



# Postgraduate Certificate

## Liver Pathology

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Global University

» Credits: 6 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/postgraduate-certificate/liver-pathology

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# 01 Introduction

According to World Health Organization reports, a large number of liver pathologies are asymptomatic in their early stages. This underlines the importance of early detection and proper management of these clinical pictures by specialists in different health care settings. Keeping up to date on the methods and diagnostic equipment for these conditions can be a challenge for professionals who often find it difficult to combine their studies with their work practice. For this reason, TECH has burst onto the academic scene with an intensive 100% online program. Through this program, graduates will be able to broaden their knowledge and skills in a comprehensive way thanks to cutting-edge materials and a distinguished teaching staff.



### tech 06 | Introduction

The evolution of medical procedures in liver diseases requires specialists to constantly update their knowledge. In doing so, these professionals provide quality care to patients based on the latest scientific evidence. This also generates other benefits as it improves prognosis, contributes to greater social awareness of the problem and promotes healthier lifestyles. In this way, the risks of transmission of infectious diseases such as Hepatitis B and C will be considerably reduced.

TECH has a complete Postgraduate Certificate where graduates will delve into the most advanced diagnostic methods to determine the extent of liver pathologies. For this purpose, a detailed classification of the diseases of this organ and its characterization into infectious, metabolic and genetic diseases is carried out. Also, the university program describes advanced preoperative models and their use such as biopsies. On the other hand, this academic syllabus is distinguished by addressing less attended topics such as the management of anesthesia during interventions in order to control hemodynamics. It also covers the physiological complexities related to the production of bile for the elimination of waste and toxins.

In turn, the methodology implemented in this program reinforces its innovative character. TECH offers a 100% online educational environment, tailored to the needs of working professionals seeking to advance their careers. It also employs the Relearning teaching system, based on the repetition of key concepts to fix knowledge and facilitate learning. In this way, the combination of flexibility and a robust pedagogical approach makes it highly accessible. In addition, students will have access to a rich library of multimedia resources in different audiovisual formats (such as interactive summaries and infographics).

This **Postgraduate Certificate in Liver Pathology** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Practical cases presented by experts in Liver Pathology
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used 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 diagnose less common epithelial tumors with the content provided in this program from TECH, the best digital university in the world according to Forbes"



You will address the intricacies of Liver Scintigraphy and its feasibility to detect Liver masses with increased accuracy"

The program's teaching staff includes professionals from the field who contribute their work experience to this educational 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 learn 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 during the academic year For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

Looking to perfect your management of percutaneous liver abscess drains? Master these procedures in just over 6 weeks.

You will have at your disposal innovative teaching materials such as explanatory videos and interactive summaries.





The present syllabus will provide students with an in-depth analysis of the different diseases that affect the liver. Beginning with a review of normal hepatic physiology, students will explore the main benign and malignant conditions that occur in this vital organ. Clinical, diagnostic and therapeutic aspects of diseases such as steatosis or cirrhosis will also be addressed. In addition, various laboratory tests will be interpreted, as well as diagnostic imaging techniques for graduates to acquire a comprehensive preparation.



### tech 10 | Objectives



### **General Objectives**

- Develop a thorough understanding of the normal anatomy of the liver, including vascular distribution, hepatic segmentation and anatomical relationships
- Establish a solid foundation in normal liver physiology to facilitate identification of pathologic deviations
- Establish a thorough understanding of the pathophysiology of benign liver diseases, including steatosis, chronic hepatitis, and other conditions
- Improve ethical decision making in the selection and application of diagnostic procedures, considering patient safety and welfare
- Stimulate interest in pancreatic disease research and promote constant updating on therapeutic and technological advances





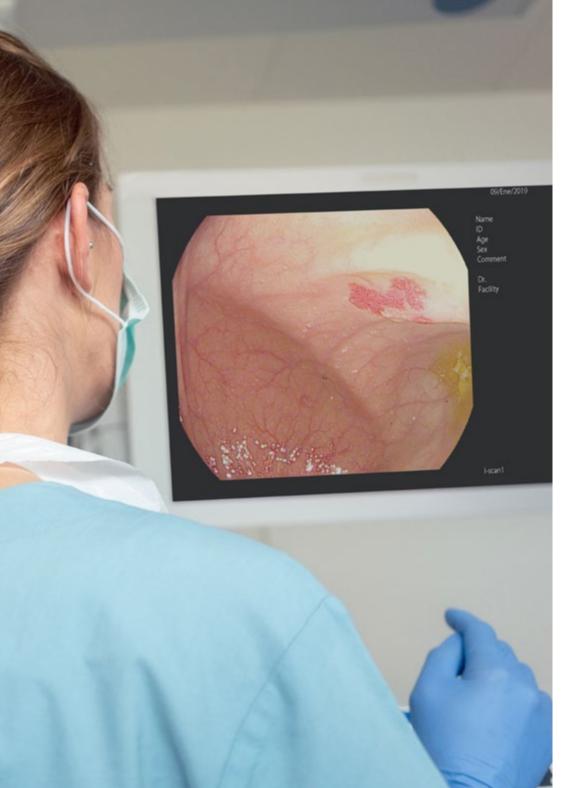


### **Specific Objectives**

- Develop the ability to identify and classify various liver diseases, including hepatitis, cirrhosis and metabolic disorders
- Become familiar with the various laboratory tests and imaging techniques used to evaluate liver disease, allowing for a comprehensive patient assessment
- Evaluate the risk factors associated with liver disease and understand the progression of these conditions
- Develop skills in the planning and execution of treatment strategies, considering pharmacological and surgical approaches



You will apply the most appropriate anesthetic management and be prepared to overcome complications that may arise during operations"







#### **International Guest Director**

Surgery and liver transplantation are the fields of research to which the eminent French physician and researcher Eric Vibert has devoted his professional career. For almost three decades, this expert has been involved in the holistic approach to primary liver cancer. Based on these interests, he has positioned himself as a true reference in this field, making significant contributions.

Dr. Vibert also leads a consortium called BOPA, which includes the University Paris-Saclay, the Ecole Mines Telécom and the Hepatobiliary Center of the Paul-Brousse Hospital (AP-HP). The aim of this project is to improve safety in operating rooms. To this end, its innovations are based on digital technologies, in gestation or already existing, which make it possible to increase the range of vision, speech and touch of the medical staff before any type of operation. These contributions, first implemented in simulated surgical rooms, have allowed the validation of multiple disruptive procedures.

In addition, this scientific pioneer is committed to connecting professionals from different fields in order to reinvent surgical practices. That is why his teams bring together engineers and computer scientists, as well as physicians, anesthesiologists, nurses and many other specialists. A work strategy that he continually integrates into his responsibilities and into the leadership of the Department of Surgery and Liver Transplantation at the Paul-Brousse de Villejuif Hospital in Paris.

In terms of academic impact, Dr. Vibert has more than 130 communications at international conferences and 30 plenary lectures. He also has an impressive H-index of 43, having authored 212 publications in first impact journals. He is also the author of the book Droit à l'Erreur, Devoir de Transparence, which deals with transparency and error management in medicine, and is the creator of the Week-End de l'Innovation Chirurgicale, with which he has left an everlasting medical-surgical mark.



### Dr. Vibert, Eric

- Chief of Surgery and Liver Transplantation at the Paul-Brousse de Villejuif Hospital, Paris, France
- Head of the Surgical Innovation Group at the University of Paris Sud
- Specialist in Liver and Biliary Tract Cancer Surgery
- Head of the Surgical Innovation Group of GH Paris Sud
- Director of Research, Biomedical/Medical Engineering at the University Paris-Sud
- Creator and Organizer of the Week-End de l'Innovation Chirurgicale
- Doctor of Medicine, St. Antoine Faculty of Medicine, University Paris VI



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

#### Management



#### Dr. Al Shwely Abduljabar, Farah

- Head of the Hepatobiliopancreatic Surgery Unit of the University Hospital of Guadalajara
- PhD in Medicine, University of Alcala
- Specialist in General and Digestive System Surgery at the University Hospital of Guadalajara
- Astellas Fellowship in Hepatobiliopancreatic Surgery and liver and pancreatic transplantation
- Official Master's Degree in Hepatology and Clinical Research at the University of Barcelona
- Official Master's Degree in Medical Expertise and Valuation of Bodily Injury by the University of Barcelona
- Degree in Medicine from the University of Alcalá, Spain
- Reviewer of the Central European Journal of Medicine
- Member of the Spanish Association of Surgeons
- Editor of: Journal of Liver and Clinical Research, EC Orthopaedics, Austin Pancreatic Disorders and Annals of Clinical Cytology and Pathology



### Course Management | 17 tech

#### **Professors**

#### Dr. García Gil, José Manuel

- Specialist in Esophagogastric and Endocrine Surgery at the University Hospital of Guadalajara
- Doctor of General Surgery and Digestive System at the University Hospital of Móstoles
- Professional Master's Degree in Updating in General Surgery and Digestive System by Cardenal Herrera University
- Teaching experience in Emergency Surgical Pathology courses
- Regular attendee at congresses and scientific conferences to update his knowledge
- Member of the Spanish Association of Surgeons

#### Dr. González Sierra, Begoña

- Specialist in General and Digestive System Surgery at the University Hospital of Guadalajara
- Professional Master's Degree in General Surgery Updating by the Spanish Confederation of Universities
- Professional Master's Degree in Integration and Clinical Problem Solving in Medicine from the University of Alcalá, Spain
- Professional Master's Degree in Aesthetic Medicine, Universidad Rey Juan Carlos, Madrid
- Degree in Medicine from the Complutense University of Madrid
- Postgraduate Certificate in Physiotherapy from the Rey Juan Carlos University

#### Dr. Díaz Candelas, Daniel Alejandro

- Specialist in General and Digestive System Surgery, University Hospital of Guadalajara, Mexico
- Postgraduate Diploma in Bases in Esophagogastric Surgery
- Degree in Medicine from the Central University of Venezuela
- Professor at the University Hospital of Guadalajara





### tech 20 | Structure and Content

#### Module 1. Hepatic Pathology

- 1.1. Pre-Operative Study
  - 1.1.1. Medical History
  - 1.1.2. Hepatic Function Tests (LFTs)
  - 1.1.3. Other Tests
- 1.2. Liver function
  - 1.2.1. Key liver functions
  - 1.2.2. Bile production
  - 1.2.3. Conclusions
- 1.3. Classification of liver diseases
  - 1.3.1. Infectious
  - 1.3.2. Metabolic
  - 1.3.3. Genetics
- 1.4. Pre-operative and intraoperative diagnostic methods for liver disease
  - 1.4.1. Imaging tests
  - 1.4.2. Hepatic biopsy
  - 1.4.3. Hepatic scintigraphy
  - 1.4.4. Other Tests
- 1.5. Study of Liver Function
  - 1.5.1. Markers
  - 1.5.2. Coagulation time
  - 1.5.3. Laboratory Tests
- 1.6. Hepatic volumetry
  - 1.6.1. Computed Tomography (CT) and Magnetic Resonance Imaging (MRI)
  - 1.6.2. Hepatic Ultrasound Scan
  - 1.6.3. Hepatic scintigraphy
- 1.7. Diagnostic imaging of focal hepatic lesions in patients with chronic liver disease
  - 1.7.1. Abdominal Ultrasound
  - 1.7.2. Computed Tomography (CT)
  - 1.7.3. Magnetic Resonance Imaging (MRI)





### Structure and Content | 21 tech

- 1.8. Incidental hepatic lesions
  - 1.8.1. Differential Diagnosis
  - 1.8.2. Types of Lesions
  - 1.8.3. Treatment
- 1.9. Interventional radiology in the management of liver disease
  - 1.9.1. Image-Guided Liver Biopsy
  - 1.9.2. Percutaneous Drainage of Hepatic Abscesses
  - 1.9.3. Transarterial Embolization (TAE) and Chemoembolization (TACE)
- 1.10. Anesthetic management in hepatic surgery
  - 1.10.1. Preoperative evaluation
  - 1.10.2. Hemodynamic Control
  - 1.10.3. Coagulation Management



Don't miss the opportunity to expand your competencies in Liver Pathology remotely, from anywhere in the world and at any time of your choice"





### tech 24 | Methodology

#### 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.



### Methodology | 27 tech

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.

### tech 28 | Methodology

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



#### **Study Material**

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

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



#### **Surgical Techniques and Procedures on Video**

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



#### **Interactive Summaries**

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

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





#### **Additional Reading**

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

#### **Expert-Led Case Studies and Case Analysis**

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



#### **Testing & Retesting**

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



#### Classes

There is scientific evidence on the usefulness of learning by observing experts.

The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### **Quick Action Guides**

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









### tech 32 | Certificate

This program will allow you to obtain your **Postgraduate Certificate in Liver Pathology** 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: Postgraduate Certificate in Liver Pathology

Modality: online

Duration: 6 weeks

Accreditation: 6 ECTS



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

#### **Postgraduate Certificate in Liver Pathology**

This is a program of 180 hours of duration equivalent to 6 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



<sup>\*</sup>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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