

# Postgraduate Certificate Transfusions in Pediatrics





## Postgraduate Certificate Transfusions in Pediatrics

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Accreditation: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-certificate/transfusions-pediatrics](http://www.techtute.com/us/medicine/postgraduate-certificate/transfusions-pediatrics)

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# 01

# Introduction

On the one hand, the incidence of transfusion-related complications is higher in the pediatric population. On the other hand, transfusion practice in pediatrics has its own characteristics due to the different mechanisms of adaptation to anemia and its clinical manifestations and to the peculiarities of the sick child. Therefore, it is essential to have specialists focused on pediatric transfusion, who are aware of the clinical variability according to the age and pathology of the patient, as well as the transfusion policies established in children. All in all, the student of this TECH program will delve in the indications of hemocomponents in Pediatrics, such as transfusion thresholds specific to the pediatric population, guided by experts in the sector and knowing that it has a quality content and the best teaching methodology.





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*This Postgraduate Certificate in Transfusions in Pediatrics is the program you were looking for to specialize in an area of hematology that demands specialized professionals"*

Transfusion practice in pediatrics has its own characteristics due to the different mechanisms of adaptation to anemia and its clinical manifestations and to the peculiarities of the sick child. In addition, the incidence of transfusion-related complications is higher in the pediatric population.

Today, increasingly restrictive transfusion policies are being imposed, but the scarcity of well-designed studies and individual clinical variability do not allow the establishment of a single transfusion threshold for all patients. Therefore, this program will detail the most accepted recommendations for transfusion of the different blood components in pediatric patients, divided into two stages: (a from the fetal stage to 4 months of age, and b) older than 4 months.

However, the student will delve into the knowledge of the indications of hemocomponents in pediatric patients, considering it a therapeutic measure that must have a clear and precise physiological knowledge in the pediatric age to avoid unnecessary risks and to make a good use of them. You will also learn how to determine transfusion thresholds in the pediatric population and learn about the proper use of blood derivatives in the pediatric population.

In addition, it is a 100% online Postgraduate Certificate, so the student has the ease of being able to take it comfortably, wherever and whenever he/she wants. All you need is a device with internet access to take your career one step further. A modality in line with the current times with all the guarantees to position the medical professional in a highly demanded field.

This **Postgraduate Certificate in Transfusions in Pediatrics** 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 in Transfusion Medicine in Pediatrics
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional development
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ With a special emphasis on evidence-based medicine and research methodologies in the field of transfusion medicine
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any device with an Internet connection



*This program details the most widely accepted recommendations for transfusion of the different blood components in pediatric patients from the fetal stage"*



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*You will expand your knowledge about the indications of hemocomponents in pediatric patients as a therapeutic measure, You must have a clear and precise physiological knowledge that only this TECH Global University Postgraduate Certificate will give you"*

*Thanks to the 100% online modality of this TECH Postgraduate Certificate offers you the opportunity to specialize where, when and how you want through a device with internet access.*

*You will learn how to determine transfusion thresholds in the pediatric population with guaranteed success, guided by the best experts.*

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

Its 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 throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts.



# 02 Objectives

The purpose of this Postgraduate Certificate is that the student achieves the proposed objectives, in order to expand their knowledge in Transfusion Medicine applied in Pediatrics through the learning of quality content and an innovative methodology. To this end, a team of medical professionals has poured its knowledge and experience in the development of the points of this curriculum, which will drive the professional from a current approach, with full preparation for the achievement of their professional goal. Thus, the student is well on his way to excellence in their daily medical work in the field of blood transfusions in Pediatrics, knowing how to proceed according to the case.







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*You will delve into the proper use of blood derivatives in the pediatric population with success”*



## General Objectives

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- ◆ Know everything about the process of blood donation and blood components
- ◆ Understand hemovigilance as a transversal process involving the entire transfusion chain, from donor to patient



*Specialize with the medical elite thanks to TECH by obtaining your Postgraduate Certificate in Transfusions in Pediatrics"*







## Specific Objectives

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- ◆ Gain a deeper knowledge of the indications of hemocomponents in pediatric patients, considering it as a therapeutic measure, of which a clear and precise physiological knowledge is necessary in the pediatric age to avoid unnecessary risks and to make a good use of them
- ◆ Determine transfusion thresholds in the pediatric population
- ◆ Focus on the proper use of blood derivatives in the pediatric population

03

# Course Management

TECH has prestigious experts in the medical field of hematology so that the student acquires a solid knowledge in the specialty of Transfusion Medicine in Pediatrics, guided by true professionals in the field. In this way, the future professional has the guarantees he/she demands to specialize with the best and boost his/her academic career towards a specialized sector that is increasingly in demand.





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*By betting on this Postgraduate Certificate in Transfusions in Pediatrics from TECH, you are betting on excellence”*



## International Guest Director

Dr. Aaron Tobian is one of the great international references in the area of blood transfusion, being director of Transfusion Medicine at the Johns Hopkins Hospital. He is also Associate Director of Medical Affairs in the Pathology Area of the same clinical center.

In the academic field, Dr. Tobian has published more than 250 scientific articles related to Transfusion Medicine in the most prestigious journals, as a result of his global studies on diseases such as HIV.

In this sense, he also develops an important work as a member of several editorial boards. In addition, he is associate editor of the Journal of Clinical Apheresis, as well as being the editor-in-chief and founder of the Transfusion News portal, a reference in the dissemination of news on Transfusion Medicine.

All this, together with his teaching work, which he develops in prestigious centers, being professor of Pathology, Oncology and Epidemiology at the Johns Hopkins University School of Medicine and the Bloomberg School of Public Health.



## Dr. Tobian, Aaron

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- Director of Transfusion Medicine at The Johns Hopkins Hospital
- Associate Director of Clinical Affairs, Pathology Area, Johns Hopkins Hospital
- M.D. from Case Western Reserve University
- M.D., Case Western Reserve University
- Professor of Pathology, Medicine, Oncology and Epidemiology at The Johns Hopkins University School of Medicine
- Associate Editor of the Journal of Clinical Apheresis
- Editor-in-Chief and founding member of the website Transfusion News
- Editorial member of the journal Transfusion

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

## Management



### Dr. Alcaraz Rubio, Jesús

- ♦ Head of the Hematology Department at the 12 de Octubre Hospital (Madrid)
- ♦ Head of the Hematology Department at Mesa del Castillo Hospital, in Murcia
- ♦ Head of the Oncohematological Day Unit Hospital Viamed in Alcantarilla, Murcia
- ♦ Emergency Specialist at the Rafael Méndez Hospital, in Lorca, Murcia
- ♦ Head of the Hematology Department at the Hospital Virgen de la Caridad in Cartagena
- ♦ Member of Sermo's Medical Advisory Board
- ♦ Associate Professor of Emergency and Clinical Simulation at the Universidad Católica San Antonio in Murcia
- ♦ Degree in Medicine and Surgery from the University of Murcia
- ♦ Specialty in Hematology Hemotherapy



## Professors

### Dr. Contessotto Avilés, María Cristina

- ◆ Pediatrician at the Pediatrics and Neonatology Unit of Hospital Quirón Salud, in Murcia
- ◆ Specialist in Pediatrics and Neonatology at the Hospital Universitario Virgen de la Arrixaca, in Murcia
- ◆ Degree in Medicine and Surgery from the University of Murcia
- ◆ Pediatrician and Neonatology Specialist

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*Make the most of this opportunity to learn about the latest advances in this subject to apply it to your daily practice"*



# 04

## Structure and Content

The structure of the contents of this Postgraduate Certificate has been designed based on the knowledge of Transfusion Medicine focused on pediatric patients, in order for the professional to deepen and update their knowledge in this field of medicine, specializing successfully. Thus, the teaching team of this program has developed a syllabus whose content offers a broad perspective of everything involved in the procedure of blood transfusion in Pediatrics, from optimal volumes to plasma transfusion in children under 4 months of age or the administration of immunoglobulins. In this way, the student will acquire the skills to develop professionally in this area of medicine thanks to quality content and the best teaching methodology.







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*In this Postgraduate Certificate you will learn the latest indications on the transfusion of intrauterine hemocomponents”*

## Module 1. Transfusions in Pediatrics

- 1.1. Transfusion Medicine in Pediatrics
  - 1.1.1. Optimal Transfusion Volumes
  - 1.1.2. Indication of Irradiated Components in Pediatrics
- 1.2. Transfusion of Intrauterine Hemocomponents
  - 1.2.1. Current Indications for Intrauterine Transfusion
- 1.3. Red Blood Cells Transfusion in Children Younger than 4 Months of Age
  - 1.3.1. Preterm Anemia
  - 1.3.2. Red Blood Cell Concentrate Transfusion Thresholds
- 1.4. Platelet Transfusion in Children Younger than 4 Months of Age
  - 1.4.1. Prophylactic Platelet Transfusion
  - 1.4.2. Alloimmune Neonatal Thrombopenia
- 1.5. Plasma Transfusion in Children Younger 4 Months of Age
  - 1.5.1. Indications for Fresh Frozen Plasma in the Neonatal Period
- 1.6. Exchange Transfusion
  - 1.6.1. Indications
  - 1.6.2. Complications of Exchange Transfusion
- 1.7. Red Blood Cells Transfusion in Children Older than 4 Months of Age
  - 1.7.1. Anemia in Hemato-Oncology Patients
  - 1.7.2. Management of Massive Hemorrhage in Pediatrics
- 1.8. Platelet Transfusion in Children Older than 4 Months of Age
  - 1.8.1. Therapeutic Platelet Transfusion Thresholds
- 1.9. Plasma Transfusion in Children Older than 4 Months of Age
  - 1.9.1. Acute Hemorrhage in Hemophiliac Patients
- 1.10. Immunoglobulin Administration
  - 1.10.1. Update on ITP Treatment in Pediatrics







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*You will expertly control the therapeutic platelet transfusion thresholds in patients older than 4 months”*

05

# Methodology

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

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







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



## At TECH we use the Case Method

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

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



According to Dr. Gervas, 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.

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

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

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



## Relearning Methodology

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

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

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





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

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

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

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

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



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



#### Study Material

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

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



#### Surgical Techniques and Procedures on Video

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



#### Interactive Summaries

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

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



#### Additional Reading

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







#### 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.



# 06 Certificate

The Postgraduate Certificate in Transfusions in Pediatrics guarantees students, in addition to the most rigorous and up to date education, access to a Postgraduate Certificate issued by TECH Global University.



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*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 **Postgraduate Certificate in Transfusions in Pediatrics** 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: **Postgraduate Certificate in Transfusions in Pediatrics**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**





future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
development lang  
virtual classroom

**tech** global  
university

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