Postgraduate Diploma

Nursing Care of the Pediatric Patient with Non-malignant Hematologic Pathology

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Nursing Care of the Pediatric Patient with Non-malignant Hematologic Pathology

Course Modality: **Online**
Duration: **6 months**
Certificate: **TECH Technological University**
Official N° of Hours: **600 h.**
Website: **www.techtitute.com/nursing/postgraduate-diploma/postgraduate-diploma-nursing-care-pediatric-nonmalignant-hematologic-pathology**

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01

Introduction

The work of pediatric nurses is essential to ensure the medical care of children from birth to teaching. Currently, these professionals must provide an adequate response to the needs of each child patient they care for, ensuring at all times that their wishes are met and their identity as a person is respected. When specializing in the field of hematology, it is important to have professionals who know the biological basis of these conditions in the blood, as well as the normal development of a healthy child. This will help them to improve the care provided and identify possible errors that can be corrected. Therefore, having the program in Nursing Care of the Pediatric Patient with Non-Malignant Hematologic Pathology is necessary to boost your professional career.

Acquire knowledge on fundamental aspects to improve your treatment of patients with non-malignant hematologies"

Non-malignant hematologic diseases in children are usually described as mild, benign abnormalities with spontaneous resolution in the first weeks of life. Therefore, it is essential to have professionals who are trained in these conditions and can provide the care they require to heal properly. It is also vitally important for nurses to understand that ongoing specialization will help them perform better in an area of work that continues to change and innovate.

Therefore, the Postgraduate Diploma in Nursing Care of the Pediatric Patient with Non-malignant Hematologic Pathology provides all the necessary and updated information in this field. In the first module, students will be introduced to the basics of neonatal and pediatric hematology, where they will explore the biological basis of blood diseases in fetuses and neonates. On the other hand, they will contrast normal and abnormal development of children and adolescents for the development of a holistic view of diseases.

Moving forward in the classes, you will learn about the different blood disorders, such as anemia and its different variants. The future graduate will also have the opportunity to learn about the different bleeding disorders in newborns and all the clinical and etiological characteristics that accompany them. Near the end, you will be introduced to the Developmental and Family Centered Care Model, which will help train you to not only treat the patient, but to support family members who are also living with these illnesses.

The teaching team assembled for this University Expert is of recognized prestige and has extensive experience in national and international reference units in the treatment and care of newborns, children and adolescents with hematological disease. The program is 100% online, making it easy for the student to take it conveniently, wherever and whenever he/she wants. All you need is a device with internet access to take your career one step further. A modality according to the current times with all the guarantees to position the engineer in a highly demanded sector.

This **Postgraduate Diploma in Nursing Care of the Pediatric Patient with Non-Malignant Hematologic Pathology** contains the most complete and updated educational program on the market. The most important features include:

- The development of case studies presented by experts in Pediatric Hematology for Nurses
- The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential 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

Know the basics of hemostasis, its control mechanisms and the laboratory tests necessary for its study"

Address the different hematological diseases in newborns, children and adolescents and enhance your professional profile"

Learn the Developmental and Family Centered models to provide care centered on the individual and family needs of the patient.

Acquire knowledge on fundamental aspects of diagnostic and follow-up procedures in the newborn with a 100% online program.

The program's teaching staff includes professionals from sector who contribute their work experience to this training 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 training programmed to train in real situations.

This program is designed around Problem Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the program. This will be done with the help of an innovative system of interactive videos made by renowned experts.

02

Objectives

The knowledge acquired in this Postgraduate Diploma allows the student to acquire the necessary skills to update in their profession, understanding at all times the biological foundations of pediatric hematologies and the impact they have on the patient's family. In this way, you will be able to develop your full capabilities in a field of medicine that continues to advance. Likewise, it will be able to identify the indispensable and necessary aspects in the adaptation of the Neonatology Unit to the NIDCAP Model. For this reason, TECH establishes a series of general and specific objectives to improve the satisfaction of the future graduate. These are the following.

Acquires knowledge on fundamental aspects of pathophysiology, clinical and treatment of hemoglobinopathies in pediatrics"

General Objectives

- Optimize the quality and care of pediatric patients with hematological pathology, providing more qualified healthcare professionals
- Acquire the essential skills to comprehensively care for children and adolescents with hematological pathology and their families
- Recognize and assess the physical, psychological, social and spiritual needs of the child and adolescent with hematologic pathology and their family
- Achieve sufficient knowledge and skills to be able to develop the personal and professional attitudes necessary to treat children and adolescents with hematologic pathology
- Develop a comprehensive vision of care for children and adolescents with hematological pathologies and their families, in order to promote their well-being, autonomy and dignity at all times
- Develop problem solving and evidence generation capabilities in the field of Pediatric Hematology to correct knowledge deficiencies and establish standards of excellence in practice

Specific Objectives

Module 1. Basis of neonatal and pediatric hematology

- Present the biological basis of fetal and postnatal hematopoiesis
- Know the main characteristics of the newborn, the child and the healthy adolescent
- Review in detail the composition of the blood, both the formed elements and the blood plasma
- Identify the characteristics of the different blood groups
- Review the general concepts, functions, organs and cells of the immune system
- Know the basics of hemostasis, its control mechanisms and the laboratory tests necessary for its study
- Present the different hematological diseases in the newborn, child and adolescent

Knows and acquires the competences to carry out the administration and care of specific hemotherapy support in newborns"

Module 2. Non-malignant hematologic pathology in newborns

- Know the hematological reference values in the newborn
- Acquire knowledge on fundamental aspects of etiopathogenesis, diagnosis, treatment and complications of non-physiological neonatal jaundice and hemolytic disease of the newborn
- Know the definition, classification, epidemiology, pathophysiology, clinical manifestations, diagnosis and treatment of anemia of prematurity (AOP)
- Differentiate other anemias in newborns and infants, their causes and characteristics, as well as their diagnosis and different treatments
- Know the different bleeding disorders in the newborn, their clinical manifestations, etiology, diagnosis and treatment
- Acquire knowledge on fundamental aspects of etiopathogenesis, clinical, diagnosis, treatment and prognosis of polycythemia in the newborn
- Differentiate the different types of thrombocytopenias in the newborn according to their etiology and type, as well as their clinical manifestations, diagnosis and treatment
- Present the pathophysiological basis, types and risk factors and etiology of neonatal shock
- Recognize the clinical manifestations and diagnosis of neonatal shock and the necessary actions for its treatment

Module 3. Specificities of care in neonates with non-malignant hematologic pathology

- Know the Developmental and Family Centered Care Model (NIDCAP), the synactive theory and the Neurodevelopment on which it is based and main aspects
- Develop the most important aspects for the application of the NIDCAP Model
- Identify the indispensable and necessary aspects in the adaptation of the Neonatology Unit to the NIDCAP Model
- Learn and appreciate the importance of feeding and nutrition in newborns
- Acquire knowledge on fundamental aspects of diagnostic and follow-up procedures in the newborn
- Update knowledge that will allow the student to distinguish the different types of vascular accesses in the newborn and to know the management and care of each one of them
- Describe and update the most common treatment modalities to treat hematological problems in the newborn
- Review the most frequent procedures, techniques and care in the administration of drugs and serum therapy in the newborn
- Acquire the knowledge necessary for specific nursing care in the treatment of the infant with non-physiological neonatal jaundice
- Know and acquire competence to carry out the administration and care of specific hemotherapy support in newborns

Module 4. Non-malignant hematologic pathology in children

- Know the general concepts, physiopathology, classification, prevalence and incidence, and signs and symptoms of the different types of anemias that can affect children and adolescents
- Acquire knowledge on fundamental aspects of , pathophysiology, clinical and treatment of hemoglobinopathies in pediatrics
- Differentiate the different types of coagulation and hemostasis disorders in pediatrics, as well as their etiology, clinic and treatment
- Acquire knowledge on fundamental aspects of epidemiology, clinical features, diagnosis and treatment of non-malignant granulocyte diseases in pediatrics
- Differentiate the different types of primary immunodeficiencies (PID) in pediatrics, as well as their clinical manifestations, diagnosis and treatment
- Know the general concepts and classification of congenital medullary insufficiencies (CMI)
- Explain in detail Fanconi's Anemia (IMC), differentiate it from the syndrome and study its characteristics, diagnosis, treatment and prognosis
- Review the factors that predispose to infections in children with hematologic pathology, how to prevent them and detail the most frequent ones

03

Course Management

In order to provide a quality education, it is necessary to have a teaching staff that can provide all the theoretical and practical information that will help students to develop optimally in any work environment. Thus, TECH has a large team specialized in the care of pediatric patients with non-malignant hematological pathologies. In this way, students have the best tools to develop all their theoretical and practical skills in their profession. This is the best way to execute in a real environment all the knowledge acquired in this program.

Learn with the best group of experts the most frequent procedures, techniques and care in the administration of drugs in hematological patients"

Management

Ms. Coronado Robles, Raquel

- Specialist Nurse in Pediatric Nursing
- Pediatric Oncohematologic unit, Vall d'Hebron Hospital, Barcelona.
- Associate Professor and coordinator of the Childhood Mention of the Nursing Degree at the Autonomous University of Barcelona (UAB)

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- Specialist Nurse in Pediatric Nursing. Vall d'Hebron Barcelona Hospital Campus

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- Day Hospital Pediatric Oncohematologic Unit Vall d'Hebron Hospital in Barcelona

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- Pediatric Oncohematologic Unit Vall d'Hebron Barcelona Hospital Campus. Co-director of SEER (Emotional Health and Educational).

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- Pediatrics unit. Vall d'Hebron Barcelona Hospital Campus

Ms. Pérez Correa, Sónia

- Pediatric Oncohematologic Unit Vall d'Hebron Barcelona Hospital Campus

Ms. Ridao Manonellas, Saida

- Specialist Nurse in Pediatric Nursing. Immunodeficiency nursing consultation

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- Psycho-oncologist Pediatric Oncohematologic Unit Vall d'Hebron Barcelona Hospital Campus

Toro Guzmán, Antonio

- Pediatric Oncohematologic unit, Vall d'Hebron Hospital, Barcelona.. Associate Professor of the Degree in Nursing at the Autonomous University of Barcelona (UAB)

Ms. Vidal Laliena, Miriam

- Ph.D cell biology, immunology and neuroscience at IDIBAPS- UB. Clinical Data Manager-study coordinator Pediatric Oncohematologic unit Vall d'Hebron Barcelona Hospital Campus (2016-2017). Currently: at CatSalut. Catalan Health Service

04

Structure and Content

Ensure that students meet the requirements of nursing applied to pediatric patients with non-malignant hematological conditions, a syllabus has been developed whose modules offer a broad perspective of this field of action, allowing the student to describe and update the different treatment modalities most frequently used to address hematological problems in the newborn. From module 1, students will see their knowledge broadened, which will enable them to develop professionally, knowing that they can count on the support of a team of experts.

Differentiate the multiple types of coagulation and hemostasis disorders in pediatrics, following the most updated program on the market"

Module 1. Basis of neonatal and pediatric hematology

1.1. Fetal Hematopoiesis
- 1.1.1. Introduction Prenatal Hematopoiesis
- 1.1.2. Mesoblastic or Megaloblastic Hematopoiesis
- 1.1.3. Hepatic Phase
- 1.1.4. Splenic Phase
- 1.1.5. Medullary or Myeloid Phase

1.2. Healthy Newborn
- 1.2.1. Fetal Development
- 1.2.2. Changes at Birth
- 1.2.3. First Month of Life

1.3. Postnatal Hematopoiesis
- 1.3.1. General Concepts Postnatal Hematopoiesis
- 1.3.2. Types of Hematopoietic Tissue
  - 1.3.2.1. Myeloid Tissue
  - 1.3.2.2. Lymphoid Tissue.
- 1.3.3. Temperature Regulation Stimulation and Inhibition
- 1.3.4. Erythropoiesis
  - 1.3.4.1. Hemoglobin Synthesis
  - 1.3.4.2. Hemoglobin Alterations
- 1.3.5. Granulocytopoiesis
- 1.3.6. Monocytopoiesis
- 1.3.7. Platelet Formation

1.4. Composition of the Blood: Formed Elements
- 1.4.1. Introduction to Blood Cells and Plasma
- 1.4.2. Blood Functions
- 1.4.3. Blood Components
  - 1.4.3.1. Plasma
  - 1.4.3.2. Formal Elements
    - 1.4.3.2.1. Red Cells or Erythrocytes
    - 1.4.3.2.2. Leukocytes
      - 1.4.3.2.2.1. Granular (Neutrophils, Eosinophils, Basophils)
      - 1.4.3.2.2.2. Non-Granular (Lymphocytes, Monocytes)

1.5. Composition of the Blood: Blood Plasma
- 1.5.1. Blood Plasma Composition
  - 1.5.1.1. Plasma Proteins
    - 1.5.1.1.1. Albumins
    - 1.5.1.1.2. Globulins
    - 1.5.1.1.3. Fibrinogen
    - 1.5.1.1.4. Others
- 1.5.2. Plasma Functions
- 1.5.3. Differences between Plasma and Serum

1.6. Blood Groups
- 1.6.1. Introduction
- 1.6.2. Antigen Group 0-A-B
  - 1.6.2.1. A and B Antigens: Agglutinogens
  - 1.6.2.2. Genetic Determination of Agglutinogens
  - 1.6.2.3. Aglutinin
  - 1.6.2.4. Agglutination Process in Transfusion Reactions
  - 1.6.2.5. Blood Typing
- 1.6.3. Rh Blood Type
  - 1.6.3.1. Rh Antigens
  - 1.6.3.2. Rh Immune Response
  - 1.6.3.3. Erythroblastosis Fetalis ("Hemolytic Disease of the Newborn")

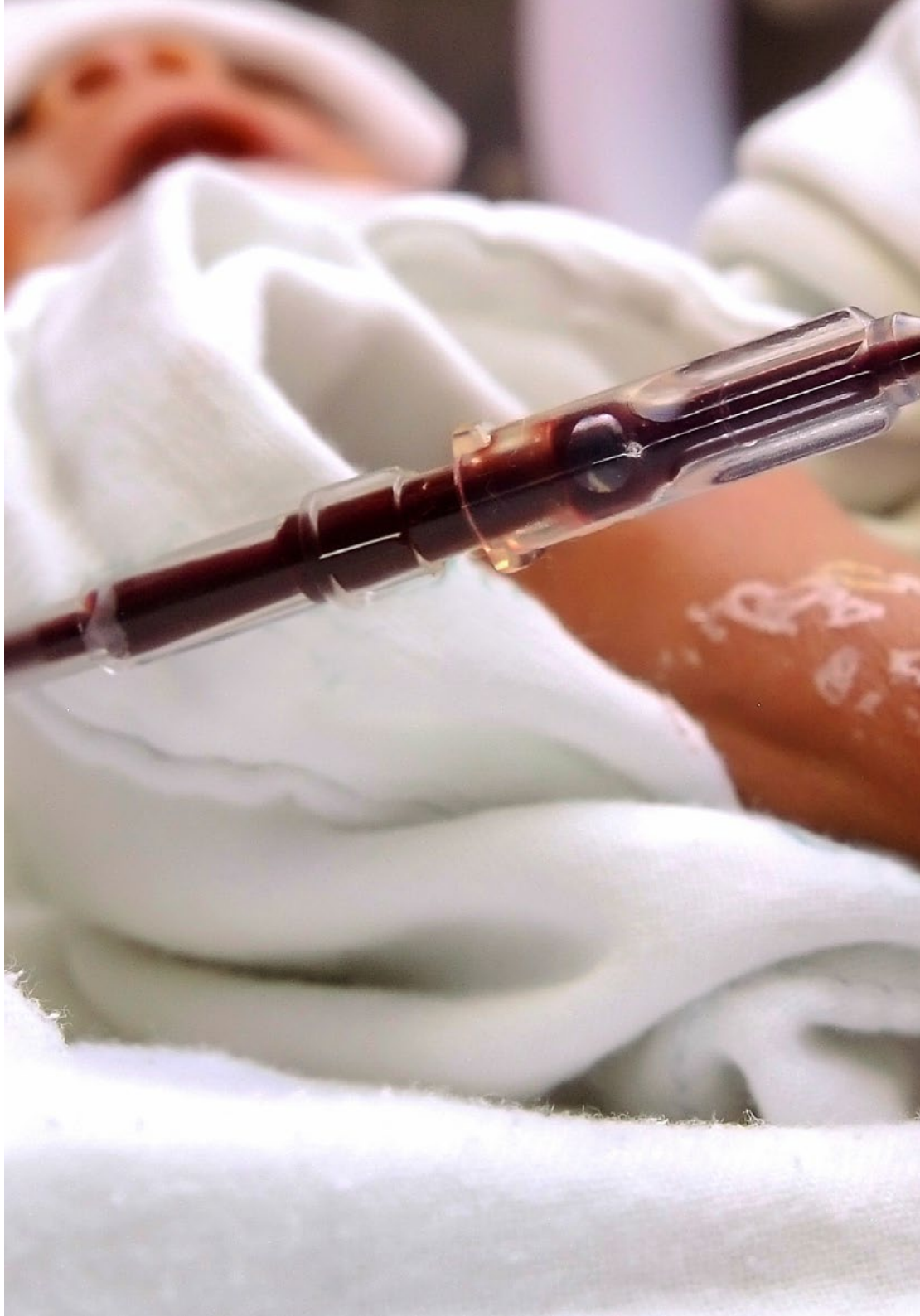
1.7. Immune System
- 1.7.1. General Concepts of Immunology
- 1.7.2. Immunological System Functions
- 1.7.3. Immune System Organs
  - 1.7.3.1. Skin and Mucous Membranes
  - 1.7.3.2. Thymus
  - 1.7.3.3. Liver and Bone Marrow
  - 1.7.3.4. Bladder
  - 1.7.3.5. Lymph Nodes
- 1.7.4. The Innate or Nonspecific System
- 1.7.5. The Adaptive or Specific System

1.7.6. Humoral Elements in the Immune Response
1.7.6.1. T Lymphocytes
1.7.6.2. Natural Killer Cells(NK)
1.7.6.3. Antigen-Presenting Cells (HLA Antigen, Macrophages, Dendritic Cells, B Lymphocytes)
1.7.6.4. Polymorphonuclear Cells: Neutrophils, Basophils and Eosinophils
1.8. Fundamentals of Hemostasis
1.8.1. Introduction
1.8.2. Primary Hemostasis
1.8.2.1. Vessels, Endothelium and Platelets
1.8.2.2. Physiology
1.8.2.2.1. Initiation (Platelet Adhesion)
1.8.2.2.2. Extension (Platelet Activation)
1.8.2.2.3. Perpetuation (Platelet Aggregation and Procoagulant Activity)
1.8.3. Secondary Hemostasis or Coagulation
1.8.3.1. Coagulation Factors
1.8.3.2. Physiology
1.8.3.2.1. Extrinsic Pathway
1.8.3.2.2. Intrinsic Pathway
1.8.4. Control Mechanisms of the Coagulation Process
1.8.5. Clot Removal and Fibrinolysis
1.8.6. Laboratory Tests
1.8.6.1. Evaluate Primary Hemostasis
1.8.6.2. Evaluate Coagulation
1.9. Healthy Child
1.9.1. Infant: 1- 24- months
1.9.2. Pre-school Stage
1.9.3. School Stage
1.10. Adolescent Stage
1.11. Introduction to Hematologic Diseases in Pediatrics
1.11.1. Introduction
1.11.2. Non-Malignant Hematologic Pathologies
1.11.2.1. In Newborns
1.11.2.1.1. Specificities
1.11.2.1.2. Most Frequent Hematologic Pathologies
1.11.2.1.2.1. Non-Physiologic Neonatal Jaundice
1.11.2.1.2.2. Preterm Anemia
1.11.2.1.2.3. Other Anemias of the Newborn
1.11.2.1.2.4. Hemorrhagic Disorders
1.11.2.1.2.5. Polycythemia
1.11.2.1.2.6. Neonatal Shock
1.11.2.2. In Children
1.11.2.2.1. Specificities
1.11.2.2.2. Most Common Pathologies
1.11.2.2.2.1. Anaemia in Pediatrics
1.11.2.2.2.2. Haemoglobinopathies
1.11.2.2.2.3. Coagulation and Hemostasis Abnormalities
1.11.2.2.2.4. Non-Malignant Granulocyte Diseases
1.11.2.2.2.5. Primary Immunodeficiencies
1.11.2.2.2.6. Congenital Spinal Insufficiencies
1.11.2.2.2.7. Most Frequent Infections
1.11.3. Malignant Hematologic Pathologies
1.11.3.1. Leukaemias
1.11.3.2. Lymphomas
1.11.3.2.1. Hodgkin's Lymphomas
1.11.3.2.2. Non-Hodgkin's Lymphoma

Module 2. Non-malignant hematologic pathology in newborns

2.1. Hematologic Reference Values in Newborns
- 2.1.1. Introduction
- 2.1.2. Reference Values in the Hemogram of the Newborn at term
  - 2.1.2.1. Reference Values of the Red Series in the RNAT
  - 2.1.2.2. Reference Values of the White Series in the RNAT
- 2.1.3. Reference Values in RNAT Biochemistry
- 2.1.4. Reference Values in RNAT Hemostasis
- 2.1.5. Reference Values in the RNAT Blood Gas Measurement
  - 2.1.5.1. Blood Gasometry at Birth
  - 2.1.5.2. Gasometry at 24 Hours of Life

2.2. Nonphysiologic Neonatal Jaundice and Hemolytic Disease of the Newborn
- 2.2.1. Introduction
- 2.2.2. Basic Pathogenic Concepts
- 2.2.3. Aetiopathogenesis.
  - 2.2.3.1. Physiological Jaundice
  - 2.2.3.2. Non-Physiologic jaundice
  - 2.2.3.3. Jaundice due to Rh Factor Incompatibility
    - 2.2.3.3.1. Hemolytic Disease of the Newborn
- 2.2.4. Clinical Complications
  - 2.2.4.1. Acute Bilirubin Encephalopathy
  - 2.2.4.2. Chronic Encephalopathy or Kernicterus
- 2.2.5. Diagnosis of the Newborn with Jaundice
  - 2.2.5.1. Medical history
  - 2.2.5.2. Physical Exploration
  - 2.2.5.3. Laboratory Tests
- 2.2.6. Treatment
  - 2.2.6.1. Phototherapy
  - 2.2.6.2. Exchange Transfusion
  - 2.2.6.3. Pharmacological Therapy



2.3. Preterm Anemia
- 2.3.1. Definition of Anemia of Prematurity (AOP)
  - 2.3.1.1. Anemia Considerations in the Preterm Newborn (PTNB)
  - 2.3.1.2. Features of a RNPT
  - 2.3.1.3. Hematological Characteristics of PTNB
- 2.3.2. Classification of Anemia by Weeks of Gestation and Corrected Weeks of Gestation
- 2.3.3. Epidemiology of Anemias in the Newborn Pediatric Anemias
- 2.3.4. Pathophysiology and Most Common Causes of Anemia in Preterm Preemies
  - 2.3.4.1. Anemias Related to Decreased Erythrocyte Production
  - 2.3.4.2. Anemias Related to Increased Erythrocyte Destruction
  - 2.3.4.3. Anemias Related to Total Blood Volume Loss
- 2.3.5. Clinical symptoms
  - 2.3.5.1. Generalities
  - 2.3.5.2. Related to the Cause
  - 2.3.5.3. Gestational Age Related
- 2.3.6. Diagnosis
  - 2.3.6.1. Prenatal Diagnosis. Is It Possible?
  - 2.3.6.2. Differential Diagnosis
  - 2.3.6.3. Complementary Tests
    - 2.3.6.3.1. General aspects
    - 2.3.6.3.2. How to Perform a Hemogram Correctly in a PTNB?
- 2.3.7. Treatment
  - 2.3.7.1. Transfusion Treatment
  - 2.3.7.2. Other Treatments of the Cause
    - 2.3.7.2.1. Erythropoietin Administration
    - 2.3.7.2.2. Autotransfusions
- 2.3.8. Evolution and Prognosis of Anemias in the PTNB

2.4. Other Anemias of the Newborn and Infant
- 2.4.1. Difference between Physiological and Non-Physiological Anemia
- 2.4.2. Most Important Pathophysiological Differences between PTNB and Term Newborns (TNB)
- 2.4.3. Causes of Anemias in Newborns and Infants
  - 2.4.3.1. Hemorrhagic
  - 2.4.3.2. Hemolytics
  - 2.4.3.3. Hypoplastic
- 2.4.4. Characteristics of Hypoplastic Anemias
  - 2.4.4.1. Physiological Hypoplastic Anemia
  - 2.4.4.2. Congenital Hypoplastic Anemia
    - 2.4.4.2.1. Diamond-Blackfan
    - 2.4.4.2.2. Fanconi Anemia
    - 2.4.4.2.3. Dyserythropoietics
    - 2.4.4.2.4. Idiopathic Aplasia
    - 2.4.4.2.5. Estren-Dameshek
  - 2.4.4.3. Secondary Aplastic Anemia
    - 2.4.4.3.1. Congenital Leukemia
    - 2.4.4.3.2. Infections
    - 2.4.4.3.3. Post-Transfusion Anemias
    - 2.4.4.3.4. Others
- 2.4.5. Secondary Aplastic Anemia
- 2.4.6. Differential Diagnosis and Complementary Tests
- 2.4.7. Transfusion Treatments and Criteria According to Age (RNAT/Infant)
- 2.4.8. Other Treatments: Exchange Transfusion
- 2.4.9. Treatment Considerations. New Treatments

2.5. Hemorrhagic Disorders in Newborns
- 2.5.1. Introduction
- 2.5.2. Clinical symptoms
- 2.5.3. Etiology of Hemorrhagic Disorders in the Neonate
  - 2.5.3.1. Acquired Causes
    - 2.5.3.1.1. Vitamin K Deficiency
    - 2.5.3.1.2. Disseminated Intravascular Coagulation (DIC)
    - 2.5.3.1.3. Hepatopathies

2.5.3.1.4. Extracorporeal Membrane Oxygenation (ECMO)

2.5.3.1.5. Others: α2 Antiplasmin Deficiency, Vascular Problems, Obstetric Trauma, Platelet Qualitative Disorders, Acquired Immune and Non-immune Thrombopenias.

2.5.3.2. Hereditary Causes

2.5.3.2.1. Congenital Deficiency of Clotting Factors: Hemophilia, Von Willebrand's Disease

2.5.4. Diagnosis of the Newborn with Hemorrhage

2.5.4.1. Medical history

2.5.4.2. Physical Exploration

2.5.4.3. Laboratory Tests

2.5.5. Treatment of Hemorrhage in Newborns

2.6. Polycythemia in the Newborn

2.6.1. Introduction

2.6.2. Aetiopathogenesis.

2.6.2.1. Blood Transfusion (Hypervolemia)

2.6.2.2. Increased Erythropoyesis (Normovolemia)

2.6.2.3. Hemoconcentration Due to Volume Depletion

2.6.2.4. Others: Physiological, Beckwith-Wiedemann Syndrome, Beckwith-Wiedemann Syndrome

2.6.3. Clinical symptoms

2.6.3.1. Neurological Manifestations

2.6.3.2. Hematological Manifestations

2.6.3.3. Cardiac Manifestations

2.6.3.4. Respiratory Manifestations

2.6.3.5. Gastrointestinal Manifestations

2.6.3.6. Renal and Genitourinary Manifestations

2.6.3.7. Dermatological Manifestations

2.6.3.8. Metabolic Manifestations

2.6.4. Diagnosis

2.6.5. Treatment of Polycythemia in the Newborn

2.6.5.1. General Measures

2.6.5.2. Partial Exchange Transfusion

2.6.6. Prognosis

2.7. Thrombocytopenias in Newborns

2.7.1. Introduction

2.7.2. Clinical symptoms

2.7.3. Etiology

2.7.3.1. Acquired Thrombocytopenias

2.7.3.1.1. Diseases: Hepatopathies, Intraventricular Hemorrhage, Intraventricular Hemorrhage

2.7.3.1.2. Ictericia Severa

2.7.3.2. Hereditary Thrombocytopenias

2.7.3.2.1. Autosomal Recessive: Glanzmann Thrombasthenia, Bernard-Soulier Syndrome.

2.7.3.2.2. Autosomal Dominant: Platelet-Type Von Willebrand's Disease, Quebec Platelet Syndrome

2.7.4. Classification According to the Type of Thrombocytopenia

2.7.4.1. Immune Neonatal Thrombocytopenia: Alloimmune or Autoimmune

2.7.4.2. Infectious Neonatal Thrombocytopenia

2.7.4.3. Neonatal Thrombocytopenia of Genetic Origin

2.7.4.4. Various Causes

2.7.5. Diagnosis of the Newborn with Hemorrhage

2.7.5.1. Medical history

2.7.5.2. Physical Exploration

2.7.5.3. Laboratory Tests

2.7.6. Treatment of Thrombocytopenia in Newborns

2.8. Neonatal Shock

2.8.1. Introduction

2.8.1.1. Pathophysiological Bases

2.8.1.2. Types of Shock

2.8.1.3. Risk Factors Associated with Neonatal Shock

2.8.2. Etiology of Neonatal Shock

2.8.3. Neonatal Shock Clinic

2.8.4. Diagnosis of Neonatal Shock

2.8.4.1. Medical history

2.8.4.2. Physical Exploration

2.8.4.3. Complementary Tests

2.8.5. Treatment of Neonatal Shock

Module 3. Specificities of care in neonates with non-malignant hematologic pathology

3.1. Developmental and Family Centered Care Model. NIDCAP
- 3.1.1. Introduction to the Model
- 3.1.2. Synactive Theory
- 3.1.3. Neurodevelopment and Behaviors of Newborns
- 3.1.4. The Family as Primary Caregiver
- 3.1.5. Teamwork

3.2. Application of NIDCAP in Newborns
- 3.2.1. Positioning and Manipulation
- 3.2.2. Babysitting Method
- 3.2.3. Painful Procedures
- 3.2.4. Inclusion of the Family in Care

3.3. Adaptation of the Neonatal Unit According to the NIDCAP Model.
- 3.3.1. Lighting and Acoustic Control
- 3.3.2. Doors Open 24 Hours a Day
- 3.3.3. Grouping of Procedures and Manipulations
- 3.3.4. Sibling Project
- 3.3.5. Joint Hospitalization
- 3.3.6. "At Home with You"

3.4. The Importance of Feeding and Nutrition in the Neonate
- 3.4.1. Feeding of the Neonate with Nonmalignant Hematologic Pathology
- 3.4.2. Breastfeeding
- 3.4.3. Breast Milk Bank
- 3.4.4. Artificial Breastfeeding

3.5. Diagnostic and Follow-up Procedures in The Newborn
- 3.5.1. Anamnesis and Detailed Examination
- 3.5.2. Blood Group and Coombs Test
- 3.5.3. Blood Analysis
- 3.5.4. Transcutaneous Bilirubin
- 3.5.5. Food Control and Elimination
- 3.5.6. Other Procedures

3.6. Venous Access in the Neonate
- 3.6.1. Umbilical Venous Catheter (CVU)
- 3.6.2. Epicutaneocava Catheter
- 3.6.3. Tunneled Central Venous Catheter type broviac
- 3.6.4. Central Femoral and Jugular Venous Lines
- 3.6.5. Peripherally Inserted Central Venous Catheter (PICC)
- 3.6.6. Peripheral Venous Line

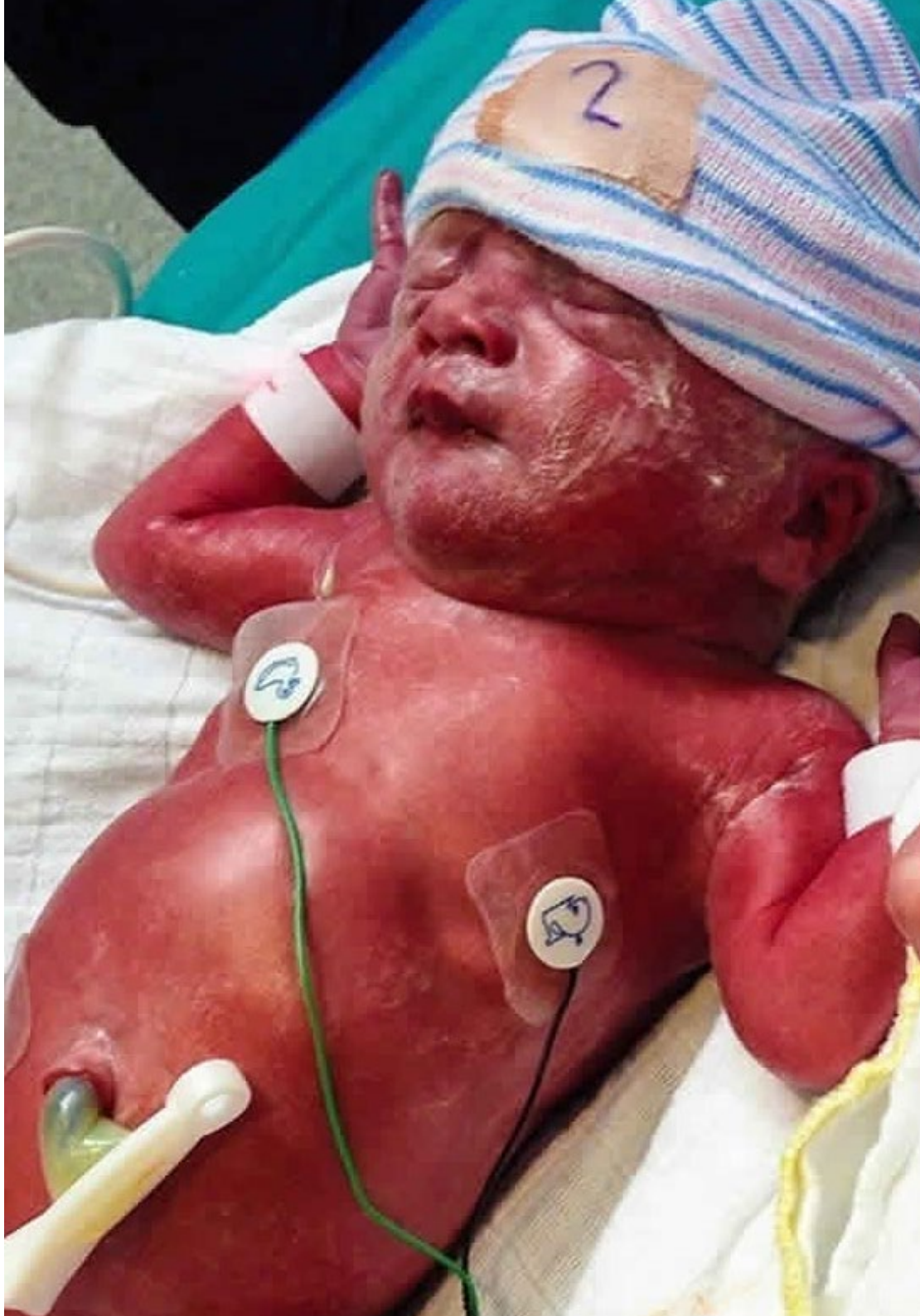
3.7. Most Frequent Treatments in the Neonate with Hematologic Pathology
- 3.7.1. Hemorrhagic Disease Prophylaxis
- 3.7.2. Phototherapy
- 3.7.3. Intravenous Immunoglobulins
- 3.7.4. Seroalbumin
- 3.7.5. Exchange Transfusion
- 3.7.6. Complementary Treatments
- 3.7.7 Metalloporphyrins

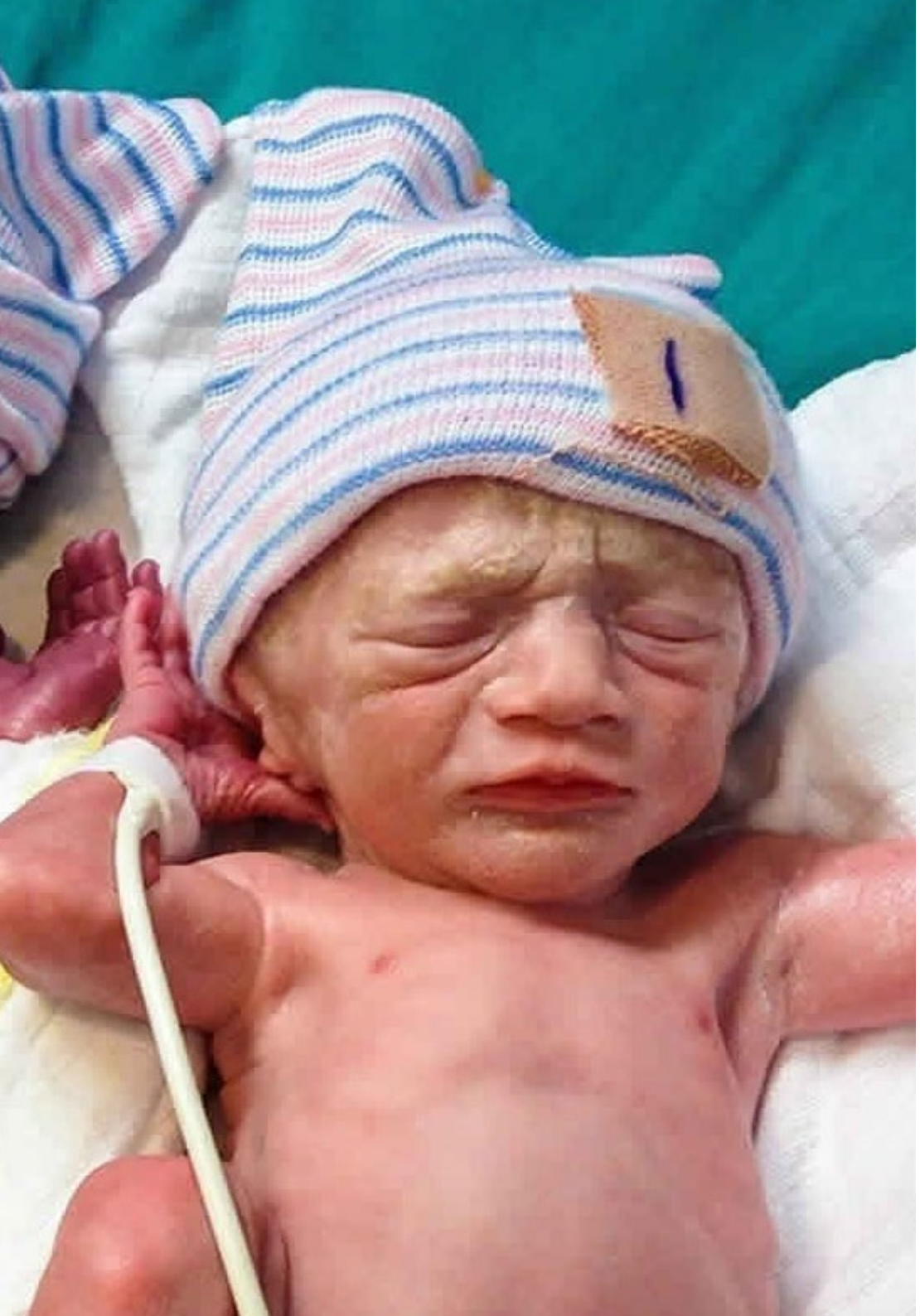
3.8. Specific Nursing Care in the Management of the Infant with Nonphysiologic Neonatal Jaundice
- 3.8.1. Theoretical Framework
  - 3.8.1.1. Nursing Care Based on the Virginia Henderson Model
- 3.8.2. Nursing Care of Newborns with Nonphysiologic Neonatal Jaundice
  - 3.8.2.1. Nursing Care Relating to Phototherapy
  - 3.8.2.2. Nursing Care Relating to Exchange Transfusion
  - 3.8.2.3. Nursing Care Relating to Pharmacological Treatment
- 3.8.3. Phases of the Nursing Process
  - 3.8.3.1. Evaluation
  - 3.8.3.2. Detection of Problems. Diagnosis
  - 3.8.3.3. NOC Planning
  - 3.8.3.4. Execution NIC
  - 3.8.3.5. Assessment

Module 4. Non-malignant hematologic pathology in children

4.1. Anaemia in Pediatrics(I)
- 4.1.1. Introduction. Concepts
- 4.1.2. General Pathophysiology of Anemias in Pediatrics
- 4.1.3. Classification of Anemias
  - 4.1.3.1. Morfoligical
  - 4.1.3.2. Pathophysiological
  - 4.1.3.3. By Establishment
- 4.1.4. Prevalence and Incidence of Anemias in Pediatrics
- 4.1.5. General Signs and Symptoms
- 4.1.6. Differential Diagnosis According to Type of Anemia
- 4.1.7. Iron Deficiency Anemia

4.2. Anemias in Pediatrics (II)
- 4.2.1. Microcytic Anemia
  - 4.2.1.1. Ferropénica
  - 4.2.1.2. Thalassemia
  - 4.2.1.3. Chronic Inflammatory Disease
  - 4.2.1.4. Others
    - 4.2.1.4.1. Copper Deficiency Anemia
    - 4.2.1.4.2. Anemia Due to Intoxication
    - 4.2.1.4.3. Others
- 4.2.2. Normocytic Anemia
  - 4.2.2.1. Definition and Possible Causes
    - 4.2.2.1.1. Bone Marrow Aplasia/Hypoplasia
    - 4.2.2.1.2. Hemophagocytic Syndrome
- 4.2.3. Macrocytic Anemia
  - 4.2.3.1. Vitamin B12 Deficiency Anemia
  - 4.2.3.2. Folate Deficiency Anemia
  - 4.2.3.3. Lesch-Nyhan Syndrome
  - 4.2.3.4. Bone Marrow Failure





4.2.4. Hemolytic Disorders
4.2.4.1. Haemoglobinopathies
4.2.4.2. Enzymopathies
4.2.4.3. Immune Hemolytic Anemia
4.2.4.4. Extrinsic Factors
4.2.4.4.1. Wilson's disease
4.2.4.4.2. Hemolytic Uremic Syndrome
4.2.4.4.3. Thrombotic Thrombocytopenic Purpura
4.2.4.4.4. Disseminated Intravascular Coagulation

4.3. Hemoglobinopathies: Sickle Cell Disease and Thalassemias
4.3.1. Quantitative Hemoglobinopathies: Thalassemias
4.3.1.1. Definition
4.3.1.2. Pathophysiology.
4.3.1.3. Thalassemia Major or Cooley's Clinic
4.3.1.4. Treatment
4.3.1.4.1. Hypertransfusion and Iron Chelators
4.3.1.4.2. Allogeneic HSCT
4.3.2. Qualitative Hemoglobinopathies: Sickle Cell Disease
4.3.2.1. Definition
4.3.2.2. Clinical symptoms
4.3.2.2.1. Hemolytic Anemia, Vasculopathy and Chronic Organ Damage
4.3.2.2.2. Venoocclusive Crises
4.3.2.2.3. Infections
4.3.2.2.4. Others
4.3.2.3. Treatment
4.3.2.3.1. Pain
4.3.2.3.2. Emergency
4.3.2.3.3. Surgical Interventions
4.3.2.3.4. Allogeneic HSCT

4.4. Alterations of Coagulation and Hemostasis in Pediatrics
4.4.1. Thrombocytopenias
4.4.1.1. Concept

4.4.1.2. Primary Immune Thrombocytopenia (PID)
4.4.1.2.1. Definition
4.4.1.2.2. Etiology
4.4.1.2.3. Clinical symptoms
4.4.1.2.4. Treatment
4.4.1.2.4.1. Intravenous Corticosteroids and Immunoglobulins
4.4.1.2.4.2. IG Anti-D, Chrysotherapy
4.4.1.2.4.3. Splenectomy, Thrombopoietin Eeceptor Agonists, Rituximab
4.4.1.2.4.4. According to Acute or Chronic
4.4.2. Hemophilia A and B
4.4.2.1. Etiology
4.4.2.2. Clinical symptoms
4.4.2.3. Treatment
4.4.2.3.1. Inactivated or Recombinant Plasma Concentrate
4.4.2.3.2. Desmopressin
4.4.2.3.3. Vaccination and Sport Specificities
4.4.3. Von Willebrand Disease (VWD)
4.4.3.1. Definition
4.4.3.2. Etiology
4.4.3.3. Clinical symptoms
4.4.3.4. Treatment
4.5. Non-Malignant Granulocyte Diseases
4.5.1. Neutropenia
4.5.1.1. Classification
4.5.1.2. Severe Congenital Neutropenia
4.5.1.2.1. Signs and Symptoms
4.5.1.2.2. Epidemiology
4.5.1.2.3. Diagnosis
4.5.1.2.4. Treatment
4.5.1.2.5. Complications
4.5.2. Congenital Defects of Phagocytic Function
4.5.2.1. Clinical Characteristics
4.5.2.2. Prevalence
4.5.2.3. Genetic Diagnosis and Advice
4.5.2.4. Treatment
4.6. Primary Immunodeficiencies
4.6.1. Introduction to Primary Immunodeficiencies (PID)
4.6.2. PID Clinic
4.6.3. Diagnosis of PIDs
4.6.4. Types of IDP
4.6.5. Treatment of PIDs
4.7. Congenital Spinal Insufficiencies(IMC)
4.7.1. Concept
4.7.2. Classification
4.7.2.1. Global BMI
4.7.2.1.1. Definition
4.7.2.1.2. Fanconi Anemia
4.7.2.1.3. Síndrome de Shwachman-Diamond
4.7.2.1.3.1. Introduction
4.7.2.1.3.2. Clinical symptoms
4.7.2.1.3.3. Treatment
4.7.2.2. IMC aisladas
4.7.2.2.1. Blackfan-Diamond Anemia
4.7.2.2.1.1. Definition
4.7.2.2.1.2. Clinical symptoms
4.7.2.2.1.3. Treatment
4.8. Congenital Medullary Insufficiencies: Fanconi's Anemia
4.8.1. Definition
4.8.2. Differentiation between Fanconi Anemia and Fanconi Syndrome
4.8.3. Characteristics of Fanconi Anemia

4.8.4. Diagnosis
4.8.4.1. Diagnostic suspicion
4.8.4.1.1. For Brother Diagnosed with Fanconi's Anemia
4.8.4.1.2. Due to the Appearance of Aplastic Anemia or Bone Marrow Failure
4.8.4.1.3. For the Appearance of Myelodysplasia or Leukemia
4.8.4.2. Tests
4.8.4.2.1. Prenatal Diagnosis.
4.8.4.2.2. Ultrasound
4.8.4.2.3. Flow Cytometry Analysis
4.8.4.2.4. Blood Count
4.8.4.2.5. Bone Marrow Aspirate (BMA) and Bone Marrow Biopsy
4.8.4.2.6. Others
4.8.5. Treatment
4.8.5.1. Support
4.8.5.1.1. Androgen Derivatives
4.8.5.1.2. Growth Factors
4.8.5.1.3. Blood Transfusions
4.8.5.2. Curative
4.8.5.2.1. Allogeneic Hematopoietic Progenitor Transplantation
4.8.5.2.2. Genetic Therapy
4.8.6. Prognosis
4.9. Most Frequent Infections in Pediatric Patient with Hematologic Pathology
4.9.1. Factors Predisposing to Infection
4.9.2. Infection Prevention
4.9.3. Most Frequent Infections
4.9.3.1. Febrile Neutropenia
4.9.3.2. Bacteremia
4.9.3.3. Sepsis and Septic Shock
4.9.3.4. Respiratory Infections
4.9.3.5. Digestive Infections
4.9.3.6. CNS Infections
4.9.3.7. Infections by Multiresistant Organisms
4.9.3.8. Viral Infections

Develop your skills by taking a program that will allow you to broaden your holistic, tolerant and sensitive view of pediatric patients with hematological diseases"

05

Methodology

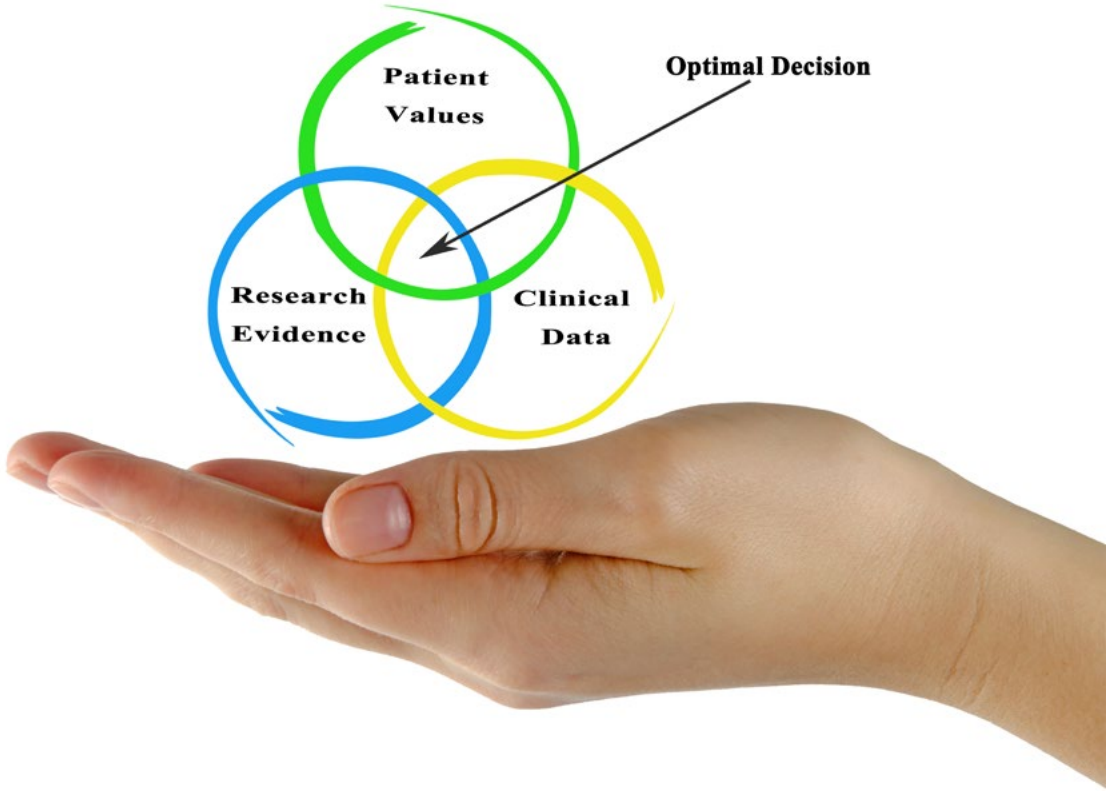
This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine**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

Discover 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 Nursing School we use the Case Method

In a given situation, what should a professional do? 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. Nurses learn better, faster, and more sustainably over time.

With TECH, nurses can experience a learning methodology 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, in an attempt to recreate the real conditions in professional nursing 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"

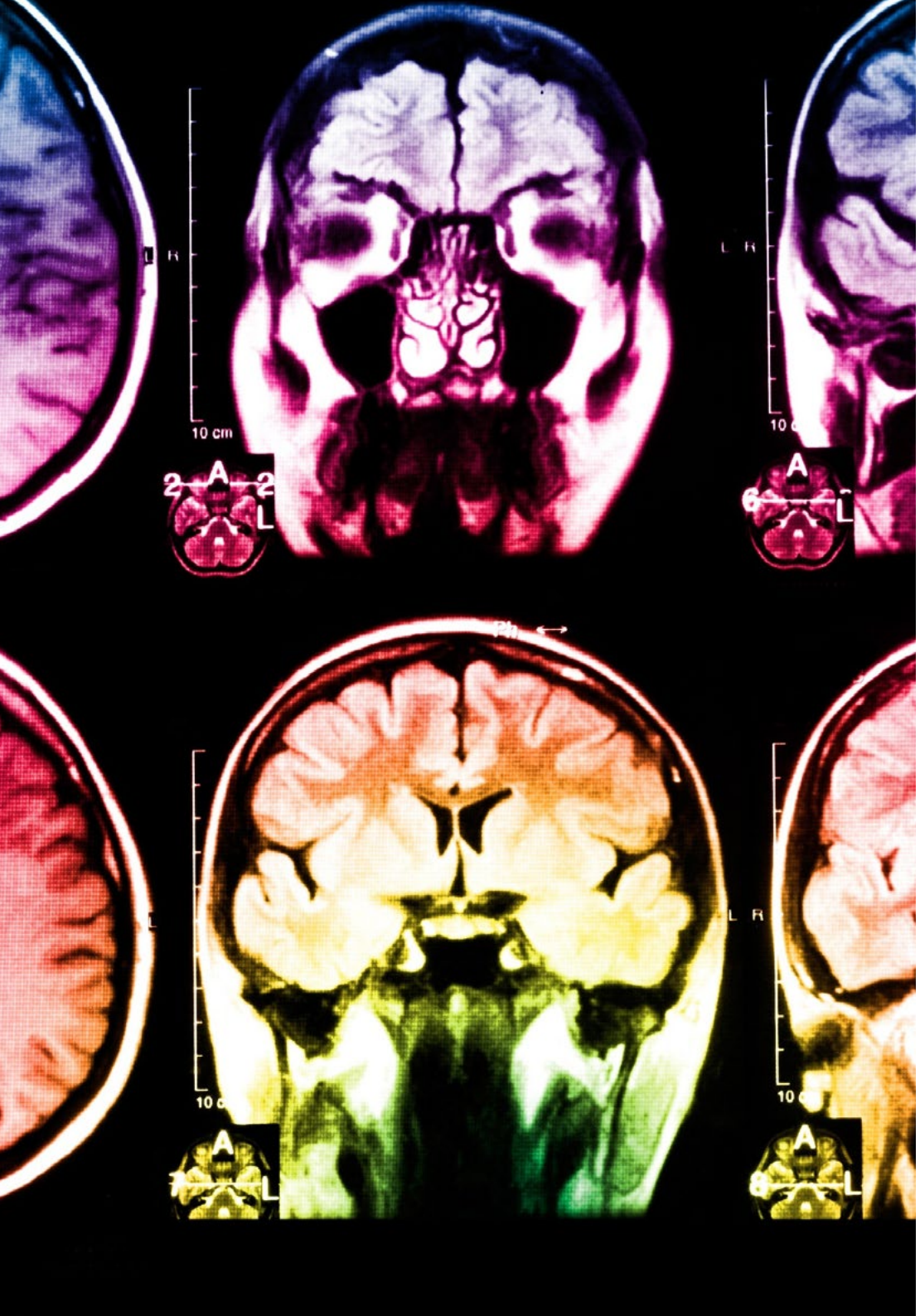
The effectiveness of the method is justified by four fundamental achievements:

1. Nurses 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 nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.
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.

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

This University is the first in the world to combine case studies with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which is a real revolution compared to the simple study and analysis of cases.

The nurse 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 175,000 nurses with unprecedented success, in all specialities regardless of practical workload. 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 (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 really 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.

Nursing 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 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.

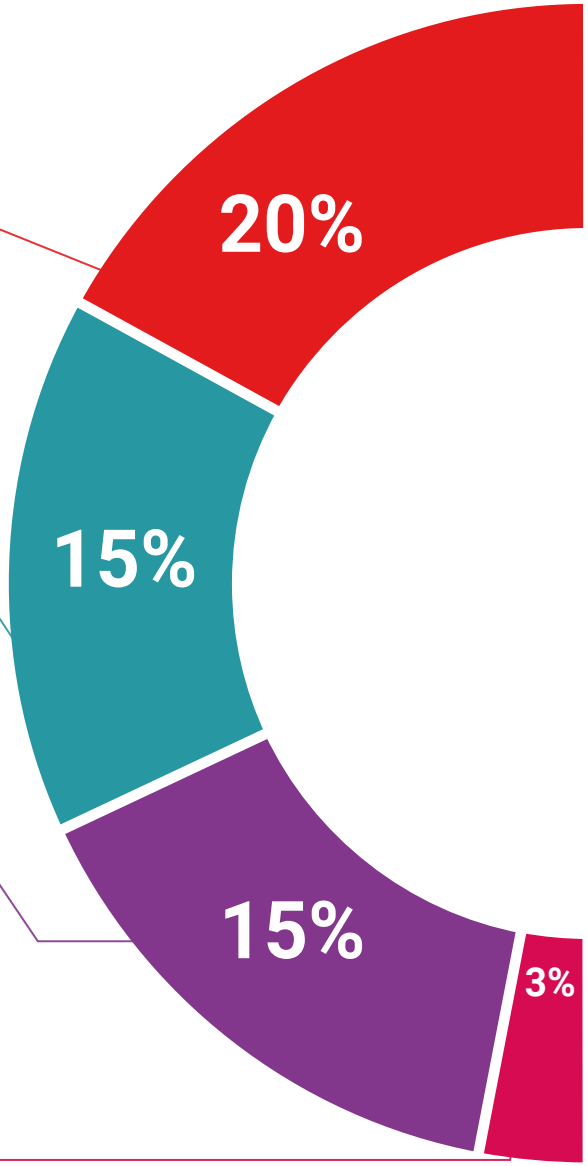
Interactive Summaries

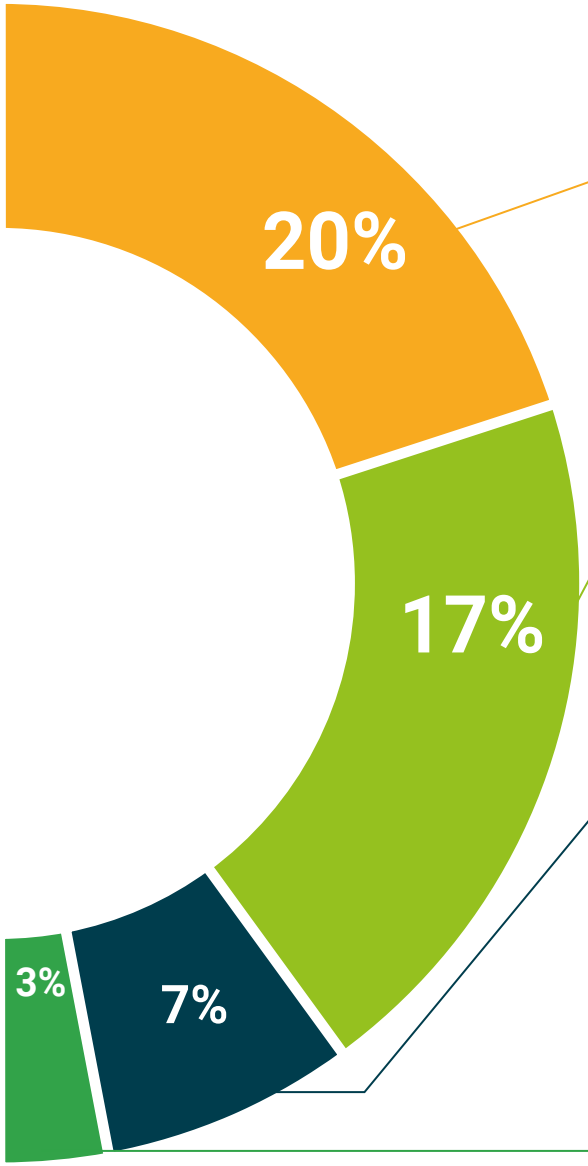
The TECH team presents the contents in an attractive and dynamic way in multimedia packages that include audio, videos, images, diagrams and concept maps in order to reinforce knowledge.

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

Additional Reading

Recent articles, consensus documents, international guides... in TECH's virtual library the student will have access to everything they need to complete their training.





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

The student's knowledge is periodically assessed and re-assessed throughout the program, through evaluative and self-evaluative activities and exercises: in this way, students can check how they are doing in terms of achieving their goals.

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 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 Diploma in Nursing Care of the Pediatric Patient with Non-Malignant Hematological Pathology guarantees, in addition to the most rigorous and up-to-date training, access to a Postgraduate Diploma issued by TECH Technological University.

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

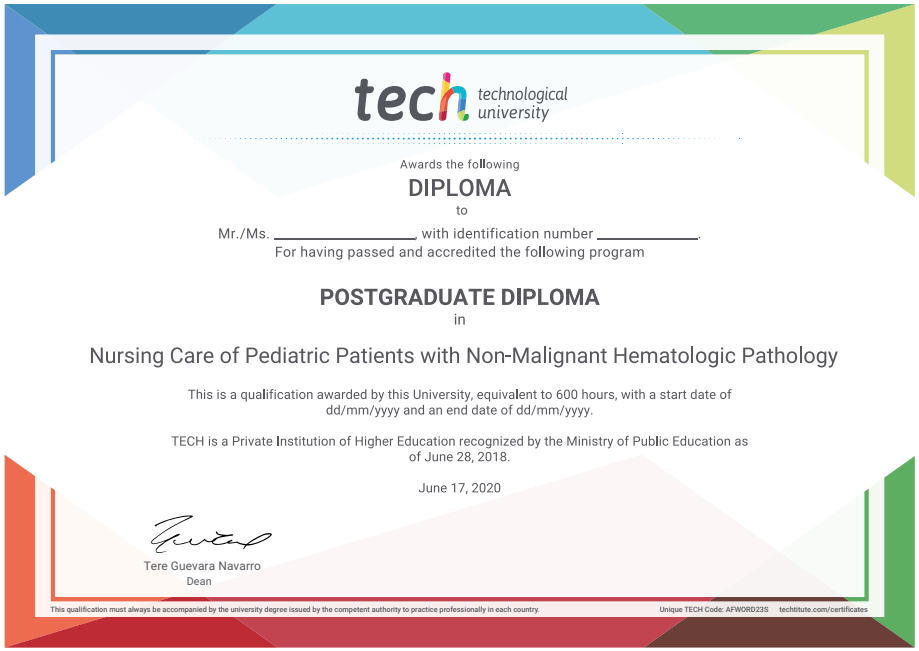
This **Postgraduate Diploma in Nursing Care of the Pediatric Patient with Non-Malignant Hematologic Pathology** contains the most complete and up-to-date program on the market..

After passing the assessments, the student will receive their corresponding **Postgraduate Diploma**, issued by **TECH Technological University** via tracked delivery*.

The diploma issued by **TECH Technological University** will express the qualification obtained in the Postgraduate Diploma, and will meet the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: **Postgraduate Diploma in Nursing Care of Pediatric Patients with Non-Malignant Hematologic Pathology**

Official Nº of Hours: **600 h.**


tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE DIPLOMA

in

Nursing Care of Pediatric Patients with Non-Malignant Hematologic Pathology

This is a qualification awarded by this University, equivalent to 600 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
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

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

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Postgraduate Diploma

Nursing Care of the Pediatric Patient with Non-malignant Hematologic Pathology

Course Modality: **Online**

Duration: **6 months**

Certificate: **TECH Technological University**

Official N° of Hours: **600 h.**

Postgraduate Diploma

Nursing Care of the Pediatric Patient with Non-malignant Hematologic Pathology

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