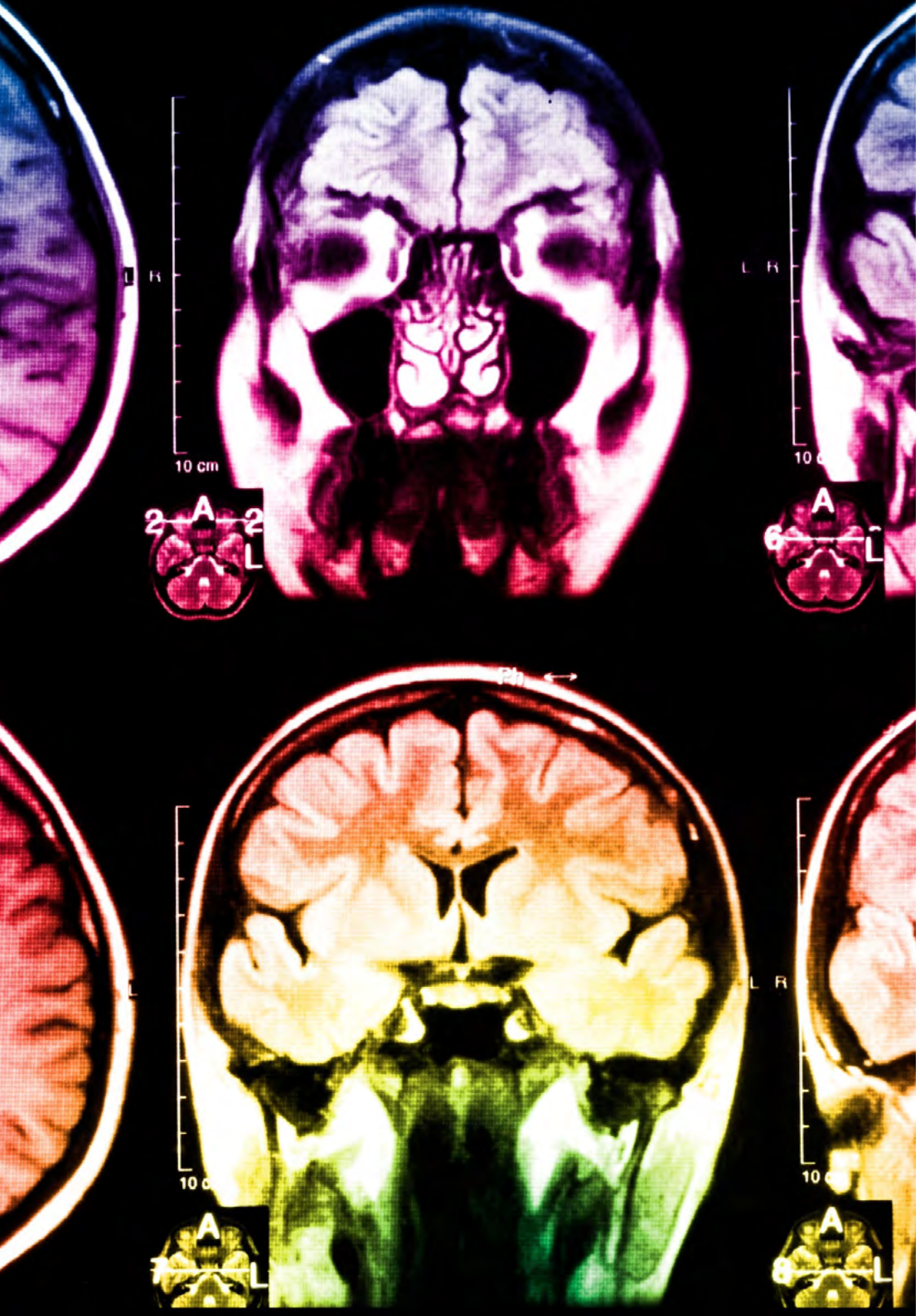
In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.

The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule"

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 assess 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.



The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.

As such, the best educational materials, thoroughly prepared, will be available in this program:

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.

Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.

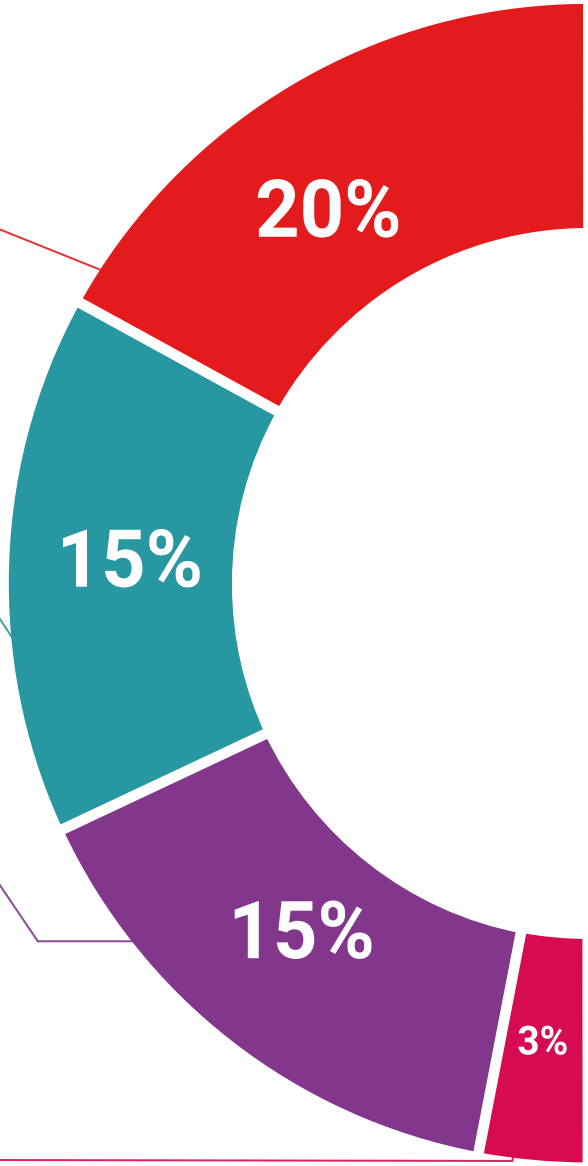
Interactive Summaries

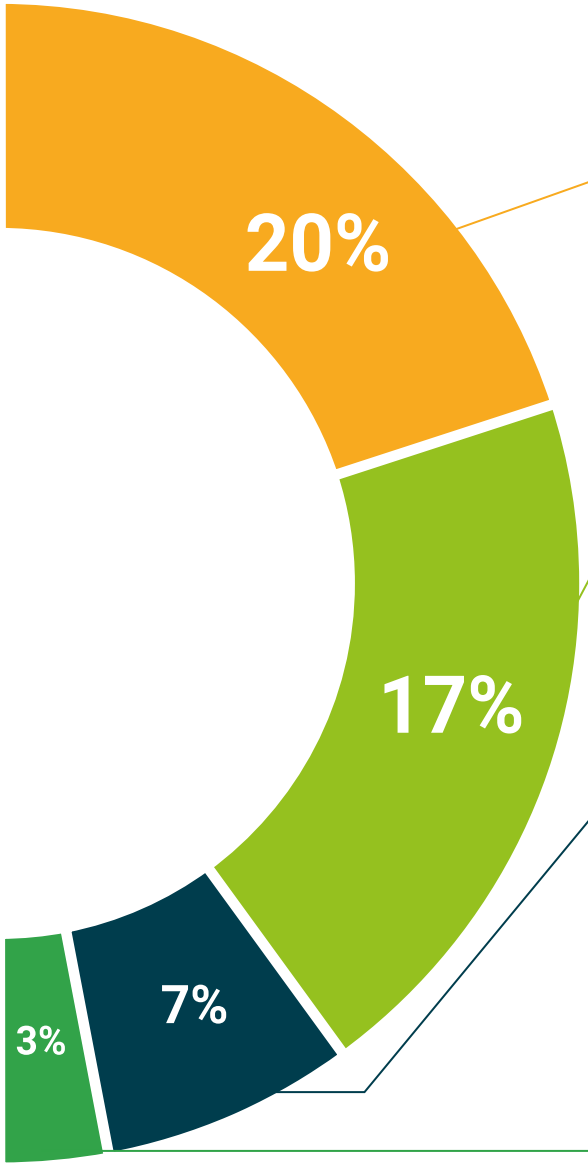
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content 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 education.





Case Studies

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.

Testing & Retesting

We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.

Classes

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

Learning from an expert strengthens knowledge and memory, and generates confidence for future difficult decisions.

Quick Action Guides

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

07

Teaching Staff

The teaching team is made up of a group of internationally renowned thoracic surgeons, recognized for their clinical experience and for being pioneers in advanced techniques. In fact, they will not only contribute their vast professional experience, but also an innovative and up-to-date approach to best practices in the field. In addition, they stand out for their pedagogical ability, facilitating dynamic and interactive learning through master classes, discussion of real clinical cases and access to exclusive audiovisual resources. As such, their commitment to teaching guarantees that graduates receive the highest quality education.

Under the management of leading experts in Thoracic Surgery, you will receive excellent education, benefitting from the experience and vision of leaders who are defining the future of this medical specialty"

Management

Dr. Martínez Hernández, Néstor J.

- President of the Scientific Advisory Office of the Spanish Society of Thoracic Surgery (SECT)
- Coordinator of the Scientific Committee of the Spanish Society of Thoracic Surgery
- Thoracic Surgeon at la Ribera University Hospital
- Thoracic Surgeon Editor of Cirugía Española in Elsevier
- Guest Editor at the Journal of Visualized Experiments
- Associate Professor at the Department of Respiratory Medicine, Faculty of Medicine, Catholic University of Valencia
- Thoracic Surgeon at the Manises Hospital
- Visiting Physician at Cedars-Sinai Medical Center
- Resident Medical Intern at the General University Hospital of Valencia
- Visiting Physician at Mount Sinai Hospital, New York, United States
- Visiting Physician at Yale New Haven Hospital, United States
- PhD in Medicine and Surgery from the University of Valencia
- Degree in Medicine and Surgery from the University of Valencia
- Specialist in Thoracic Surgery
- Extraordinary Doctorate Award from the University of Valencia
- Antonio Caralps y Masso Award of the SECT for the Best Communication in Thoracic Surgery
- First Prize of IX Edition to the Best Specialist in Training at the Gregorio Marañón General University Hospital
- Member of: European Society for Thoracic Surgery (ESTS), Spanish Society of Thoracic Surgery (SECT), Spanish Society of Pulmonology and Thoracic Surgery (SEPAR) and Valencian Society of Pulmonology (SVN)

Dr. Quero Valenzuela, Florencio

- Chief of the Thoracic Surgery Department at the Virgen de las Nieves University Hospital
- Specialist Physician in Thoracic Surgery at the Virgen de las Nieves University Hospital
- Specialist Physician in Thoracic Surgery at the Virgen Macarena University Hospital
- Member of the Ae22-Cancer Genetics, Biomarkers and Experimental Therapies Research Group
- Doctor of Surgery from the University of Granada
- Master's Degree in Clinical Unit Management from the University of Murcia
- Expert in Epidemiology and Clinical Research from the University of Granada
- Bachelor's Degree in Medicine and Surgery from the University of Granada

Professors

Dr. Jiménez Maestre, Unai

- Chief of the Thoracic Surgery Department at the IMQ Zorrotzaurre Clinic
- Specialist Physician in the Thoracic Surgery Department at the Cruces University Hospital
- Intern Physician in the Thoracic Surgery Department at the Cruces University Hospital
- Specialty in Cardiothoracic Transplantation at Freeman Hospital, Newcastle, United Kingdom
- Bachelor's Degree in Medicine and Surgery from the University of the Basque Country

Dr. Lorenzo Martín, Mónica

- Secretary of the Thoracic Tumors Committee at Cruces University Hospital
- Specialist Physician in Thoracic Surgery at Cruces University Hospital
- Resident Physician in Thoracic Surgery at Cruces University Hospital
- Doctor of Medicine and Surgery from the University of the Basque Country
- Bachelor's Degree in Medicine and Surgery from the University of the Basque Country
- Member of: Spanish Society of Thoracic Surgery (SECT)

Dr. Macía Vidueira, Iván
- President of the Tumor Commission at the Bellvitge University Hospital
- Tutor to Thoracic Surgery Residents at Bellvitge University Hospital
- Specialist Physician in Thoracic Surgery at Bellvitge University Hospital
- Intern in the Thoracic Surgery Unit at Bellvitge University Hospital
- Specialist in Thoracic Surgery at Bellvitge University Hospital
- Doctor of Medicine from the University of Barcelona
- University Expert in Thoracic Ultrasound from the University of Barcelona
- Postgraduate in Lean Practitioner from the Polytechnic University of Catalonia
- Degree in Medicine from the University of Barcelona

Dr. Aragón Álvarez, Sonsoles
- Specialist in Anesthesiology and Resuscitation, UR Hospital
- Scientific researcher specializing in the study of the effect of medication on patients with anxiety
- Doctor of Medicine from the University of Valencia
- Bachelor of Medicine from the Autonomous University of Valencia

Dr. Fuentes Martín, Álvaro
- Coordinator of the MIR Committee in the Spanish Society of Thoracic Surgery
- Specialist Physician of Thoracic Surgery at the University Clinical Hospital of Valladolid
- Member of the National Commission of the Specialty of Thoracic Surgery in the Ministry of Health
- PhD in Health Sciences Research from the University of Valladolid
- Resident Physician in Thoracic Surgery at the University Clinical Hospital of Valladolid
- Degree in Medicine from the Complutense University of Madrid
- Member of: Spanish Society of Thoracic Surgery (SECT)

Dr. Figueroa Almánzar, Santiago
- Vice-President of the Teaching Commission in the Clínico-Malvarrosa Health Department
- Coordinator of the Teaching and Continuing Education Committee of the Spanish Society of Thoracic Surgery
- Specialist Physician in Thoracic Surgery at the General University Hospital of Valencia
- Resident Physician in Thoracic Surgery at the General University Hospital of Valencia
- International VATS Training Program at the Pulmonary Hospital of Shanghai, China
- Specialty in Thoracic Surgery at the Yale Cancer Center, United States
- Master's Degree in Clinical Unit Management from the University of Murcia
- Bachelor's Degree in Medicine from the University of Valladolid
- Member of: Spanish Society of Thoracic Surgery

Dr. Paradela de la Morena, Marina
- Coordinator of the Conference Committee of the Spanish Society of Thoracic Surgery
- Specialist Physician in the Thoracic Surgery Department at Bellvitge University Hospital
- Specialist Physician in Thoracic Surgery at the University Hospital Complex of A Coruña
- Specialist Physician in Thoracic Surgery at the Clinical Hospital of Barcelona
- Specialist Physician in Thoracic Surgery at the Centre Chirurgical Marie Lannelongue, France
- Specialty in Thoracic Surgery from the University Hospital Complex of A Coruña
- Master's Degree in Critical Care and Emergencies from the University of Barcelona
- University Expert in Thoracic Surgery Emergencies from the Spanish Society of Thoracic Surgery
- Bachelor's Degree in Medicine and Surgery from the University of Santiago de Compostela
- Member of: Spanish Society of Thoracic Surgery (SECT)

Dr. Rodríguez Taboada, Pau

- Clinical Chief of the Thoracic Surgery Service at the Joan XXIII University Hospital in Tarragona
- Coordinator of the Joint Thoracic Surgery Department at the Joan XXIII University Hospital in Tarragona and the Sant Joan University Hospital in Reus
- Associate Physician of the Thoracic Surgery Department at the Joan XXIII University Hospital in Tarragona
- Assistant Physician in the Thoracic Surgery Department at the Sant Joan University Hospital in Reus
- Member of the Catalan Thoracic Surgery Society
- Specialty MIR in Thoracic Surgery at the Bellvitge University Hospital
- Bachelor of Medicine from the University of Barcelona
- Member of: Catalan Thoracic Surgery Society

Dr. Campo-Cañaveral de la Cruz, José Luis

- Specialist Physician in Thoracic Surgery at the 12 de Octubre University Hospital
- Specialist Physician in Thoracic Surgery at the Puerta de Hierro University Hospital
- Resident in Thoracic Surgery at the Puerta de Hierro University Hospital
- Specialist in Lung Transplantation and Cardiorespiratory Support at Toronto General Hospital, Canada
- Doctor of Medicine from the Autonomous University of Madrid
- Master's Degree in Diagnosis and Treatment of Thoracic Tumors from the Autonomous University of Madrid
- Master's Degree in Clinical Management from TECH University
- Bachelor's Degree in Medicine from the Complutense University of Madrid

Dr. García Gómez, Francisco

- Thoracic Surgeon at the Virgen del Rocío Hospital
- Thoracic Surgeon at the Jerez Puerta del Sur Hospital
- Thoracic Surgeon at the Puerta del Mar University Hospital
- Thoracic Surgeon at the Quirón Sagrado Corazón Hospital
- Residency in Thoracic Surgery at the Virgen del Rocío University Hospital
- Specialty in Thoracic Surgery at the Memorial Sloan Kettering Cancer Center, New York
- Doctor of Medicine from the University of Sevilla
- Master's Degree in Thoracic Oncology from the Cardenal Herrera University
- Master's Degree in Emergency Medicine from the University of Sevilla
- University Expert in Lung Cancer, Tumors of the Pleura, Mediastinum and Thoracic Wall from the Cardenal Herrera University
- University Expert in Screening, Molecular Biology and Staging of Thoracic Cancer from the Cardenal Herrera University
- University Expert in Diagnosis and Basis of Treatment in Thoracic Oncology from the Cardenal Herrera University
- Degree in Medicine from the University of Cádiz

Dr. Meneses Pardo, José Carlos

- Medical Director of the "Evita una Muerte, Está en tus manos" Project
- Thoracic Surgeon at the 12 de Octubre University Hospital
- Thoracic Surgeon at the Torrejón University Hospital
- Specialist in Thoracic Surgery from the University of Sevilla
- Degree in Medicine from the University of Sevilla

Dr. López Villalobos, José Luis
- Thoracic Surgeon at the Quirónsalud Sagrado Corazón Hospital
- Assistant Physician in the Thoracic Surgery Department at the Virgen del Rocío University Hospital
- Medical Intern Resident in Airway Surgery at the Clinical Hospital of Valencia
- Medical Intern Resident in Thoracic Surgery at the Virgen del Rocío University Hospital
- Doctor of Medicine from the University of Sevilla
- Bachelor's Degree of the Faculty of Medicine of the University of Sevilla

Dr. Gómez Hernández, María Teresa
- Specialist Physician in Thoracic Surgery at the University Hospital of Salamanca
- Specialty Resident in Thoracic Surgery at the University Hospital of Salamanca
- Doctor of Medicine from the University of Salamanca
- Master's Degree in Medical Management and Clinical Management from the UNED
- Master's Degree in Health Research Methodology in Health Sciences from the University of Salamanca
- Bachelor's Degree in Medicine from the University of Salamanca

Dr. Fra Fernández, Sara
- Specialist Physician in Thoracic Surgery at the Ramón y Cajal University Hospital
- Resident in Thoracic Surgery at the Ramón y Cajal University Hospital
- Scholarship holder of the European Association of Cardiothoracic Surgery (EACTS) Program
- Master's Degree in Thoracic Oncology from the CEU San Pablo University
- University Expert in Pleural Pathology from the Autonomous University of Barcelona
- Degree in Medicine from the University of Santiago de Compostela

Dr. Sánchez García , Fernando
- Physician Specialist in Anesthesiology and Resuscitation at La Ribera University Hospital
- Manager at La Ribera University Hospital
- Expert in Pain Therapy
- Bachelor of Medicine

Dr. Cabañero Sánchez, Alberto
- Thoracic Surgeon at the Ramón y Cajal University Hospital in Madrid
- Medical Intern Resident in the specialty of Thoracic Surgery at the University Hospital Ramón y Cajal
- Degree in Medicine and Surgery from the University of Alcalá

Dr. Cal Vázquez, Isabel
- Specialist Physician in Thoracic Surgery at La Princesa University Hospital
- Specialist Physician in Thoracic Surgery at the Puerta de Hierro University Hospital
- Medical Intern Resident in Thoracic Surgery at the San Carlos Clinical Hospital
- Master's Degree in Thoracic Oncology from CEU Unviersity
- University Expert in Lung Cancer, Tumors of the Pleura, Mediastinum and Wall from CEU
- Expert in Diagnosis and Basis of Treatment in Thoracic Oncology from CEU
- University Expert in Screening, Molecular Biology and Staging in Lung Cancer from CEU
- University Expert in Emergencies in Thoracic Surgery from the Catholic University of Valencia
- University Expert in Pleural Pathology from the University of Barcelona
- Bachelors' Degree in Medicine and Surgery from the Complutense University of Madrid

Dr. Romero Román, Alejandra

- Specialist Physician in Thoracic Surgery at the Puerta de Hierro University Hospital
- Medical Intern Resident in Thoracic Surgery at the Puerta de Hierro University Hospital
- Master's Degree in Diagnosis and Treatment of Patients with Thoracic Tumors from the Autonomous University of Madrid
- Master's Degree in Thoracic Oncology from the CEU Cardenal Herrera University
- Bachelor's Degree in Medicine from the University of Alcalá

Dr. Cano García, José Ramón

- Specialist Physician in Thoracic Surgery at the Mother and Child Hospital Complex of Gran Canaria
- Member of the Technical Assistance Board at the Materno-Insular Hospital Complex of Gran Canaria
- Specialist Physician in Thoracic Surgery at the San Roque University Hospitals
- MIR specialty in Thoracic Surgery at the Reina Sofia University Hospital
- Doctor of Medicine from the University of Córdoba
- Master's Degree in Thoracic Oncology from the CEU Cardenal Herrera University
- University Expert in Lung Cancer, Tumors of the Pleura, Mediastinum and Thoracic Wall from the CEU Cardenal Herrera University
- University Expert in Screening, Molecular Biology and Staging of Lung Cancer from the CEU Cardenal Herrera University
- University Expert in Diagnosis and Treatment Bases in Thoracic Oncology from the CEU Cardenal Herrera University
- University Expert in Emergencies in Thoracic Surgery from the Catholic University of Valencia San Vicente Mártir
- Degree in Medicine from the University of Córdoba

Dr. Cilleruelo Ramos, Ángel

- Thoracic Surgeon at the Clinical University Hospital of Valladolid
- Member of the Institutional Relations Committee of the Spanish Society of Pulmonology and Thoracic Surgery (SEPAR)
- Treasurer of the Castile-Leon and Cantabria Society of Respiratory Pathology (SOCALPAR)
- Medical Intern Resident in Thoracic Surgery at the University Clinical Hospital of Valladolid
- Doctor of Medicine from the University of Valladolid
- Master's Degree in Airway Diseases from the San Antonio Catholic University of Murcia
- Master's Degree in Healthcare Unit Management from the Menéndez Pelayo International University
- Master's Degree in Innovation and New Technologies Applied to Respiratory Medicine from the San Pablo CEU University
- University Expert in Pleural Pathology from the University of Barcelona
- University Expert in Emergency Thoracic Surgery from the Catholic University of Valencia
- Member of: Spanish Society of Pulmonology and Thoracic Surgery (SEPAR) and Castile-Leon and Cantabria Society of Respiratory Pathology (SOCALPAR)

Dr. García Pérez, Alejandro

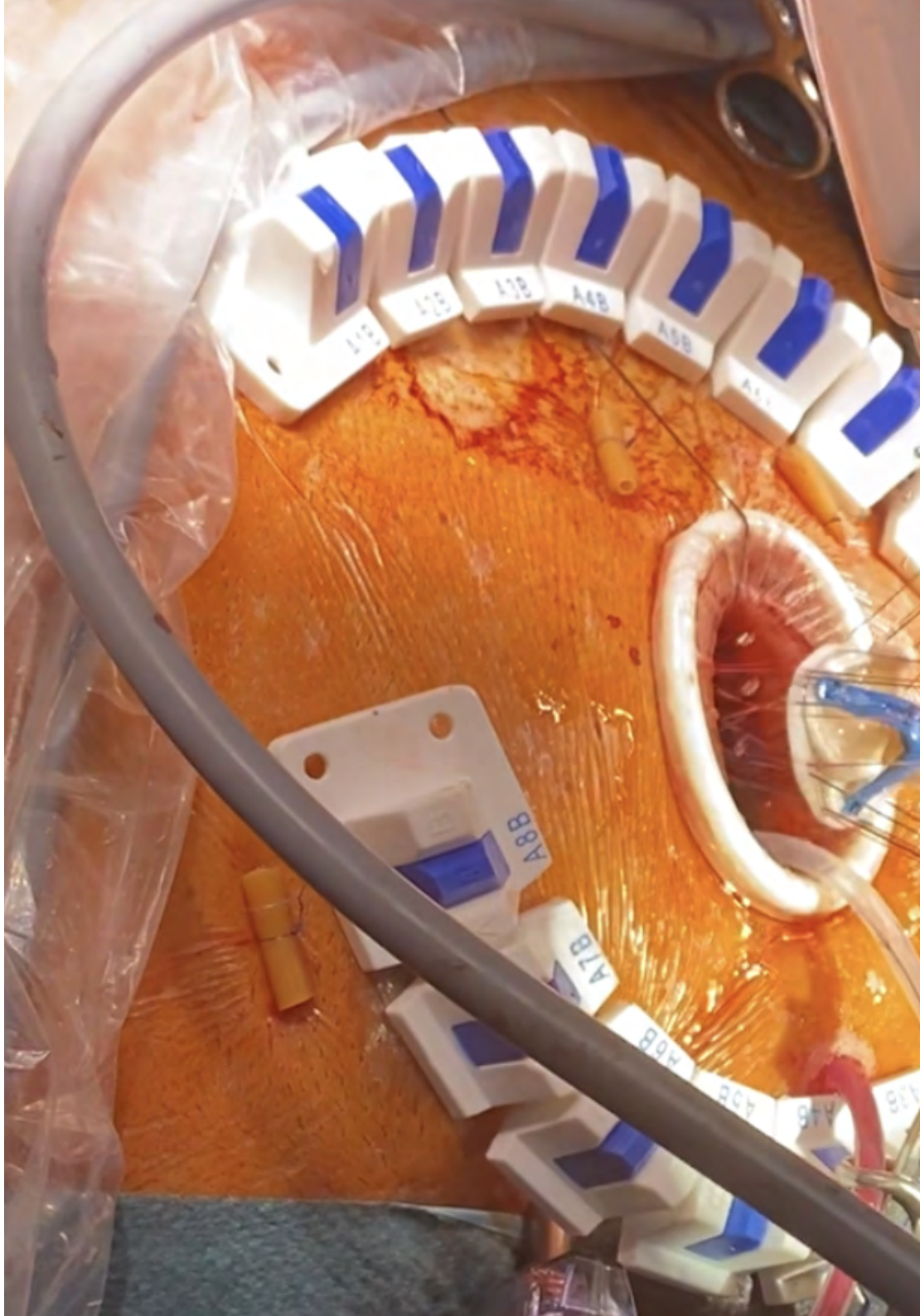
- Specialist Physician in Thoracic Surgery and Lung Transplantation at the University Hospital of A Coruña
- Specialty in Thoracic Surgery from the Shanghai Pulmonary Hospital, China
- Residency in Thoracic Surgery at La Fe University Hospital
- Degree in Medicine from the University of Santiago de Compostela

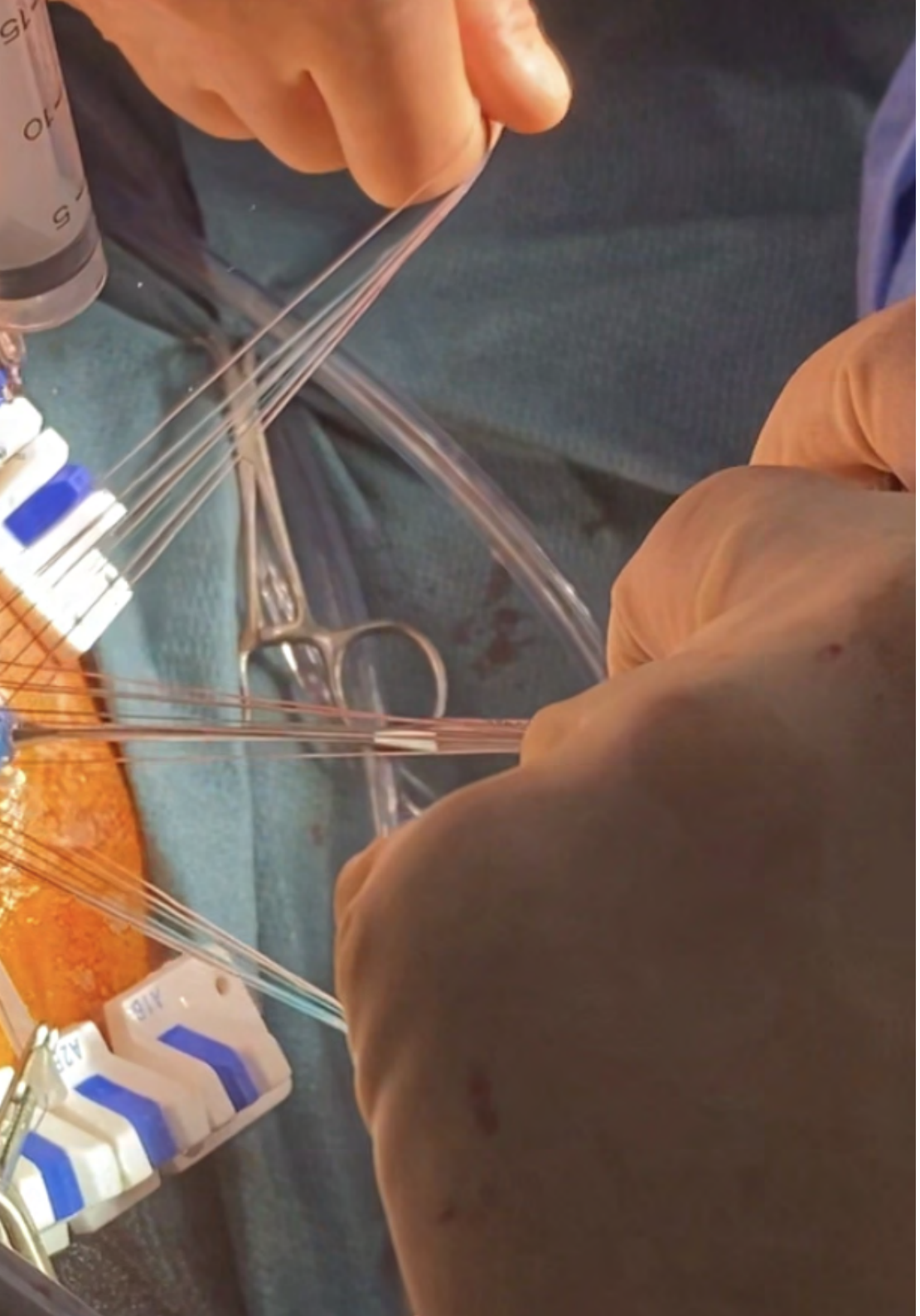
Dr. Trujillo Sánchez, María

- Specialist Physician in Thoracic Surgery at the Clinical University Hospital of Valencia
- Specialist Physician in Thoracic Surgery at the La Fe University Hospital
- Specialist Physician in Thoracic Surgery at the Puerta de Hierro University Hospital
- Specialty in Thoracic Surgery from the Memorial Sloan Kettering Cancer Center (MSK), New York
- Specialty in Thoracic Surgery from the Toronto General Hospital, Canada
- Resident in Thoracic Surgery at the 12 de Octubre University Hospital
- Degree in Medicine from the University of Navarra
- Member of: Spanish Society of Thoracic Surgery (SECT), Spanish Society of Pulmonology and Thoracic Surgery (SEPAR), Spanish Lung Cancer Group (GECP), European Society of Thoracic Surgeons (ESTS)

Dr. Rivas Doyague, Francisco

- Specialist Physician in Thoracic Surgery at Bellvitge University Hospital
- Specialist Physician in Thoracic Surgery at Sant Joan Hospital in Reus
- Resident in Thoracic Surgery at Bellvitge University Hospital
- Certified in the da Vinci System by the IRCAD-EITS da Vinci Training Center, France
- University Expert in Thoracic Ultrasound by the University of Barcelona
- Degree in Medicine from the University of Valladolid





Dr. Monge Blanco, Sara

- Specialist Physician in Thoracic Surgery at the Quirónsalud Sagrado Corazón Hospital
- Specialist Physician in Thoracic Surgery at the Virgen del Rocío Hospital
- Researcher in the Spanish Multicenter Study Group of Primary Spontaneous Pneumothorax (GEMENEP)
- Resident Physician specialized in Thoracic Surgery at the Virgen del Rocío Hospital
- Master's Degree in Healthcare Research and Assistance from the University of A Coruña
- Master's Degree in Thoracic Oncology from the CEU Cardenal Herrera University
- Master's Degree in Catastrophes, Emergencies and Humanitarian Aid from the Catholic University of Murcia
- University Expert in Pain Treatment from the University of Vitoria-Gasteiz
- University Expert in Care for the Critically Ill with Respiratory Disease from the University of Vitoria-Gasteiz
- Degree in Medicine from the University of Sevilla

Dr. Miñana Aragón, Encarna

- Attending Physician of Anesthesiology, Resuscitation and Pain Therapy at the University Hospital of La Ribera
- Attending Physician in Anesthesiology, Resuscitation and Pain Therapy at La Fe University Hospital in Valencia
- Attending Physician in Anesthesiology at Malva-Rosa Hospital
- Specialist in Anesthesiology, Resuscitation and Pain Therapy at La Fe University Hospital in Valencia
- Doctor of Medicine from the Autonomous University of Barcelona
- Bachelor of Medicine and Surgery from the Autonomous University of Barcelona

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Certificate

This Professional Master's Degree in Minimally Invasive Thoracic Surgery guarantees students, in addition to the most rigorous and up-to-date education, access to a diploma for the Professional Master's Degree issued by TECH Global University.

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

This private qualification will allow you to obtain a diploma for the **Professional Master's Degree in Minimally Invasive Thoracic Surgery** 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** private qualification, is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Professional Master's Degree in Minimally Invasive Thoracic Surgery**

Modality: **online**

Duration: **12 months**

Accreditation: **90 ECTS**


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

Professional Master's Degree in Minimally Invasive Thoracic Surgery

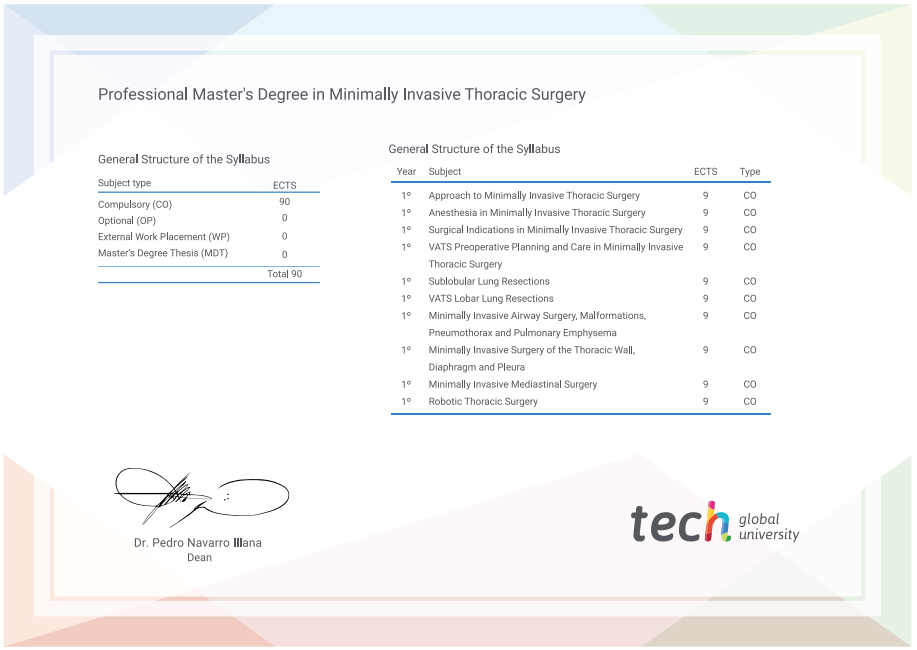
This is a private qualification of 2,700 hours of duration equivalent to 90 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

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

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

Dr. Pedro Navarro Illana
Dean

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


Professional Master's Degree in Minimally Invasive Thoracic Surgery

General Structure of the Syllabus

Subject type	ECTS
Compulsory (CO)	90
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
	Total 90

General Structure of the Syllabus

Year	Subject	ECTS	Type
1°	Approach to Minimally Invasive Thoracic Surgery	9	CO
1°	Anesthesia in Minimally Invasive Thoracic Surgery	9	CO
1°	Surgical Indications in Minimally Invasive Thoracic Surgery	9	CO
1°	VATS Preoperative Planning and Care in Minimally Invasive Thoracic Surgery	9	CO
1°	Sublobular Lung Resections	9	CO
1°	VATS Lobar Lung Resections	9	CO
1°	Minimally Invasive Airway Surgery, Malformations, Pneumothorax and Pulmonary Emphysema	9	CO
1°	Minimally Invasive Surgery of the Thoracic Wall, Diaphragm and Pleura	9	CO
1°	Minimally Invasive Mediastinal Surgery	9	CO
1°	Robotic Thoracic Surgery	9	CO

Dr. Pedro Navarro Illana
Dean

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

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Professional Master's Degree
Minimally Invasive Thoracic Surgery

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Global University**
- Accreditation: **90 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Professional Master's Degree

Minimally Invasive Thoracic Surgery

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