Postgraduate Certificate

Myocardial, Coronary Myocardial and Coronary Cardiotoxicity in the Oncologic Patient.

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Postgraduate Certificate

Myocardial, Coronary and Coronary Myocardial Cardiotoxicity in the Oncologic Patient

- Modality: **online**
- Duration: **8 weeks**
- Certificate: **TECH Global University**
- Credits: **10 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/us/medicine/postgraduate-certificate/myocardial-coronary-myocardial-coronary-cardiotoxicity-oncologic-patient

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01

Introduction

Cardiac toxicity is a serious situation that usually appears in oncology patients. Due to the growing importance of this clinical process, it is essential for the specialist physician to be up to date with the latest contributions for the management of complex clinical situations involving myocardial and coronary artery disease.

Improve your knowledge in Oncological Cardiology through this course, where you will find the best didactic material with real case studies"

Cardiac toxicity (CT) occurs in 30% of the millions of patients treated today for oncological processes. This is a "serious complication that usually debuts as heart failure and negatively affects the prognosis" of patients. The onset and severity of CT related to oncologic treatment are varied, depending mainly on each patient's individual susceptibility, the mechanism of action of the therapy, the capacity for early detection and the establishment of targeted treatment.

The objective of this course is to offer updated training in an area of current relevance from the clinical point of view, whose knowledge is advancing rapidly, focused on the specialization of the professionals involved interested in the subject.

Cardiologists, oncologists and hematologists with special interest in this field have with this course the opportunity to complete and update their knowledge in oncologic cardiology. The final objective of this training will be that students learn the pathophysiological basis of the genesis of CT, as well as the ways to detect and treat it. Students will get to know, understand and apply the latest diagnostic techniques, and preventive and therapeutic measures specific to CT in oncology patients.

Emphasis will be placed on solving complex clinical problems by performing case studies based on real-life situations. In addition, it offers a unique opportunity to learn about the latest research advances in this high-demand field.

This Postgraduate Certificate in Myocardial, Coronary Myocardial and Coronary Cardiotoxicity in Oncology Patients offers you the characteristics of a high level scientific, teaching and technological course. These are some of its most notable features:

- Latest technology in online teaching software.
- Highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand.
- Practical cases presented by practising experts.
- State-of-the-art interactive video systems.
- Teaching supported by telepractice.
- Continuous updating and recycling systems.
- Self-regulating learning: full compatibility with other occupations.
- Practical exercises for self-evaluation and learning verification.
- Support groups and educational synergies: questions to the expert, debate and knowledge forums.
- Communication with the teacher and individual reflection work.
- Content that is accessible from any fixed or portable device with an Internet connection.
- Banks of complementary documentation permanently available, even after the course.

Learn about the latest advances in the specialty to be able to perform a quality medical practice"

This course may be the best investment you can make in the selection of a refresher program for two reasons: besides updating your knowledge in Myocardial and Coronary Cardiotoxicity Myocardial and Coronary Affectation in the Oncological Patient, you will obtain a course certificate from TECH Global University"

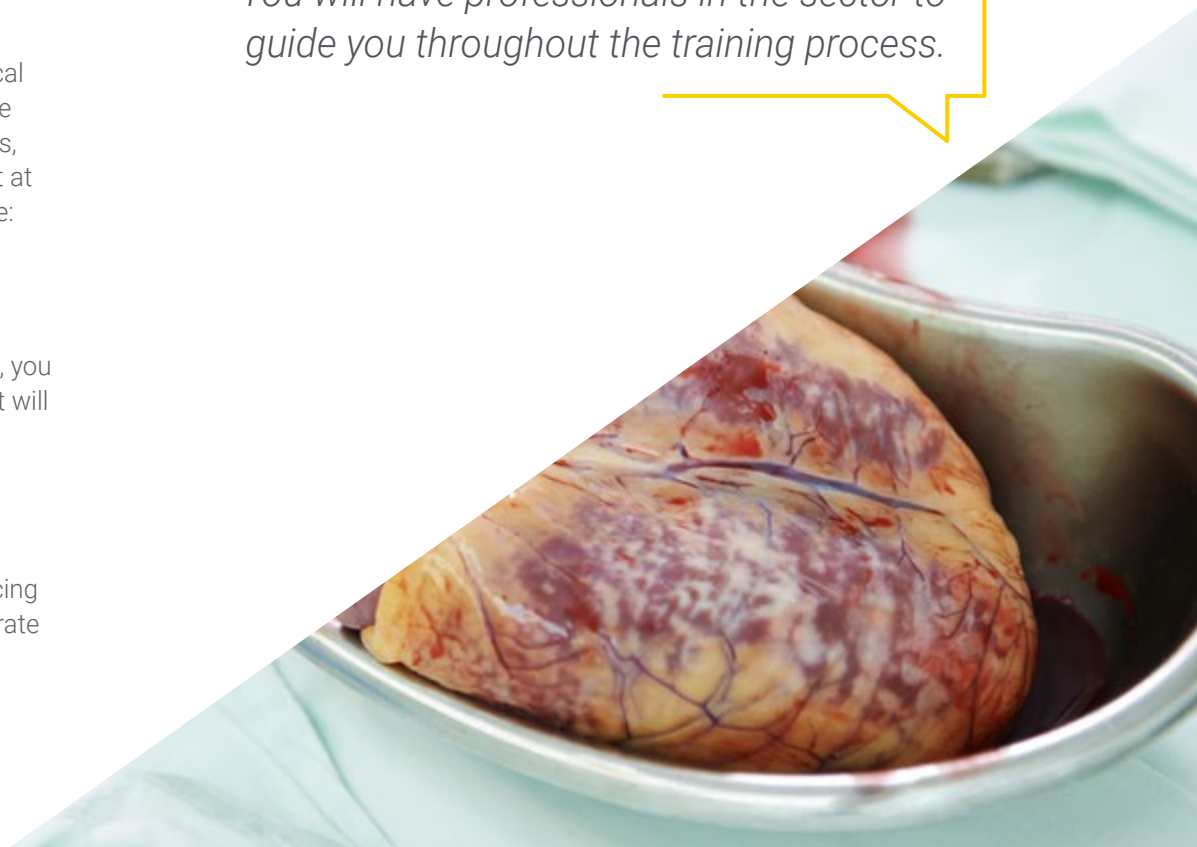
Our teaching team is composed of professionals belonging to the field of Oncological Cardiology. In this way, we make sure to provide you with the training update that we intend. A multidisciplinary team of doctors trained and experienced in different fields, who will develop the theoretical knowledge in an efficient way, but, above all, will put at the service of the Course the practical knowledge derived from their own experience: one of the differential qualities of this Course.

This mastery of the subject is complemented by the effectiveness of the methodological design of this course. Developed by a multidisciplinary team of e-learning experts, it integrates the latest advances in educational technology. Thus, you will be able to study with a series of comfortable and versatile multimedia tools that will give you the operability you need in your training.

The design of this program is based on Problem Based Learning: an approach that conceives learning as an eminently practical process. To achieve this at a distance, we will use telepractice: with the help of an innovative interactive video system, and learning from an expert, you will be able to acquire the knowledge as if you were facing the scenario you are learning at that moment. A concept that will allow you to integrate and fix the learning in a more realistic and permanent way.

It includes clinical cases that bring the development of the program as close as possible to the reality of medical care.

You will have professionals in the sector to guide you throughout the training process.



02

Objectives

The objective of this training is to train highly qualified professionals for work experience. An objective that is complemented, moreover, in a global manner, by promoting human development that lays the foundations for a better society. This objective is focused on helping medical professionals reach a much higher level of expertise and control. A goal that, in only 2 months, you will be able to achieve, with a high intensity and precision course.

Develop your skills and abilities in Oncologic Cardiology with this highly scientifically rigorous program"

General Objectives

- Update Cardiologists, Oncologists, and Hematologists's knowledge in the field of Cardio-Oncology.
- Promote work strategies based on a comprehensive approach to the patient as a standard model for achieving excellent care.
- Encourage the acquisition of technical skills and abilities, through a powerful audiovisual system, and the possibility of development through online simulation workshops and/or specific training.
- To encourage professional stimulation through continuous education and research.
- Deepen our knowledge of myocardial involvement caused by anthracyclines.
- Identify other chemotherapy drugs with the capacity to produce myocardial toxicity.
- Deepen our knowledge of myocardial toxicity induced by monoclonal antibodies, especially tratuzumab.
- Recognize the ability of therapies directed against new molecular targets (cellular kinase inhibitors) and proteosome inhibitors to produce ventricular dysfunction and heart failure.
- Learn the effects of thoracic radiotherapy on the myocardium.
- Know the importance of early detection of myocardial involvement due to cardiotoxicity.

- Identify patients at high risk of coronary artery disease.
- Define the role of oncological treatments such as fluoropyrimidines in the development of ischemic heart disease.
- Acquire updated knowledge on diagnostic methods for coronary artery disease related to cardiotoxic drugs.
- Get up to date on the management of acute coronary syndrome in the context of oncologic treatment.
- Learn the monitoring strategy in patients who have had coronary ischemia.
- Know the clinical relevance of thoracic radiotherapy in the development of coronary artery disease and its mechanisms.

Develop your skills and abilities in Oncologic Cardiology with this scientifically rigorous program.

03

Course Management

The program's teaching staff includes leading specialists in Cardio-Oncology, and other related areas, who bring their years of work experience to this training program. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner. A unique opportunity to learn from the best.

Learn about the latest advances in Cardio-Oncology procedures from leading professionals"

International Guest Director

Dr. Arjun Ghosh is recognized in the healthcare field for his many efforts to improve the quality of care at the University College London Hospital (UCLH) and Barts Heart Center. Both institutions have become international references in Cardiology, an area in which this doctor is considered a true eminence.

From his position as Head of the Clinical Service at UCLH, the expert has devoted great efforts to the care of patients with cancer and to reduce the cardiac side effects that may result from aggressive treatments such as chemotherapy, radiotherapy and surgery. Thanks to his extensive experience in this field, he is a consultant specialist in the Long-Term Follow-Up Unit, created to monitor the evolution of people who have survived tumors.

Dr. Ghosh's research has been at the forefront of clinical innovation throughout his career. His PhD, for example, was defended at the Imperial College of London and subsequently presented to the British Parliament. This merit is only plausible for studies that make unquestionable contributions to society and science. The thesis has also received numerous national and international awards. It has also been endorsed by presentations at various congresses around the world.

The famous cardiologist is also a specialist in advanced Diagnostic Imaging techniques, using state-of-the-art tools: Magnetic Resonance Imaging and Echocardiography. He also has a broad academic vocation that led him to complete a Master's degree in Medical Education, obtaining accreditations from the Royal College of Physicians of the United Kingdom and University College London.

Dr. Ghosh is also the Director of the Foundation Program at St. Bartholomew's Hospital and holds various positions in local and international societies, such as the American College of Cardiology.

Dr. Arjun Ghosh

- Specialist in Cardio-Oncology and Advanced Cardiac Imaging
- Head of Clinical Service University College London Hospital (UCLH)
- Consultant Cardiologist at the Barts Heart Center
- Director of the St Bartholomew's Hospital Foundation Program
- Doctorate in Cardiology at Imperial College London
- Master's Degree in Medical Education from the Royal College of Physicians of the
- United Kingdom and University College London
- Member of:
- American College of Cardiology
- British Cardiovascular Society
- Royal Society of Medicine
- International Society of Cardio-Oncology

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

Management

Dr. Macía Palafox, Ester

- Clinical Manager of the Cardio-Oncology Unit of the Fundación Jiménez Díaz University Hospital in Madrid.
- Degree in Medicine from the Complutense University Madrid.
- Cardiology Specialist at La Paz University Hospital in Madrid..
- TECH Master's Degree in Clinical Arrhythmology (Complutense University of Madrid).
- Fellowship in Investigative Arrhythmology (Columbia University, New York).
- Member of the Spanish Society of Cardiology. Cardio-Oncology Work Group.

Co-Director

Dr. García–Foncillas, Jesús

- Director of the Chair of Molecular Individualized Medicine of the Autonomous University of Madrid (UAM-Merck).
- Director of the Oncology Institute "OncoHealth".
- Director of the Oncology Department of the University Hospital "Fundación Jiménez Díaz".
- Director of the Translational Oncology Division of the Health Research Institute FJD-UAM.
- Professor of Oncology, Autonomous University of Madrid.

Dr. Ibáñez Cabeza, Borja

- Head of the Fundación Jiménez Díaz Cardiology Research Unit.
- Director of the Clinical Research Department of the Carlos III National Center for Cardiovascular Research (CNIC).

Coordinators

Dr. Taibo Urquía, Mikel
- Cardiology. Jiménez Díaz Foundation Hospital

Dr. Kallmeyer Mayor, Andrea
- Cardiology. Jiménez Díaz Foundation Hospital

Professors

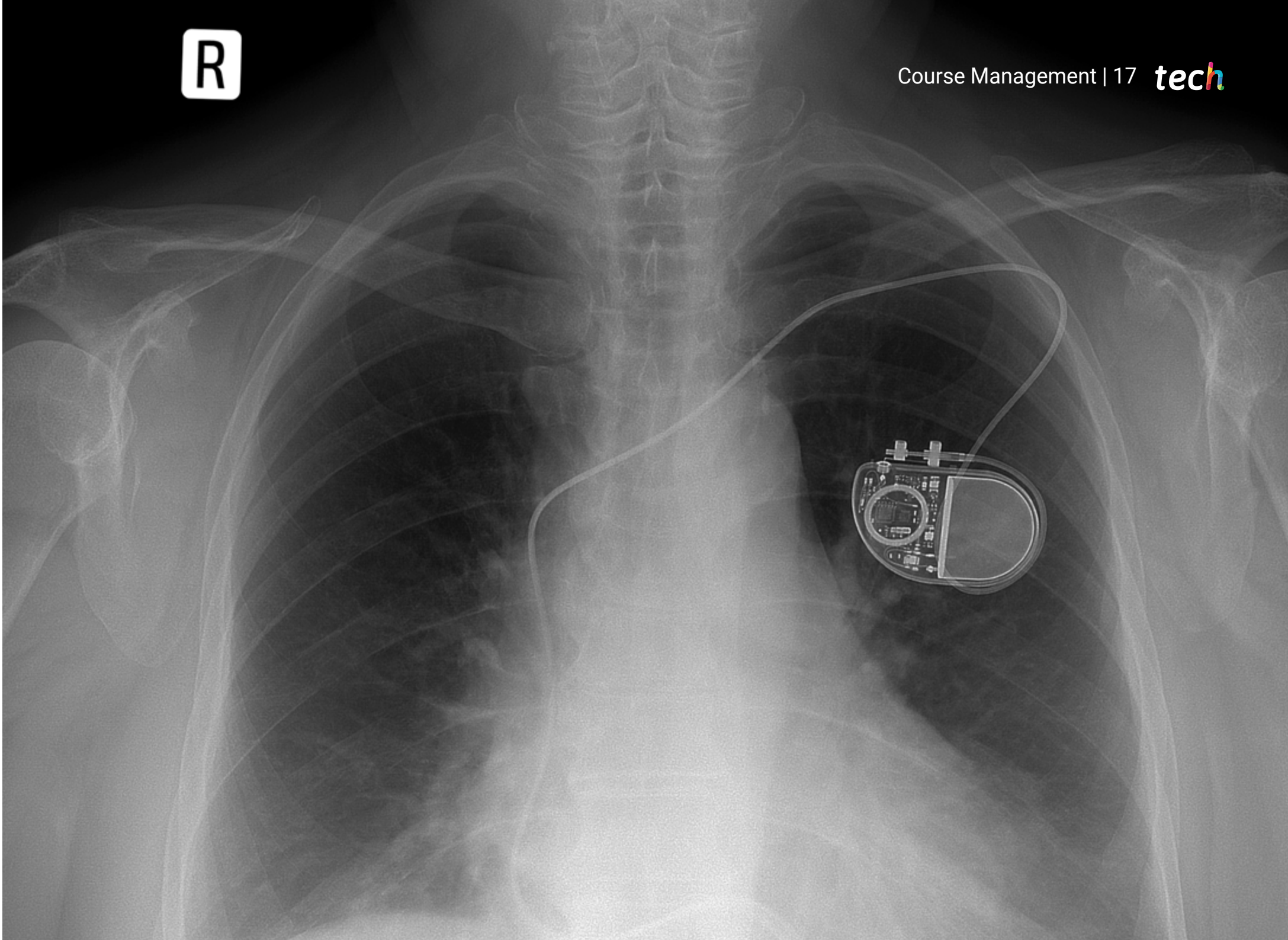
Dr. Bravo Calero, Loreto
- Cardiology Department, University Hospital Fundación Jiménez Díaz Quironsalud, Madrid.

Dr. Higueras Nafria, Javier
- Cardiology Department, University Hospital Clínico San Carlos, Madrid, Madrid.

Dr. Lorenzo Muñoz, Natalia
- Cardiology Department, University Hospital Infanta Cristina, Madrid.

D. Martínez Milla, Juan
- Cardiology Department, University Hospital Fundación Jiménez Díaz Quironsalud, Madrid.

Dr. Salamanca Viloria, Jorge
- Cardiology Department, University Hospital La Princesa, Madrid.



04

Structure and Content

The structure of the contents has been designed by a team of professionals from the best hospitals and universities in the country, who are aware of the relevance of up-to-date training to be able to intervene in the diagnosis and treatment of heart problems in oncology patients through the use of Cardio-Oncology, and are committed to quality teaching through new educational technologies.

Train with renowned professionals, who will provide you with their knowledge and experience in Cardio-Oncology".

Module 1. Myocardial Toxicity

1.1. Incidence and Clinical Relevance
1.2. Pathophysiology of Ventricular Dysfunction and Heart Failure in the Context of Cardiotoxicity
1.3. Drugs Implicated in the Development of Ventricular Dysfunction and Heart Failure
  1.3.1. Anthracyclines
  1.3.2. Other Chemotherapy Drugs
  1.3.3. Biological Agents: Monoclonal Antibodies
  1.3.4. Therapies Directed Against New Molecular Targets: Inhibitors of Cellular Kinases
  1.3.5. Proteosome Inhibitors
1.4. Radiotherapy and Heart Failure
1.5. Diagnostic Methods of Myocardial Involvement
  1.5.1. Electrocardiogram
  1.5.2. Echocardiography
  1.5.3. Other Noninvasive Imaging Techniques
1.6. Treatment Strategies
  1.6.1. Treatment of Acute Heart Failure
  1.6.2. Tratamiento crónico de pacientes con disfunción ventricular
1.7. Presymptomatic Myocardial Involvement
  1.7.1. Management of the Patient with Elevated Circulating Biomarkers during Oncology Treatment
  1.7.2. Approach to the Patient with Preclinical Alteration of Ventricular Function during Oncologic Treatment
1.8. Follow-up Strategy during Treatment with Drugs with the Capacity to Produce Myocardial Toxicity
  1.8.1. Anthracyclines
  1.8.2. Biological Agents: Monoclonal Antibodies
  1.8.3. Therapies Directed Against New Molecular Targets: Inhibitors of Cellular Kinases
  1.8.4. Immune Checkpoint Inhibitors

Module 2. Ischemic Heart Disease and Cardiotoxicity

2.1. Incidence of Ischemic Heart Disease in Oncology Patients
2.2. Identification of Patients at High Risk for Coronary Heart Disease
2.3. Pathophysiology of Ischemic Heart Disease in the Context of Oncology Treatment
2.4. Pharmacologic Oncologic Therapies that Favor Ischemic Heart Disease
  2.4.1. Fluoropyrimidine
  2.4.2. Vascular Endothelial Growth Factor Inhibitors
  2.4.3. Other (cis-platinum)
2.5. Diagnostic Methods of Coronary Heart Disease Related to Cardiotoxic Drugs
  2.5.1. Electrocardiogram
  2.5.2. Functional Tests
  2.5.3. Non-invasive Imaging Tests
  2.5.4. Pruebas de imagen invasiva
2.6. Acute Coronary Syndrome in the Context of Oncologic Treatment
2.7. Follow-up and Treatment Strategy in Patients with Coronary Ischemia
2.8. Thoracic Radiotherapy and Ischemic Heart Disease
  2.8.1. Incidence and Pathophysiology of Radioinduced Coronary Artery Disease
  2.8.2. Risk Factors for the Development of Ischemic Heart Disease in the Patient Who Has Received Radiation Therapy
  2.8.3. Clinical Assessment and Diagnostic Methods of Coronary Heart Disease in the Patient Who Has Received Radiation Therapy
  2.8.4. Therapeutic Options in Coronary Heart Disease Associated with Radiotherapy
2.9. Management of the Chronic Ischemic Patient Receiving Oncologic Treatment

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

05

Methodology

This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.
This teaching system is used in the most prestigious medical schools in the world, and major publications such as the***New England Journal of Medicine***have considered it to be one of the most effective.

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

At TECH we use the Case Method

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

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

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

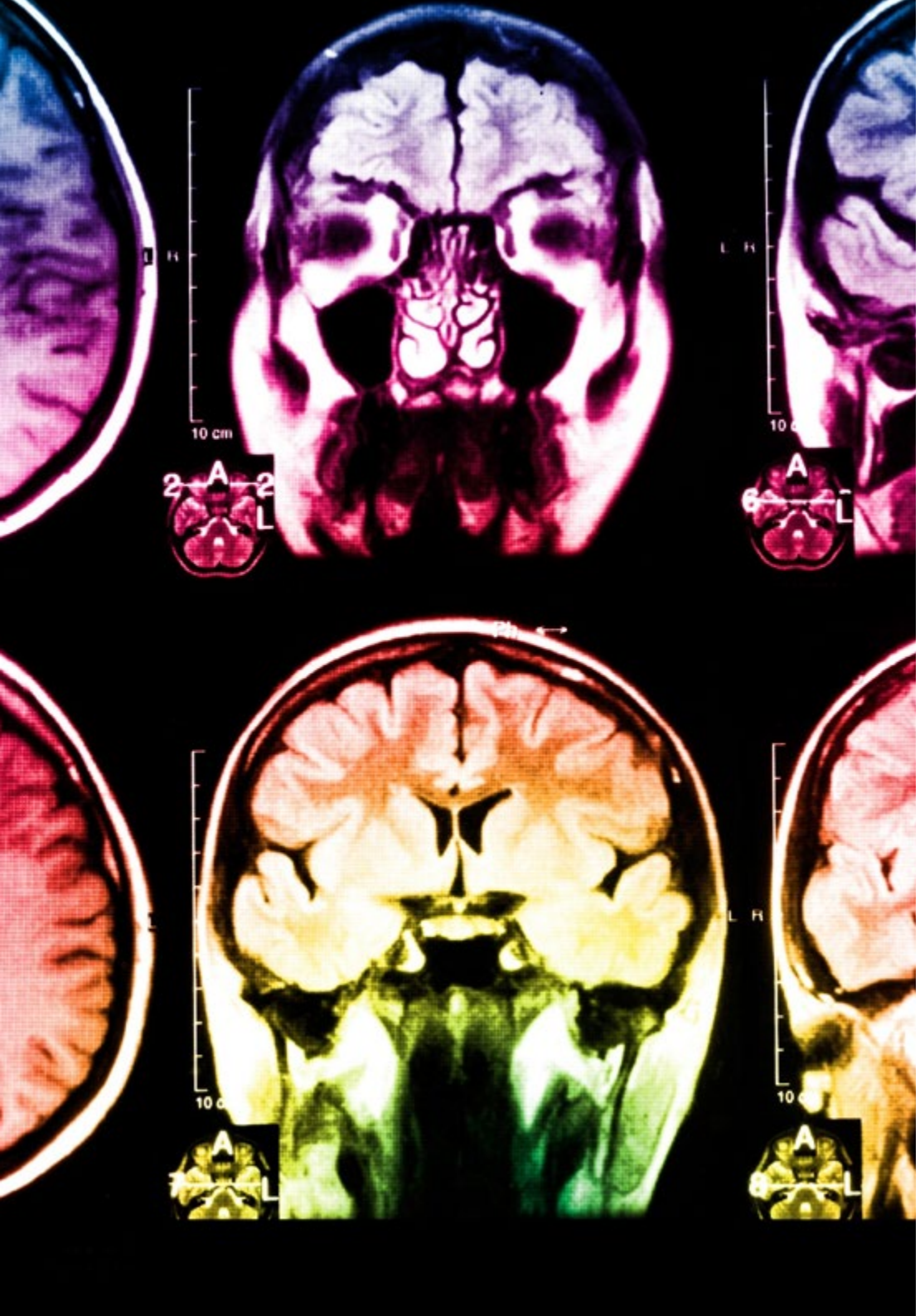
1. Students who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
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.

Re-Learning Methodology

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

Our University is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.

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



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

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

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

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

In this program you will have access to the best educational material, prepared with you in mind:

Study Material

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

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

Latest Techniques and Procedures on Video

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

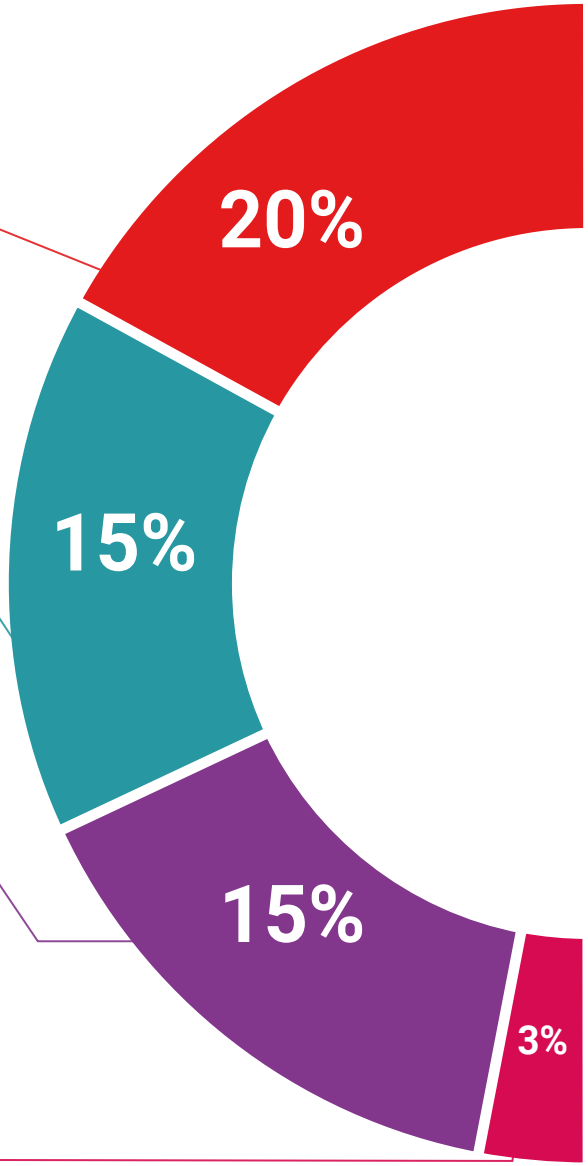
Interactive Summaries

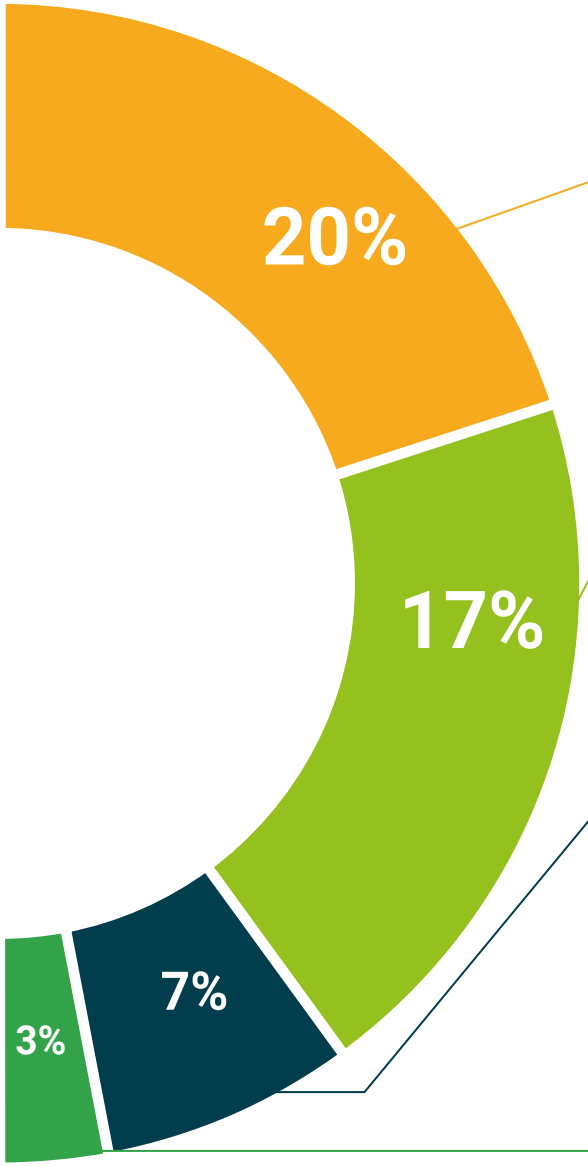
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

Additional Reading

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





Postgraduate Diploma-Led Case Studies and Case Analysis

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

Testing & Re-testing

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

Classes

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

Learning from an Postgraduate Diploma strengthens knowledge and memory, and generates confidence in our future difficult decisions.

Quick Action Guides

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

06

Certificate

The **Postgraduate Certificate in Myocardial, Coronary Myocardial and Coronary Cardiotoxicity in the Oncologic Patient** guarantees you, in addition to the most rigorous and up to date training, access to a Postgraduate Certificate issued by **TECH Global University.**

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

This program will allow you to obtain your **Postgraduate Certificate in Myocardial,Coronary, Coronary Myocardial Cardiotoxicity in the Oncologic Patient** 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.

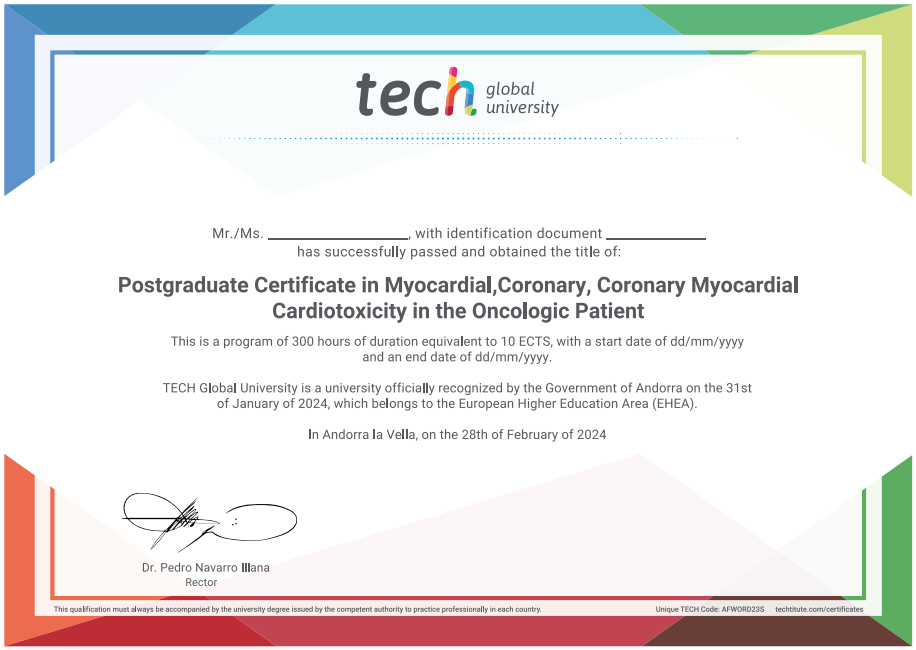
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Myocardial,Coronary, Coronary Myocardial Cardiotoxicity in the Oncologic Patient**

Modality: **online**

Duration: **8 weeks**

Accreditation: **10 ECTS**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Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Certificate in Myocardial,Coronary, Coronary Myocardial Cardiotoxicity in the Oncologic Patient

This is a program of 300 hours of duration equivalent to 10 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

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

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

Dr. Pedro Navarro Illana
Rector

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

*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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Postgraduate Certificate

Myocardial,Coronary, Coronary Myocardial Cardiotoxicity in the Oncologic Patient

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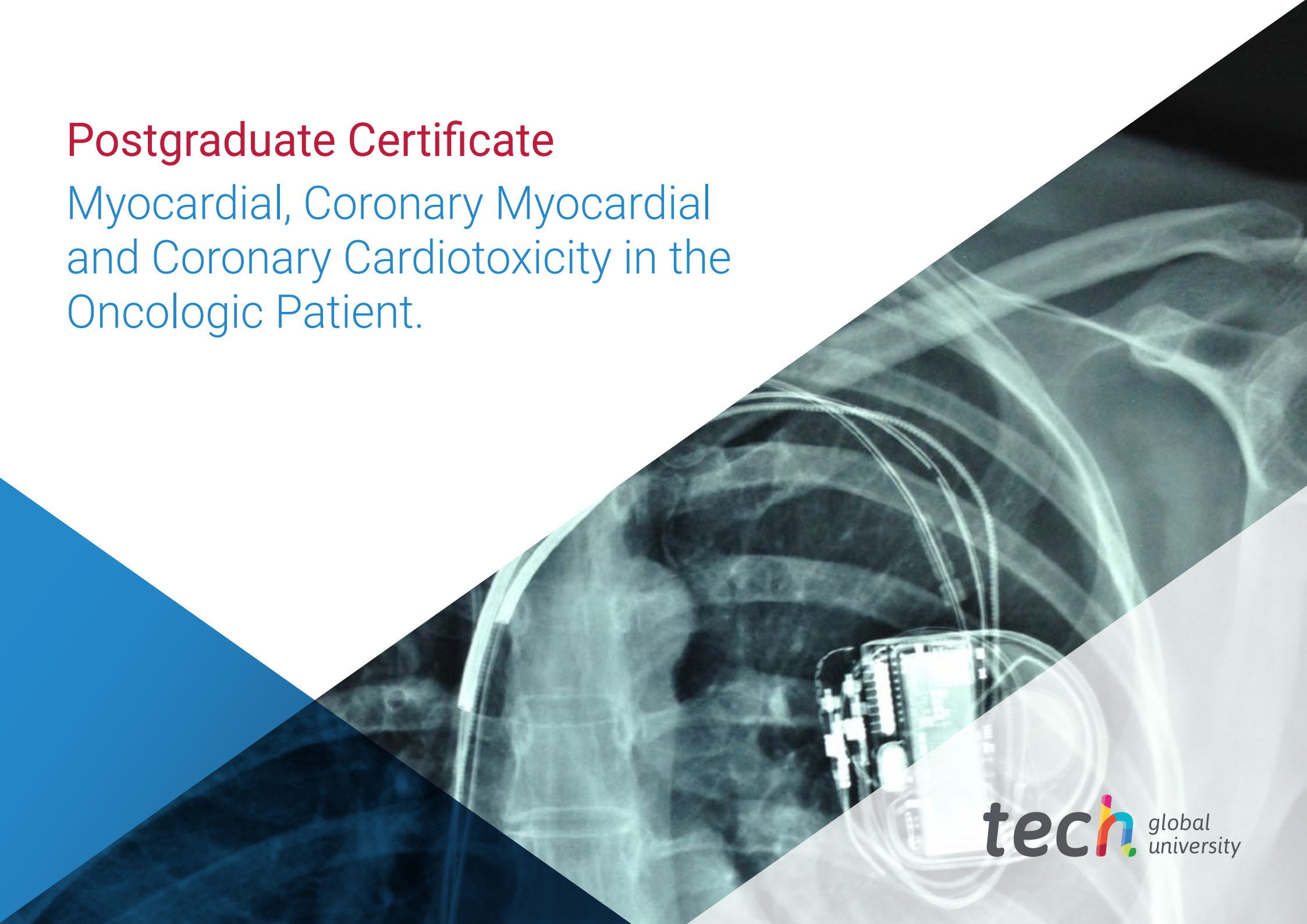
- Duration: **8 weeks**
- Certificate: **TECH Global University**
- Credits: **10 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Postgraduate Certificate

Myocardial, Coronary Myocardial and Coronary Cardiotoxicity in the Oncologic Patient.



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