Advanced Master's Degree

Gynecological and Assisted Reproductive Nursing

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Advanced Master's Degree
Gynecological and Assisted Reproductive Nursing

- Modality: **online**
- Duration: **2 years**
- Certificate: **TECH Global University**
- Accreditation: **120 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/us/nursing/advanced-master-degree/advanced-master-degree-gynecological-assisted-reproductive-nursing**

Index

01

Introduction

Nursing is especially important in the field of gynecology and assisted reproduction, since teamwork and quality in this sector are key to the success of the treatments. This program aims to provide these professionals with the skills and abilities to develop their work activity in a more competent manner, and with the confidence of working with the essential knowledge.

The good work of nurses in the fields of gynecology and assisted reproduction favors the success of treatments"

Care for women requires specific knowledge and attention. It is the result of a great deal of care and attention given with generosity and professionalism by different professional categories. Therefore, it requires the acquisition of special knowledge that is different from that of the rest of the population, and it is necessary to rely on professionals trained in these specific areas. A similar situation occurs in the field of Assisted Reproduction, since having specific knowledge will help professionals, but, above all, it will help patients.

This Advanced Master's Degree aims to meet the needs of nurses specialized in these fields of care. Therefore, specific care in the field of gynecology, such as gynecological diseases, changes in the growth and aging of women, as well as the study of infertility in women, to learn to identify the most important factors involved in it and to know the most relevant and frequent pathologies that affect women with infertility.

There is a growing demand for nurses to have knowledge of this population in order to provide the best attention to ensure quality care adapted to new research. For this reason, this program aims to help professionals train in this field and care for their patients with the utmost scientific and professional rigor.

Throughout this program, the student will learn all of the current approaches to the different challenges posed by their profession. A high-level step up that will become a process of improvement, not only on a professional level, but also on a personal level.

This challenge is one of TECH's social commitments: to help highly qualified professionals specialize and develop their personal, social and work skills during the course of their studies.

We will not only take you through the theoretical knowledge we offer, but we will show you another way of studying and learning that is more organic, simpler and more efficient. We will work to keep you motivated and to create a passion for learning within you, and we will push you to think and develop critical thinking.

This **Advanced Master's Degree in Gynecological and Assisted Reproductive Nursing** contains the most complete and up-to-date scientific program on the market. Its most notable features are:

- The latest technology in e-learning software
- Intensely visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand.
- The development of practical case studies presented by practising experts
- State-of-the-art interactive video systems
- Teaching supported by telepractice
- Continuous updating and recycling systems
- Self-regulated learning: full compatibility with other occupations
- Practical exercises for self-assessment and learning verification
- Support groups and educational synergies: Questions to the expert, discussion forums and knowledge
- Communication with the teacher and individual reflection work
- Content that is accessible from any fixed or portable device with an Internet connection
- Supplementary documentation databases are permanently available, even after the training has ended

The high demand for nursing professionals in the areas of gynecology and assisted reproduction favors this type of training"

A high level of scientific training, supported by advanced technological development and the teaching experience of the best professionals"

A deep and comprehensive dive into strategies and approaches in Gynecological and Assisted Reproductive Nursing.

We have the best teaching methodology and a multitude of simulated cases that will help you train in real situations.

Our teaching staff is made up of working professionals. This way we ensure that we provide you with the up-to-date training you are expecting. A multidisciplinary team of trained and experienced professionals in different environments who will develop the theoretical knowledge in an efficient way, but above all, they will put the practical knowledge derived from their own experience at the service of the program.

This mastery of the subject is complemented by the effectiveness of the methodological design of this Advanced Master's Degree, which has been developed by a multidisciplinary team of e-learning experts and integrates the latest advances in educational technology. This way, you will be able to study with a range of easy-to-use and versatile multimedia tools that will give you the necessary skills you need for your specialization.

The design of this program is based on Problem-Based Learning, an approach that views learning as a highly practical process. To achieve this remotely, 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 actually facing the scenario you are studying at that moment. A concept that will allow students to integrate and memorize what they have learnt in a more realistic and permanent way.

02

Objectives

Our objective is to train highly qualified professionals for work experience, an objective that is complemented, moreover, in a global manner, with the promotion of human development that lays the foundations for a better society. This objective is focused on helping professionals reach a much higher level of expertise and control. A goal that you can take for granted, with a high-intensity and high-precision program.

If your goal is to improve in your profession, to acquire a qualification that will enable you to compete among the best, then look no further: welcome to TECH"

General Objectives

- Acquire knowledge in specific gynecological care
- Promote work strategies based on a comprehensive approach to the patient as a standard model for achieving excellent care
- Promote the acquisition of technical skills and abilities through a powerful audiovisual system and the possibility of development through specific training
- Encourage professional stimulation through continuing education and research
- Broaden specific knowledge of each of the areas of work in assisted reproduction
- Enable students to be interdependent and problem solvers
- Facilitate good performance of nursing professionals in order to provide the best care throughout the process

Obtain the most exhaustive Economic and Corporate Criminal Law through the best didactic material, studying through real penal and criminal cases"

Specific Objectives

- Know the anatomy and physiology of the male and female sexual apparatus
- Knowledge of reproductive endocrinology
- Gain knowledge about the development of sex differentiation
- Acquire knowledge of the ovarian and uterine cycle
- Understand male physiology
- Understand the neurohormonal regulation of reproductive function
- Update knowledge about puberty
- Know the physiological process of the climacteric period
- Knowledge of the physiology of sexuality
- Gain knowledge about the concepts related to menstrual symptoms
- Update knowledge on gynecological examinations
- Acquire knowledge about the biological process of reproduction and the sexual cycle of women and its psychological and social implications
- Know the various pathologies of puberty
- Know the different menstrual disorders
- Understand hypothalamic and pituitary amenorrhea
- Knowing the different functional uterine hemorrhages
- Get to know the pathologies and treatments during the climacteric stage
- Know the different infertility problems
- Update the various assisted reproduction techniques
- Acquire knowledge, skills and attitudes to provide care to women and their partners throughout the reproductive cycle
- Gain knowledge about the different concepts of contraception
- Classification of the various contraceptive methods
- Gain knowledge about sexually transmitted infections
- Update knowledge on epidemiological aspects of sexually transmitted infections
- Get to know the different treatments for sexually transmitted infections
- Update knowledge on health education for at-risk populations
- Get to know the different types of primary prevention methods
- Understand pelvic pain
- Know the different malformations of the genital apparatus
- Know the types of benign tumors
- Knowledge of benign gynecological pathology
- Gain knowledge about the different alternations of genital static
- Know the different types of vulvovaginoperineal tears
- Knowledge of vulvovaginal pathology
- Gain knowledge about the cervical pathology and its treatment
- Get to know the uterine pathology and its treatment
- Learn about the adnexal pathology and its treatment
- Update knowledge on early diagnosis of breast and gynecologic cancer

- Get to know the various diagnostic tests in the detection of gynecological cancer
- Knowledge of the pathology of vulvar and vaginal tumors
- Knowledge of benign cervical tumor pathology
- Gain knowledge about the intraepithelial neoplasia of the cervix
- Gain knowledge about invasive cervical cancer
- Gain knowledge abobut the premalignant endometrial lesions
- Understand carcinoma of the uterine corpus uteri
- Gain knowledge about the ovarian tumor pathology
- Get to know the different tumor markers
- Acquire knowledge of the psychological aspects of gynecologic cancer and nursing care
- Learn about palliative care and pain management
- Update knowledge on gynecologic surgery
- Get to know the different types of gynecological anesthesia
- Get to know about preoperative and postoperative care
- Knowledge of the various postoperative complications
- Learn about different abdominal surgeries
- Gain knowledge about abdominal hysterectomy
- Get to know the laparoscopic and hysteroscopic surgery
- Acquire knowledge about robotic surgery applied to gynecology
- Acquire knowledge of clinical examination in breast pathology
- Learn about new diagnostics in the management of breast pathology
- Knowledge of the various mammary pathologies
- Knowledge of breast cancer
- Knowledge of the various treatments and management of the breast cancer patient.
- Gain knowledge about breast cancer during pregnancy
- Acquire knowledge about urinary incontinence and its epidemiology
- Get to know the diagnosis and treatment of urinary incontinence
- Acquire knowledge of the various gynecological emergencies
- Knowledge of the different gynecological hemorrhages
- Learn how to assist in premature childbirth
- Update knowledge on the anatomy of the female and male genitalia to lay the foundations of reproduction
- Expand knowledge of neurophysiology and its relationship to ovogenesis and spermatogenesis
- Introduce nurses to a more biological approach to gametogenesis, emphasizing the importance of meiosis and gamete quality
- Understand the process of fertilization and the first steps of embryonic development in order to introduce nurses to the world of embryology

- Analyze the effect of advanced maternal and paternal age on human reproduction.
- Know the importance of anamnesis for the identification of toxic habits, stress, sexual problems and hereditary antecedents related to infertility in women
- Know what the basic initial study of infertility consists of in order to be able to explain it to the patient in clear and simple terms
- Know the complementary tests for the study of women in consultation depending on the specific alterations of each patient in order to individualize each patient depending on the altered factors present
- Know the most frequent disorders in women with infertility
- Know what the initial study of the male consists of in consultation as , well as the complementary explorations or genetic studies that may be requested
- Understand the importance of good semen handling practices
- Be able to perform a complete seminogram of the male
- Be able to process samples for assisted reproduction techniques
- Understand what sperm freezing consists of and be able to perform it without complications
- Be able to perform semen washings for HIV, Hepatitis B and Hepatitis C seropositive males, as well as to understand the importance of semen washings and good management, and to know when to recommend them in consultation
- Know the basics of semen donation, both at the consultation and laboratory level
- Learn about three of the most widely used sperm selection techniques currently in use, magnetically labeled cell sorting (MACS), intracytoplasmic injection of morphologically selected spermatozoa (IMSI) and selection based on hyaluronic acid binding, and thus know when to recommend them in consultation
- Know the basics of antioxidant therapy and how to discern which antioxidants have proven efficacy and which do not
- Reinforce basic genetic concepts
- Know the karyotype and its uses
- Broaden knowledge of molecular genetics
- Understand the origin and etiology of genetic factors influencing human fertility
- Discover the different preimplantation genetic diagnosis tests
- Discuss the most current topics in genetics such as nuclear transfer or epigenetics
- Master the immunological factors affecting Assisted Reproduction
- Distinguish the different origins of immunological problems in reproduction and possible treatments
- Providing continuous care throughout treatment
- Be able to transmit truthful and reassuring information to the patient, to be able to coordinate teams
- Ability to transmit emotional support, as we are aware of how hard and long this process can be
- Health education

- Be able to carry out certain delegated activities such as checking serologies, hormone profiles, medical record updates, etc
- Facilitating practice management: materials used in a practice, analysis and tests, and cycle coordination
- Develop which are the main folliculogenesis inducers, what are the advantages and disadvantages of each of them and which are the most widely used at present
- Acquire knowledge about the types of gonadotropins that exist and how treatment results
- Develop knowledge on the management of ovulation inducers
- Acquire a broad knowledge of the hormonal treatments that exist, which are the most commonly used and which are the most effective
- Conduct good health education to teach self-administration of drugs at home
- Know and develop the consequences of ovarian stimulation, and explain what ovarian hyperstimulation syndrome is
- Study the handling and routes of administration of drugs used in Assisted Reproduction
- Promote the participation of nursing personnel during Assisted Reproduction treatments
- Explain what clomiphene citrate is, in what situations it is used and how it is administered
- Develop what is an aromatase inhibitor and discern its advantages and disadvantages
- Study when gonadotropin analogues are used and in which cases they are used
- Pain management and control after puncture
- Know the treatments that currently exist in AR and that are appropriate for each patient according to their infertility diagnosis
- Learn from the most basic techniques (AI) to the most complex techniques (IVF/ICSI) to obtain quality embryos that result in pregnancy
- Discover complementary techniques that help improve fertilization rates and facilitate embryo selection to transfer the best embryo to the patient
- Differentiate between freezing and vitrification, and the possibilities of donation
- Understand traceability as an indispensable tool to avoid errors in the laboratory
- Know other techniques that can help in the diagnosis of the patient
- Understand the role of assisted reproductive nursing, what are the surgical areas?
- Explain the phases of surgery: preoperative, intraoperative and postoperative
- Acquire knowledge about follicular puncture and oocyte retrieval, which is the technique and the necessary material and which are the main nursing activities
- Develop how to obtain spermatozoa in patients with azoospermia
- Know the different surgical treatments performed in fertility and which are the most used techniques nowadays
- Know what an Assisted Reproduction laboratory is like, which parts form it and what techniques are performed in each one of them
- Know what are the appropriate environmental conditions of an AR laboratory
- Have knowledge of the hygiene and clothing of laboratory personnel, the cleanliness of the laboratory and know the mechanisms of risk prevention
- Discover the equipment in the laboratory, as well as its function and care
- Know the quality and cleanliness controls of an AR laboratory

- Know the working times of the laboratory in order to understand which are the most favorable needs for the techniques, and thus perform them at the optimal time, improving teamwork between the operating room and the laboratory, and thus obtain the best results
- Understand the psychological, social, cognitive and behavioral aspects of infertility
- Detect psychological or emotional alterations derived from infertility diagnoses and/or derived from reproduction treatment
- Provide emotional support to the patient throughout the process of Assisted Reproduction
- Develop communication skills to enable a comprehensive approach to infertility counseling and treatment
- Take into consideration special health situations of the beneficiaries of reproductive treatments, which entails the acquisition of different knowledge and therapeutic skills by nursing professionals
- Bereavement management and dupport
- Advise and provide nutritional monitoring in Assisted Reproduction consultations

We want to help you improve your future. Do not wait any longer and enroll on a program that will open new professional doors for you"

03

Skills

Once all the contents have been studied and the objectives of the Advanced Master's Degree in Gynecological and Assisted Reproductive Nursing have been achieved, the professional will have enhanced their competence and performance in this area. A very complete approach, in a high-level specialization that makes the difference.

Achieving excellence in any profession requires effort and perseverance. But above all, the support you will get from our professionals who will give you the boost you need with the necessary means and assistance. At TECH, we offer you everything you need"

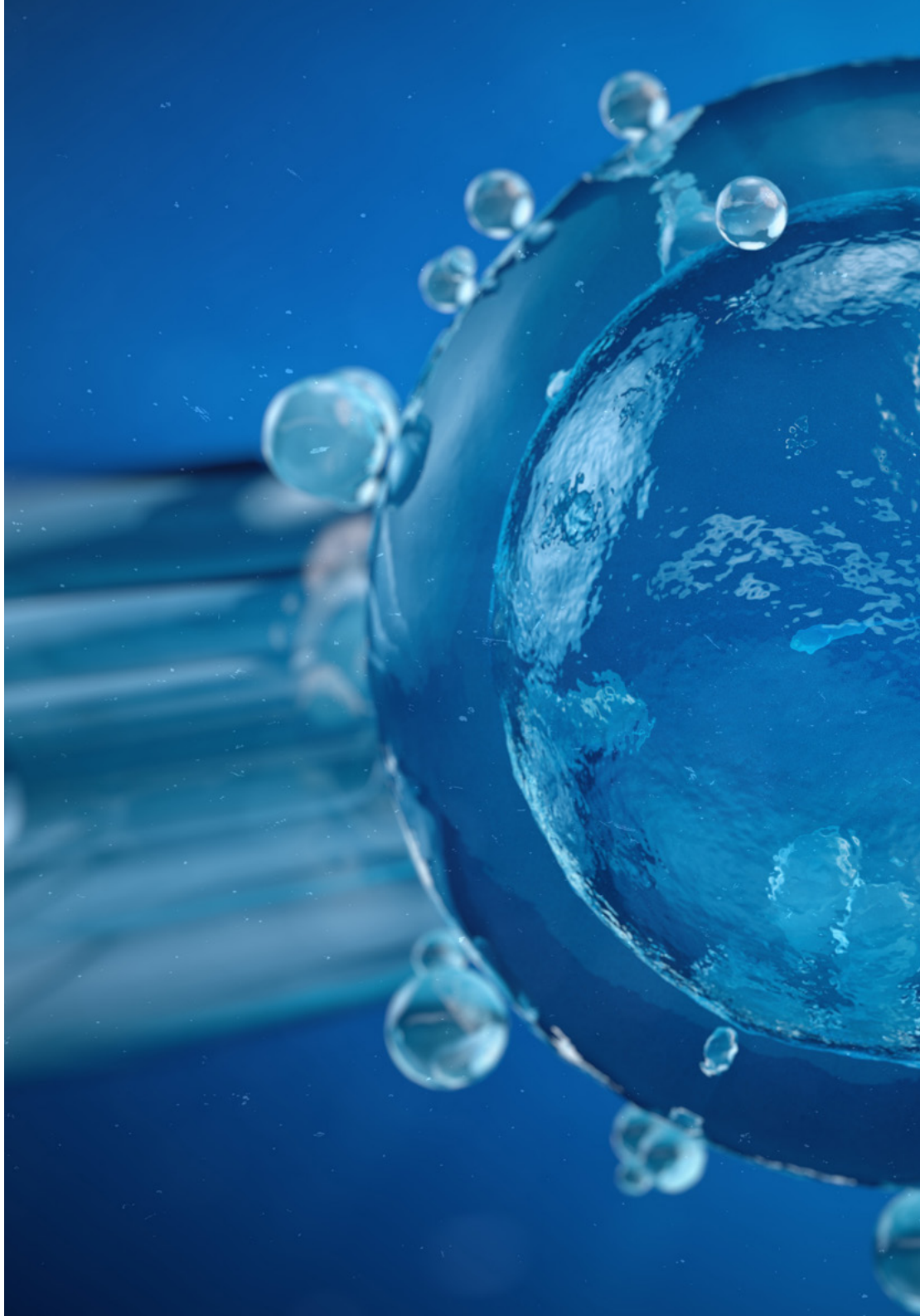
General Skills

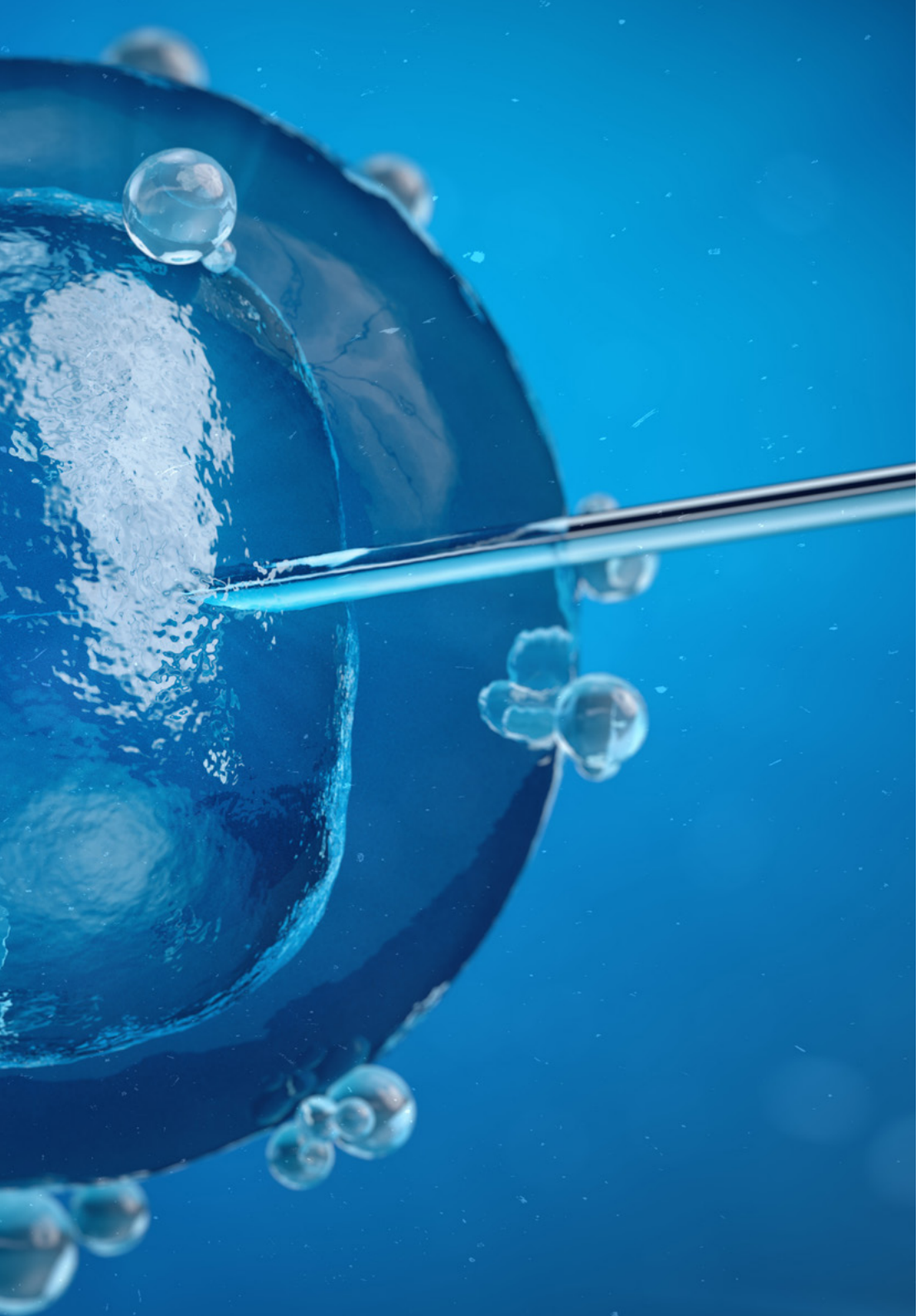
- Possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context
- Apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their area of study
- Integrate knowledge and face the complexity of making judgments based on incomplete or limited information
- Communicate their conclusions and the ultimate knowledge and rationale behind them to specialized and non-specialized audiences in a clear and unambiguous manner
- Acquire the learning skills that will enable the professional to continue studying in a manner that will be largely self-directed or autonomous
- Be competent in the nursing performance in the Assisted Reproduction Unit
- Know all the protocols and techniques relevant to the nursing practice of Assisted Reproduction
- Know how to work in an interdisciplinary way in the Assisted Reproduction Unit

Specific Skills

- Master the necessary aspects of the anatomy and physiology of human reproduction.
- Have knowledge of the endocrinology of the female reproductive system, the menstrual cycle and the particularities of ovogenesis
- Possess knowledge of the anatomy of the male reproductive organs, endocrinology and spermatogenesis
- Participate and, if necessary, lead and energize maternal and child health, women's health, sexual health, reproductive health and climacteric programs
- Provide adequate health education to women, families and the community, identifying learning needs in relation to maternal and child health, sexual health, reproductive health and the climacteric period, carrying out the different educational programs related to the needs detected
- Provide sexual and reproductive counseling to women, youth and families
- Promote a positive experience and a responsible attitude towards sexuality in the population and provide advice on contraception
- Collaborate in the implementation of activities for the promotion, prevention, assistance and recovery of women's sexual and reproductive health
- Detect risk factors and gynecological problems in women
- Apply the principles of clinical reasoning, problem detection, decision making, care and attention planning and appropriate evaluation to the different clinical situations in the field of nursing care
- Understand embryonic development, fertilization and other aspects of human reproduction
- Possess knowledge of the necessary aspects of nursing practice in the field of female infertility
- Know everything about ovarian, uterine and tubal, infectious, genetic and immunological factors and be able to adjust the intervention to these aspects
- Recognize implementation failures and their causes, as well as the special factors that determine them
- Possess knowledge of the aspects of male infertility necessary for nursing practice
- Recognize which are the diagnostic tests in male infertility and how they are performed
- Know the processes of sample collection and analysis
- Know which oral therapies can be used
- Know the relevant aspects for Assisted Reproduction nursing in the field of genetics and reproductive immunology
- Know how to proceed in the field of basic cytogenetics
- Describe chromosomal abnormalities
- Recognizing genetic disorders that affect infertile couples
- Operating in the preimplantation genetic diagnosis environment (PGT : Pre-Implantation Genetic Testing)
- Take into account the importance of the immunological factor in Assisted Reproduction.

- Have the capacity to act appropriately in the Assisted Reproduction and donor bank consultation
- Schedule, draw and interpret blood tests for infertility testing
- Know how to perform the intervention in the area of Patient Education
- Lead the management area in assisted reproductive nursing
- Follow-up of the patient after BHCG result
- Work in the donor bank in all areas of nursing care
- Know the protocols, uses and applications of pharmacology in Assisted Reproduction: folliculogenesis inducers, ovulation inducers, other hormonal treatments
- Know the commercial presentations of the pharmaceutical products
- Know the proper anesthetic management in AR
- Recognize each one of the Assisted Reproduction techniques: artificial insemination
- Know how to perform preimplantation genetic testing, embryo transfer, freezing and vitrification
- Know the donation protocols, ROPA method, traceability, bio-surveillance
- Perform all operating room nursing duties
- Act at the time of intervention: follicular puncture, embryo transfer, sperm collection in cases of azoospermia and other surgical interventions in the area of infertility
- Know all aspects of the laboratory in Assisted Reproduction: structure, conditions, etc.,
- Have the ability to provide psychological support to the patient being treated in the Assisted Reproduction unit
- Have the ability to act in the case of patients in special situations
- Know how to plan food during Assisted Reproduction
- Recognize and accompany bereavement in Assisted Reproduction
- Know what are the new alternatives in AR
- Get up to date on research advances in assisted reproduction





Our objective is very simple: to offer you quality specialized training with the best teaching methods currently, so that you can reach new heights of excellence in your profession"

04

Course Management

The program includes leading experts in Gynecology and Assisted Reproductive Nursing in its teaching staff, all of whom contribute their work experience to this program. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner.

Our teachers have joined forces to offer you all their knowledge to help you achieve success in your profession"

Management

Ms. Agra Bao, Vanesa

- Operating room supervisor at EVA FERTILITY-DORSIA
- Degree in Nursing University of La Coruña
- Postgraduate Diploma in Legal Nursing. UNED
- Official Master's Degree in Occupational Risk Prevention. USP-CEU
- Master's Degree in Physical Activity and Health. Miguel de Cervantes University
- Instructor of Basic Life Support and DESA. SEMICYUC
- Postgraduate Diploma in Surgical Anesthesiology for Nursing. CEU Cardenal Herrera University
- Biosafety and Occupational Risk Prevention in Microbiology Laboratories. SEM
- The male in Assisted Reproduction EVA FERTILITY CLINICS
- Biosafety Laboratories and Research Animal Facilities with Biocontainment Level 3. SEGLA
- Nursing action in traumatic emergencies, poisoning and other urgent situations. DAE

Ms. Boyano Rodríguez, Beatriz

- Embryologist at Clínicas EVA, Madrid
- Postgraduate Diploma in Clinical Genetics, Alcalá de Henares University, Madrid
- Master's Degree in Assisted Human Reproduction Biotechnology, IVI and University of Valencia
- Postgraduate in Medical Genetics, University of Valencia, Spain
- Degree in Biology, Universidad de Salamanca
- Member of the Association for the Study of Reproductive Biology
- Member of the Spanish Association of Human Genetics

Dr. Vázquez Lara, Juana María

- Diploma in Nursing
- PhD from the University of Granada
- Nurse of the 061 of Ceuta
- Midwife in the Ceuta Health Area
- Head of Studies of the Ceuta Midwifery Teaching Unit
- Professor of the Ceuta Midwifery Teaching Unit
- Member of the Obstetric-Gynecological Emergency Group of the SEEUE

Dr. Rodríguez Díaz, Luciano

- Diploma in Nursing
- PhD from the University of Granada
- Midwife at the University Hospital of Ceuta
- Lecturer at the University Centre of Nursing of Ronda
- Lecturer in the Ceuta Midwifery Teaching Unit
- Member of Obstetric-Gynecological Emergency Group of the SEEUE
- Responsible for Perinatal Health: Reproductive Sexual Health and Normal Childbirth of Ingesa
- Member of the Clinical Commission for Research and Continuing Education of the University Hospital of Ceuta
- Full member of the Institute of Ceuta Studies
- Member of the Editorial Board of the European Journal of Health Research

Professors

Ms. Martín, Alba

- Embryologist at Clínicas EVA, Madrid
- Degree in Biology from the Complutense University of Madrid, specializing in NEUROBIOLOGY and BIOSANITARY
- Master's Degree in Mammalian Reproductive Biology and Technology at the University of Murcia, Spain
- Postgraduate and professional development program with modular structure in Health Law and Biomedicine Universidad Nacional de Educación a Distancia (National University of Distance Education)
- Online Postgraduate Certificate entitled "Epigenetic Control of Gene Expression" given by the University of Melbourne

Ms. Fernández Rubio, Marta

- Diploma in Nursing. San Pablo CEU University
- Master's Degree in Emergency and Intrahospital Critical Care. San Pablo CEU University
- More than 30 FUNDEN Postgraduate Certificate courses in nursing care
- Postgraduate Certificate in chronic wounds. Madrid Hospital
- Postgraduate Certificate in Umbilical Cord Stem Cells and Regenerative Medicine. Madrid Hospital

Ms. Fernández, Sara

- Degree in Nursing. San Pablo CEU University
- Expert in the care of adult patients in life-threatening situations. CODEM
- Postgraduate Certificate in chronic wounds. Madrid Hospital
- Nursing guidance for emergency use of intravenous pharmaceutical products. LOGGOS
- More than twenty FUNDEN Postgraduate Certificate courses in nursing care

Ms. De Riva, María

- Embryologist. Laboratory management, orders, shipments, protocol development, database control, administrative tasks. EVA CLINICS
- Degree in Biological Sciences. Alcalá de Henares University
- Research work on gene expression in mouse embryos. Brussels Free University
- Assisted Reproduction Postgraduate basic degree: Alcalá de Henares Hospital
- Assisted Reproduction Advanced postgraduate course: Alcalá de Henares Hospital
- Master on Theoretical Basis and Laboratory Procedures of Assisted Reproduction. IVI

Ms. Serrano, Erika

- Outpatient nurse, gynecology, dermatology, neurology, rheumatology, endocrinology. José Marvá Specialty Center
- Diploma in Nursing. Alcalá de Henares University
- University Specialist in Outpatient Emergency Nursing. Juan Carlos University. Madrid
- Complementary Therapies in Health Sciences. UAH. Faculty of Medicine
- Update on Intravenous Therapy IDER TRAINING
- Assessment and treatment of ulcers and wounds. IDER TRAINING
- Critical patient: respiratory and cardiovascular processes. IDER TRAINING
- More than fifteen training courses in nursing care and nursing care at ASDEC, FMAE and ECS

Dr. Aldama, Perla
- Gynecologist specialized in Assisted Reproduction Egg bank. Eva Fertility Clinics
- Medical Surgeon School of Medicine UNAM. Mexico City
- Master's Degree in Human Reproduction Universidad Complutense de Madrid Spanish Fertility Society Madrid, Spain
- Grade Human Reproduction Hospital Juarez de Mexico City Mexico
- Basic and advanced colposcopy Hospital Juarez de Mexico City Mexico
- Grade Gynecology and Obstetrics Gynecology and Obstetrics Hospital 4 Mexico City
- Researcher with publications and papers in scientific congresses and prestigious scientific journals

Ms. Pulido, Sara
- Nurse in Assisted Reproduction consultation in the International Department, and in the Assisted Reproduction Operating Room. VAS Clinic, Madrid
- Graduate in Nursing, Alfonso X El Sabio University
- Master's Degree in Intensive Care Nursing

Ms. Amor Besada, Noelia
- Midwife Galicia Health Service

Ms. Andrés Núñez, Carmen Patricia
- Degree in Medicine and Surgery
- Specialist in Obstetrics and Gynecology at the University Hospital of Ceuta

Ms. Carrasco Racero, María Mercedes
- Diploma in Nursing
- Nurse and Internship Coordinator at the University Center of Ronda

Ms. De Dios Pérez, María Isabel
- Diploma in Nursing
- Midwife at the Zaragoza University Hospital

Ms. Díaz Lozano, Paula
- Diploma in Nursing
- Midwife at the Ceuta University Hospital

Ms. Gilart Cantizano, Patricia
- Diploma in Nursing
- Specialized Care Midwife Campo de Gibraltar and Quirón Campo de Gibraltar

Ms. Llinás Prieto, Lucía
- Diploma in Nursing
- Nurse in Specialized Care Cadiz

Mr. Márquez Díaz, Antonio
- Diploma in Nursing
- Midwife Hospital Costa del Sol de Marbella and Hospital Quirón Campo de Gibraltar

Ms. Mérida Téllez, Juanma
- Diploma in Nursing
- Midwife Costa del Sol de Marbella Hospital

Ms. Mérida Yáñez, Beatriz
- Diploma in Nursing
- Primary Care Midwife Extremadura

Ms. Muñoz Vela, Francisco Javier
- Diploma in Nursing
- Midwife in Specialized Care at the Maternal-Child Care Hospital of Málaga

Ms. Palomo Gómez, Rocío
- Diploma in Nursing
- Ceuta Specialized Care Midwife

Ms. Revidiego Pérez, María Dolores
- Diploma in Nursing
- Specialized Care Midwife Campo de Gibraltar and Quirón Campo de Gibraltar

Ms. Rivero Gutiérrez, Carmen
- Diploma in Nursing
- Ceuta Specialized Care Midwife

Mr. Rodríguez Díaz, David
- Diploma in Nursing
- Nurse at Nuestra Señora de Candelaria University Hospital

Mr. Vázquez Lara, Francisco José
- Degree in Biological Sciences

Ms. Vázquez Lara, María Dolores
- Diploma in Nursing
- Campo de Gibraltar Primary Care Nurse

05

Structure and Content

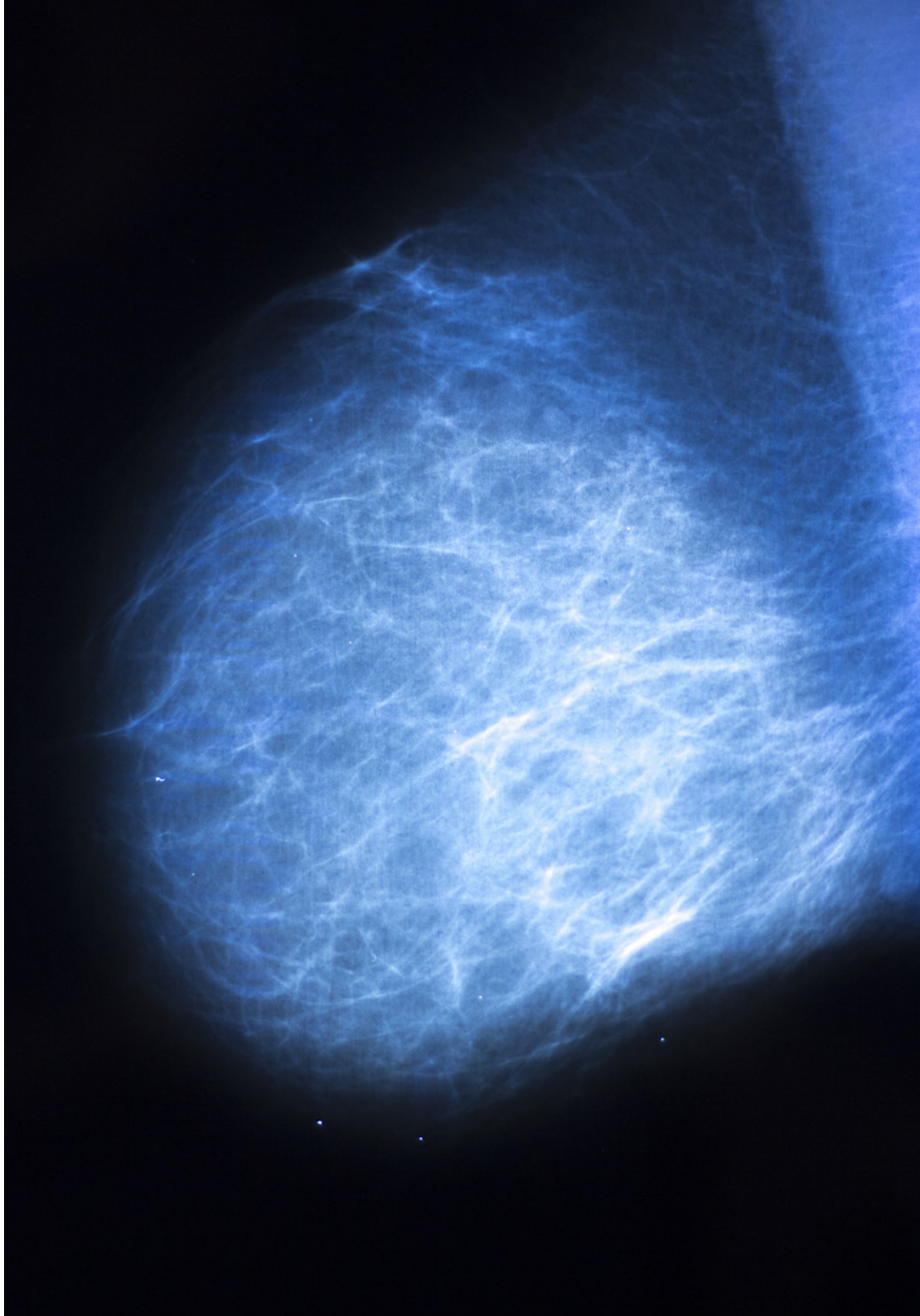
The contents of this program have been developed by the different teachers of this Advanced Master's Degree, with a clear purpose: to ensure that our students acquire each and every one of the necessary skills to become true experts in this field. The content of this program enables you to learn all aspects of the different disciplines involved in this field. A complete and well-structured program will take you to the highest standards of quality and success.

Through a very well structured program, you will be able to access the most advanced knowledge of the moment in Gynecological and Assisted Reproductive Nursing"

Module 1. Anatomy and Physiology of Reproduction

1.1. Anatomy of the Female Reproductive Organs
- 1.1.1. Introduction
- 1.1.2. External Female Genitalia
  - 1.1.2.1. Vulva
  - 1.1.2.2. Mons Pubis
  - 1.1.2.3. Labia Majora
  - 1.1.2.4. Labia Minora
  - 1.1.2.5. Vaginal Vestibule
  - 1.1.2.6. Clitoris
  - 1.1.2.7. Vestibular Bulbs
- 1.1.3. Internal Female Genitalia
  - 1.1.3.1. Vagina.
  - 1.1.3.2. Uterus
  - 1.1.3.3. Fallopian Tube
  - 1.1.3.4. Ovaries

1.2. Endocrinology of the Female Reproductive System
- 1.2.1. Introduction
- 1.2.2. The Hypothalamus
  - 1.2.2.1. GnRH
- 1.2.3. Pituitary Gland
  - 1.2.3.1. FSH and LH
- 1.2.4. Steroid Hormones
  - 1.2.4.1. Introduction
  - 1.2.4.2. Synthesis
  - 1.2.4.3. Mechanism of Action
  - 1.2.4.4. Estrogens
  - 1.2.4.5. Androgens
  - 1.2.4.6. Progestogens
- 1.2.5. External Modulation: Endorphins and Melatonin
- 1.2.6. GnRH Pulses: Brain-Ovarian Relationship
- 1.2.7. GnRH Agonists and Antagonists



1.3. Menstrual Cycle
- 1.3.1. Menstrual Cycle
- 1.3.2. Biochemical Indicators of the Menstrual Cycle
  - 1.3.2.1. Hormones in Basal State
  - 1.3.2.2. Ovulation
  - 1.3.2.3. Evaluation of Ovarian Reserve: Antimüllerian Hormone
- 1.3.3. Ultrasound Indicators of the Menstrual Cycle
  - 1.3.3.1. Follicle Count
  - 1.3.3.2. Endometrial Ultrasound
- 1.3.4. End of the Reproductive Age
  - 1.3.4.1. Pre-Menopause
  - 1.3.4.2. Menopause
  - 1.3.4.3. Post-Menopause

1.4. Ovogenesis (Folliculogenesis and Ovulation). Meiosis: From the Oogonia to the MII Oocyte. Types of Follicles and their Relation to Ovogenesis. Follicular Dynamics. Ovarian Recruitment and Ovulation. Oocyte MII: Markers of Oocyte Quality. In Vitro Oocyte Maturation

1.5. Anatomy of the Male Reproductive Organs
- 1.5.1. External Male Genitalia
  - 1.5.1.1. Testicles
  - 1.5.1.2. Penis
  - 1.5.1.3. Epididymis
  - 1.5.1.4. Vas Deferens
- 1.5.2. Internal Male Genitalia
  - 1.5.2.1. Seminal Vesicles
  - 1.5.2.2. Ejaculatory Duct
  - 1.5.2.3. Prostate.
  - 1.5.2.4. Urethra
  - 1.5.2.5. Bulbourethral Glands

1.6. Endocrinology of the Male Reproductive System
- 1.6.1. Testicular Function Regulation
- 1.6.2. Androgen Biosynthesis
- 1.6.3. Inhibins and Activins
- 1.6.4. Prolactin
- 1.6.5. Prostaglandins
- 1.6.6. Estrogens
- 1.6.7. Other Factors

1.7. Spermatogenesis
- 1.7.1. Meiosis
- 1.7.2. Differences between Ovogenesis and Spermatogenesis
- 1.7.3. The Seminiferous Tubule
  - 1.7.3.1. Hormones Involved
  - 1.7.3.2. Cell Types
- 1.7.4. The Blood-Testis Barrier
- 1.7.5. Endocrine and Paracrine Control

1.8. Fertilization
- 1.8.1. Gamete Transport
- 1.8.2. Gametic Maturation
- 1.8.3. Gamete Interaction

1.9. Embryonic Development
- 1.9.1. Zygote Formation
- 1.9.2. First Divisions
- 1.9.3. Blastocyst Formation and Implantation
- 1.9.4. Gastrulation: Mesoderm Formation
  - 1.9.4.1. Notochord Formation
  - 1.9.4.2. Establishment of Body Axes
  - 1.9.4.3. Setting Cellular Destinations
  - 1.9.4.4. Trophoblast Growth

1.9.5. Embryonic Period or Organogenesis Period
1.9.5.1. Ectoderm
1.9.5.2. Mesoderm
1.9.5.3. Endoderm
1.10. Effect of Age on the Male and Female Reproductive System
1.10.1. Female Reproductive System
1.10.2. Male Reproductive system

Module 2. Puberty, Menstruation and the Climacteric Period

2.1. Pathology of Puberty
2.1.1. Precocious Puberty
2.1.2. Delayed Puberty
2.2. Menstrual Disorders
2.2.1. Hypothalamic Amenorrhea
2.2.2. Hypophyseal Type of Amenorrhea
2.2.3. Hyperprolactinemia
2.3. Uterine Amenorrhea
2.3.1. Protocol
2.3.2. Diagnosis
2.4. Functional Uterine Bleeding
2.4.1. Ovulatory Bleeding
2.4.2. Anovulatory Bleeding
2.4.3. Bleeding from Extragenital Causes
2.5. Climacteric Pathology
2.5.1. Treatment of Climacteric Pathology: HRT
2.5.2. Hormone Replacement Therapy and Gynecological Cancer
2.5.3. Complementary or Alternative Measures in Menopause
2.5.4. Phytoestrogens

Module 3. Gynecological Infectious Pathology and Sexually Transmitted Diseases

3.1. Sexually Transmitted Infections
3.1.1. Etiology
3.1.2. Epidemiology
3.2. Infectious Processes of the Reproductive System
3.2.1. Etiology
3.2.2. Classification
3.2.3. Treatment
3.3. Vulvovaginitis
3.3.1. Description
3.3.2. Treatment
3.4. Vaginal Candidiasis
3.4.1. Description
3.4.2. Treatment
3.5. Bacterial Vaginosis
3.5.1. Description
3.5.2. Treatment
3.6. Vaginal Trichomoniasis
3.6.1. Description
3.6.2. Treatment
3.7. Syphilis
3.7.1. Description
3.7.2. Treatment
3.8. Chancroid
3.8.1. Description
3.8.2. Treatment
3.9. Lymphogranuloma Venereum
3.9.1. Description
3.9.2. Treatment
3.10. Herpes Simplex
3.10.1. Description
3.10.2. Treatment

3.11. Infections that Cause Urethritis and Cervicitis
- 3.11.1. Description
- 3.11.2. Treatment

3.12. Condyloma Acuminata
- 3.12.1. Description
- 3.12.2. Treatment

3.13. Molluscum Contagiosum
- 3.13.1. Description
- 3.13.2. Treatment

3.14. Scabies
- 3.14.1. Description
- 3.14.2. Treatment

3.15. Pediculosis Pubis
- 3.15.1. Description
- 3.15.2. Treatment

3.16. HIV
- 3.16.1. Description
- 3.16.2. Treatment

3.17. Pelvic Inflammatory Disease
- 3.17.1. Description
- 3.17.2. Treatment

3.18. Papillomavirus Infection
- 3.18.1. Description
- 3.18.2. Treatment

Module 4. Care for Women with Gynecological Problems

4.1. Pelvic Pain
- 4.1.1. Dysmenorrhea
- 4.1.2. Premenstrual Syndrome, Endometriosis and Others
- 4.1.3. Nursing Care

4.2. Genital Apparatus Malformations
- 4.2.1. Vulvar Malformations
- 4.2.2. Vaginal Malformations
- 4.2.3. Cervical Malformations
- 4.2.4. Uterine Body Malformations
- 4.2.5. Ovarian Malformations
- 4.2.6. Lower Urinary Organ Malformations: Urogenital Fistulas
- 4.2.7. Female Genital Mutilation
- 4.2.8. Breast Malformations

4.3. Benign Tumors
- 4.3.1. Benign Vulvar Tumors
- 4.3.2. Benign Vaginal Tumors
- 4.3.3. Benign Ovarian Tumors

4.4. Benign Gynecological Pathology
- 4.4.1. Benign Cervical Pathology
- 4.4.2. Benign Uterine and Endometrial Body Pathology
- 4.4.3. Benign Fallopian Tube Pathology

4.5. Genital Static Disorders
- 4.5.1. Uterine Prolapse
- 4.5.2. Cystocele
- 4.5.3. Rectocele
- 4.5.4. Enterocele

4.6. Vulvovaginoperineal Tears and Rectovaginal Fistulas

4.7. Vulvovaginal Pathology
- 4.7.1. Vulvovaginitis
- 4.7.2. Bartholinitis
- 4.7.3. Vulvar Lichen Sclerosis
- 4.7.4. Paget's Disease
- 4.7.5. Vulvar and Vaginal Cancer

4.8. Cervical Pathology
- 4.8.1. Cervicitis
- 4.8.2. Polyps
- 4.8.3. Cervical Cancer

4.9. Uterine Pathology
- 4.9.1. Uterine Myoma
- 4.9.2. Endometrial Cancer

4.10. Adnexal Pathology
- 4.10.1. Pelvic Inflammatory Disease (PID)
- 4.10.2. Polycystic Ovary Syndrome (PCOS)
- 4.10.3. Endometriosis
- 4.10.4. Ovarian Carcinoma
- 4.10.5. Ovarian Carcinoma

Module 5. Care for Women with Gynecological Oncology Problems

5.1. Early Diagnosis of Breast and Gynecological Cancer
- 5.1.1. Early Diagnosis and Population Screening Programs
- 5.1.2. Identification of Groups at Risk

5.2. Epidemiology of Breast and Gynecological Cancer
- 5.2.1. Examinations and Diagnostic Tests

5.3. Gynecological and Breast Cancer
- 5.3.1. Description
- 5.3.2. Treatment

5.4. Vulvar Cancer
- 5.4.1. Description
- 5.4.2. Treatment

5.5. Cervical Cancer
- 5.5.1. Description
- 5.5.2. Treatment

5.6. Endometrial Cancer
- 5.6.1. Description
- 5.6.2. Treatment

5.7. Uterine Sarcomas
- 5.7.1. Description
- 5.7.2. Treatment

5.8. Ovarian Cancer
- 5.8.1. Description
- 5.8.2. Treatment

5.9. Breast Cancer
- 5.9.1. Description
- 5.9.2. Treatment

5.10. Psychological Aspects of Gynecological Cancer
- 5.10.1. Nursing Care
- 5.10.2. Palliative Care and Pain Management

Module 6. Gynecological Surgery

6.1. Gynecological Surgical Intervention
- 6.1.1. Gynecological Surgery
- 6.1.2. Breast Surgery

6.2. Hospitalized Gynecological Patient
- 6.2.1. Preoperative Care
- 6.2.2. Postoperative Care
- 6.2.3. Complications

6.3. Anesthesia in Gynecology
- 6.3.1. Description of the Different Techniques
- 6.3.2. Nursing Care

6.4. Endoscopic Surgery (Laparoscopy)
- 6.4.1. Description
- 6.4.2. Action Protocol

6.5. Endoscopic Surgery (Hysteroscopy)
- 6.5.1. Description
- 6.5.2. Action Protocol

6.6. Tubal Ligation
- 6.6.1. Description
- 6.6.2. Action Protocol

6.7. Robotic Surgery Applied to Gynecology
- 6.7.1. Description
- 6.7.2. Nursing Care

Module 7. Breast Pathology

7.1. Clinical and Instrumental Examination in Breast Pathology
- 7.1.1. Different Examination Methods
- 7.1.2. Types of Diagnostic Methods

7.2. Benign Breast Pathology
- 7.2.1. Abnormalities
- 7.2.2. Anomalies
- 7.2.3. Mastodynia
- 7.2.4. Inflammatory Process
- 7.2.5. Benign Tumor Pathology

7.3. Breast Cancer
- 7.3.1. Epidemiology and Risk Factors
- 7.3.2. Primary Prevention: Early Diagnosis. Non-Palpable Lesions
- 7.3.3. Clinic and Development
- 7.3.4. TNM Classification
- 7.3.5. Biology of Breast Carcinoma (Markers)

7.4. Breast Cancer Treatments
- 7.4.1. Types of Treatment
- 7.4.2. Nursing Care

7.5. Monitoring and Management of the Breast Cancer Patient
- 7.5.1. Care Control
- 7.5.2. Health Education
- 7.5.3. Nursing Care

Module 8. Urinary Incontinence (UI)

8.1. Epidemiology of Urinary Incontinence
- 8.1.1. Prevalence
- 8.1.2. Incidence

8.2. Types of Urinary Incontinence
- 8.2.1. Concept
- 8.2.2. Classification

8.3. Nursing Assessment in Urinary Incontinence
- 8.3.1. Nursing Care Process
- 8.3.2. Nursing Care

8.4. Nursing Diagnostics in Urinary Incontinence
- 8.4.1. Examination Methods
- 8.4.2. Diagnostic Techniques

8.5. Treatment of Urinary Incontinence
- 8.5.1. Non-Surgical Treatment
- 8.5.2. Surgical Management

8.6. Prevention and Management of Urinary Incontinence in Women
- 8.6.1. Health Education

Module 9. Gynecological and Obstetrical Emergencies

9.1. Gynecological Abdominal Pain
- 9.1.1. Concept
- 9.1.2. Nursing Care

9.2. Genital Tract Trauma and Wounds
- 9.2.1. Types
- 9.2.2. Nursing Care

9.3. Sexual Assault
- 9.3.1. Concept
- 9.3.2. Diagnosis
- 9.3.3. Nursing Care

9.4. Gynecological Hemorrhage
- 9.4.1. Classification
- 9.4.2. Nursing Care

9.5. Threat of Preterm Labor
- 9.5.1. Concept
- 9.5.2. Treatment
- 9.5.3. Nursing Care

9.6. Hypertensive States of Pregnancy
- 9.6.1. Classification
- 9.6.2. Treatment
- 9.6.3. Nursing Care

9.7. Obstetric Hemorrhage
- 9.7.1. 1st Trimester Hemorrhage
- 9.7.2. 2nd Trimester Hemorrhage
- 9.7.3. Postpartum Hemorrhage

Module 10. Study of Infertility in Women

10.1. Initial Study
- 10.1.1. Introduction
- 10.1.2. Basis of the Study According to Factors
- 10.1.3. Medical History
- 10.1.4. Physical Exploration
- 10.1.5. Basic Infertility Studies
- 10.1.6. Complementary Studies According to Altered Factor

10.2. Ovarian Factor
- 10.2.1. Age
  - 10.2.1.1. Age and Ovarian Reserve
  - 10.2.1.2. Early Ovarian Failure
  - 10.2.1.3. Studies to Assess Ovarian Reserve
    - 10.2.1.3.1. AMH
    - 10.2.1.3.2. RFA
    - 10.2.1.3.3. Other Hormones
- 10.2.2. Anovulation
  - 10.2.2.1. What Is Anovulation?
  - 10.2.2.2. Clinical Manifestations
  - 10.2.2.3. Importance of the Luteal Phase
  - 10.2.2.4. Causes
    - 10.2.2.4.1. Polycystic Ovary Syndrome
    - 10.2.2.4.2. Most Frequent Hormonal Disorders
    - 10.2.2.4.3. Other Causes
  - 10.2.2.5. Studies to Assess Ovulation
    - 10.2.2.5.1. Gynecological Hormonal Profile
    - 10.2.2.5.2. Other Hormones
      - 10.2.2.5.2.1. Thyroid Hormones
      - 10.2.2.5.2.2. Prolactin
      - 10.2.2.4.2.3. Androgens
    - 10.2.2.5.3. Luteal Phase Progesterone

10.3. Uterine and Tubal Factor
- 10.3.1. Uterus
  - 10.3.1.1. Uterus and Endometrium
  - 10.3.1.2. Müllerian Malformations
  - 10.3.1.3. Myomas and Polyps
  - 10.3.1.4. Asherman's Syndrome
  - 10.3.1.5. Uterine Factor and Implantation Failure
  - 10.3.1.6. Uterine Factor and Recurrent Pregnancy Loss
- 10.3.2. Fallopian Tubes
  - 10.3.2.1. Tubal Obstruction
    - 10.3.2.1.1. Pathology
    - 10.3.2.1.2. Surgical
    - 10.3.2.1.3. Endometriosis
    - 10.3.2.1.4. Others
- 10.3.3. Research
  - 10.3.3.1. 2D and 3D Ultrasound
  - 10.3.3.2. Hysteroscopy and Others
    - 10.3.3.2.1. Hysteroscopy
    - 10.3.3.2.2. Hysterosalpingography
    - 10.3.3.2.3. Hysterosonography
    - 10.3.3.2.4. Hysterolaparoscopy
    - 10.3.3.2.5. MRI

10.4. Infectious Factor
- 10.4.1. Infections and Infertility
- 10.4.2. Most Frequent Infections
- 10.4.3. Pelvic Inflammatory Disease
- 10.4.4. Hydrosalpinx
- 10.4.5. Research
  - 10.4.5.1. Crops and Specialty Crops
  - 10.4.5.2. PCR and Others

10.5. Genetic Factor
- 10.5.1. Genetics Today
- 10.5.2. Most Frequent Genetic Disorders
  - 10.5.2.1. Turner Syndrome
  - 10.5.2.2. Fragile X Syndrome
  - 10.5.2.3. Hereditary Thrombophilias
  - 10.5.2.4. Other Mutations
- 10.5.3. Screening Studies

10.6. Immunological Factor
- 10.6.1. The Immune System and Fertility
- 10.6.2. Main Disorders
  - 10.6.2.1. Antiphospholipid Antibody Syndrome
  - 10.6.2.2. Systemic Lupus Erythematosus (SLE)
  - 10.6.2.3. Others
- 10.6.3. Key Immunological Tests

10.7. Endometriosis
- 10.7.1. Endometriosis Today
- 10.7.2. Implications in Fertility
- 10.7.3. The Patient with Endometriosis
- 10.7.4. Clinical and Laboratory Study

10.8. Implantation Failure and Recurrent Abortion
- 10.8.1. Failure of Implantation
  - 10.8.1.1. Definition
  - 10.8.1.2. Main Causes
  - 10.8.1.3. Study
- 10.8.2. Recurrent Miscarriage
  - 10.8.2.1. Definition
  - 10.8.2.2. Main Causes
  - 10.8.2.3. Study

10.9. Special Considerations
- 10.9.1. Cervical Factor
  - 10.9.1.1. Importance of Cervical Physiology
- 10.9.2. Postcoital Test
  - 10.9.2.1. Sexology
  - 10.9.2.2. Vaginismus
- 10.9.3. Psychological Causes
- 10.9.4. Infertility of Unknown Origin
  - 10.9.4.1. Definition
  - 10.9.4.2. What Should Be Done?
- 10.9.5. Comprehensive Approach

10.10. Conclusions

Module 11. Study of Male Infertility

11.1. Initial Study
- 11.1.1. Objectives
- 11.1.2. When Should It Be Done?
- 11.1.3. Minimum Evaluation
- 11.1.4. Optimal Evaluation
- 11.1.5. Medical History
- 11.1.6. Physical Exploration

11.2. Complementary Evaluations
- 11.2.1. Sperm Function Tests
- 11.2.2. Hormonal Determinations
- 11.2.3. Ultrasound and Scrotal *Doppler* Ultrasound
- 11.2.4. Transrectal Ultrasound
- 11.2.5. Bacteriological Study of Semen
- 11.2.6. Post-Orgasm Urinalysis

11.3. Genetic Studies
- 11.3.1. Karyotype
- 11.3.2. Y Chromosome Microdeletions
- 11.3.3. CFTR Mutations
- 11.3.4. Meiotic Chromosome Studies
- 11.3.5. FISH of Spermatozoa

11.4. Seminogram
- 11.4.1. Basic Considerations
- 11.4.2. Proper Sample Handling
- 11.4.3. Sample Collection
  - 11.4.3.1. Preparation
  - 11.4.3.2. Collection for Diagnosis
  - 11.4.3.3. Collection for Use in Assisted Reproduction
  - 11.4.3.4. Collection for Microbiological Analysis
  - 11.4.3.5. Home Collection
  - 11.4.3.6. Collection with Preservative
- 11.4.4. Initial Macroscopic Examination
  - 11.4.4.1. Liquefaction
  - 11.4.4.2. Viscosity
  - 11.4.4.3. Appearance
  - 11.4.4.4. Volume
  - 11.4.4.5. PH
- 11.4.5. Initial Microscopic Examination
  - 11.4.5.1. How to Obtain a Representative Sample
  - 11.4.5.2. Sample Quantity
  - 11.4.5.3. Aggregation
  - 11.4.5.4. Agglutination
  - 11.4.5.5. Presence of Cellular Elements Other than Spermatozoa
- 11.4.6. Motility
- 11.4.7. Vitality
- 11.4.8. Concentration
- 11.4.9. Counting of Cells Other than Sperm Cells
- 11.4.10. Sperm Morphology
- 11.4.11. Presence of Leukocytes in Semen
- 11.4.12. Antispermatozoa Antibodies Test
- 11.4.13. Automated Analysis

11.5. Analysis and Processing of Samples for Assisted Reproduction Techniques (ART)
- 11.5.1. Washing
- 11.5.2. Swim-up
- 11.5.3. Density Gradients

11.6. Sperm Freezing
- 11.6.1. Indications
- 11.6.2. Cryoprotectors
- 11.6.3. Semen Freezing Techniques
- 11.6.4. Storage Containers

11.7. Semen Washing for HIV, Hepatitis B and Hepatitis C Seropositive Males
- 11.7.1. Hepatitis B
- 11.7.2. HIV
- 11.7.3. Hepatitis C
- 11.7.4. General Considerations

11.8. Sperm Donation
- 11.8.1. General Aspects
- 11.8.2. Indications
- 11.8.3. Sperm Donor Considerations
- 11.8.4. Recommended Tests
- 11.8.5. Anonymity
- 11.8.6. Choosing the Right Donor
- 11.8.7. Risk
- 11.8.8. Cessation of Donation

11.9. Complementary Sperm Selection Techniques
- 11.9.1. MACS (Magnetically Marked Cell Sorting)
  - 11.9.1.1. Biological Basis of the Technique
  - 11.9.1.2. Indications
  - 11.9.1.3. Advantages and Disadvantages
- 11.9.2. IMSI (Intracytoplasmic Injection of Morphologically Selected Spermatozoa)
  - 11.9.2.1. Procedure
  - 11.9.2.2. Indications
  - 11.9.2.3. Advantages and Disadvantages
- 11.9.3. Selection Based on Binding to Hyaluronic Acid
  - 11.9.3.1. Procedure
  - 11.9.3.2. Indications
  - 11.9.3.3. Advantages and Disadvantages

11.10. Oral Therapy: Use of Antioxidants
- 11.10.1. Antioxidant Concept
- 11.10.2. Reactive Oxygen Species (ROS)
- 11.10.3. Factors Leading to Increased ROS in Semen
- 11.10.4. Damage Caused by Increased ROS in Spermatozoa
- 11.10.5. Antioxidant System in Semen
  - 11.10.5.1. Enzymatic Antioxidants
  - 11.10.5.2. Superoxide Dismutase
  - 11.10.5.3. Catalase
  - 11.10.5.4. Nitric Oxide Synthase
  - 11.10.5.5. Glutathione S-Transferase
  - 11.10.5.6. Peroxiredoxin
  - 11.10.5.7. Thioredoxins
  - 11.10.5.8. Glutathione Peroxidase
- 11.10.6. Exogenous Supplementation
  - 11.10.6.1. Omega 3 Fatty Acids
  - 11.10.6.2. Vitamin C
  - 11.10.6.3. Coenzyme Q10
  - 11.10.6.4. L-Carnitine
  - 11.10.6.5. Vitamin E
  - 11.10.6.6. Selenium
  - 11.10.6.7. Zinc
  - 11.10.6.8. Folic Acid
  - 11.10.6.9. L-Arginine
- 11.10.7 Conclusions

Module 12. Genetics and Immunology of Reproduction

12.1. Basic Cytogenetics: The Importance of Karyotyping
- 12.1.1. DNA and its Structure
  - 12.1.1.1. Genes
  - 12.1.1.2. Chromosomes
- 12.1.2. The Karyotype
- 12.1.3. Uses of Karyotyping: Prenatal Diagnosis
  - 12.1.3.1. Amniocentesis
  - 12.1.3.2. Chorionic Villus Biopsy
  - 12.1.3.3. Abortion Analysis
  - 12.1.3.4. Meiosis Studies

12.2. The New Era of Diagnostics: Molecular Cytogenetics and Massive Sequencing
- 12.2.1. FISH
- 12.2.2. CGH Arrays
- 12.2.3. Massive Sequencing

12.3. Origin and Etiology of Chromosomal Abnormalities
- 12.3.1. Introduction
- 12.3.2. Classification According to Origin
  - 12.3.2.1. Numeric
  - 12.3.2.2. Structural
  - 12.3.2.3. Mosaicism
- 12.3.3. Classification According to Etiology
  - 12.3.3.1. Autosomal
  - 12.3.3.2. Sexual
  - 12.3.3.3. Polyploidy and Haploidy

12.4. Genetic Disorders in the Infertile Couple
- 12.4.1. Genetic Disorders in Women
  - 12.4.1.1. Hypothalamic Origin
  - 12.4.1.2. Pituitary Origin
  - 12.4.1.3. Ovarian Origin
    - 12.4.1.3.1. Chromosomal Disorders
      - 12.4.1.3.1.1. Total X Chromosome Deletion: Turner Syndrome
      - 12.4.1.3.1.2. Partial X Chromosome Deletion
      - 12.4.1.3.1.3. X Chromosome and Autosome Translocations
      - 12.4.1.3.1.4. Others
  - 12.4.1.4. Monogenic Disorders
    - 12.4.1.4.1. Fragile X
  - 12.4.1.5. Fragile X Syndrome
- 12.4.2. Genetic Disorders in Men
  - 12.4.2.1. Numerical Alterations: Klineffelter's Syndrome
  - 12.4.2.2. Robertsonian Translocations
  - 12.4.2.3. CFTR Mutation
  - 12.4.2.4. Y Chromosome Microdeletions

12.5. Pre-Implantation Genetic Diagnosis (PGT): *Pre-Implantation Genetic Testing*)
- 12.5.1. Introduction
- 12.5.2. Embryo Biopsy
- 12.5.3. Indications
- 12.5.4. Genetic Diagnosis for Monogenic Diseases (PGT-M)
  - 12.5.4.1. Carrier Studies
- 12.5.5. Genetic Diagnosis for Structural Abnormalities
  - 12.5.5.1. Numerical (Aneuploidies; PGT-A)
  - 12.5.5.2. Structural (PGT-SR)
- 12.5.6. Combined Genetic Diagnosis
- 12.5.7. Limitations
- 12.5.8. Mosaic Embryos as a Special Case
- 12.5.9. Non-Invasive Pre-Implantational Genetic Diagnosis

12.6. Babies with Three Genetic Progenitors, Nuclear Transfer in Mitochondrial Diseases
- 12.6.1. Mitochondrial DNA
- 12.6.2. Mitochondrial Diseases
- 12.6.3. Donor Cytoplasmic Transfer

12.7. Epigenetics
- 12.7.1. General Concepts
- 12.7.2. Epigenetic Modifications
- 12.7.3. Genetic Imprinting

12.8. Genetic Studies in Donors
- 12.8.1. Recommendations
- 12.8.2. Carrier Matching
- 12.8.3. Carrier Panels

12.9. The Immunological Factor in Assisted Reproduction
- 12.9.1. General Aspects
- 12.9.2. The Immune System in Women in Constant Change
- 12.9.3. Immune Cell Population in the Female Reproductive System
  - 12.9.3.1. Regulation of T-Lymphocyte Populations
  - 12.9.3.2. Cytokines
  - 12.9.3.3. Female Hormones
- 12.9.4. Infertility of Autoimmune Origin
  - 12.9.4.1. Antiphospholipid Syndrome
  - 12.9.4.2. Antithyroid Antibodies
  - 12.9.4.3. Antinuclear Antibodies
  - 12.9.4.4. Anti-Ovarian and Anti-FSH Antibodies
  - 12.9.4.5. Antispermatozoa Antibodies
- 12.9.5. Alloimmune Infertility, the Contribution of the Fetus
  - 12.9.5.1. The Embryo as an Antigen
  - 12.9.5.2. Implantation Failure of Euploid Embryos
    - 12.9.5.2.1. NK Cells
    - 12.9.5.2.2. T-Helpers
    - 12.9.5.2.3. Autoantibodies
- 12.9.6. The Role of Sperm and Spermatozoa
  - 12.9.6.1. T-Lymphocyte Regulation
  - 12.9.6.2. Seminal Fluid and Dendritic Cells
  - 12.9.6.3. Clinical Relevance

12.10. Immunotherapy and Special Situations
- 12.10.1. Introduction
- 12.10.2. Aspirin and Heparin
- 12.10.3. Corticosteroids
- 12.10.4. Antibiotic Therapy
- 12.10.5. Colony Growth Factors
- 12.10.6. Intravenous Fat Emulsions
- 12.10.7. Intravenous Immunoglobulins
- 12.10.8. Adalimumab
- 12.10.9. Peripheral Mononuclear Cells
- 12.10.10. Seminal Plasma
- 12.10.11. Antibody-Free Semen Preparations
- 12.10.12. Tacrolimus
- 12.10.13. Risks and Benefits
- 12.10.14. Conclusions
- 12.10.15. Special Situations: Endometriosis
- 12.10.16. Special Situations: Chlamydia Trachomatis Infection

Module 13. Assisted Reproduction Consultation and Donor Bank

13.1. Importance of the Nurse in the Assisted Reproduction Clinic
- 13.1.1. Nursing Consultation: An Emerging Requirement
- 13.1.2. Areas of Work: Care, Management and Education
- 13.1.3. The Integral Continuum of Care

13.2. Care Area. Follow-Up Consultation
- 13.2.1. Patient Care in Stimulation Cycles
- 13.2.2. Folliculometry
- 13.2.3. Cytology

13.3. Blood Tests for Fertility Study. Programming, Interpretation and Extraction
- 13.3.1. Hypophyseal Hormones or Gonadotropins
  - 13.3.1.1. FSH
  - 13.3.1.2. LH
  - 13.3.1.3. Prolactin
  - 13.3.1.4. TSH
- 13.3.2. Ovarian Hormones
  - 13.3.2.1. Estradiol
  - 13.3.2.2. Progesterone
  - 13.3.2.3. Antimullerian (HAM)
- 13.3.3. Other Hormones
  - 13.3.3.1. Free Triiodothyronine (T3)
  - 13.3.3.2. Free Thyroxine (T4)
  - 13.3.3.3. Total Testosterone (T)
  - 13.3.3.4. Inhibin B
- 13.3.4. Implantation Failure Study: Interpretation and Extraction
  - 13.3.4.1. Definition
  - 13.3.4.2. Immunological Profile
  - 13.3.4.3. Thrombophilias
  - 13.3.4.4. Endometrial Biopsy
  - 13.3.4.5. Endocervical and Vaginal Culture
- 13.3.5. Serologies: Interpretation and Extraction
  - 13.3.5.1. Introduction and Necessity
  - 13.3.5.2. HBV
  - 13.3.5.3. HCV
  - 13.3.5.4. HIV
  - 13.3.5.5. Syphilis (RPR)
  - 13.3.5.6. Rubella
  - 13.3.5.7. Toxoplasmosis
- 13.3.6. Karyotypes

13.4. Patient Education Area
- 13.4.1. Effective Communication
- 13.4.2. Basic Hygienic–Dietary Measures: Importance of BMI
- 13.4.3. Self-Administration of Medications

13.5. Management Area
- 13.5.1. Medical History
- 13.5.3. Gamete Request
  - 13.5.3.1. Male Gamete Petition
  - 13.5.3.2. Female Gamete Petition
- 13.5.4. Transfer of Genetic Material

13.6. Patient Follow-Up after BHCG Result
- 13.6.1. Introduction: Interpretation of the Result
- 13.6.2. First Consultation after BHCG Result
  - 13.6.2.1. Negative Result
  - 13.6.2.2. Positive Result
- 13.6.3. Food Education for Pregnant Women
- 13.6.4. Monitoring of Pregnant Women: Medication and Ultrasound Monitoring. Release
- 13.6.5. Obstetrical Control after Delivery

13.7. Donor Bank
- 13.7.1. Donor Requirements: Testing and Compatibility. Importance of Blood Type
- 13.7.2. Limits on the Number of Stimulations and/or Donations
- 13.7.3. Limit on the Number of Pregnancies
- 13.7.4. International Donations
- 13.7.5. Anonymity
- 13.7.6. Financial Compensation
- 13.7.7. Donor Registration
- 13.7.8. Additional Tests.

13.8. Frequently Asked Questions

13.10. Conclusions

Module 14. Pharmacology

14.1. Folliculogenesis Inducer: Clomiphene Citrate
- 14.1.1. Introduction
- 14.1.2. Definition
- 14.1.3. Mechanism of Action
- 14.1.4. Administration and Use
- 14.1.5. Side Effects:
- 14.1.6. Advantages and Disadvantages
- 14.1.7. Results

14.2. Induction of Folliculogenesis with Gonadotropins
- 14.2.1. Introduction and Indications
- 14.2.2. Types
  - 14.2.2.1. Follicle Stimulants
  - 14.2.2.2. Corpus Luteum Stimulants
- 14.2.3. Stimulation with Increasing or Decreasing Doses
- 14.2.4. Treatment Results
- 14.2.5. Complications
- 14.2.6. Instruction in Self-Administration

14.3. Ovulation Inducers
- 14.3.1. Human Chorionic Gonadotropin (HCG) and Recombinant Chorionic Gonadotropin
- 14.3.2. Human Menopausal Gonadotropin (HMG)
- 14.3.3. Recombinant Follicle Stimulating Hormone (FSH)
- 14.3.4. Recombinant Luteinizing Hormone (LH)
- 14.3.5. GnRH Agonists

14.4. Other Hormonal Treatments
- 14.4.1. Hypothalamic Gonadotropin-Releasing Hormone (GnRH)
  - 14.4.1.1. Introduction
  - 14.4.1.2. Mechanism of Action
  - 14.4.1.3. Administration Guideline
  - 14.4.1.4. Complications
- 14.4.2. Aromatase Inhibitors
  - 14.4.2.1. Definition and Uses
  - 14.4.2.2. Mechanism of Action and Mode of Use
  - 14.4.2.3. Administration Guideline
  - 14.4.2.4. Types
  - 14.4.2.5. Advantages and Disadvantages

14.5. Use of Gonadotropin Analogs in Assisted Reproduction
- 14.5.1. Agonists
  - 14.5.1.1. Introduction and Main Agonists
  - 14.5.1.2. Origin, Chemical Structure and Pharmacodynamic Properties
  - 14.5.1.3. Pharmacokinetics and Method of Administration
  - 14.5.1.4. Effectiveness
- 14.5.2. Antagonists
  - 14.5.2.1. Types and Mechanism of Action
  - 14.5.2.2. Form of Administration
  - 14.5.2.3. Pharmacokinetics and Pharmacodynamics

14.6. Other Coadjuvant Pharmaceutical Products Used in Assisted Reproduction
- 14.6.1. Insulin-Sensitizing Drugs: Metformin
- 14.6.2. Corticoids
- 14.6.3. Folic Acid
- 14.6.4. Estrogens and Progesterone
- 14.6.5. Oral Contraceptives

14.7. Pharmacological Support of the Luteal Phase in In Vitro Fertilization
- 14.7.1. Introduction
- 14.7.2. Ways to Treat Luteal Phase Deficit
  - 14.7.2.1. Luteal Support with hCG
  - 14.7.2.2. Luteal Phase Supplementation with Progesterone
  - 14.7.2.3. Luteal Phase Supplementation with Estrogens
  - 14.7.2.4. Luteal Phase Maintenance with GnRH Agonists
- 14.7.3. Controversies
- 14.7.4. Conclusion

14.8. Complications of Ovarian Stimulation: Ovarian Hyperstimulation Syndrome (OHSS)
- 14.8.1. Introduction
- 14.8.2. Pathophysiology
- 14.8.3. Symptomatology and Classification
- 14.8.4. Prevention
- 14.8.5. Treatment

14.9. Commercial Presentations in Fertility Treatments
- 14.9.1. Ovitrelle®, Elenva®, Ovaleap®, Porgoveris®, Bemfola®, Monopur®, Gonal®, Puregon®, Fostipur®, HMG-Lepori®, Decapeptyl®, Cetrecide®, Orgaluntan®

14.10. Anesthetic Management in Assisted Reproduction
- 14.10.1. Introduction
- 14.10.2. Local Anesthesia
- 14.10.3. Opioids
- 14.10.4. Benzodiazepines
- 14.10.5. Inhalation and Intravenous General Anesthesia: Nitrous Oxide, Halogenated and Propofol
- 14.10.6. Regional Anesthesia
- 14.10.7. Conclusions

Module 15. Assisted Reproduction Techniques

15.1. Artificial Insemination
- 15.1.1. Definition
- 15.1.2. Types
- 15.1.3. Indications
- 15.1.4. Requirements
- 15.1.5. Procedure
- 15.1.6. IVF/ICSI Results and Pregnancy Probability
- 15.1.7. Definition and Differences
- 15.1.8. IVF/ICSI Indications
- 15.1.9. Requirements
- 15.1.10. Advantages and Disadvantages
- 15.1.11. Probability of Pregnancy
- 15.1.12. Procedure
  - 15.1.12.1. Oocyte Puncture
  - 15.1.12.2. Oocyte Evaluation
  - 15.1.12.3. Oocyte Insemination (IVF/ICSI)
    - 15.1.12.3.1. Other Insemination Techniques: IMSI, PICSI, ICSI+MACS, Use of Polarized Light
  - 15.1.12.4. Evaluation of Fertilization
  - 15.1.12.5. Embryo Culture
    - 15.1.12.5.1. Types
    - 15.1.12.5.2. Cultivation Systems
    - 15.1.12.5.3. Time Lapse Culture Equipment
- 15.1.13. Possible Risks

15.2. Preimplantation Genetic Testing (PGT)
- 15.2.1. Definition
- 15.2.2. Types
- 15.2.3. Indications
- 15.2.4. Procedure
- 15.2.5. Advantages and Disadvantages

15.3. Embryo Transfer
- 15.3.1. Definition
- 15.3.2. Embryo Quality and Selection
  - 15.3.2.1. Transfer Day
  - 15.3.2.2. Number of Embryos to Be Transferred
- 15.3.3. Assisted Eclosion
- 15.3.4. Procedure

15.4. Freezing and Vitrification
- 15.4.1. Differences
- 15.4.2. Sperm Freezing
  - 15.4.2.1. Definition
- 15.4.3. Egg Vitrification
  - 15.4.3.1. Definition
  - 15.4.3.2. Procedure
  - 15.4.3.3. Devitrification
  - 15.4.3.4. Advantages: Preservation and Donation
- 15.4.4. Embryo Vitrification
  - 15.4.4.1. Definition
  - 15.4.4.2. Indications
  - 15.4.4.3. Vitrification Day
  - 15.4.4.4. Procedure
  - 15.4.4.5. Devitrification
  - 15.4.4.6. Advantages
- 15.4.5. Fertility Preservation (experimental)
  - 15.4.5.1. Ovarian Tissue
  - 15.4.5.2. Testicular Tissue

15.5. Donation
- 15.5.1. Definition
- 15.5.2. Types of Donation
  - 15.5.2.1. Egg Donation
    - 15.5.2.1.1. Definition
    - 15.5.2.1.2. Indications
    - 15.5.2.1.3. Types of Egg Donation
    - 15.5.2.1.4. Procedure
      - 15.5.2.1.4.1. Donor Ovarian Puncture
      - 15.5.2.1.4.2. Recipient Endometrial Preparation
  - 15.5.2.2. Egg Bank: Storage System
  - 15.5.2.3. Advantages and Disadvantages
  - 15.5.2.2. Sperm Donation
    - 15.5.2.2.1. Procedure
  - 15.5.2.3. Embryo Donation
    - 15.5.2.3.1. Definition
    - 15.5.2.3.2. Indications
    - 15.5.2.3.3. Procedure
    - 15.5.2.3.4. Advantages
  - 15.5.2.4. Double Donation
    - 15.5.2.4.1. Definition
    - 15.5.2.4.2. Indications
    - 15.5.2.4.3. Procedure

15.6. ROPA Method
- 15.6.1. Definition
- 15.6.2. Indications
- 15.6.3. Procedure
- 15.6.4. Legal Requirements

15.7. Traceability
- 15.7.1. Definition
- 15.7.2. Materials
- 15.7.3. Samples
- 15.7.4. Double Check
- 15.7.5. Technological Traceability Systems (Witness, Gidget)

15.8. Biovigilance

15.9. Other Techniques
- 15.9.1. Endometrial Receptivity Test (ERA)
- 15.9.2. Study of the Vaginal Microbiome

Module 16. The Operating Room and the Assisted Reproduction Laboratory

16.1. The Surgical Unit
- 16.1.1. Surgical Area Zones
- 16.1.2. Surgical Clothing
- 16.1.3. The Role of Nurses in the Assisted Reproduction Unit
- 16.1.4. Waste Management and Environmental Control

16.2. Follicular Puncture for Oocyte Collection
- 16.2.1. Definition
- 16.2.2. Features
- 16.2.3. Procedure and Material Required
- 16.2.4. Nursing Activities: Intraoperative
- 16.2.5. Nursing Activities: Postoperative
- 16.2.6. Discharge Recommendations
- 16.2.7. Complications

16.3. Embryo Transfer
- 16.3.1. Definition
- 16.3.2. Features
- 16.3.3. Procedure and Material Required
- 16.3.4. Endometrial Preparation: Estrogens and Progesterone
- 16.3.5. Nursing Role during Embryo Transfer
- 16.3.6. Nursing Role after Embryo Transfer
- 16.3.7. Discharge Instructions
- 16.3.8. Complications

16.4. Sperm Collection in Patients with Azoospermia (Testicular Biopsy)
- 16.4.1. Sperm Introduction and Recovery
- 16.4.2. Methods
  - 16.4.2.1. MESA
  - 16.4.2.2. PESA
  - 16.4.2.3. TESE
  - 16.4.2.4. TESE
  - 16.4.2.5. TEFNA
- 16.4.3. Conclusion

16.5. Surgical Treatments for Infertility
- 16.5.1. Laparoscopy in Infertility
  - 16.5.1.1. Objectives
  - 16.5.1.2. Techniques and Instrumentation
  - 16.5.1.3. Indications
- 16.5.2. Hysteroscopy
  - 16.5.2.1. Introduction
  - 16.5.2.2. Diagnostic Techniques
  - 16.5.2.3. Hysteroscopic Distention Devices
  - 16.5.2.4. Operative Technique

16.6. The Laboratory as a Clean Room: Definition

16.7. Laboratory Structure
- 16.7.1. Andrology Laboratory
- 16.7.2. Embryology Laboratory
- 16.7.3. Cryobiology Laboratory
- 16.7.4. PGD Laboratory

16.8. Laboratory Conditions
- 16.8.1. Design
- 16.8.2. Pressure
- 16.8.3. Gas Control (CO_2, O_2, N_2)
- 16.8.4. Temperature Control
- 16.8.5. Air Control (VOCs)
- 16.8.6. Lighting

16.9. Cleaning, Maintenance and Safety
- 16.9.1. Personnel Clothing and Hygiene
- 16.9.2. Laboratory Cleaning
- 16.9.3. Biosecurity
- 16.9.4. Quality Controls

16.10. Laboratory Equipment
- 16.10.1. Bells
- 16.10.2. Incubators
- 16.10.3. Microinjectors
- 16.10.4. Refrigerators
- 16.10.5. Nitrogen Tanks
- 16.10.6. Time Lapse Equipment
- 16.10.7. Control of Equipment, Breakdowns and Repairs

16.11. Laboratory Working Times

Module 17. Psychological Support and Special Situations in Assisted Reproduction

17.1. Psychology of Human Reproduction
- 17.1.1. Reproductive Physiology
- 17.1.2. Human Sexuality: Functional and Dysfunctional
- 17.1.3. Definition of Sterility/Infertility
- 17.1.4. Infertile Couple Support

17.2. Assisted Human Reproduction Psychology
- 17.2.1. Beliefs about Assisted Reproduction
- 17.2.2. Psychological, Emotional, Behavioral, Cognitive and Emotional Aspects of Assisted Reproduction
- 17.2.3. Psychological Aspects of Genetic Studies
- 17.2.4. Psychological and Emotional Repercussions of Reproductive Treatments
- 17.2.5. Awaiting Results
- 17.2.6. Families Resulting from Assisted Reproduction
  - 17.2.6.1. Family Types and Emotional Nursing Support

17.3. Recurrent Gestational Loss
- 17.3.1. Causes
  - 17.3.1.1. Stress
- 17.3.2. Social, Cultural and Religious Beliefs
- 17.3.3. Possible Reactions to Repeat Abortion
- 17.3.4. Psychological, Cognitive-Behavioral Repercussions of Abortion
- 17.3.5. Psychosomatic Repeat Miscarriage
- 17.3.6. Intervention in Repeat Abortions
- 17.3.7. Indication for Psychotherapy: Nursing Support in Psychotherapy

17.4. Psychosocial Approach in Gamete Donation
- 17.4.1. Interviewing Gamete Donor Candidates
  - 17.4.1.1. Qualitative Assessment
  - 17.4.1.2. Quantitative Valuation
  - 17.4.1.3. Behavioral Assessment
  - 17.4.1.4. Psycho-Technical Evaluation
- 17.4.2. Gamete Donation Candidate Evaluation Report
  - 17.4.2.1. Re-evaluation
- 17.4.3. Gamete Recipient Families
  - 17.4.3.1. Myths and Beliefs about Gamete Donation
  - 17.4.3.2. Frequently Asked Questions
  - 17.4.3.3. Disclosure of Origins According to Family Models

17.5. Assisted Reproduction Nursing Consultation: Psychosocial Approach
- 17.5.1. Holistic Counseling and Treatment in Assisted Reproduction Nursing
- 17.5.2. Primary Health Care Role of the Infertile Couple
  - 17.5.2.1. Target Population Recruitment
  - 17.5.2.2. Initial Interview: Reception, Information, Orientation, Referral to Other Professionals
- 17.5.3. Management of Communication with Assisted Reproductive Technologies Patients
  - 17.5.3.1. Communicative Skills
  - 17.5.3.2. Nurse-Patient Interpersonal Relationship
  - 17.5.3.3. Emotional Patient Care in Assisted Reproduction
    - 17.5.3.3.1. Detection of Emotional Problems in the Interview with the Patient
    - 17.5.3.3.2. Intervention and Prevention Strategies
    - 17.5.3.3.3. Support Groups
- 17.5.4. Principal Nursing Diagnoses (NANDA), Interventions (NIC) and Outcomes (NOC) in the Emotional Process of Assisted Reproduction

17.6. Special Situations
- 17.6.1. Reproductive Approach in the Oncology Patient
  - 17.6.1.1. How Does Cancer Treatment Affect Fertility?
  - 17.6.1.2. When Is it Necessary to Preserve Fertility?
  - 17.6.1.3. Limits to Fertility Preservation
- 17.6.2. Fertility Preservation in Oncology Patients
  - 17.6.2.1. Ovarian Stimulation for Fertility Preservation in Oncology Patient
  - 17.6.2.2. Preservation Methods:
    - 17.6.2.2.1. Cryopreservation: Oocytes, Embryos and Ovarian Tissue
    - 17.6.2.2.2. Hormone Therapy
    - 17.6.2.2.3. Ovarian Transposition
- 17.6.3. Fertility Preservation in Oncology Patients
  - 17.6.3.1. Preservation Methods
    - 17.6.3.1.1. Cryopreservation of Semen
    - 17.6.3.1.2. Cryopreservation of Testicular Tissue
    - 17.6.3.1.3. Hormone Therapy
- 17.6.4. Reproductive Approach and Preservation in Patients with Sex Change.

17.7. Nutritional Advice in Assisted Reproduction
- 17.7.1. Nutrition and Infertility. Lifestyle
  - 17.7.1.1. Obesity
  - 17.7.1.2. Hormonal Problems
    - 17.7.1.2.1. Hypothyroidism/Hyperthyroidism
    - 17.7.1.2.2. Diabetes Mellitus
    - 17.7.1.2.3. SOP
    - 17.7.1.2.4. Endometriosis
- 17.7.2. Recommended/Discouraged Foods Before and During Assisted Reproduction Treatment
  - 17.7.2.1. Role of Vitamins
  - 17.7.2.2. Role of Minerals
- 17.7.3. Myths and Truths About Feeding in Assisted Reproduction
- 17.7.4. Examples of Diet

17.8. Grief in Assisted Reproduction
- 17.8.1. Concept of Grief
- 17.8.2. Types of Grief in Assisted Reproduction:
  - 17.8.2.1. Infertility Grief
  - 17.8.2.2. Mourning the Loss of the Invisible
  - 17.8.2.3. Gestational Grief
  - 17.8.2.4. Grief for Unsuccessful Implementations
  - 17.8.2.5. Perinatal Grief
- 17.8.3. Therapeutic Advice for Overcoming Grief
- 17.8.4. Care Plan in the Grief Process

17.9. Assisted Reproduction Failure: New Alternatives
- 17.9.1. Adoptions
- 17.9.2. The Childless Family

A comprehensive program that will take you through the knowledge you need to compete among the best"

06

Methodology

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

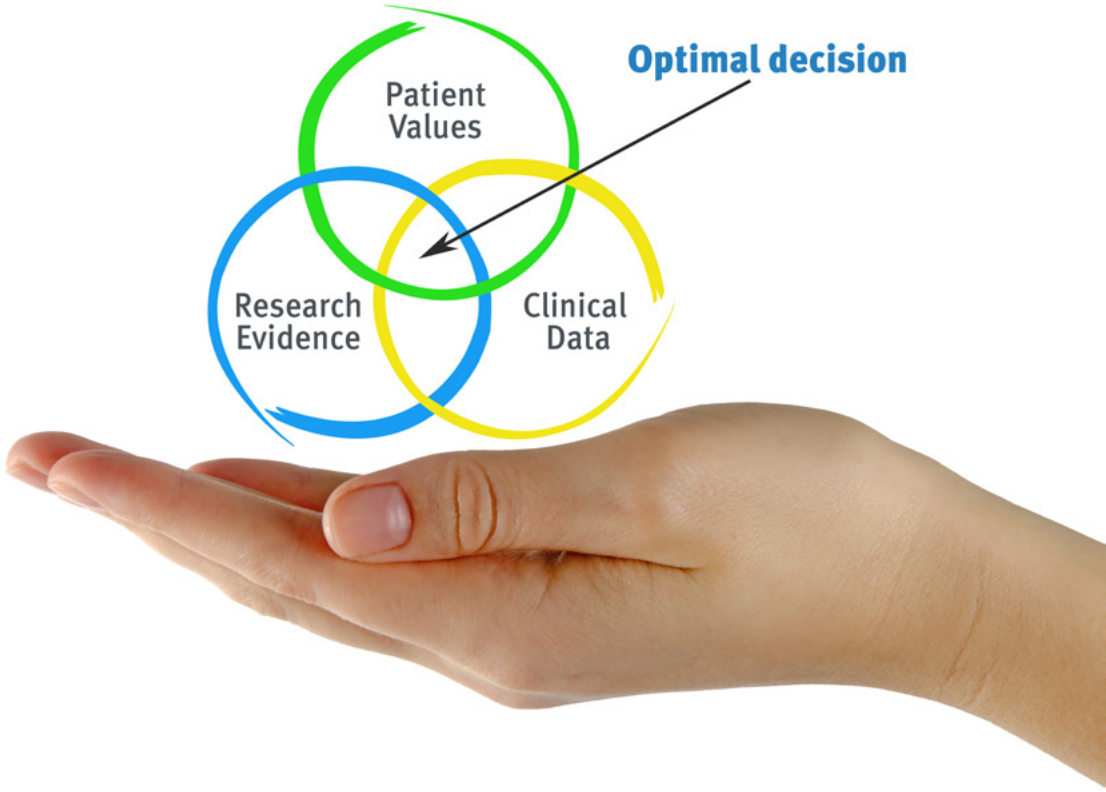
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

Discover 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 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:

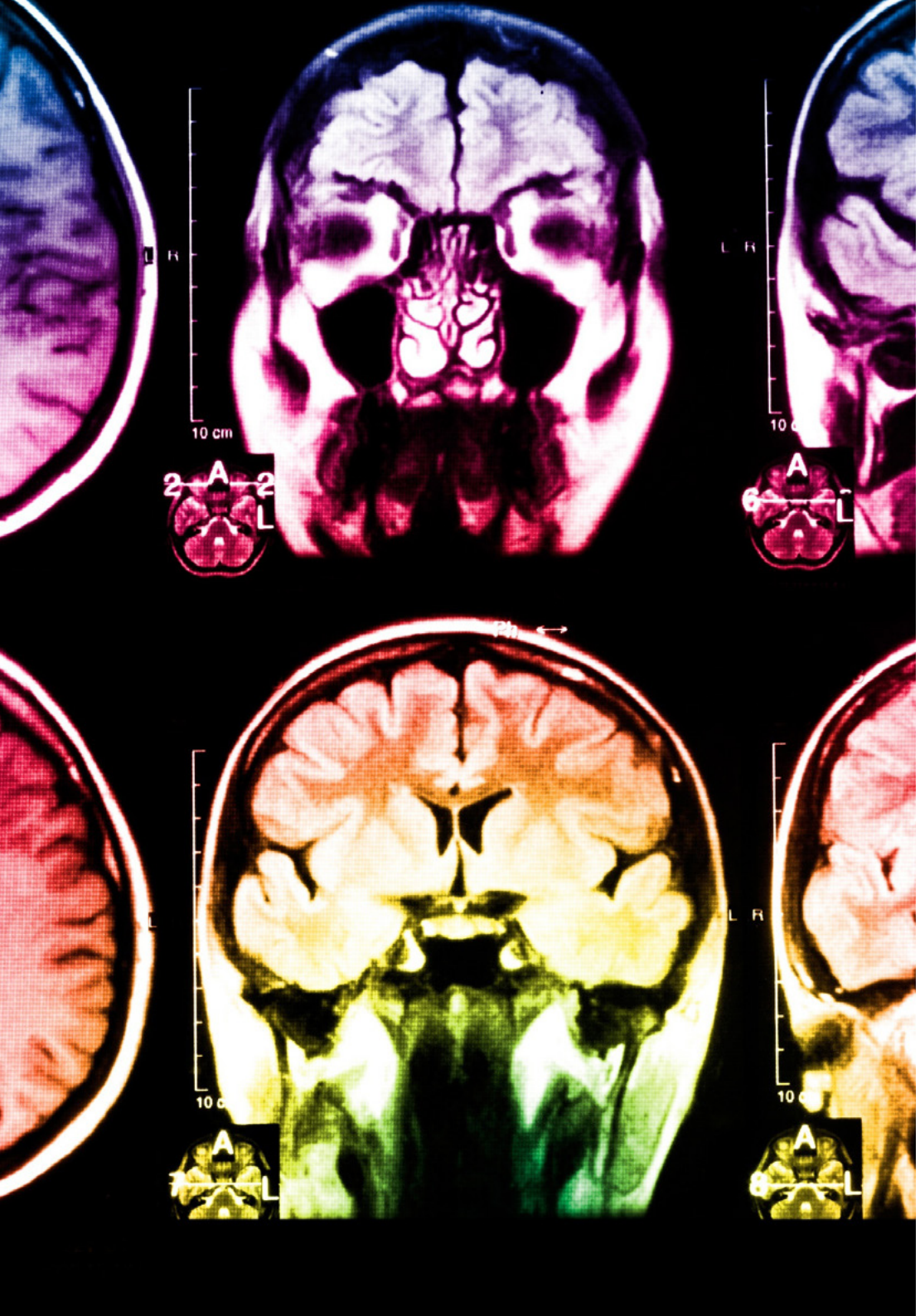
1. Nurses who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into 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.

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 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 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 we have trained more than 175,000 nurses with unprecedented success in all specialities regardless of practical workload. 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 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 them as many times as you want.

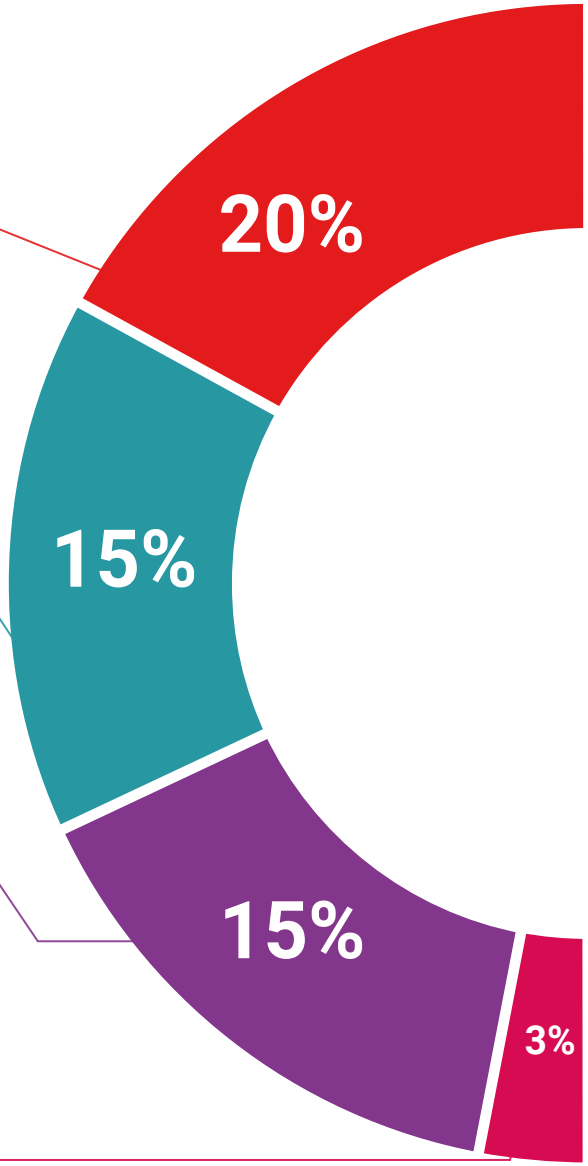
Interactive Summaries

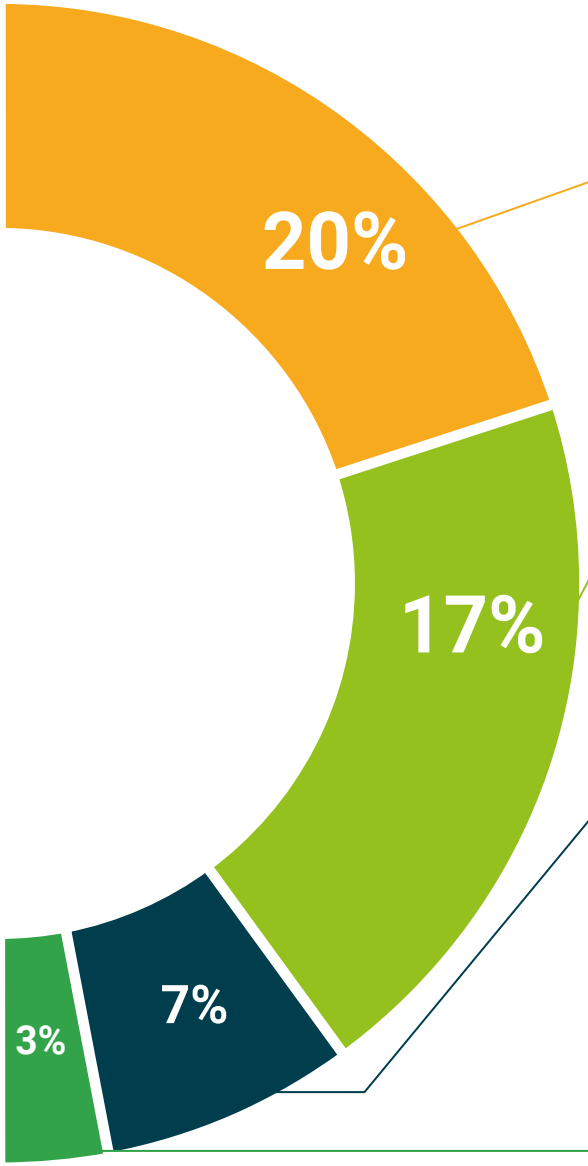
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 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.

07

Certificate

The Advanced Master's Degree in Gynecological and Assisted Reproductive Nursing guarantees students, in addition to the most rigorous and up-to-date education, access to an Advanced Master's Degree issued by TECH Global University.

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

This private qualification will allow you to obtain a **Advanced Master's Degree diploma in Gynecological and Assisted Reproductive Nursing** 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: **Advanced Master's Degree in Gynecological and Assisted Reproductive Nursing**

Modality: **online**

Duration: **2 years**

Accreditation: **120 ECTS**


tech global university

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

Advanced Master's Degree in Gynecological and Assisted Reproductive Nursing

This is a private qualification of 3,600 hours of duration equivalent to 120 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

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

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

Dr. Pedro Navarro Illana
Dean

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


Advanced Master's Degree in Gynecological and Assisted Reproductive Nursing

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	Anatomy and Physiology of Reproduction	8	CO
1º	Puberty, Menstruation and the Climacteric Period	7	CO
1º	Gynecological Infectious Pathology and Sexually Transmitted Diseases	7	CO
1º	Care for Women with Gynecological Problems	7	CO
1º	Care for Women with Gynecological Oncology Problems	7	CO
1º	Gynecological Surgery	7	CO
1º	Breast Pathology	7	CO
1º	Urinary Incontinence (UI)	7	CO
			CO

Year	Subject	ECTS	Type
2º	Gynecological and Obstetrical Emergencies	7	CO
2º	Study of Infertility in Women	7	CO
2º	Study of Male Infertility	7	CO
2º	Genetics and Immunology of Reproduction	7	CO
2º	Assisted Reproduction Consultation and Donor Bank	7	CO
2º	Pharmacology	7	CO
2º	Assisted Reproduction Techniques	7	CO
2º	The Operating Room and the Assisted Reproduction Laboratory	7	CO
2º	Psychological Support and Special Situations in Assisted Reproduction	7	CO

Dr. Pedro Navarro Illana
Rector

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

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Advanced Master's Degree

Gynecological and Assisted Reproductive Nursing

- Modality: **online**
- Duration: **2 years**
- Certificate: **TECH Global University**
- Accreditation: **120 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Advanced Master's Degree

Gynecological and Assisted Reproductive Nursing

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